

DRAFT



air pollution control district
SANTA BARBARA COUNTY

DRAFT

PERMIT TO OPERATE No. 5840 - R6

and

PART 70 RENEWAL OPERATING PERMIT No. 5840

and

Part 70 SIGNIFICANT MODIFICATION PTO 5840-11

**IMERYS FILTRATION MINERALS, INC.
LOMPOC PLANT**

2500 Miguelito Road, Lompoc, California

OPERATOR

Imerys Filtration Minerals, Inc. (“Imerys”)

OWNERSHIP

Imerys Filtration Minerals, Inc. (“Imerys”)

**Santa Barbara County
Air Pollution Control District**

XXXXXX, 2019

PART I – MAIN PLANT

Table of Contents

<u>SECTION</u>	<u>PAGE</u>
1.0 INTRODUCTION	1
1.1. PURPOSE	1
1.2. FACILITY OVERVIEW	3
1.3. EMISSION SOURCES	5
1.4. EMISSION CONTROL OVERVIEW	5
1.5. OFFSETS/EMISSION REDUCTION CREDIT OVERVIEW	6
1.6. PART 70 OPERATING PERMIT OVERVIEW	6
2.0 PROCESS DESCRIPTION	9
2.1. PROCESS SUMMARY	9
2.2. SUPPORT SYSTEMS	10
2.3. MINING ACTIVITIES	11
2.4. MAINTENANCE/DEGREASING ACTIVITIES	11
2.5. OTHER PROCESSES	11
3.0 REGULATORY REVIEW	13
3.1. RULE EXEMPTIONS CLAIMED	13
3.2. COMPLIANCE WITH APPLICABLE FEDERAL RULES AND REGULATIONS	15
3.3. COMPLIANCE WITH APPLICABLE STATE RULES AND REGULATIONS	17
3.4. COMPLIANCE WITH APPLICABLE LOCAL RULES AND REGULATIONS	18
3.5. COMPLIANCE HISTORY	22
4.0 ENGINEERING ANALYSIS	27
4.1. GENERAL	27
4.2. STATIONARY COMBUSTION SOURCES	27
4.3. BAGHOUSE SOURCES	30
4.4. AIR SIFTER SYSTEM	32
4.5. ROTOCLONES	32
4.6. REFUELING OPERATIONS	32
4.7. FUGITIVE DUST SOURCES	32
4.8. GREENHOUSE GASES	34
4.9. OTHER EMISSION SOURCES	34
4.10. BACT/ MACT/NSPS/NESHAPS	35
4.11. EMISSIONS MONITORING/PROCESS MONITORING/CAM	37
4.12. SOURCE TESTING/SAMPLING	41
4.13. PART 70 ENGINEERING REVIEW: HAZARDOUS AIR POLLUTANT EMISSIONS	42
5.0 EMISSIONS	43
5.1. GENERAL	43
5.2. PERMITTED EMISSIONS LIMITS – EMISSION UNITS	43
5.3. FACILITY PERMITTED EMISSIONS	44
5.4. PART 70: FEDERAL POTENTIAL TO EMIT	45
5.5. PART 70: HAP POTENTIAL TO EMIT EMISSION ESTIMATES	45
5.6. EXEMPT EMISSION SOURCES/PART 70 INSIGNIFICANT EMISSIONS	45
6.0 AIR QUALITY IMPACT ANALYSIS	65

DRAFT

6.1.	MODELING	65
6.2.	INCREMENTS	65
6.3.	MONITORING	65
6.4.	HEALTH RISK ASSESSMENT	65
7.0	CAP CONSISTENCY, OFFSET REQUIREMENTS, AND ERCS	67
7.1.	GENERAL	67
7.2.	CLEAN AIR PLAN	67
7.3.	OFFSET REQUIREMENTS	67
7.4.	EMISSION REDUCTION CREDITS	68
8.0	LEAD AGENCY PERMIT CONSISTENCY	70
9.0	PERMIT CONDITIONS	71
9.A	STANDARD ADMINISTRATIVE CONDITIONS	72
9.B	GENERIC CONDITIONS	77
9.C	EQUIPMENT SPECIFIC CONDITIONS	80
9.D	DISTRICT-ONLY CONDITIONS	135
10.0	ATTACHMENTS	1
10.1.	EMISSION CALCULATION DOCUMENTATION	1
10.2.	EMISSION CALCULATION DOCUMENTATION	1
10.3.	EQUIPMENT LIST	1
10.4.	EQUIPMENT LIST (EXEMPT/INSIGNIFICANT EQUIPMENT)	1

LIST OF FIGURES and TABLES

<u>TABLE/ FIGURE</u>	<u>PAGE</u>
TABLE 3.1 GENERIC FEDERALLY ENFORCEABLE DISTRICT RULES.....	24
TABLE 3.2 UNIT-SPECIFIC FEDERALLY ENFORCEABLE DISTRICT RULES	26
TABLE 3.3 NON-FEDERALLY ENFORCEABLE DISTRICT RULES	26
TABLE 4.1 VARIABLES USED IN DETERMINING WASTE HANDLING EMISSIONS	34
TABLE 4.2 BACT CONTROL TECHNOLOGY PERFORMANCE STANDARDS	35
TABLE 4.3 BAGHOUSES SUBJECT TO CAM.....	40
TABLE 4.4 7 SYSTEM VENTURI SCRUBBER/PACKED BED TOWER SUBJECT TO CAM	41
TABLE 4.5 EQUIPMENT SUBJECT TO SOURCE TESTING	41
TABLE 5.1 OPERATING EQUIPMENT DESCRIPTION.....	46
TABLE 5.2 EQUIPMENT EMISSION FACTORS	49
TABLE 5.3 SHORT TERM EMISSION LIMITS.....	52
TABLE 5.4 LONG TERM EMISSION LIMITS	55
TABLE 5.5 PERMITTED FACILITY EMISSIONS.....	58
TABLE 5.6 ESTIMATED FEDERAL POTENTIAL TO EMIT	59
TABLE 5.7 HAP EMISSION FACTORS	60
TABLE 5.8 FACILITY HAP POTENTIAL TO EMIT (TPY) ESTIMATE	61
TABLE 5.9 STATIONARY SOURCE HAP POTENTIAL TO EMIT (TPY) ESTIMATE	62
TABLE 5.10 ESTIMATED PERMIT EXEMPT EMISSIONS	63
TABLE 9.1 BAGHOUSE STACK CONCENTRATIONS AND EMISSIONS	97
TABLE 9.2 SOX/NOX EMISSION LIMITS	98
TABLE 9.3 EQUIPMENT EXHAUST FLOW LIMITS AND OPERATING LIMITS	99
TABLE 9.4 BAGHOUSES SUBJECT TO AN INSPECTION AND MAINTENANCE PLAN	101
TABLE 9.5 BAGHOUSES REQUIRING SOCK REPLACEMENT DURING SCHEDULED OVERHAULS.....	102
TABLE 9.6 MOBILE PLANT BACT WET SUPPRESSION FUGITIVE DUST CONTROL	110
TABLE 9.7 MOBILE PLANT BACT ENCLOSED CRUDE MATERIAL HANDLING AND TRANSFER	111
TABLE 9.8 IMERY'S THROUGHPUT LIMITS (DRY UNLESS OTHERWISE INDICATED)	116
TABLE 9.9 BAGHOUSE EQUIPMENT SOURCE TEST GROUPING AND FREQUENCY	119
TABLE 9.10 SOURCE TESTING REQUIREMENTS FOR INTERNAL COMBUSTION ENGINES	120
TABLE 9.11 SOURCE TESTING REQUIREMENTS FOR EXTERNAL COMBUSTION UNITS EXCLUDING 7 SYSTEM (SEE TABLE 9.14)	121
TABLE 9.12 SOURCE TESTING REQUIREMENTS FOR BAGHOUSES AND ROTOCLOVES	122
TABLE 9.13 SOURCE TESTING REQUIREMENTS FOR 7 SYSTEM VENTURI SCRUBBER/PACKED BED TOWER	123
TABLE 9.14 SILICATES PLANT BOILER HEAT INPUT LIMITS	136
TABLE 10.1 VARIABLES USED IN EMISSIONS CALCULATIONS– APPENDIX 10.2	1
TABLE 10.2 EXEMPT EQUIPMENT EMISSION CALCULATIONS - APPENDIX 10.2	2
TABLE 10.3 ALTERNATE EQUIPMENT OPERATING SCENARIO - APPENDIX 10.2	3
DELETE LINE 6TABLE 10.4 ALTERNATE EMISSION FACTORS - APPENDIX 10.2	4
TABLE 10.5 - ALTERNATE SHORT-TERM EMISSION LIMITS -APPENDIX 10.2.....	5
TABLE 10.6 ALTERNATE LONG-TERM EMISSION LIMITS- APPENDIX 10.2	6
TABLE 10.7 LOMPOC BAGHOUSE SPECIFICATIONS – APPENDIX 10.4	1
TABLE 10.8 DEPERMITTED EQUIPMENT – APPENDIX 10.4.....	4
 FIGURE 1.1 LOCATION MAP FOR THE LOMPOC PLANT.....	 2

ABBREVIATIONS/ACRONYMS

AP-42	USEPA's <i>Compilation of Emission Factors</i>
APCD	Santa Barbara County Air Pollution Control District
API	American Petroleum Institute
ASTM	American Society for Testing Materials
ATC	Authority to Construct
BACT	Best Available Control Technology
Bhp	brake horsepower
BSFC	brake specific fuel consumption
CAAA	Clean Air Act Amendments of 1990 (federal)
CAC	California Administrative Code
CAM	compliance assurance monitoring
CEMS	continuous emissions monitoring system
CO	carbon monoxide
Dscf(m)	dry standard cubic foot (per minute)
EU	emission unit
°F	degree Fahrenheit
gal	gallon
gr	grain
H ₂ S	hydrogen sulfide
HAP	hazardous air pollutant (as defined by CAAA, Section 112(b))
HHV	high heating value
I&M	inspection & maintenance
IC	internal combustion
k	kilo (thousand)
l	liter
lb	pound
lbs/hr	pounds per hour
LPG	liquid petroleum gas
M	thousand
MACT	Maximum Achievable Control Technology
MM	million
MW	molecular weight
NAR	Non-attainment Review
NEI	net emissions increase
NG	natural gas
NO _x	nitrogen oxides
NSPS	New Source Performance Standards
O ₂	oxygen
PM	particulate matter
PM ₁₀	particulate matter less than ten microns in diameter
ppm(vd or w)	parts per million (volume dry or weight)
psia	pounds per square inch absolute
psig	pounds per square inch gauge
PTO	Permit to Operate
RACT	Reasonably Available Control Technology
ROC	reactive organic compounds, same as "VOC" as used in this permit
scfd (or scfm)	standard cubic feet per day (or per minute)
SIP	State Implementation Plan
SO _x	sulfur oxides
SSID	Stationary Source ID
STP	standard temperature (60°F) and pressure (29.92 inches of mercury)
THC	total hydrocarbons
tpy, TPY	tons per year
USEPA	United States Environmental Protection Agency

DRAFT

UTM	Universal Transverse Mercator
VE	visible emissions
VOC	volatile organic compounds

1.0 Introduction

1.1. Purpose

General. The Santa Barbara County Air Pollution Control District (District) is responsible for implementing all applicable federal, state and local air pollution requirements which affect any stationary source of air pollution in Santa Barbara County. The federal requirements include regulations listed in the Code of Federal Regulations: 40 CFR Parts 50, 51, 52, 55, 61, 63, 68, 70 and 82. The State regulations may be found in the California Health & Safety Code, Division 26, Section 39000 et seq. The applicable local regulations can be found in the District's Rules and Regulations. This is a combined permitting action that covers both the Federal Part 70 permit (*Part 70 Operating Permit No. 5840*) as well as the State Operating Permit (*Permit to Operate No. 5840 - R6*).

The County is designated as a nonattainment area for the state ozone ambient air quality standard. The County is also designated a nonattainment area for the state PM₁₀ ambient air quality standard.

This permit address three permitting actions: (1) The renewal of the federal Part 70 permit, (2) the reevaluation of the local operating permit, and (3) the Part 70 major modification to eliminate Imerys having to comply with the *Sulfur Dioxide Compliance Monitoring Protocol* and the *Modified 7 System Sulfur Dioxide Compliance Monitoring Protocol*.

Part 70 Permitting. The initial Part 70 permit for the Imerys Lompoc Plant facility was issued April 11, 2000 in accordance with the requirements of the District's Part 70 operating permit program. This permit is the sixth renewal of the Part 70 permit, and may include additional applicable requirements.

The District triennial permit reevaluation has been combined with this Part 70 Permit renewal, and this permit incorporates previous permits.

The Lompoc Plant facility constitutes the *Lompoc-Imerys* stationary source (SSID = 1735), which is a major source for VOC¹, NO_x, SO_x, CO, PM, PM₁₀, GHGs and HAPs. Conditions listed in this permit are based on federal, state or local rules and requirements. Sections 9.A, 9.B and 9.C (Parts I and II) of this permit are enforceable by the District, the USEPA and the public since these sections are federally enforceable under Part 70. Where any reference contained in Sections 9.A, 9.B or 9.C refers to any other part of this permit that part of the permit referred to is federally enforceable. Conditions listed in Section 9.D are "District-only" enforceable.

The Celpure Plant is a specialty plant within the Lompoc facility and addressed in Part II of this document following Attachment 10.5. Due to the size of this plant and complexity of PTO 9757, Sections 1 (Introduction) through Section 9.C (Equipment Specific Conditions) of PTO 9757 have been incorporated, in their entirety, as *Part II* of this permit.

Pursuant to the stated aims of Title V of the CAAA of 1990 (i.e., the Part 70 operating permit program), this permit has been designed to meet three objectives. First, compliance with all conditions in this permit ensures compliance with federally enforceable requirements for the facility. Second, this is comprehensive document to be used as a reference by the permittee,

¹ VOC as defined in Regulation XIII has the same meaning as reactive organic compounds as defined in Rule 102. The term ROC shall be used throughout the remainder of this document, but where used in the context of the Part 70 regulation, the reader shall interpret the term as VOC.

regulatory agencies and the public to assess compliance. Third, this permit is a consolidation of Title V Part 70 permitting requirements, renewal of the existing Part 70 PTO 5840 permit (including several Part-70 minor modifications to this permit) and the reevaluation of District PTO 5840.

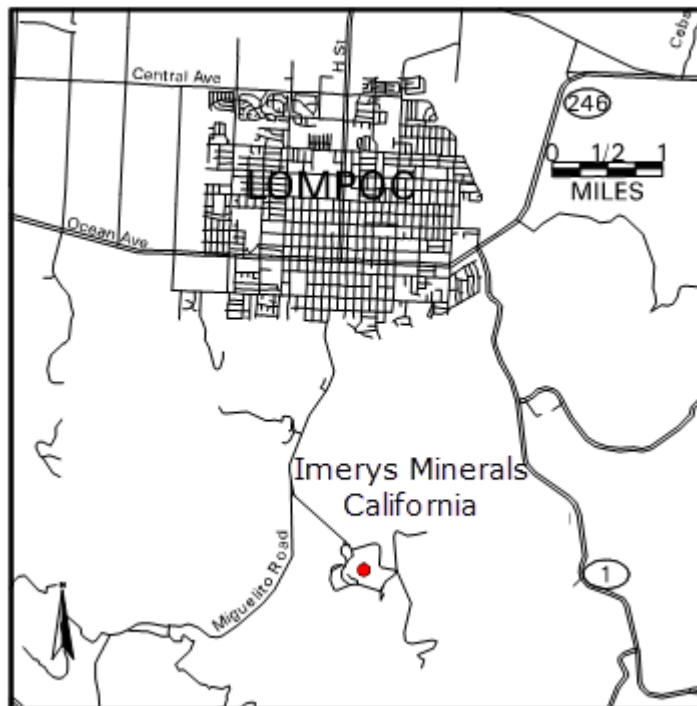
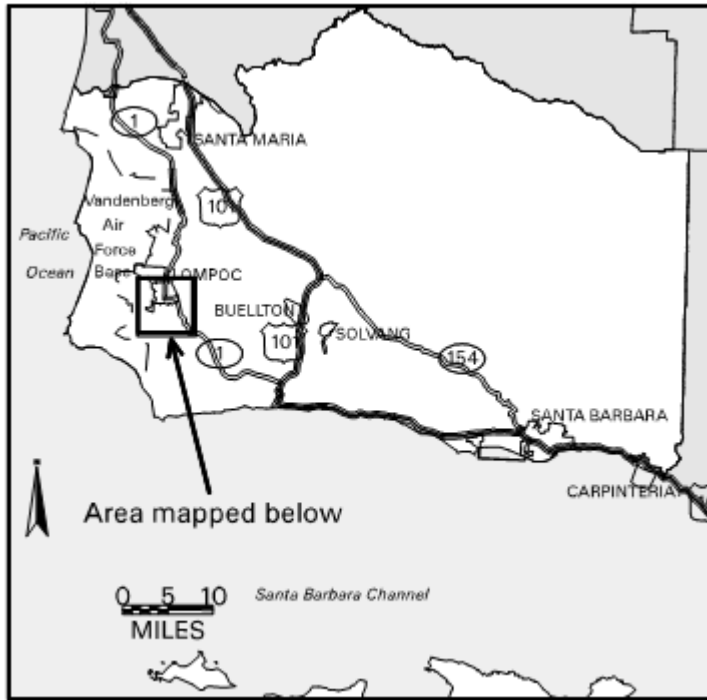


Figure 1.1 Location Map for the Lompoc Plant

Part 70 Significant Modification. This permit action also incorporates Imerys' request to eliminate permit conditions requiring compliance with the *Sulfur Dioxide Compliance Monitoring Protocol* and the *Modified 7 System Sulfur Dioxide Compliance Monitoring Protocol*.

The *Sulfur Dioxide Compliance Monitoring Protocol* was established in 2001 when Imerys (then Celite) was operating five separate processing lines each with a kiln/furnace sulfur dioxide emission limit of 400 lbs/hr. Four of those lines have been shut down.

The remaining line, 7 System, was substantially modified under PTO/Part 70 Significant Modification 12105, which was issued March 1, 2014. That modification reduced the permitted emission limit for that line from 400 lbs/hr to 3 lbs/hr. That permit modification required the new 7 System kiln and furnace comply with the *Modified 7 System Sulfur Dioxide Compliance Monitoring Protocol* and the *7 System Portable Analyzer Monitoring Plan*.

The District therefore concluded: (1) With the shutdown of processing Lines 3, 5, 6, and 11 there is no longer any need for the *Sulfur Dioxide Compliance Monitoring Protocol*. (2) The *Modified 7 System Sulfur Dioxide Compliance Monitoring Protocol* was an artifact carryover from the historic approach used to estimate SO₂ emissions. Because the *7 System Portable Analyzer Monitoring Plan* measures actual stack emissions and is not a mass approach, it is a more accurate method for monitoring compliance with the 7 System SO₂ emission limit, and the *Modified 7 System Sulfur Dioxide Compliance Monitoring Protocol* is not needed to ensure compliance with emission limits.

The *Modified 7 System Sulfur Dioxide Compliance Monitoring Protocol* also required Imerys post continuous hourly SO₂ furnace/kiln emissions on the Internet. The District concluded this is no longer warranted because when this condition was initially implemented the permit limits for affected units were 2,000 lbs/hr. The current limit from the remaining 7 System is 3 lbs/hr today.

1.2. Facility Overview

- 1.2.1 Facility Overview: Imerys Filtration Minerals, Inc. ("Imerys") is the sole owner and operator of the Lompoc Plant, located at 2500 Miguelito Road, approximately one mile south of the City of Lompoc, California (UTM coordinates: Zone 10, East 733.7 km, North 3831.3 km). Both the plant and the mine are located in an unincorporated area of Santa Barbara County. For District regulatory purposes, the facility location is in the Northern Zone of Santa Barbara County². Figure 1.1 shows the relative location of the facility within the county.

Diatomaceous earth (DE) mining and processing has occurred at this site for over 100 years. Although parts of the plant were built before 1950, most of it was built in the 1950's in a canyon south of the City of Lompoc. Thus, construction and operation predated the formation of the District. The District first issued permits for the systems to Johns-Manville, which later became Manville Sales Corporation. Celite Corporation purchased the mine facility from Manville Sales Corporation in 1991. In 2005 Imerys, USA, Inc purchased Celite Corporation. In early 2018 Imerys, USA, Inc. Imerys Minerals California, Inc. changed its name to Imerys Filtration Minerals, Inc. The bulk of the mining operations take place on lands adjacent the plant, eliminating the need to use public roads to transport most of the ore to the plant. Numerous

² District Rule 102, Definition: "Northern Zone"

changes have been made at the site resulting in increased capacities in certain areas of the plant. Product (most made from DE) is transported via truck and rail to distributors and customers.

As reflected in the previous Part 70 permit reevaluation, Imerys completed a major plant modernization, which consisted of removing lines 3 and 5 from service and completely reconstructing line 7. Emissions from the modified System 7 are controlled by new 7 System Venturi Scrubber/Packed Bed Tower control unit, enclosed baghouses, bin vents, and a furnace with a Low-NO_x burner. Since that permit was issued Imerys decommissioned System 6, which involved removing from operations: the 6 System Cleanable High Efficiency Air Filter (CHEAF), Furnace, Kiln and several baghouses (PTO 5840-10). Imerys also made a number of other permit changes including adding a prime diesel water pump engine and a process change involving a new additive, and eliminating a number of baghouses. These changes have been incorporated into this permit.

As indicated the Imerys permit has undergone six updates incorporating over 100 Authority to Construct permit changes. Moreover, a number regulatory changes at both the federal and state/local level have occurred over this period which had to be incorporated into the Imerys permit. An objective of this revision is to simplify and clarify the requirements.

The *Imerys - Lompoc* stationary source consists of a single facility, FID #0012.

The operations at the facility consist of the following plants:

Powder Mills

- Crushing Plant
- Product Line 7 (capable of producing natural and calcined product)
- Experimental Plant
- Truck and Railcar Loading
- Central Waste Handling
- Waste Recovery and Recycling
- Milling Circuit
- Storage Silos
- Bagging and Packing

Synthetic Silicate Plant

- Acid-washed filter aid Plant

Specialties

- Mortar Plant
- Pellet Plant
- Chromosorb Plant
- Celite Analytical Filter Aid (CAFA) Plant

Quarries

- Mobile Plant

Celpure Plant (See Part II)

Imerys Filtration Minerals, Inc. operates DE mining and processing facilities. DE is a sedimentary deposit composed of fossilized diatoms which had siliceous skeletons. Imerys

mines and mills diatomite into powders of various grades for use by industries in many applications. Diatomite is surface mined and crushed and screened using mobile equipment. It is then milled and dried in the powder mills. The natural product is classified into a variety of grades and undergoes no additional processing before being bagged for shipment to distributors and customers.

Other diatomite products are the calcinated and flux-calcinated powders. Natural product is transformed into these types via exposure to high temperatures in rotary kilns. Flux-calcined product is calcined in the presence of soda ash. The material is thereafter classified into fine and coarse particle sizes and then either packed into bags or bulk loaded for shipment. Smaller volumes of DE are processed using process additives. The dryers and kilns are heated by external combustion.

- 1.2.2 Facility New Source Review Overview: Since the issuance of the last operating permit PTO 5840-R5 in February 2016, the following NSR permitting actions have been issued for the Imerys Lompoc Plant:

Permit	Date Issued	Permit Action
ATC 14897	1/13/2016	Reroute vent line from General Waste BH (137) to the Soda Ash BH (109452non-) and increase hours of operation.
ATC 14908	4/6/2017	Increase permitted airflow Baghouse 789 (110723)
ATC 14860	8/24/2016	Add mixing tank, silo, storage bin, change in BH emission factor
ATC 14999	8/20/2017	Change to 7 System to address DE moisture content.
ATC 14894	7/25/2017	Prime diesel water pump engine.
PTO 14582	1/18/2018	Elimination of four baghouses
PTO 14908	Issuance of this permit	Increase permitted airflow Baghouse 789 (110723)
PTO 14984	Issuance of this permit	Prime diesel water pump engine.
PTO 5840-10	Issuance of this permit	Removing the System 6 furnace (Device ID 00047), kiln (Device ID 103345), CHEAF (Device ID 000121, 000123,), and baghouses (Device IDs 103364, 103365, 000122) from permit and generating emission reduction credits from that action (DOI 106)

1.3. *Emission Sources*

Air pollution emissions from the Lompoc Plant are primarily the result of combustion sources and non-metallic mineral drying and processing. Section 4 of the permit provides the District's engineering analysis of these emission sources. Section 5 of the permit describes the emissions from the Lompoc Plant, and also lists the potential emissions from permit exempt emission units.

1.4. *Emission Control Overview*

Air quality emission controls are utilized at the Lompoc Plant for a number of emission units to reduce air pollution emissions. The emission controls employed at the plant include:

- Use of baghouses of many types and sizes for particulate matter control
- Use of rotoclones for organic fumes and dust emissions
- Ultra low-NO_x burner for No. 2 boiler
- 7 System Venturi Scrubber/Packed Bed Tower for PM and SO_x control

1.5. *Offsets/Emission Reduction Credit Overview*

The Imerys stationary source potential to emit exceeds the Rule 802 emission offset threshold for ROC, NO_x, SO_x, PM and PM₁₀. Imerys must therefore offset emission increases in these pollutants/precursors consistent with Rule 802.

As explained more fully in the Section 7.4, Imerys holds three Emission Reduction Credit certificates which Imerys can use for its offset obligations.

1.6. *Part 70 Operating Permit Overview*

1.6.1 Permit Life and Federally enforceable Requirements: All federally enforceable requirements are listed in 40 CFR Part 70.2 (*Definitions*) under “applicable requirements.” These include all SIP-approved District Rules, all conditions in the District-issued Authority to Construct permits, and all conditions applicable to major sources under federally promulgated rules and regulations. All these requirements are enforceable by the public under CAAA. (See Tables 3.1 and 3.2 for a list of federally enforceable requirements).

1.6.2 Insignificant Emissions Units: Insignificant emission units are defined under District Rule 1301 as any regulated air pollutant emitted from the unit, excluding HAPs, that are less than 2 tons per year based on the unit’s potential to emit and any HAP regulated under section 112(g) of the Clean Air Act that does not exceed 0.5 ton per year based on the unit’s potential to emit. Insignificant activities must be listed in the Part 70 application with supporting calculations. Applicable requirements may apply to insignificant units. See Attachment 10.5.

1.6.3 Federal Potential to Emit: The Imerys facility qualifies as a “Part 70 Source” because the source has a federal potential to emit (PTE) more than 100 tons per year of regulated air pollutants. Since the facility’s emissions exceeded the Part 70 “major source” permit threshold exclusive of fugitive emissions, fugitive emissions have not been quantified.

1.6.4 Permit Shield: The operator of a major source may be granted a shield specifically stipulating any federally-enforceable conditions that are no longer applicable to the source and stating the reasons for such non-applicability. The permit shield must be based on a request from the source and its detailed review by the District. Permit shields cannot be indiscriminately granted with respect to all federal requirements. Imerys requested a permit shield during the initial Part 70 permit issued in 2000 for the following.

- Source Testing/Sampling (Section 4.12)
- BACT Requirements (Table 4.2)
- Emission Limit Table (Table 5.3 and Table 5.4)
- Permit Conditions (Sections 9.A, 9.B, 9.C)

The District reviewed the above request and granted a permit shield for the BACT performance standards listed in Table 4.2 for the #345 baghouse (District Device No 108) and for emission standards in specific SIP rules for which emission standards have been directly incorporated into the Part 70 permit. The following permit shields were granted:

- Rule 309.E.3 SO_x lb/hr emissions standards for the 7 furnace and kiln
- Rule 342 emission standards for Boiler #2 (device ID 82)
- Rule 304 and Rule 306 PM standards for all baghouses listed in Table 10.7
- Rule 311 for all fuel burning equipment

- Rule 309.E.3.b NO_x emissions standard for the boilers (District Device No 81 and 82), and the silicates dryers (District Device No 140 and 143 (reference Table 5.2)
- BACT performance standards in Table 4.2 for #345 baghouse (District Device No 108)

The District determined that the other shield requests were overly broad and/or not consistent with the intent of the shield provisions of 40CFR Part 70. A shield should be specific to an applicable requirement (e.g., a SIP approved Rule), and where relevant portions of the requirement have been included in the permit, compliance with the permit is deemed to be compliance with the applicable portions of the Rule and Clean Air Act. For instance, if emission standards from a Rule are clearly specified in enforceable conditions in the Part 70 permit, a shield could be provided.

- 1.6.5 Alternate Operating Scenarios: A major source may be permitted to operate under different operating scenarios, if appropriate descriptions of such scenarios are included in its Part 70 permit application and if such operations are allowed under federally-enforceable rules. In previous Part 70 Permits to Operate Imerys requested permitted alternative operating scenarios to: (1) burn #6 fuel oil in all kiln and furnace burners, and the silicate boilers; (2) burn #4 fuel oil in all kiln and furnace burners; and (3) burn #2 fuel oil and propane in all kiln and furnace burners and #2 fuel oil the Silicate Boilers. Excluding the fuel oil heater, which was depermitted, these scenarios have been built into the permit conditions and emission tables. Also, Imerys requested an alternative permitted operating scenario in which the silicates plant produces a magnesium silicates product rather than the calcium silicates product. The difference is that the lime system is not used for the magnesium silicates product. Criteria emissions are expected to be similar for both scenarios. These alternate operating scenarios were approved by the District.

Imerys subsequently modified its System 7 line through ATC/PTO 12105. In that permit Imerys requested it be allowed to burn ultra-low sulfur #2 diesel fuel (CARB diesel) for no more than 200 hours per year in the System 7 furnace and kiln should the availability of natural gas be curtailed. Hence, the fuel oil alternative operating scenario approved by the District excludes the System 7 kiln and furnace.

- 1.6.6 Compliance Certification: Part 70 permit holders must certify compliance with all applicable federally-enforceable requirements including permit conditions. Such certification must accompany each Part 70 permit application and be re-submitted annually on or before March 1st or on a more frequent schedule specified in the permit. Each certification must be signed by the “responsible official” of the owner/operator company whose name and address is listed prominently in the Part 70 permit. (see Section 1.6.9 below)
- 1.6.7 Permit Reopening: Part 70 permits are re-opened and revised if the source becomes subject to a new rule or new permit conditions are necessary to ensure compliance with existing rules. The permits are also re-opened if they contain a material mistake or the emission limitations or other conditions are based on inaccurate permit application data.
- 1.6.8 Hazardous Air Pollutants (HAPs): Part 70 permits also regulate emissions of HAPs from major sources through the imposition of maximum achievable control technology (MACT), where applicable. The federal PTE for HAP emissions from a source is estimated to determine MACT or any other rule applicability. (see Sections 4.13 and 5.5).
- 1.6.9 Responsible Official: The designated responsible official and their mailing address is:

Mr. Jim Murberger

DRAFT

Vice President and General Manager
Filtration & Additives North American Division
Imerys Filtration Minerals, Inc.
1732 North First Street, Suite 450
San Jose, CA 95112

2.0 Process Description

2.1. Process Summary

Imerys operates diatomaceous earth (DE) mining and processing facilities. Ore is processed into powders of various grades for uses such as filtration aids, fillers and biocatalyst carriers. Most of the ore is surface mined from lands adjacent to the plant, typically has about 40% to 45% moisture in situ and contains variable amounts of sulfur. Crude ore is initially crushed and screened using mobile equipment and stored in stockpiles by crude type designation. The crushed and screened crude is transported to the powder mills as needed using covered conveyors. Powder Mills production processes consist of varying combinations of crushing, milling, drying, calcining, conveying, classifying and packing. Other wet and dry processing of diatomite and other materials occurs on a smaller scale at the Synthetic Silicates Plant and various other areas of the facility. Production equipment includes equipment such as crushers, mills, boilers, furnaces, kilns, classifiers, packers, material handling equipment, storage bins, compressors, waste handling equipment, and stationary, emergency use internal combustion engines (ICEs).

- 2.1.1 Main Production: The facility consists of one primary production line in the Powder Mills, smaller ancillary processing systems, packing equipment, truck and railcar loading systems, waste handling systems and various support systems. Earth moving equipment hauls mined diatomite from the quarries to stockpiles adjacent to the mine. Mobile crushing and screening equipment pre-process the crude material for use in the processing lines. Water is used to control fugitive dust from storage piles. Mobile loading equipment and conveyors move the crushed DE from the storage piles to the crude bins. Bin loading emissions are controlled by the crushing plant ventilation baghouse (CRVBH).

The ore from the mobile plant is fed into the production line. Initially crushed crude is milled and dried in a current of heated air. The powder mill processing line 7 produces natural (uncalcined) and calcined DE. Throughout the plant, blowers, screws, bucket elevators and similar devices mill and convey the DE. Cyclones, preseparators, separators, reseparators, air sifters and similar equipment mill and separate product by density, size, configuration and DE waste. After drying, the natural powder is divided into fine and coarse grades and then bagged or directed to enclosed bulk rail cars or trailers. Some material from the Powder Mill, virgin DE or other virgin materials are milled, classified, chemically treated and/or used to make various other products in the ancillary smaller processing lines. DE is sold in bulk (via railcars or trucks) or in bags.

The System 7 product line underwent extensive modification starting in 2007 with the final PTO issued in March of 2014. The modified System 7 processing begins on the wet end with a new crude delivery system to transport crude material from the mine to the mill. A Cat 922 front loader transfers crude to a new dump hopper with a grizzly feeder. Fugitive dust is controlled by a water spray/fog dust suppression system. From the hopper, crude is transferred by transfer belts to a new bucket elevator. The bucket elevator transfers crude to modified and existing belt conveyors to fill six existing crude bins. The bucket elevator is fully enclosed and vents to the existing General Waste Baghouse (CRVBH). Existing and modified belt feeders are used to measure the amount of crude being fed to the system.

Crude from the crude bins is transferred onto a new common conveyor belt then the new BE 706 that feeds material to the processing equipment. The particles and moist air are dried, separated, and the product is collected. Exhaust is vented into the new 7 System Venturi Scrubber/Packed Bed Tower to control particulate matter and sulfur dioxide emissions. Reject material consisting

of heavy mineral particles like sand, chert, and consolidated DE is sent to Central Waste. As material is fed through the process, baghouses capture all particulate matter at a BACT standard not to exceed 0.005 gr/scf.

When the 7 System is not actively processing crude, the system may operate in a kiln bypass mode. The only equipment in operation during kiln bypass or kiln idle operating condition is the kiln burner and combustion blower and baghouse BH717 (District Device No. 109846). During Kiln Bypass operations, the kiln is placed on "slow turn" which is 1/4 revolution every hour to prevent warpage of the kiln shell. No crude is fed to the System during bypass.

Dry End Processing includes all processing after product is discharged from the kiln. Product is separated and collected into appropriate bins. All particulate emissions are controlled by baghouses meeting the BACT standard of 0.005 gr/scf.

The modified system includes a new automated packing circuit. Product collected in bins throughout dry end processing is pumped to one of two new hose stations. The hose stations allow product to be routed to one of eight new product silos or two existing bulk bins. Each product silo is equipped with a bin vent baghouse. From the product silos, product packed at various packing stations, or loaded directly into truck or rail cars.

- 2.1.2 Baghouse Operations: The production line at the Powder Mill, as well as the various specialty plants, has baghouses serving the DE production. The baghouses are generally used to capture DE material exhausted from the cyclones. Baghouses are also used to ventilate DE loading areas.
- 2.1.3 Waste Handling: Waste DE from the Powder Mills processes is sent to the Central Waste system where it is slurried and pumped to the mine. Initially, the dust is blown through pipelines to the central waste area into baghouses (General Waste and Preseparator waste). The baghouses discharge via covered chutes into a water tank with an agitator. Water is applied in the chutes to minimize the fugitive dust generated by the discharge of the material into the water. In addition, a dust truck with an enclosed container bed is used to empty central waste bins when the central waste system is overloaded. Fugitive dust from the loading of waste dust into the truck is minimized by connection of the truck to a vacuum line. The dust truck is driven to the waste dump in the mine and dumped by gravity. The dust truck and containers called "load lugger boxes" (about 2 – 3 yd³) are used to collect waste material. These boxes are hauled to the waste area of the mine and are dumped by gravity.

2.2. *Support Systems*

- 2.2.1 *Power Generation*: Electrical power for the Lompoc Plant is currently provided by Pacific Gas and Electric. The plant has one stand-by generator at the Powder Mills which is used in the event of a power outage. The generator is driven by a 200 bhp natural gas fired ICE. The plant also has an emergency water pump powered by a 199 bhp diesel engine used to pump flood water from the quarries in case of power outage to the two electric water pumps, and an emergency generator powered by a 250 hp diesel engine to provide emergency power to administrative offices.

2.3 Mining Activities

- 2.3.1 *Surface Mining.* Diatomaceous earth is surface mined from a number of quarries, the majority of which are located on properties adjacent to the plant. The material classified as ore is hauled from the quarries to stockpiles adjacent to the quarries. A front end loader transfers the raw crude ore to electrically powered mobile quarry crushing and screening equipment for pre-processing. The crushed and screened crude ore material is then classified by crude-type into storage piles, where it is then transferred by covered conveyor to the powder mill processing lines. All of the Lompoc facility's diesel-powered mobile mining equipment is exempt from permitting. Fugitive dust is generated during activities such as the initial extraction of the material from the ground, loading and unloading (into storage piles and then from the piles to conveyors), driving on unpaved roads, and wind erosion. Material which is not classified as ore is considered waste or over-burden and is taken to the on-site waste dumps.

2.4 Maintenance/Degreasing Activities

- 2.4.1 *Paints and Coatings:* Maintenance painting at the Lompoc Plant is conducted on an intermittent basis.
- 2.4.2 *Solvent Usage:* Solvents not used for surface coating thinning may be used at the plant for routine maintenance activities. Routine maintenance activities include activities such as parts cleaning in small cold solvent degreasers and wipe cleaning with rags.
- 2.4.3 *Abrasive Blasting:* Imerys uses portable abrasive blasting equipment. This equipment is currently exempt from permit and listed in Section 3.1.

2.5 Other Processes

Imerys asserts that no other processes exist that would be subject to permit other than that stated in this permit and the permit application.

DRAFT

This page left intentionally blank

3.0 Regulatory Review

This Section identifies the federal, state and local rules and regulations applicable to the Lompoc Plant.

3.1. *Rule Exemptions Claimed*

District Rule 202 (*Exemptions to Rule 201*): Imerys has requested a number of District permit exemptions under this rule. An exemption from permit, however, does not necessarily grant relief from any applicable prohibitory rule. The following exemptions were reviewed by the District and determined to be applicable:

- Section 202.D.3 for mine vehicles, cranes, forklifts and company automobiles as defined in H&SC 42310.
- Section 202.D.4 for trains used for transportation of freight.
- Section 202.D.8 and D.14 for a 3.5 bhp portable striper and other equipment used in maintenance painting activities.
- Section 202.F.1.d for one natural gas fired 200 bhp stationary emergency electrical power generator used exclusively for emergency electrical power generation that operate no more than 200 hrs/year and for which records of hours of operation per day and per year are maintained and available to the District upon request.
- Section 202.F.1.f for a gasoline fired 16 bhp ICE used to drive a portable air compressor; an 18 bhp propane-fired ICE used to drive a vacuum system; a 9 bhp gasoline-fired ICE used to drive a portable concrete mixer; eight 10.5 bhp diesel-fired ICEs used to power mobile quarry flood lights as ICEs rated at less than 20 bhp (six Amida, two Ingersoll-Rand); one 43 bhp ICE used to drive air blower; and one 30 bhp ICE used to drive an air compressor.
- Section 202.F.2 for 10 gasoline-fired and 4 diesel-fired ICEs used for miscellaneous plant operations. These 14 engines are non-road engines that have been registered under the California portable engine registration program (PERP). These engines are located at the stationary source, and are primarily used for maintenance. The engines are not essential to the day to day production operations. These non-road engines are considered Title 2 sources, and therefore not subject to Part 70 permit.
- Section 202.G.1.a for various water heaters, one natural gas fired 0.11 MMBtu/hr CAFA rotary kiln, and one experimental plant drier (0.3 MMBtu/hr), main kiln (1.5 MMBtu/hr) 6" kiln (0.2 MMBtu/hr), one 0.6 MMBtu/hr acid wash kiln, one 0.6 MMBtu/hr acid wash furnace, two 0.8 MMBtu/hr natural gas fired shrink wrap units, one 0.2 MMBtu/hr LPG-fired shrink wrap gun as combustion equipment with a maximum heat input less than 2 MMBtu fired exclusively on PUC natural gas and direct fired process heaters.
- Section 202.H for abrasive blasting equipment.

- Section 202.K.6 for barbecues used for on-site functions per H&SC 42310(d).
- Section 202.L.5 for a natural gas fired steam cleaner as equipment used exclusively for steam cleaning.
- Section 202.L.6 for various furnaces used exclusively for space heating.
- Section 202.L.9 for 7 “blow-off” booths for personal dust removal and the associated baghouse, 14 vacuum systems used to clean dust from the ground, a portable vacuum used to collect spilled material, a filter truck with a vacuum for cleaning dust from vehicle filters, as vacuum cleaning systems used exclusively for industrial, commercial or residential housekeeping purposes.
- Section 202.M.15 for various stationary and portable welding equipment.
- Section 202.N. as laboratory equipment (fume hoods and 2 baghouses) used by the Quality Control and Research lab equipment for chemical or physical analyses and bench scale equipment.
- Section 202.O.1 for a pellet plant extruder used to form wet DE into pellets as a press used exclusively for extruding minerals.
- Section 202.O.3 for various metal grinding, pressing, rolling and drawing equipment.
- Section 202.O.4 for wood working equipment with attached ventilation systems and sawdust containers.
- Section 202.P.11 for fire extinguisher training.
- Section 202.U.2.a for various degreasing equipment with aggregate surface area totaling less than 10 square feet.
- Section 202.V.2 for the #3 fuel Oil Tank, Silicates Day tank, and the Heavy Duty Garage (Diesel) Tank for storage of <40° API gravity fuel oil.
- Section 202.V.3 for oil totes to store unused lubricating oils and waste lubricating oils.
- Section 202.V.7 for three (3) gasoline storage tanks each having a capacity less than 250 gallons.
- Section 202.V.8 for a propane tank as storage of liquefied gases which do not exceed the Gas Processors Association specifications for maximum volatile sulfur content of commercial grade liquefied petroleum gas.
- Section 202.V.9.a. for four 93% sulfuric acid tanks and pumping equipment as tanks used exclusively for storage and dispensing of commercial grades of sulfuric acid.

3.2. *Compliance with Applicable Federal Rules and Regulations*

- 3.2.1 40 CFR Parts 51/52{*New Source Review (Non-attainment Area Review and Prevention of Significant Deterioration)*}: The Lompoc Plant was constructed and permitted prior to the applicability of these regulations. However, all permit modifications as of 1971 are subject to District NSR requirements. Compliance with District Regulation VIII (*New Source Review*) ensures that future modifications to the facility will comply with these regulations.
- 3.2.2 40 CFR Part 60 {*New Source Performance Standards*}: Subpart OOO establishes particulate matter standards for Nonmetallic Mineral Processing Plants such as the Imerys facilities. The subpart is applicable to crushers, grinding mills, screening operations, bucket elevators, belt conveyors, bagging operations, storage bins and enclosed truck or rail car loading stations; and control devices used to capture particulate matter emissions from such equipment as applicable. The subpart applies to facilities that commenced constructional, reconstruction, or modification after August 31, 1983. More stringent requirements apply to affected facilities that commenced constructional, reconstruction, or modification, after April 22, 2008. The chart below summarizes these requirements:

Emission Limits for Control Devices

Requirement	Time Frame	Limit	Test Method
Emission limit for control device that commenced constructional, reconstruction, or modification	Sep 1, 1983 to Apr 22, 2008	0.022 gr/dscf	Method 5 or 17
	After Apr 22, 2008	0.014 gr/dscf	Method 5 or 17
Opacity limit for control device commenced constructional, reconstruction, or modification	Sep 1, 1983 to Apr 22, 2008	7% opacity	Method 9
	After Apr 22, 2008	No Visible	Method 22

Note: See Section 4.10.3 and Table 9.1 for equipment subject to NSPS Subpart OOO at the Main Plant.

Emission Limits for Fugitives

Requirement	Time Frame	Limit	Test Method
Opacity limits for affected handling and processing equipment that not wet material processing ³ and not located inside a building that commenced construction, reconstruction, or modification	Sep 1, 1983 to Apr 22, 2008	10% opacity	Method 9
	After Apr 22, 2008	7% opacity	Method 9
Emission limits for affected handling and processing equipment located and enclosed inside a building that commenced construction, reconstruction, or modification	On and after Sep 1, 1983	7% opacity building opening(s) excluding vents ⁴	Method 9

- 3.2.3 40 CFR 60 Subpart UUU, {Standards of Performance for Calciners and Dryers in Mineral Industries}: This subpart applies to the System 7 calciner and furnace dryer particulate emissions (controlled by the 7 System Venturi Scrubber/Packed Bed Tower). The chart below summarizes the requirements:

NSPS Subpart UUU Summary

Requirement	Limit/Specific	40 CFR Citation
Emission limit for control device	0.04 gr/dscf	60.732(a)
Opacity limit without wet scrubber	10% (NA)	60.732(b)
Source Test for gr/dscf & opacity	timing, sampling, etc	60.732 to 60.8
Test method for emission limit	Method 5 +	60.736(b)(1)
Monitoring	Δp , scrub liquid flow	60.734(d)
Rkpg/Reporting Requirements	Δp , scrub liquid flow	60.735(a-d)

[PTO 12105]

- 3.2.4 40 CFR Part 61 {NESHAP}: Any demolition or renovation affecting asbestos containing materials must meet the requirements of 40 CFR 61 Subpart M (National Emission Standard for Asbestos).
- 3.2.5 40 CFR Part 63 {MACT}: This facility is subject to MACT standards Subpart ZZZZ. The revised National Emission Standard for Hazardous Air Pollutants (NESHAP) for reciprocating internal combustion engines (RICE) was published in the Federal Register on January 18, 2008 with amendments in 2010 and 2013. An affected source under the NESHAP is any existing, new, or reconstructed stationary RICE located at a major source or area source.

Existing Emergency Compression Ignition RICE. Three engines are subject to Subpart ZZZZ, the diesel fired 199 bhp Standby Lake Pump Engine (ID 8919), and the diesel fired 250 bhp Admin Building Standby Emergency Generator Engine (ID 387654), and

³ Wet material processing includes screening operations which removes unwanted material or which separates marketable fines from the product by a washing process which is designed and operated at all times such that the product is saturated with water. These operations and subsequent screening operations, bucket elevators and belt conveyors in the production line that process saturated materials up to the first crusher, grinding mill or storage bin in the production line are considered wet material processing and are exempt from Subpart OOO

⁴ Vents must meet control device limits.

the 200 bhp Powder Mills Emergency Natural Gas Engine (ID 8069) are subject to the following requirements:

- (1) Change the oil and filter every 500 hours of operation or annually, whichever comes first; and
- (2) Inspect the air cleaner every 1,000 hours of operation or annually, whichever comes first; and
- (3) Inspect all hoses and belts every 500 hours of operation or annually, whichever comes first.

3.2.6 40 CFR Part 64 {Compliance Assurance Monitoring}: This rule became effective on April 22, 1998. The Imerys Lompoc facility contains a significant number of emission units that are subject to the provisions of Part 64. These units are identified in section 4.11.3. Imerys' General Plant and System 7 CAM Plans provide the details of how the applicability determination for these units was made and the monitoring parameters that have been implemented. See Section 4.11.3 and permit condition 9.C.14 for additional detail.

3.2.7 40 CFR Part 70 {Operating Permits}: This Subpart is applicable to the Lompoc Plant. Table 3.1 lists the federally-enforceable District promulgated rules that are "generic" and apply to the Lompoc Plant. Table 3.2 lists the federally-enforceable District promulgated rules that are "unit-specific". These tables are based on data available from the District's administrative files and from Imerys's Part 70 Operating Permit application. Table 3.2 includes the adoption dates of these rules.

3.3. *Compliance with Applicable State Rules and Regulations*

3.3.1 Division 26. Air Resources {California Health & Safety Code}: The administrative provisions of the Health & Safety Code apply to this facility and will be enforced by the District. These provisions are District-enforceable only.

3.3.2 California Administrative Code Title 17 [Section 93115]: These sections specify emission, operational, monitoring, and recordkeeping requirements for stationary diesel-fired compression ignition engines rated over 49 bhp. The Prime Diesel Engine (APCD DevNo 391449), emergency/standby lake pump engine and admin building generator at the Lompoc Plant are required to conform to these standards. Compliance will be assessed through onsite inspections and reporting. This title also specifies the standards by which abrasive blasting activities are governed throughout the State. All abrasive blasting activities at the Lompoc Plant are required to conform to these standards. Compliance will be assessed through onsite inspections. These standards are District-enforceable only, however, CAC Title 17 does not preempt enforcement of any SIP-approved rule that may be applicable to abrasive blasting activities.

3.3.3 AB2588: Imerys is in the process of completing an updated Air Toxics Emission Inventory Plan (ATEIP) and Air Toxics Emission Inventory Report (ATEIR) under the AB2588 "Hot Spots" program. These documents will reflect the entire Imerys Filtration Minerals, Inc. Stationary Source, including the 7 System modernization project. Once approved, a health risk assessment for the entire facility will be performed in accordance

with Air Toxic "Hot Spots" risk procedures.

3.4. Compliance with Applicable Local Rules and Regulations

- 3.4.1 Applicability Tables: In addition to Tables 3.1 and 3.2, Table 3.3 lists the non-federally enforceable District promulgated rules that apply to the Lompoc Plant.
- 3.4.2 Rules Requiring Further Discussion: The following is a rule-by-rule evaluation of compliance for the Lompoc Plant:

Rule 301 - Circumvention: This rule prohibits the concealment of any activity that would otherwise constitute a violation of Division 26 (Air Resources) of the California H&SC and the SBCAPCD rules and regulations. To the best of the District's knowledge, Imerys is operating in compliance with this rule.

Rule 302 - Visible Emissions: This rule prohibits the discharge from any single source any air contaminants for which a period or periods aggregating more than three minutes in any one hour which is as dark or darker in shade than a reading of 1 on the Ringlemann Chart or of such opacity to obscure an observer's view to a degree equal to or greater than a reading of 1 on the Ringlemann Chart. Sources subject to this rule include: the CHEAF, 7 System Venturi Scrubber/Packed Bed Tower baghouses, two boilers, various piston IC engines, and baghouses and process handling equipment installed before 1983. Improperly maintained units have the potential to violate this rule. Compliance will be ensured through the use of work practices, visible emissions monitoring and records. See permit condition 9.B.2 for the requirements to be implemented to ensure compliance with this rule.

Rule 303 - Nuisance: Rule 303 prohibits any source from discharging air contaminants in such quantities which cause injury, detriment, nuisance or annoyance to any considerable number of persons. Current District policy requires 5 verifiable complaints in 24 hours from 5 or more different households or 10 verifiable complaints from 10 or more different households over a ten-day period to conclude that a public nuisance condition exists.

From April 2000 up to March 2007, the District received forty-four (44) citizen complaints regarding emissions from the Imerys facility. From March 2007 until September 2015, the District received thirty-one (31) citizen complaints regarding emissions from the Imerys facility. Twenty-nine (29) of those complaints concerned dust emissions and two (2) of the complaints concerned odors. The District has not received sufficient complaints in reference to any one incident to find Imerys in violation of Rule 303.

Rule 304 - Particulate Matter, Northern Zone: The Lompoc Plant is considered a Northern Zone source. This rule prohibits the discharge to atmosphere, any particulate matter in excess of 0.3 grains per cubic feet of gas at standard conditions. Sources subject to this rule include the 7 System Venturi Scrubber/Packed Bed Tower, the baghouses, two boilers and various IC engines at the plant. Improperly maintained units have the potential to violate this rule. Compliance will be ensured through the use of source testing, work practices, a *Diesel and Gasoline Engine NO_x and Particulate Matter Maintenance Plan*, and visible emissions monitoring and records.

Rule 306 - Dust and Fumes, Northern Zone: The Lompoc Plant is considered a Northern Zone source. This rule prohibits the discharge to atmosphere from any source particulate matter in excess of specified mass emission rates in pounds per hour. The maximum emission rates are determined as a function of process weight rate, measured in pounds per hour, and are listed in Table 306(a) of the rule. Sources subject to this rule include: the 7 System Venturi Scrubber/Packed Bed Tower, the baghouses, conveyor dryer, the two boilers and various IC engines at the plant. Improperly maintained units have the potential to violate this rule. Compliance will be ensured through the use of source testing, work practices, a *Diesel and Gasoline Engine NO_x and Particulate Maintenance Plan*, and visible emissions monitoring and records.

Rule 309 - Specific Contaminants: Under Section "A", no single source may discharge sulfur compounds and combustion contaminants in excess of 0.2 percent as SO₂ (by volume) and 0.3 gr/scf (at 12% CO₂) respectively. In addition, a person shall not build, erect, install, or expand any non-mobile fuel burning equipment unit unless the discharge into the atmosphere will not exceed 200 pounds per hour of sulfur compounds or 140 pounds per hour of nitrogen oxides. The furnaces and kilns are not considered a single fuel burning unit because each unit (furnace or kiln) is capable of operating independently and producing useful heat on its own. Equipment subject to this rule include the 7 System Venturi Scrubber/Packed Bed Tower, baghouse (Pellet Plant Hot Baghouse), two boilers, and various IC engines at the Lompoc Plant. Compliance will be ensured through the use of source testing, work practices, visible emissions observations and records. Due to the variation of the natural sulfur content in the process the potential to exceed the SO_x emissions standard exists. Condition 9.C.5, Combustion Equipment - Line 7 Kiln and Furnace addresses SO_x compliance.

Rule 310 - Odorous Organic Compounds: This rule prohibits the discharge of H₂S and organic sulfides that result in a ground level impact beyond the property boundary in excess of either 0.06 ppmv averaged over 3 minutes and 0.03 ppmv averaged over 1 hour. No measured data exists to confirm compliance with this rule. However, since Imerys processes primarily involve combustion of elemental sulfur, emissions of odorous organic sulfur compounds are not expected to occur at the plant.

Rule 311 - Sulfur Content of Fuels: This rule limits the sulfur content of fuels combusted at the Lompoc Plant to 0.5 percent (by weight) for liquids fuels and 50 gr/100 scf (calculated as H₂S) {or 796 ppmvd} for gaseous fuels. Compliance will be verified through documentation from fuel suppliers or periodic analysis.

Rule 317 - Organic Solvents: This rule sets specific prohibitions against the discharge of emissions of both photochemically and non-photochemically reactive organic solvents (40 lb/day and 3,000 lb/day respectively). Solvents may be used at the plant during normal operations for degreasing by wipe cleaning and for use in paints and coatings in maintenance operations. There is the potential to exceed the limits under Section B.2 during significant surface coating activities. Imerys is required to maintain records to ensure compliance with this rule.

Rule 321 - Solvent Cleaning Operations: This rule sets equipment and operational standards for degreasers using organic solvents. Imerys has stated that their solvent cleaning operations fall under the exemptions of this rule.

Rule 322 - Metal Surface Coating Thinner and Reducer: This rule prohibits the use of photochemically reactive solvents for use as thinners or reducers in metal surface coatings. Imerys is required to maintain records during maintenance operations to ensure compliance with this rule.

Rule 323.1 - Architectural Coatings: This rule sets standards for the application of surface coatings and standards for many types of architectural coatings. The primary coating standard that will apply to the plant is for Industrial Maintenance Coatings which has a limit of 250 grams ROC per liter of coating, as applied. Imerys is required to comply with the Administrative requirements under Section F.

Rule 324 - Disposal and Evaporation of Solvents: This rule prohibits any source from disposing of more than one and a half gallons of any photochemically reactive solvent per day by means that will allow the evaporation of the solvent into the atmosphere. Imerys will be required to maintain records to ensure compliance with this rule.

Rule 326 - Storage of Reactive Organic Liquids: This rule applies to equipment used to store reactive organic compound liquids with a vapor pressure greater than 0.5 psia. The plant has several tanks of organic liquid, but they are all exempt from this rule. In particular, the fuel oil tanks, propane tank and the remaining tanks are exempt under Sections B.1.b, B.7 and B.1.a, respectively.

Rule 329 - Cutback and Emulsified Asphalt Paving Materials: This rule details the applicability and standards for the application of cutback emulsified asphalt paving materials. Imerys occasionally uses this material for road and parking lot maintenance.

Rule 330 - Surface Coating of Metal Parts and Products: This rule sets standards for the use of surface coatings on metal parts and products. However, all Imerys coating operations fall within Rule 323 or Rule 339. Accordingly, no coating operations are expected to be subject to this rule.

Rule 333 - Control of Emissions from Reciprocating IC Engines: This rule applies to all engines with a rated brake horsepower of 50 or greater that are fueled by liquid or gaseous fuels. Except for the Prime Diesel Water Pump Engine (Dev ID 391449), all of the engines at the facility are either emergency standby engines, or they are permit-exempt portable engines. Rule 333 sets emission standards for, NO_x, ROC, CO and requires an engine inspection and maintenance plan including quarterly NO_x and CO emission testing using a portable analyzer. Permit Conditions 9.C.1 and 9.D.2 satisfies these requirements.

Rule 342 - Control of Oxides of Nitrogen from Boilers, Steam Generators and Process Heaters: This rule sets emission standards for external combustion units with a rated heat input greater than 5.0 MMBtu/hr. The Lompoc Plant has two boilers with ratings greater than this threshold. Both are equipped with dual fuel burners capable of firing on natural gas or fuel oil. Because Boiler #1 is limited by permit to an annual heat input less than 9 billion Btu, it is exempt from the mass emission limits, but must be tuned annually. Boiler #2 is not limited to 9 billion Btu/year and must meet NO_x limits of 30 ppmv and 0.036 lb/MMBtu of heat input when fired on natural gas. In addition, Boiler #2 may not exceed carbon monoxide emissions of 400 ppmv. Compliance is ensured by the annual tuning of Boiler #1 and biennial testing of Boiler #2. Boiler #2's fuel-oil-fired mode is

limited to less than 192 hours per year which exempts it from the liquid-fuel-fired 40 ppmv and 0.052 lb/MMBtu NO_x limits.

Rule 353 - Adhesives and Sealants: This rule limits the use of adhesives, adhesive bonding primers, adhesive primers, sealants and sealant primers. Imerys's use of these materials is very limited, and as such, they are expected to operate within the limits of the rule.

Rule 361 – Small Boilers, Steam Generators and Process Heaters: This rule sets emission standards for external combustion units with a rated heat input greater than 2.0 MMBtu/hr and less than 5.0 MMBtu/hr. Section B.1a of Rule 361 exempts combustion equipment where the products of combustion come into direct contact with the materials to be heated. Two external combustion units at the Imerys Lompoc Plant meet this exemption criteria, and are not subject to Rule 361 requirements.

Rule 505 - Breakdown Conditions: This rule describes the procedures that Imerys must follow in order to seek regulatory relief when a breakdown condition occurs to any emissions unit associated with the Lompoc Plant. A breakdown condition is defined as an unforeseeable failure or malfunction of (1) any air pollution control equipment or related operating equipment which causes a violation of an emission limitation or restriction prescribed in the District Rules and Regulations, or by State law, or (2) any in-stack continuous monitoring equipment, provided such failure or malfunction:

- a. Is not the result of neglect or disregard of any air pollution control law or rule or regulation;
- b. Is not the result of an intentional or negligent act or omission on the part of the owner or operator;
- c. Is not the result of improper maintenance;
- d. Does not constitute a nuisance as defined in Section 41700 of the Health and Safety Code;
- e. Is not a recurrent breakdown of the same equipment.

Rule 603 - Emergency Episode Plans: Section "A" of this rule requires the submittal of Stationary Source Curtailment Plan for all stationary sources that can be expected to emit more than 100 tons per year of hydrocarbons, nitrogen oxides, carbon monoxide or particulate matter. Imerys submitted such a plan on September 29, 2000.

Rule 803 - Prevention of Significant Deterioration (PSD): The PSD provisions apply to attainment pollutants and their precursor pollutants. This rule also applies to total suspended particulates (PM). Santa Barbara County is in attainment for the federal PM₁₀ ambient air quality standards. The precursor pollutants of PM₁₀ are NO_x, ROCs and oxides of sulfur (SO_x).

Rule 810 – Federal Prevention of Significant Deterioration: This rule was adopted January 20, 2011 to incorporate the federal Prevention of Significant Deterioration rule requirements into the District's Rules and Regulations by reference. .

Through the process of issuing PTO 12105 for the modification to System 7 (issued March 1, 2014) the District assessed the applicability of Federal PSD, offset, modeling and monitoring facility emission thresholds. The results of this analysis showed that the facility and 7 System modification project did not trigger PSD, offset or monitoring permitting requirements as the emission increases for all pollutants are below their respective significance thresholds.

The hourly CO potential to emit emissions did trigger the Air Quality Impact Analysis (AQIA) requirements of Rule 803. Total CO emissions from the 7 System were modeled using ISC-ST3 software and combined with the ambient background CO concentrations. Total concentrations were below the eight hour and one hour California State Ambient Air Quality Standards (AAQS).

3.5. *Compliance History*

This section contains a summary of the compliance history for this facility and was obtained from documentation contained in the District's Administrative file.

Variances: Imerys has sought variance relief per Regulation V since the last Part 70 renewal permit was issued in 2016.

Case: 2016-44-I/2016-45-N/2017-14-I: This was an Interim/90 day variance from District Rule 206, Conditions 9.C.7(c)(viii) and 9.C.12(a)(ii) of PTO 5840-R5 and was granted on October 19, 2017. This was necessitated when it was discovered that during a source test equipment setup, there was insufficient airflow to conduct the source test on baghouse 901. The variance was effective until March 31, 2017. A part necessary to fix the flow rate was late being delivered, which triggered variance 2017-14-I. Shortly after that variance was issued the part arrived and which allowed Imerys to be back into compliance.

Case: 2017-25-I: This was an Interim/90 day variance from District Rules 206, Conditions 9.C.6(a)(i) and 9.C.6(c)(xiii) of Part 70/Permit to Operate 5840-R5. This was necessitated when the daily portable analyzer indicated an exceedance, measured at 5.6 lb/hr NO_x (limit 5.55 lb/hr). The variance was effective until January 15, 2018, after which Imerys was back in compliance.

Violations: The last facility inspection occurred on November 11, 2018. The inspector reported that no violations of District rules or permit conditions were found. The following violations have been documented since the last Part 70 permit renewal in 2016:

VIOLATION TYPE	NUMBER	ISSUE DATE	DESCRIPTION OF VIOLATION
NOV	10997	11/2/2015	Exceeding the PM emission rate during September 18,19, 2015 Air Toxics Emission Testing of Celpure 370 scrubber.
NOV	10998	8/4/2016	Exceeding the airflow on Baghouse 789 during the June 22, 2016 source test.
NOV	10999	8/29/2016	Failure to conduct the quarterly Method 9 Visible Emission Evaluation during the first quarter of 2016 on the Mortar Plant Vent Baghouse.

VIOLATION TYPE	NUMBER	ISSUE DATE	DESCRIPTION OF VIOLATION
NOV	11125	8/29/2016	Failing to maintain 90% data recovery efficiency for the 7 System hourly SOx emission reporting.
NOV	11137	2/16/2017	Failing to retest SOx within 45 minutes per the System 7 Portable Analyzer Monitoring Plan.
NOV	11234	10/15/2017	Failing to conduct portable analyzer monitoring of the 7 System Venturi Scrubber/Packed Bed Tower exhaust within 45 minutes of an exceedance.
NOV	11350	5/31/18	Failure to complete Daily Portable Analyzer Testing on 5/23/18.

Significant Historical Hearing Board Actions: During the 1989 reevaluation of this permit, the owner of the facility at that time, Manville Sales Corporation, appealed the permit to the District Hearing Board. The major objections stated by Manville on the permit were:

- source testing methods, frequency, plan and reporting requirements
- continuous parameter monitoring requirements for baghouses & CHEAFs
- regulation of mining operations
- emission limits based on assumptions other than prohibitory rule emission standards
- monitoring, recordkeeping, and reporting requirements

The District filed a response to the petition on November 11, 1989. Negotiations commenced and the hearing was continued. The District and Manville thereafter negotiated changes to the permit which were approved by the District Hearing Board. These included:

- limit “data, specifications and documented assumptions” to what is in the Engineering Evaluation,
- emission limits based on the applicable limits in Rules 306 and 309,
- delete the parameter monitoring requirements (baghouses & CHEAFs),
- delete the requirements to shutdown quarry operations during wind over 30 mph,
- grant the full Rule 309 limit for each equipment item rather than each stack,
- change information in the Equipment Description and delete proprietary information,
- delete discussion regarding nuisance in Engineering Evaluation, and
- revise the NEI table.

The permit was reissued on April 4, 1990 with the changes listed above.

Table 3.1 Generic Federally Enforceable District Rules

Generic Requirements	Affected Emission Units	Basis for Applicability	Adoption Date
<u>RULE 101</u> : Compliance by Existing Installations	All emission units	Emission of pollutants	June 1981
<u>RULE 102</u> : Definitions	All emission units	Emission of pollutants	June 21, 2012
<u>RULE 103</u> : Severability	All emission units	Emission of pollutants	October 23, 1978
<u>RULE 201</u> : Permits Required	All emission units	Emission of pollutants	June 19, 2008
<u>RULE 202</u> : Exemptions to Rule 201	Applicable emission units	Insignificant activities/emissions, per size/rating/function	August 25, 2016
<u>RULE 203</u> : Transfer	All emission units	Change of ownership	April 17, 1997
<u>RULE 204</u> : Applications	All emission units	Addition of new equipment of modification to existing equipment.	August 25, 2016
<u>RULE 205</u> : Standards for Granting Permits	All emission units	Emission of pollutants	April 17, 1997
<u>RULE 206</u> : Conditional Approval of Authority to Construct or Permit to Operate	All emission units	Applicability of relevant rules	October 15, 1991
<u>RULE 207</u> : Denial of Applications	All emission units	Applicability of relevant rules	October 23, 1978
<u>RULE 208</u> : Action on Applications – Time Limits	All emission units. Not applicable to Part 70 permit applications.	Addition of new equipment of modification to existing equipment.	April 17, 1997
<u>RULE 212</u> : Emission Statements	All emission units	Administrative	October 20, 1992
<u>RULE 301</u> : Circumvention	All emission units	Any pollutant emission	October 23, 1978
<u>RULE 302</u> : Visible Emissions	All emission units	Particulate matter emissions	June 1981
<u>RULE 303</u> : Nuisance	All emission units	Emissions that can injure, damage or offend.	October 23, 1978
<u>RULE 304</u> : PM Concentration – North Zone	Each PM source	Emission of PM in effluent gas	October 23, 1978
<u>RULE 306</u> : Dust and Fumes – North Zone	All emission units	Emissions of particulate matter	August 1989
<u>RULE 309</u> : Specific Contaminants	All emission units	Combustion contaminants	October 23, 1978
<u>RULE 311</u> : Sulfur Content of Fuel	All combustion units	Use of fuel containing sulfur	October 23, 1978

Generic Requirements	Affected Emission Units	Basis for Applicability	Adoption Date
<u>RULE 317</u> : Organic Solvents	Emission units using solvents	Solvent used in process operations.	October 23, 1978
<u>RULE 321</u> : Solvent Cleaning Operations	Emission units using solvents	Solvent used in process operations.	June 21, 2012
<u>RULE 322</u> : Metal Surface Coating Thinner and Reducer	Emission units using solvents	Solvent used in process operations.	October 23, 1978
<u>RULE 323</u> : Architectural Coatings	Paints used in maintenance and surface coating activities for paints made before Jan 1, 21015	Application of architectural coatings.	November 15, 2001
<u>RULE 323.1</u> : Architectural Coatings	Paints used in maintenance and surface coating activities for paints made on or after Jan 1, 2015	Application of architectural coatings.	June 19, 2014
<u>RULE 324</u> : Disposal and Evaporation of Solvents	Emission units using solvents	Solvent used in process operations.	October 23, 1978
<u>RULE 353</u> : Adhesives and Sealants	Emission units using adhesives and sealants	Adhesives and sealants use.	June 21, 2012
<u>RULE 505 SECTIONS A, B1, D</u> : Breakdown Conditions	All emission units	Breakdowns where permit limits are exceeded or rule requirements are not complied with.	October 23, 1978
<u>RULE 603</u> : Emergency Episode Plans	Stationary sources with PTE greater than 100 tpy	Imerys Lompoc PTE is greater than 100 tpy.	June 15, 1981
<u>REGULATION VIII</u> : New Source Review	All emission units	Addition of new equipment of modification to existing equipment. Applications to generate ERC Certificates.	August 25, 2016
<u>RULE 810</u> : Federal Prevention of Significant Deterioration	All emission units.	Sources subject to any requirement under 40 Code of Federal Regulations, Part 52, Section 52.21.	June 20, 2013
<u>REGULATION XIII (RULE 1301)</u> : General Information for Part 70 Operating Permits	All emission units		August 25, 2016
<u>REGULATION XIII (RULES 1302 - 1305)</u> : Part 70 Operating Permits	All emission units		Rules 1302 and 1305 November 9, 1993; 1302 and 1304 Jan 1, 18, 2001.

Table 3.2 Unit-Specific Federally Enforceable District Rules

Unit-Specific Requirements	Affected Emission Units	Basis for Applicability	Adoption Date
<u>RULE 326</u> : Storage of Reactive Organic Compounds	Misc tanks including fuel oil and propane tanks	Stores ROCs with vapor pressure greater than 0.5 psia	January 18, 2001
<u>RULE 329</u> : Cutback Asphalt Paving Materials	Maintenance and paving of roads the facility	Use of cutback asphalt for paving	February 25, 1992
<u>RULE 333</u> : Control of Emissions from Reciprocating Internal Combustion Engines	Prime Diesel Water Pump Engine	Rated greater than 49 hp and permitted for continuous use.	June 19, 2008
<u>RULE 342</u> : Control of Oxides of Nitrogen from Boilers, Steam Generators and Process Heaters	Boiler #1 and Boiler #2	Rated greater than 5 MMBtu/hr	April 17, 1997
<u>RULE 360</u> : Emissions of Oxides of Nitrogen from Large Water Heaters and Small Boilers	Facility hot water heaters.	Rated greater than or equal to 75,000 Btu/hr and up to less than or equal to 2 MMBtu/hr	March 15, 2018
<u>RULE 901</u> : New Source Performance Standards (NSPS)	Subpart OOO: Crushers, powder mills, screening operations, bucket elevators, belt conveyors, bagging operations, storage bins and enclosed truck or rail car loading stations and associated baghouses; Subpart UUU: System #7 kiln and furnace dryer particulate emissions (controlled by the 7 System Venturi Scrubber/Packed Bed Tower)	Subpart OOO, UUU	April 28, 2009 September 20, 2010

Table 3.3 Non-Federally Enforceable District Rules

Requirement	Affected Emission Units	Basis for Applicability	Adoption Date
<u>RULE 210</u> : Fees	All emission units	Administrative	March 17, 2005
<u>RULE 310</u> : Organic Sulfides	All emission units.	Odorous sulfide emissions	January 12, 1976
<u>RULE 352</u> : Natural Gas-Fired Fan-Type Central Furnaces and Small Water Heaters	All emission units,	Rated less than 75,000 Btu/hr	October 20, 2011
<u>RULES 501-504</u> : Variance Rules	All emission units.	Administrative	October 18, 1971
<u>RULE 505 SECTIONS B2, B3, C, E, F, G</u> : Breakdown Conditions	All emission units.	Breakdowns where permit limits are exceeded or rule requirements are not complied with.	October 23, 1978
<u>RULES 506-519</u> : Variance Rules	All emission units.	Administrative	August 14, 1978

4.0 Engineering Analysis

4.1. General

The engineering analyses performed for this permit were limited to the review of:

- ☞ facility process flow diagrams
- ☞ emission factors and calculation methods for each emissions unit
- ☞ emission control equipment (including RACT, BACT, NSPS, NESHAP, MACT)
- ☞ emission source testing, sampling, CEMS, CAM
- ☞ process monitors needed to ensure compliance

Unless noted otherwise, default ROC/THC reactivity profiles from the District's document titled "*VOC/ROC Emission Factors and Reactivities for Common Source Types*" dated 7/13/98 (ver 1.1) was used to determine non-methane, non-ethane fraction of THC.

4.2. Stationary Combustion Sources

- 4.2.1 **General:** The stationary combustion sources associated with the Lompoc Plant consist of boilers, kilns, furnaces, and internal combustion engines. Primary power to the plant is currently supplied by Pacific Gas and Electric (PG&E). Natural gas is currently supplied by the Southern California Gas Company. These units are permitted to use various fuel oils based on the original permit (fuel oil #6) or minor modifications to the part 70 permit (fuel oils #2, #4 and Propane).

External Combustion Equipment - The Lompoc Plant is permitted to operate:

Facility	Name	Device ID	MMBtu/hr
Silicates	Boiler #1	81	15.5
Silicates	Boiler #2	82	23.0
Silicates	Conveyer Dryer	143	45.0
Silicates	Flash Dryer	140	17.5
Pellet Production	Pellet Plant Dryer	5843	4.5
Pellet Production	Pellet Plant Kiln	5844	4.4
Line 7	Line 7 Kiln	103370	50.0
Line 7	Line 7 Furnace	103371	45.0

Internal Combustion Equipment - All internal combustion units that service the main plant, except the Prime Diesel Water Pump Engine (Dev No. 391449), are exempt from permitting. These include: Powder Mills Emergency Natural Gas ICE (Dev. No. 8069), the Emergency Lake Diesel Engine (ICE (Dev. No. 8919) and the Admin Building Emergency Generator (Dev No. 387654). Table 10.2 lists these exempt units with estimated emissions.

4.2.2 Emission Factors:

External Combustion Equipment (Boiler #1) - The federally enforceable NO_x emission factor for boiler #1, shown in Table 5.2, is based on Rule 309.E limits (140 lb/hr) while fired on PUC gas or fuel oil #6. The ROC, CO, and PM emission factors while fired on PUC gas come from USEPA AP-42 Tables 1.4-1 and 1.4-2 and are District-only enforceable. The NO_x, ROC, CO, and PM emission factors while fired on fuel oil come from USEPA AP-42 Tables 1.3-1 and 1.3-2. The ROC factor was adjusted by 0.5 for PUC gas, and by 0.79 for fuel oil #2 and #6. The PM emission factor was derived from the PM₁₀ factor by using a PM/PM₁₀ ratio of 1.0. The SO_x emission factor is based on mass balance using a total sulfur content of 80 ppmv while fired on PUC gas, 0.5% by weight sulfur for fuel oil #6, and 0.05% by weight sulfur for fuel oil #2.

External Combustion Equipment (Boiler #2) - The NO_x, ROC, SO_x, CO, and PM emission factors while fired on PUC gas or fuel oil #6 are based on source test results completed per ATC 9240 - 02. The NO_x, ROC, CO, and PM emission factors while fired on fuel oil #2 come from USEPA AP-42 Tables 1.3-1 and 1.3-2. The ROC factor was adjusted by 0.79 for fuel oil #2. The PM emission factor was derived from the PM₁₀ factor by using a PM/PM₁₀ ratio of 1.0. The SO_x emission factor is based on mass balance using a total sulfur content of 80 ppmv while fired on PUC gas, 0.5% by weight sulfur for fuel oil #6, and 0.05% by weight sulfur for fuel oil #2.

External Combustion Equipment (Silicates Conveyor and Flash Dryer) - There are federally enforceable mass emission rate limits for NO_x and SO_x. The NO_x emission factor for the Silicates Conveyor and Flash Dryer, shown in Table 5.2, is based on Rule 309.E limits (140 lb/hr) while fired on PUC gas. The SO_x emission factor is based on mass balance using a total sulfur content of 797 ppmv while fired on PUC gas. There are no emissions associated with ROC, CO, or PM/PM₁₀ from these units. There are no District-only enforceable limits on these units.

External Combustion Equipment (Kilns and Furnaces) – System #7 – Exhaust from the System #7 kiln and furnace is controlled by the 7 System Venturi Scrubber/Packed Bed Tower - The NO_x emissions from the Venturi Scrubber/Packed Bed Tower are equal to the NO_x BACT determination of 5.55 lb/hr combined NO_x emissions for both the furnace and kiln. This is the same permitted NO_x emission limit from the combined operations of the furnace and kiln as permitted in ATC 12105-11. Originally, the NO_x emissions were calculated based on separate emission factors for the furnace and kiln. Due to the complexities and uncertainties of source testing the furnace burner, which uses kiln exhaust as pre-heated combustion air, a revised NO_x BACT performance standard of 5.55 lb/day combined NO_x emissions was established.

The ROC emissions from the Venturi Scrubber/Packed Bed Tower are equal to the ROC BACT determination of 2.63 lb/hr. Originally, the ROC emissions were calculated based on USEPA AP-42 natural gas combustion emission factors for both the furnace and the kiln. Source testing showed elevated ROC emissions, and the ROC emission limits were revised to reflect a total stack limit for the Venturi Scrubber/Packed Bed Tower .

The CO emissions from the Venturi Scrubber/Packed Bed Tower are limited to 27.00 lb/hr, which is equal to the maximum CO emissions found during the September 2011 source testing (26.28 lb/hr) plus a small adjustment factor. Similar to the ROC emissions, the CO emissions were originally calculated based on AP-42 natural gas

combustion emission factors for both the furnace and the kiln. Source testing showed elevated CO emissions, and the CO emission limit was revised to reflect a total stack limit for the Venturi Scrubber/Packed Bed Tower .

The SO₂ emissions from the Venturi Scrubber/Packed Bed Tower are derived from an emission factor based on the Venturi Scrubber/Packed Bed Tower manufacturer's stack SO₂ emission guarantee of 0.05 lbs/minute (3 lb/hour).

The PM/PM₁₀ emissions from the Venturi Scrubber/Packed Bed Tower are limited to 4.00 lb/hr, which is equal to the maximum PM emission rate found during the August 2013 source testing (3.96 lb/hr) plus a small adjustment factor to provide a margin of safety. For permitting purposes, Imerys has assumed that the PM/PM₁₀ ratio is 1:1.

External Combustion Equipment (Kiln and Furnace Pilots) - The federally enforceable NO_x, SO_x, CO, ROC, and PM emission factors for the kiln and furnace pilots, shown in Table 5.2, come from USEPA AP-42 Tables 1.4-1 and 1.4-2.

External Combustion Equipment (Pellet Plant Dryer and Kiln) - The federally enforceable NO_x, CO, ROC, and PM emission factors for the Pellet Plant dryer and kiln, shown in Table 5.2, come from USEPA AP-42 Tables 1.4-1 and 1.4-2 for external combustion equipment fired on natural gas. The SO_x emission factor is based on mass balance.

Internal Combustion Equipment –The Admin Building Emergency Standby Engine, Emergency Lake Pump engine, and Prime Diesel Water Pump Engine were certified with emission rates below the applicable standard for that engine under EPA's non-road emission standards (40 CFR 89.112). The applicable emission standards were used as the emission factors for these engines with the following exceptions.

- SO_x emission factor was calculated using mass based CARB diesel sulfur limits.
- The Emergency Lake Pump Engine was subject to a combined NO_x_HC emission standard. This emission rate was split 95% for NO_x and 5% for HC (ROC) per ARB guidance.
- The Prime Diesel Water Pump Engine NO_x, ROC and CO emission factors were increase by 50% with a not-to-exceed in use adjustment per District policy for prime in use engines.

Emission estimates were then determined by the following equations:

$$\begin{aligned} E1, \text{ lb/day} &= \text{Engine Rating (bhp)} * \text{EF (g/bhp-hr)} * \text{Daily Hours (hr/day)} * (\text{lb}/453.6 \text{ g}) \\ E2, \text{ tpy} &= \text{Engine Rating (bhp)} * \text{EF (g/bhp-hr)} * \text{Annual Hours (hr/yr)} * (\text{lb}/453.6 \text{ g}) * \\ &\quad (\text{ton}/2000 \text{ lb}) \end{aligned}$$

4.2.3 Emission Controls:

- 4.2.3.1 *External Combustion Equipment (Boiler #1)* - Boiler #1 is an uncontrolled 15,500 MMBtu/hr Combustion Engineering Model VP unit permitted to burn natural gas, fuel oil #2 and fuel oil #6. It is restricted by permit to burn oil no more than 192 hours per year (cumulative for #2 and #6). In addition, it is limited to 9 billion Btu/year of heat input.

4.2.3.2 *External Combustion Equipment (Boiler #2)* - Boiler #2 is a 23,000 MMBtu/hr Nebraska Model NS-B-32-Economizer unit equipped with a low-NO_x burner. It is permitted to burn both natural gas and fuel oil #2 and #6. The low NO_x burner allows this boiler to comply with the Rule 342.D.1 NO_x concentration limit of 30 ppmv and emission rate of 0.036 MMBtu/hr. The oil-fire mode is exempt from Rule 342 emission limits because Imerys accepted an ATC condition limiting operation on oil (168 hours/calendar year) to periods of natural gas curtailment or testing. (Rule 342.B.2).

4.2.3.3 *External Combustion Equipment (Silicates Conveyor and Flash Dryer)* - The Silicates Conveyor Dryer and the Silicates Flash Dryer are uncontrolled for NO_x. Although typically fired on PUC-quality gas, there is no federal requirement limiting Imerys to this fuel. Imerys may burn fuel with sulfur content as high as 797 ppmv, hence the 0.137 MMBtu emission factor in Table 5.2.

4.2.3.4 *External Combustion Equipment (Kilns and Furnaces)* -

7 System. Emissions from the modified System 7 are controlled by a 7 System Venturi Scrubber/Packed Bed Tower absorber scrubber, baghouses, and bin vents. The Scrubber controls emissions from the kiln and furnace. All of the dust sources are ventilated to baghouses or the 7 System Venturi Scrubber/Packed Bed Tower.

The Scrubber uses a venturi followed by a cyclonic separator and packed tower absorber system. The system removes both particulate matter and sulfur dioxide. The throat of the Venturi is adjustable by the means of an opposing (bomb bay type) blade which is controlled by an electric motor driven actuator. The opposing blades allow variation in flow while maintaining constant pressure drop. The dust and some sulfur dioxide are captured by the liquid droplets which are atomized by the high velocity through the throat area of the Venturi.

The exhaust from the Venturi exits via a flooded elbow into the downstream cyclonic separator. The droplets enter the cyclonic separator tangentially and are removed by the centrifugal force produced. The elbow and separator also aid in removal of particulate by creating secondary contact zones. The cleaned exhaust passes through a chimney tray separator prior to entering the attached Gas Absorber.

The exhaust enters the vessel at the bottom of the Scrubber and continues upwards through the absorption packing. Absorption of the sulfur dioxide vapors takes place in the packed section. The counter-current, alkaline scrubbing solution is distributed across the entire tower cross section via a spray header with nozzles. These nozzles are designed to ensure that no vapor can escape without coming in intimate contact with the liquid. Above the packed section is a mesh pad type mist eliminator, which will remove virtually all liquid droplets from the air stream before it exits through the top of the vessel and up through the stack.

4.3. Baghouse Sources

- 4.3.1. General: Imerys operates several baghouses throughout the powder mills, milling circuit, Synthetic Silicate Plant, bagging and packing, silos storage and the specialty plant. Each line has baghouse(s) to capture or control particulate matter emitted from the process. Some of the baghouses are open to the atmosphere while majority are enclosed. The socks in the baghouses

are cleaned via a variety of methods: pulse jet, reverse air, blow back, manual cleaning, air shaker, and heresy type blow ring. Depending on the baghouse, the socks may operate under positive or negative pressure. Additional information on the specifics of each baghouse can be found in Table 10.7.

- 4.3.2. Emission Factors: Baghouse emission factors are based on either (1) manufacturers' performance estimates for units covered by an District Authority to Construct permit; (2) the federal limit of 0.022 gr/dscf, for baghouses constructed or modified after August 31, 1983 but before April 22, 2008, or 0.014 gr/dscf, for baghouses constructed or modified on or after April 22, 2008, for units subject to NSPS Subpart OOO emission limits and not limited in an ATC; (3) source testing; (4) the Rule 304 0.3 gr/dscf limit; or (5) the Rule 306 feedrate based limits.

Potential emissions from each baghouse are based on the maximum rated airflow for the baghouse exhaust blower, the guaranteed outlet grain loading concentration (in gr/dscf) and the permitted operating schedule (hours/day and hours/year). The calculation methodology for all baghouses is:

$$ER = EF * F * 60 \text{ min/hr} * HPP \div 7000 \text{ gr/lb}$$

Where:

ER =	emission rate (lb/period)
EF =	emission factor (gr/dscf)
F =	flow rate in dscfm
HPP =	operating hours per time period (hrs/period)

The grain loading concentrations are based on the guaranteed limit provided by the manufacturer. Imerys has assumed that the PM/PM₁₀ ratio and PM/PM_{2.5} ratio for baghouses is 1:1 for permitting purposes.

- 4.3.3. Emission Controls: Emissions of particulate matter from the handling of DE throughout processing are controlled by baghouses, rotoclones, and the 7 System Venturi Scrubber/Packed Bed Tower. The 7 System Venturi Scrubber/Packed Bed Tower controls dust from the main production lines and is covered under Section 4.2.3.4 above relating to the furnaces and kilns.

Baghouse design is driven by a number of variables such as the volume and temperature of the air entering the baghouse, composition of the particulate material to be controlled (e.g., corrosive characteristics), space requirements/limitations, the desired level of particulate control, and the method for cleaning the bags.

The Imerys' baghouses are comprised primarily of two types (a) reverse air, where air flow is periodically reversed to remove dust off the filters; (b) and pulse jet, where a burst of compressed air is shot through the baghouse to eject material caked on the exterior of the bag. The remaining baghouses are a mixture of shaker, manual clean, and others.

The baghouse material that can be used is dictated by the type of baghouse (pulse jet or reverse flow), temperature of the gas, characteristics of the particulate matter, desired level of control and cost. Imerys currently uses a variety of different materials including Orlon, polyester wover, polyester felt, wover fiberglass and others.

4.4. *Air Sifter System*

General: The Air Sifter System includes the 3P and 5P powder pumps which pump product from the #3 or #5 product bins into the #3 and #5 air sifter feed bins. The product exits the bins into the air sifters which mechanically and pneumatically separate fine from heavy diatomite.

Due to these design limitations and weak product demand, the system is currently in use only periodically. Imerys estimates that 4,500 cfm of air flow is necessary to efficiently operate the system, however, the existing air sifter baghouses cannot accommodate this flowrate. The exhaust has been redirected to the 345 baghouse which currently has sufficient capacity to accommodate this flow.

4.5. *Rotoclones*

Imerys operates one rotoclone, manufactured by American Air Filter Model 20W. The federally enforceable limits are based on the 0.3 gr/dscf limit for PM and the same calculation method as in Section 4.3 above. There are no federally enforceable limits on ROC for this unit.

4.6. *Refueling Operations*

The Lompoc Plant has three fuel storage tanks, one each of propane, diesel and fuel oil #6. The diesel storage tank serves the various exempt IC engines at the plant. The diesel, fuel oil and propane storage tanks are exempt from permit because diesel and fuel oil have API gravities under 40 degrees (Rule 202.V.2), and because the propane complies with Gas Processors Association specifications (Rule 202.V.8).

4.7. *Fugitive Dust Sources*

There are no federally enforceable or District mass emission limits that regulate fugitive dust from mining and waste handling activities. However, a description of these emissions and of the method for quantifying their potential to emit is provided below. These provisions are not subject to permit condition 9.A.14 (Consistency with Analysis). There are federally enforceable mass emission limits that regulate the fugitive dust from the mobile crude ore crushing and screening equipment and storage piles.

- 4.7.1 Fugitive Dust from Mining: Imerys maintains ore in storage piles known as “Blend Piles”. Ore is moved by bulldozers and carried to piles. These load-in and load-out activities disturb ore and roadway dust into the air. The potential to emit of the storage pile activities is estimated as follows:

ER in lb/hr = A * EF for active and inactive piles

Where:

ER =	emission rate (lb/period)
EF =	PM emission factor (lbs/acre/hr)
A =	maximum total pile area in acres
T =	active pile schedule (hrs/year)

Using the methodology from USEPA AP-42, 4th Edition, Table 8.19.1-1 (9/85), the EF can be either of two values depending upon whether the storage pile is active or inactive. The emission factor for active piles (EF) is 1.65 lbs/acre/hr for PM and 0.79 lbs/acre/hr

for PM₁₀. The emission factor for inactive piles (EF) is 0.22 lbs/acre/hr for PM and 0.11 lbs/acre/hr for PM₁₀. Piles are active 2920 hours per year and inactive 5840 hours per year. As provided in a letter dated August 21, 1992 from Monty McVay, Imerys maintains 8 acres of ore in storage piles. Based on the above equation and values, the fugitive PM₁₀ emissions are 9.23 tons per year from the active piles and 2.57 tons per year from the inactive piles.

- 4.7.2 Fugitive Dust from Mobile Plant: The mobile quarry crushing and screening plant consists of crushing and screening operations and creation of four crushed crude ore stockpiles (7.4 acres total) and one reject storage pile. The crushing and screening plant is designed for a total feed-rate of raw crude ore of 322 wet short tons per hour (approximately 178 dry short tons per hour) with a maximum operating schedule of 24 hours per day, 4,380 hours per year. Fugitive emissions are controlled by the use of partial enclosures, dust suppression system, and limiting operations during high wind. The potential to emit of the mobile plant equipment is calculated as follows:

$$ER = EF * TP * HPP$$

Where:

ER =	emission rate (lb/period)
EF =	emission factor (lb/ton material throughput)
TP =	material throughput (ton/hr)
HPP =	operating hours per time period (hrs/period)

The emission factors for the grizzly feeder, screen, conveyors and crusher were obtained from EPA FIRE 6.25 (October 2004) for mineral products processing using wet suppression control technology. The emission factors for raw crude transfer to ground storage, oversize transfer to reject pile, and storage pile radial stacking were calculated using the methodology outlined in USEPA AP-42 Section 13.2.4 (November 2006) for aggregate handling and storage piles. The mean wind speed and moisture content used in these calculations were provided by Imerys and verified by the District. The storage pile emissions were calculated using the methodology outline in USEPA AP-42 Section 13.2.5 (November 2006) for industrial wind erosion.

- 4.7.3 Waste Fugitive Dust: At the other end of the process, handling of waste dust produces fugitive emissions. Waste material from all processes is sent to the Central Waste system where it is slurried and pumped to the mine. Dust blown to the central waste area baghouses discharge via chute into a water tank with an agitator. Water applied in the covered discharge chute does not eliminate all fugitive dust generated by the discharge of the material into the water. In addition, a dust truck is used to empty central waste bins when the central waste system is overloaded. The dust in the dust truck is driven to the waste area in the mine and dumped by gravity. Five cubic foot containers called “load lugger boxes” are used to collect small quantities of waste material throughout the plant. These boxes are hauled to the waste area of the mine and are dumped by gravity. Waste handling emissions are calculated as follows:

$$ER \text{ in lb/hour} = \{ K * 0.0032 * (U/5)^{1.3} / (M/2)^{1.4} \} * (1-CON) * QD / 24$$

$$ER \text{ in tons/ year} = (\{ K * 0.0032 * (U/5)^{1.3} / (M/2)^{1.4} \} * (1-CON) * QY/2000)$$

Where:	ER = emission rate (lb/period) K = PM size fraction (unitless) U = average wind speed (miles per hour) M = moisture of ore (% by wt)	CON= control efficiency QD= tons handled per day QY= tons handled per year T= active pile schedule
--------	---	---

Table 4.1 Variables Used in Determining Waste Handling Emissions

Discharge Activity	CON	K	M	U	QD	QY	ER	EY
							lb/day	ton/yr
From central waste into wastewater tank	0.8	0.35	1	5	200	875,000	0.005	0.26
Dry material to dust truck or boxes	0.8	0.35	1	5	200	60,000	0.12	0.02
Dry materials at dump	0	0.35	1	20	200	60,000	3.58	0.65
Wet material to dust truck or boxes	0	0.35	50	5	72	3000	0.00	0.00
Wet material at dump	0	0.35	50	20	72	3000	0.01	0.00

This method is from AP-42 Chapter 13.2.4; January 1995. “CON” in the table above is estimated by Imerys based on water addition, ventilation and covering of receiving bins and the use of socks to minimize free drop distance.

4.8. Greenhouse Gases

GHG emissions from combustion sources are calculated using emission factors found in Tables C-1 and C-2 of 40 CFR Part 98 and global warming potentials found in Table A-1 of 40 CFR Part 98 (as of 4/25/2011; which is the date for the CFR specified in the California Mandatory Reporting Regulation, CCR Title 17, Sections 95100-95158). CO₂ equivalent emission factors are calculated for CO₂, CH₄, and N₂O individually then summed to calculate a total CO_{2e} emission factor. Annual CO_{2e} emission totals are presented in short tons.

The follow emission factors apply. The derivation of these emission factors is provided in Attachment 10.1.

For natural gas combustion the emission factor is: 117.00 lb CO_{2e}/MMBtu

For diesel fuel combustion the emission factor is: 163.60 lb CO_{2e}/MMBtu

4.9. Other Emission Sources

- 4.9.1. General Solvent Cleaning/Degreasing: Solvent usage (not used as thinners for surface coating) occurring at the Lompoc Plant as part of normal maintenance activities such as degreasing in cold solvent units and wipe cleaning. Emissions from these activities are based on Rule 317.
- 4.9.2. Surface Coating: Surface coating operations include periodic painting of equipment, parts, structures, etc. as part of maintenance and non-maintenance activities however, there are no emissions from this activity included in this permit.
- 4.9.3. Abrasive Blasting: Abrasive blasting with CARB-certified sands may be performed as a preparation step prior to surface coating. Particulate matter is emitted during this process. A general emission factor of 0.01 pound PM per pound of abrasive (SCAQMD - Permit Processing Manual, 1989), or a more current and/or appropriate factor as determined by the District, or the most up-to-date factor available, will be used to estimate emissions of PM and PM₁₀ when needed for compliance evaluations. A PM/PM₁₀ ratio of 1.0 is assumed.

4.10. BACT/MACT/NSPS/NESHAPS

- 4.10.1. **BACT:** Best Available Control Technology is required for PM and PM₁₀ for the emission units covered by ATC 8202, ATC 12091, ATC 12208, ATC 12315, ATC 12398, and ATC 12105, and ATC 14860 the Lompoc Plant. This includes all of System 7, the milling circuit equipment, the storage silos equipment, the mobile crude ore crushing and screening plant equipment and the powder mill bagging and packing equipment. The applicable BACT control technologies and the corresponding performance standards are listed in Table 4.2.

Pursuant to District Policy and Procedure 6100.064, once an emission unit is subject to BACT requirements, then any subsequent modifications to that emissions unit or process are subject to BACT. This applies to both *de minimis* changes and equivalent replacements, regardless of whether or not such changes or replacements require a permit.

Table 4.2 BACT Control Technology Performance Standards

Source	Control Technology	Performance Standard	Reference
Packer Station 545 East, Packer Station 545 West, Packer Station 560, and packer station 281 Bagwash	345BH – Baghouse manufactured by Fabric Filters Northwest with automatic reverse pulse jet cleaning system, 552 polypropylene filter socks, 8685 ft ² total cloth area, 4.0 scfm/ft ² air-cloth ratio.	PM ₁₀ : 0.002 gr/dscf PM: 0.007 gr/dscf	ATC 8202
Milling circuit product processing	Fabric filter	PM/PM ₁₀ : 0.005 gr/dscf	ATC 12091
Milling circuit product transfer, handling and conveyance	Fully enclosed and vented to a particulate control device.	All product transport lines and transfer points shall be fully enclosed and vented to a baghouse.	ATC 12091
Silos product handling and transfer	Fully enclosed and vented to a particulate control device.	PM/PM ₁₀ : 0.005 gr/dscf	ATC 12208
Mobile plant product transfer, handling and conveyance	Enclosed transfer points controlled by wet suppression	Visible emissions less than 10% opacity	ATC 12315
Powder mill bagging and packing product transfer	Fabric filter	PM/PM ₁₀ : 0.005 gr/dscf	ATC 12398
Powder mill bagging and packing product transfer, handling and conveyance	Fully enclosed and vented to a particulate control device.	All product transport lines and transfer points shall be fully enclosed and vented to a baghouse.	ATC 12398
System 7 Furnace Burner	Low NO _x burner guaranteed to 20 ppmv NO _x exhaust emission concentration corrected to 3% O ₂	Combined furnace and kiln NO _x emissions equal to or less than a rate of 5.55 lb/hour.	PTO 12105
System 7 Kiln Burner	Existing burner	Combined furnace and kiln NO _x emissions equal to or less than a rate of 5.55 lb/hour.	PTO 12105
System 7 Process Line	7 System shall not process crude blends with greater than 43% D-Family crude types by weight.	System ROC emissions equal to or less than a rate of 2.63 lb/hr.	PTO 12105

Source	Control Technology	Performance Standard	Reference
System 7 Process Line	7 System Venturi Scrubber/Packed Bed Tower absorber	SO ₂ removal efficiency of equal to or greater than 99.75% of the inlet or an exhaust gas SO ₂ content of 0.05 lb/min whichever is less stringent.	PTO 12105
System 7 Gaseous Fuel	Combustion devices shall burn PUC quality natural gas	Sulfur content shall be equal to or less than 80 ppmv as H ₂ S.	PTO 12105
System 7 Liquid Fuel	Combustion devices shall be restricted to burn ultra low sulfur content #2 diesel for an emergency period of equal to or less than 200 hours per year	Sulfur content shall be equal to or less than 0.0015% sulfur by weight.	PTO 12105
System 7 Process Line	7 System Venturi Scrubber/Packed Bed Tower absorber	PM/PM ₁₀ removal efficiency of equal to or greater than 99.8% of the inlet or an exhaust gas PM concentration of 0.005 grains/dscf whichever is less stringent.	PTO 12105
System 7 Product processing	Fabric filter	Stack outlet concentration shall be equal to or less than 0.005 grains/dscf.	PTO 12105
System 7 Product transfer, handling, and conveyance.	Fully enclosed and vented to a particulate control device.	All product bucket elevators, transport lines, screw conveyors, and transfer points shall be fully enclosed and vented to a baghouse or to the venturi scrubber.	PTO 12105
Blender (Device ID 389133) and Semi Bulk Packing Station (Device ID 389137)	Fully enclosed and vented to a 345 BH. See ATC 8202.	See ATC 8202, above.	ATC 14860

4.10.2. MACT: MACT provisions applicable to this facility have not been promulgated.

4.10.3. NSPS Subpart OOO: (*Standards of Performance for Nonmetallic Mineral Processing Plants; 40 CFR 60.670 et seq*). This subpart applies to several emission units at the Imerys Lompoc Plant. Subpart OOO applies to crushers, powder mills, screening operations, bucket elevators, belt conveyors, bagging operations, storage bins and enclosed truck or rail car loading stations constructed, and baghouses used to control emissions from such equipment, reconstructed or modified after August 31, 1983. See Section 3.2.2 for a summary of the requirements.

The following equipment is subject to the subpart's fugitive emission opacity limits:

- Line 3 automatic bag packing operation: Packer Station 545 East, Packer Station 545 West, Packer Station 560, Packer Station 281, and Bagwash (PTO 8202).
- 6P semibulk packing station (PTO 9616).
- Powder mill 3AS and 5AS lines consisting of the 3AS and 5AS feed bins, 3AS and 5AS coarse pumps, air sifters #101 through #104, AS blowers #101 through #104, cyclones #101 through #104, the Line 3 and 5 Air Sifter baghouses (3ASBH &

5ASBH), and the following shared by the 2 lines: the AS packing station pump, the two 3&5AS packers, coarse screw and AS screw. (replacement) (PTO 9551).

- Number five and number six automatic packing stations (5AP and 6AP).
- Ventilation system of the #3 and #4 bulk bins (PTO 9193).
- Milling circuit mill, classifiers, cyclone, conveyors, and bins (PTO 12091)
- Product storage silos, powder pumps, and bins (PTO 12208)
- Mobile plant grizzly, hopper, apron feeder, transfer belts, crusher, belt scales, screen, stackers, and storage piles. (PTO 12315)
- Powder mill bagging/packing semi bulk bag fillers, blowers, and bins (PTO 12398)
- System 7 processing equipment (PTO 12105)
- Blending Plant Semi Bulk Packing Station (District Device ID 389137) (PTO 14860)

The baghouses subject to Subpart OOO baghouse emission limits are those listed in Table 9.1 with “Subpart OOO” under the column “Opacity Basis.”

- 4.10.4. NESPS Subpart UUU: (*Standards of Performance for New Stationary Sources: Calciners and Dryers in Mineral Industries; 40 CFR 60.730 et seq*). This subpart applies to the System #7 kiln and furnace dryer particulate emissions (controlled by the 7 System Venturi Scrubber/Packed Bed Tower).
- 4.10.5. NESHAPS Subpart T: (*National Emission Standards for Halogenated Solvent Cleaning; 40 CFR 63.460 et seq*). This subpart applies to solvent cleaning machines at the Imerys Lompoc Plant that use any of the following: methylene chloride, perchloroethylene, trichloroethylene, 1,1,1 trichloroethane, carbon tetrachloride, or chloroform. Based on the application for this Part 70 permit, however, these substances are not currently used at the Lompoc Plant. Accordingly, NESHAP Subpart T does not apply to this source at this time.

4.11. Emissions Monitoring/Process Monitoring/CAM

4.11.1. Emissions Monitoring:

Processing line #7, controlled by the Venturi Scrubber/Packed Bed Tower, is another release point of SO_x emissions.

Imerys was required to monitor compliance with SO_x emission limits on an hourly basis in accordance with the main plant *Sulfur Dioxide Compliance Monitoring Protocol* and the *System 7 Sulfur Dioxide Compliance Monitoring Protocol*. The Protocols describe the procedures for measurement of the crude ore sulfur content, crude ore blend rates, and inlet crude mass feed rates (weight of ore per unit time) to calculate estimated SO_x emissions exiting the 7 System Venturi Scrubber/Packed Bed Tower.

The *Sulfur Dioxide Compliance Monitoring Protocol* was developed and implemented in 2001 when Imerys (then Celite) was operating five separate process lines each with their own furnace and kiln: Lines 3, 5, 6, 7, and 11. Since that time four lines were shut down and the remaining line, 7 System, underwent a Significant Part 70 Modification. That permit action (PTO/Part 70 Significant Modification 12105) reduced the permitted SO_x emissions from 400 lbs/hr to 3 lbs/hr and required Imerys comply with *System 7 Sulfur Dioxide Compliance Monitoring Protocol*.

PTO 12105 also required Imerys conduct daily Venturi Scrubber/Packed Bed Tower stack sampling for SO₂ using a portable analyzer. The sampling and reporting requirements are detailed in *System 7 Portable Analyzer Monitoring Plan*

Imerys requested that permit conditions requiring it comply with the *Sulfur Dioxide Compliance Monitoring Protocol* be eliminated as a part of this permit (PTO/Part 70 5840-R6/ Part 70 Significant Permit Modification 5840-11) because the operating lines covered by that protocol are no longer in service, except the 7 System, and the 7 System is covered by *System 7 Sulfur Dioxide Compliance Monitoring Protocol*.

Imerys also requested the permit conditions requiring it comply with the *7 System Sulfur Dioxide Compliance Monitoring Protocol* the 7 System is required to conduct daily stack emission testing under the *System 7 Portable Analyzer Monitoring Plan*.

The District agrees that with the elimination of the 6 System during 2018, the *Sulfur Dioxide Compliance Monitoring Protocol* no longer serves any purpose.

The District also agrees that because the SO₂ emissions under the *System 7 Sulfur Dioxide Compliance Monitoring Protocol* are calculated values, whereas the SO₂ emissions under the *System 7 Portable Analyzer Monitoring Plan* are a direct measurement of the SO₂ emission coming out of the stack of the Venturi Scrubber/Packed Bed Tower, permit conditions requiring the Imerys comply with the *System 7 Sulfur Dioxide Compliance Monitoring Protocol* are no longer warranted and an artifact of earlier compliance approach before the implementation of the *System 7 Portable Analyzer Monitoring Plan*.

The *Portable Analyzer Monitoring Plan* was approved on January 8, 2015 and prepared per the System 7 permit modification PTO/ Part 70 Significant Modification 12105 issued March 1, 2014. As discussed earlier, in the System 7 both the kiln and furnace exhaust is routed through the 7 System Venturi Scrubber/Packed Bed Tower to reduce particulate matter and SO_x emissions. In lieu of continuous emission monitoring Imerys committed to daily monitoring of NO_x, SO_x, and CO from the venturi scrubber/packed bed tower outlet using a portable ENERAC Series 700 portable analyzer or an alternative device approved by the District. Those data in conjunction with quarterly source tests are used to ensure compliance with permitted NO_x, SO_x and CO emission limits. The portable analyzer testing requirements and protocols are fully detailed in the *System 7 Portable Analyzer Monitoring Plan*.

The Prime Diesel Water Pump Engine (Dev ID 391449) permitted under ATC 14984 is a source of NO_x emissions and required emission offsets. This prime engine triggered District Rule 333's requirement for the submittal of an *Engine Inspection and Maintenance Plan*. This plan was approved and requires quarterly NO_x and CO emission testing using a portable analyzer.

- 4.11.2. Process Monitoring: In many instances, ongoing compliance beyond a single (snap shot) source test is assessed by the use of process monitoring systems. Examples of these monitors include: engine hour meters and fuel usage meters. Once these process monitors are in place, it is important that they be well maintained and calibrated to ensure that the required accuracy and precision of the devices are within specifications. At a

minimum, the following process monitors will be required to be calibrated and maintained in good working order:

- Fuel use meters
 - Boilers #1 and #2:*
 - dedicated, pressure corrected natural gas meter
 - dedicated, #2, #4 and #6 fuel oil totalizers
 - 7 System kiln and furnace:*
 - dedicated, instantaneous natural gas fuel feed meter
- Hour meters, non-resettable (pellet plant dryer and kiln)
- Manometers, magnahelic gauges or equivalent for pressure drop across baghouses
- Weigh belts serving the Powder Mills crude feed bins.
- Weigh belts serving the Mobile Plant crushing and screening equipment.
- Water line pressure and water flow meters serving the Mobile Plant equipment.

Calibration and maintenance requirements are provided in the *Process Monitor Calibration and Maintenance Plan*. This Plan takes into consideration manufacturer recommended maintenance and calibration schedules. Where manufacturer guidance is not available, the recommendations of comparable equipment manufacturers, when available, and good engineering judgment is utilized.

- 4.11.3. CAM: The Imerys Lompoc Plant is a major source that is subject to the USEPA's Compliance Assurance Monitoring (CAM) rule (40 CFR 64). As detailed in Imerys's General Plant CAM Plan (approved on January 6, 2003 and last updated on December reference, 2008) it was determined that the units listed below on Tables 4-3 (Baghouses) and 4-4 (7 System Venturi Scrubber/Packed Bed Tower) satisfy the criterion established by 40 CFR Part 64 that subject these units to additional compliance monitoring, i.e., (1) these units have precontrol emissions of at least 100% of the major source amount (PM/PM₁₀); (2) are subject to a federally enforceable emissions standard and, (3) use a control device to achieve compliance with this standard.

The compliance monitoring parameter selected for the baghouses is a daily visible emission observation as well as a quarterly Method 9 visible emission inspection. Several monitoring parameters were selected for the 7 System Venturi Scrubber/Packed Bed Tower. These are as follows:

- (1) daily visible emission observation and a quarterly Method 9 visible emission inspection;
- (2) pressure drop across the 7 System Venturi Scrubber/Packed Bed Tower;
- (3) scrubbing liquid line pressure,
- (4) packed bed tower flow rate and pH, and
- (5) wet crude feed rate.

The CAM Plan provides additional description of and justification for the selection of these monitoring parameters. The Plan also provides additional detail regarding the applicability determination of the units included in the plan and recordkeeping and reporting requirements. See permit condition 9.C.14.

Table 4.3 Baghouses Subject to CAM

Device Name	Imerys ID	District Device No	Device Name	Imerys ID	District Device No
Crushing Plant Vent. BH	CRVBH	100	7 Kiln Bypass BH717	BH717	109846
Mill Ventilation Baghouse	11VBH	102	Baghouse BH101	BH101	110191
345 Baghouse	345BH	108	Baghouse BH102	BH102	110192
378 Baghouse	378BH	109	Baghouse BH103	BH103	110193
978 Baghouse	978BH	110	Baghouse BH104	BH104	110194
578 Baghouse	578BH	119	Baghouse BH105	BH105	110195
616 Ventilation Baghouse	616VBH	128	Baghouse BH106	BH106	110196
Recirculating System Ventilation Baghouse	RSVBH	135	Baghouse BH107	BH107	110197
Preseparator Waste Baghouse	PSWBH	136	Baghouse BH108	BH108	110198
General Waste Baghouse	GWBH	137	Process Baghouse (BH912)	BH912	110203
Silicate Plant Feed Mix Baghouse	SPFMBH	138	Baghouse BH925A	BH925A	110641
Silicate Plant Lime Baghouse	SPLTBH	139	Baghouse BH925B	BH925B	110642
Silicate Plant Ventilation Baghouse (Pack)	SPVBH	142	Baghouse BH109A	BH109A	110649
Mortar Plant Ventilation Baghouse	MPVBH	146	Baghouse BH109B	BH109B	110650
Pellet Plant Ventilation Baghouse - Cold	PPCVBH	147	Baghouse BH110A	BH110A	110651
Pellet Plant Ventilation Baghouse - Hot	PPHVBH	148	Baghouse BH110B	BH110B	110652
Chromosorb Ventilation Baghouse - South	CPVBHS	149	7 Dry End Baghouse BH775	BH775	110720
3 Bulk Bin Baghouse	3BBVBH	151	7 Dry End Baghouse BH777	BH777	110721
6 Automatic Packing Station Baghouse (678)	678BH	103363	7 Dry End Baghouse BH788	BH788	110722
4 Bulk Bin Baghouse	4BBVBH	103514	7 Dry End Baghouse BH789	BH789	110723
Feed Bin Baghouse (BH901)	BH901	108935	7 Wet End Baghouse BH721	BH721	110724
Baghouse (BH916)	BH916	108940	Baghouse 5DC-01	5DC-01	114326
Soda Ash Baghouse	SABH	109452			

Table 4.4 7 System Venturi Scrubber/Packed Bed Tower Subject to CAM

Device Name	System	Imerys ID	District DeviceNo
Main Outlet for 7 System Venturi Scrubber/Packed Bed Tower	7	7 Scrubber	109866

4.12. Source Testing/Sampling

Source testing and sampling are required in order to ensure compliance with permitted emission limits, prohibitory rules, control measures and the assumptions that form the basis of this operating permit. Tables 9.10 through Table 9.13 detail the pollutants and test methods of required testing. Frequency of required testing can be found in permit condition 9.C.12. Imerys will be required to follow the *District Source Test Procedures Manual* (May 24, 1990 and all updates). The following emission units are required to be source tested:

Table 4.5 Equipment Subject to Source Testing

Device Name	Type	Imerys ID	District Device No	Device Name	Type	Imerys ID	District Device No
Silicate Plant Boiler #1		SPB1	81	Feed Bin Baghouse (BH901)	Enclosed	BH901	108935
Silicate Plant Boiler #2		SPB2	82	Baghouse (BH916)	Enclosed	BH916	108940
Silicates Conveyor Dryer		SPCD	143	Baghouse BH101	Enclosed	BH101	110191
Chromosorb Plant: Rotoclone Scrubber		CROTO	150	Baghouse BH102	Enclosed	BH102	110192
Venturi/Packed Bed Tower			109866	Baghouse BH103	Enclosed	BH103	110193
Crushing Plant Ventilation Baghouse	Enclosed	CRVBH	100	Baghouse BH104	Enclosed	BH104	110194
Mill Ventilation Baghouse (1178)	Enclosed	11VBH	102	Baghouse BH105	Enclosed	BH105	110195
345 Baghouse	Enclosed	345BH	108	Baghouse BH106	Enclosed	BH106	110196
378 Baghouse	Enclosed	378BH	109	Baghouse BH107	Enclosed	BH107	110197
978 Baghouse	Enclosed	978BH	110	Baghouse BH108	Enclosed	BH108	110198
578 Baghouse	Enclosed	578BH	119	Process Baghouse (BH912)	Enclosed	BH912	110203
616 Ventilation Baghouse	Enclosed	616VBH	128	Packing Sta BH125	Enclosed	BH125	110525
Recirculating System Ventilation Baghouse	Enclosed	RBH	135				
Preseparator Waste Baghouse	Enclosed	PSWBH	136	Bin Vent BH131A1	Enclosed	BH131A1	110532
General Waste Baghouse	Enclosed	GWBH	137	Bin Vent BH131A2	Enclosed	BH131A2	110533
Silicate Plant Feed Mix Baghouse	Enclosed	SPFMBH	138	Bin Vent BH131B1	Enclosed	BH131B1	110534
Silicate Plant Lime Baghouse	Enclosed	SPLBH	139	Bin Vent BH131B2	Enclosed	BH131B2	110535
Silicate Plant Production Baghouse	Enclosed	SPPBH	141	Baghouse BH925A	Enclosed	BH925A	110641
Silicate Plant Ventilation Baghouse (Pack)	Enclosed	SPVBH	142	Baghouse BH925B	Enclosed	BH925B	110642
Mortar Plant Ventilation Baghouse	Enclosed	MPVBH	146	Baghouse BH109A	Enclosed	BH109A	110649
Pellet Plant Ventilation Baghouse - Cold	Enclosed	PPCVBH	147	Baghouse BH109B	Enclosed	BH109B	110650
Pellet Plant Ventilation Baghouse - Hot	Enclosed	PPHVBH	148	Baghouse BH110A	Enclosed	BH110A	110651
Chromosorb Ventilation Baghouse - South	Enclosed	CPVBHS	149	Baghouse BH110B	Enclosed	BH110B	110652
3 Bulk Bin Baghouse	Enclosed	3BBVBH	151	Baghouse 5DC-01	Enclosed	5DC-01	114326
Soda Ash Baghouse	Enclosed	SABH	109452	7 Wet End Baghouse BH721	Enclosed	BH721	110724
3 Air Sifter Ventilation Baghouse	Enclosed	3ASBH	6471	7 Dry End Baghouse BH775	Enclosed	BH775	110720
5 Air Sifter Ventilation Baghouse	Enclosed	5ASBH	6472	7 Dry End Baghouse BH777	Enclosed	BH777	110721
6 Automatic Station Baghouse (678)	Enclosed	678BH	103363	7 Dry End Baghouse BH788	Enclosed	BH788	110722
Silicate Plant Flash Dryer Baghouse	Enclosed	SPFDBH	103474	7 Dry End Baghouse BH789	Enclosed	BH789	110723
4 Bulk Bin Baghouse	Enclosed	4BBBH	103514	7 Kiln Bypass BH717	Enclosed	BH717	109846
Note (1): Required only if quarterly portable analyzer tests shows noncompliance with permit limits.				Prime Water Pump Engine ¹	Diesel	Well 39 Pump	391449

4.13. ***Part 70 Engineering Review: Hazardous Air Pollutant Emissions***

Hazardous air pollutant (HAP) emissions for the Imerys Lompoc Plant are based on two sets of emissions data from the different categories of emission units at the Lompoc Plant. The first set of emissions (section 4.13.1) is based on various HAP emission factors and the permitted operational limits and maximum facility design throughputs of this permit.

HAP emission factors are shown in Table 5.7. Facility potential annual HAP emissions, based on the worst-case scenario listed in Section 5.3 below, are shown in Table 5.8. Stationary Source potential annual HAP emissions are summarized in Table 5.9. These emissions are estimates only. They are not limitations.

4.13.1. Emission Factors for HAP Potential Emissions:

Natural Gas fired external combustion units: The HAP emission factors for external combustion equipment (boilers, dryers/heaters, kilns, furnaces and pilots) were obtained from the Ventura County Air Pollution Control District *AB2588 Combustion Emission Factors for Natural Gas Fired External Combustion Equipment* (May, 2001) for reactive organics, and USEPA AP-42 Table 1.4-4, *Emission Factors for Metals from Natural Gas Combustion* (July, 1998) for metals. While some of these units are permitted to operate on fuels other than natural gas, historical operations show natural gas as the primary fuel used at the Imerys facility.

Diesel-fired IC engines with no control: The HAP emission factors for diesel fired IC engines were obtained from the Ventura County Air Pollution Control District *AB2588 Combustion Emission Factors for Diesel Combustion* (May, 2001). These diesel ICEs total 262 bhp and have a brake specific fuel consumption of 7500 Btu/bhp-hr.

Gasoline-fired, rich burn, non-cyclic IC engines with no control: The HAP emission factors for gasoline fired IC engines were obtained from the CARB Speciation Manual, Part II, Table 502 (August 1991). These were applied to a total hydrocarbon emission factor of 2.10 lb/MMBtu for gasoline engines obtained from USEPA AP-42 Table 3.3-1 *Emission Factors for Uncontrolled Gasoline and Diesel Industrial Engines* (October 1996). These gasoline ICEs total 507 horsepower and have brake specific fuel consumption of 11,000 Btu/bhp-hr.

Diatomite emissions: The HAP emission for the processed diatomite emissions from the the baghouses, rotoclones and the mobile plant were obtained from USEPA AP-42 Table 11.22-1, *Trace Element Content of Finished Diatomite* (November, 1995). The factors for the metal HAPs are fractions, in parts per million by weight, of the *emitted* tonnage of PM.

Solvent Emissions: Photochemically reactive and non-photochemically reactive solvents are assumed to contain 5% benzene, 5% toluene and 5% xylene.

5.0 Emissions

5.1 General

Emissions calculations are divided into "permitted" and "exempt" categories. Permit exempt equipment is determined by District Rule 202. Each emissions unit has a federally enforceable emission limit which is based on rule limits in most cases, rather than on maximum capacity of the equipment. Table 5.3 and Table 5.4 lists both the District-only enforceable and the federally enforceable emission limits. (Note Part II of this permit contains a separate emissions summary). Section 5.5 provides the estimated HAP emissions from the Lompoc Plant. Section 5.6 provides the estimated emissions from permit exempt equipment. Section 5.7 provides the net emissions increase calculation for the facility and the stationary source. In order to accurately track the emissions from a facility, the District uses a computer database.

5.2 Permitted Emissions Limits – Emission Units

Each emissions unit associated with the facility was analyzed to determine the federally enforceable and District-only enforceable emission limits for the following pollutants:

- ⇒ Nitrogen Oxides (NO_x) ⁵
- ⇒ Reactive Organic Compounds (ROC)
- ⇒ Carbon Monoxide (CO)
- ⇒ Sulfur Oxides (SO_x) ⁶
- ⇒ Particulate Matter (PM)
- ⇒ Particulate Matter smaller than 10 microns (PM₁₀) ⁷
- ⇒ Particulate Matter smaller than 2.5 microns (PM_{2.5}) ⁸
- ⇒ Greenhouse Gases (as CO₂)

Permitted emissions are calculated for both short term (hourly and daily) and long term (quarterly and annual) time periods. Section 4.0 (Engineering Analysis) provides a general discussion of the basic calculation methodologies and emission factors used. Table 5.1 provides the basic operating characteristics. Table 5.2 provides the specific emission factors. Tables 5.3 and 5.4 shows the permitted short-term and permitted long-term emissions for each unit or operation. In the table, the last column indicates whether the emission limits are federally enforceable. Those emissions limits that are federally enforceable are indicated by the symbol "FE". Those emissions limits that are District-only enforceable are indicated by the symbol "AE".

Each permitted emission unit has a federally enforceable emission limit which, in most cases, is based on rule limit is rather than on the maximum capacity of the equipment. The federally enforceable limits in Tables 5.3 and 5.4 typically reflect the rule limits (denoted "FE"). The District-only enforceable limits typically reflect potential-to-emit

⁵ Calculated and reported as nitrogen dioxide (NO₂)

⁶ Calculated and reported as sulfur dioxide (SO₂)

⁷ Calculated and reported as all particulate matter smaller than 10 µm

⁸ Calculated and reported as all particulate matter smaller than 2.5 µm

for the applicable equipment (denoted “AE”). The Imerys stationary source potential to emit is estimated in section 5.4. It should be noted that the pollutant limits in Tables 5.3 and 5.4 are enforceable limits for each emission unit, and the sum of emissions over all permitted units does not equate to the potential to emit totals in section 5.4. Section 10 includes alternate emission limits for the boilers when fired on fuel oil #2, #4, or #6.

5.3. Facility Permitted Emissions

The total permitted emissions for all units associated with the facility was analyzed. This analysis looked at the maximum permitted operating scenarios for each unit. In most cases the maximum permitted operating scenario for a piece of equipment is based on prohibitory rule allowances, and not from design or physical limitations of the equipment. The equipment operating in each of the scenarios are presented below. Unless otherwise specified, the operating characteristics defined in Table 5.1 for each emission unit are assumed. Table 5.5 shows the facility permitted emissions. Note that these totals do not define the facility potential to emit, or federal potential to emit. The potential to emit has been estimated by Imerys, as documented in section 5.4, Table 5.6.

Hourly/Daily Scenario:

- Silicates Boiler #1
- Silicates Boiler #2
- Silicates Conveyer Dryer
- Silicates Flash Dryer
- Pellet Plant Dryer
- Pellet Plant Kiln
- Line 7 Furnace and Kiln
- Baghouses
- Solvent Usage
- Chromosorb Rotoclone
- Mobile Plant
- Milling Circuit
- Storage Silos
- Bagging and Packing
- Emergency Diesel Generator and Pump Engines

Quarterly and Annual Scenario:

- Silicates Boiler #1
- Silicates Boiler #2
- Silicates Conveyer Dryer
- Silicates Flash Dryer
- Pellet Plant Dryer
- Pellet Plant Kiln
- Lines 7 Furnace and Kiln
- Baghouses
- Solvent Usage
- Chromosorb Rotoclone
- Mobile Plant

- Milling Circuit
- Storage Silos
- Bagging and Packing
- Emergency Diesel Generator and Pump Engines

5.4. *Part 70: Federal Potential to Emit*

Table 5.6 lists the federal Part 70 potential to emit. The values in Table 5.6 are based on a reasonable worst-case scenario defined in the original Part 70 application from Imerys. This potential to emit is only an estimate used to determine the applicability of Title V to this facility. In addition, the PTE defined in Table 5.6 is not a limit; see Tables 5.3 and 5.4 for emission limits on individual pieces of equipment. (Not all of Imerys's emission units have limits, but all have a potential to emit.

5.5. *Part 70: HAP Potential to Emit Emission Estimates*

Total emissions of hazardous air pollutants (HAP) are computed for informational purposes only. HAP emission factors are shown in Table 5.7. Facility potential annual HAP emissions, based on the worst-case scenario listed in Section 5.3 above, are shown in Table 5.8. Stationary Source potential annual HAP emissions are summarized in Table 5.9.

5.6. *Exempt Emission Sources/Part 70 Insignificant Emissions*

Equipment/activities exempt pursuant to Rule 202 include maintenance operations involving surface coating and various combustion devices. Insignificant emission units are defined under District Rule 1301 as any regulated air pollutant emitted from the unit, excluding HAPs, that are less than 2 tons per year based on the unit's potential to emit and any HAP regulated under section 112(g) of the Clean Air Act that does not exceed 0.5 ton per year based on the unit's potential to emit.

Table 5.9 presents the estimated annual emissions from these exempt equipment items, including those exempt items not considered insignificant. The basis for these calculations is presented in Table 10.2. This permit includes the Solvents/Surface coating activities during maintenance operations.

Table 5.1 Operating Equipment Description

Equipment Description				Equipment Specification		Operating Limitations						Fuel Properties			
Equipment Item	Process Line	Fuel	District DeviceNo	Size	Units	On-line			Fuel Use (MMBtu)			HHV ⁽⁵⁾ Total Sulfur			
						(hr/day)	(hr/qtr)	(hr/yr)	(per day)	(per qtr)	(per yr)				
Silicates Boiler #1		NG	81	15.5	MMBtu/hr	24	145	581	372	2,250	9,000	1,050 Btu/scf	80.00 ppmv S		
Silicates Boiler #2		NG	82	23	MMBtu/hr	24	2130	8520	552	48,990	195,960	1,050 Btu/scf	80.00 ppmv S		
Silicates Conveyor Dryer			143	45	MMBtu/hr	24	2190	8760	1,080	98,550	394,200	1,050 Btu/scf	797.00 ppmv S		
Silicates Flash Dryer			140	17.5	MMBtu/hr	24	2190	8760	420	38,325	153,300	1,050 Btu/scf	797.00 ppmv S		
Pellet Plant Dryer		NG	5843	4.5	MMBtu/hr	24	2190	8760	108	9,855	39,420	1,050 Btu/scf	80.00 ppmv S		
Pellet Plant Kiln		NG	5844	4.4	MMBtu/hr	24	2190	8760	106	9,636	38,544	1,050 Btu/scf	80.00 ppmv S		
Kiln		Line 7	NG	103370	50	MMBtu/hr	24	2190	7227	1,200	109,500	361,350	1,050 Btu/scf	80.00 ppmv S	
Furnace		Line 7	NG	109857	45	MMBtu/hr	24	2190	7227	1,080	98,550	325,215	1,050 Btu/scf	80.00 ppmv S	
Kiln Bypass Mode		Line 7	NG	103370	50	MMBtu/hr	24	2190	2920	1,200	109,500	146,000	1,050 Btu/scf	80.00 ppmv S	
Furnace & Kiln Pilots (NG)		Line 7	NG		4	MMBtu/hr	24	2190	8760	96	8,760	35,040	1,050 Btu/scf	80.00 ppmv S	
Solvent Use - Photochemically Reactive						5.00	456	1825							
Solvent Use -non-Photochemically Reactive						6.67	608	2433							
Water Pump Engine		Diesel	391449	171.00	HP	24.00	2190	8760							
Emergency Standby Lake Pump Engine		Diesel	8919	199.00	HP	2.00	12.5	50							
Admin Building Emergency Standby Engine		Diesel	387654	250.00	HP	2.00	5.0	20							

Table 5.1 Operating Equipment Description (Continued)

Equipment Description			Equipment Specification		Operating Limitations		
Equipment Item	Process Line	District DeviceNo	Size	Units	On-line		
					(hr/day)	(hr/qtr)	(hr/yr)
3 Air Sifter Ventilation Baghouse		6471	473	scf/minute	24	2190	8760
345 Baghouse		108	20,000	scf/minute	24	2190	8760
378 Baghouse		109	45,150	scf/minute	24	2190	8760
3 Bulk Bin Baghouse		151	3,360	scf/minute	24	2190	8760
5 Air Sifter Ventilation Baghouse		6472	473	scf/minute	24	2190	8760
578 Baghouse		119	31,500	scf/minute	24	2190	8760
6 Super Fine Super Floss Baghouse	Line 6	126	19,000	scf/minute	24	2190	8760
6 Dry End Ventilation Baghouse	Line 6	125	18,661	scf/minute	24	2190	8760
6 Automatic Packing Station Baghouse (678)	Line 6	103363	30,000	scf/minute	24	2190	8760
616 Ventilation Baghouse	Line 6	128	3,000	scf/minute	24	2190	8760
7 Wet End Baghouse BH721	Line 7	110724	687	scf/minute	24	2190	8760
7 Dry End Baghouse BH775	Line 7	110720	3,813	scf/minute	24	2190	8760
7 Dry End Baghouse BH777	Line 7	110721	31,520	scf/minute	24	2190	8760
7 Dry End Baghouse BH778	Line 7	110722	11,404	scf/minute	24	2190	8760
7 Dry End Baghouse BH789	Line 7	110723	14,037	scf/minute	24	2190	8760
7 Kiln Bypass BH717	Line 7	109846	12,290	scf/minute	24	2190	2920
Mill Ventilation Baghouse (1178)		102	36,000	scf/minute	24	2190	8760
Snow Floss Plant Baghouse		133	12,978	scf/minute	24	2190	8760
Silicate Plant Flash Dryer Baghouse		103474	14,700	scf/minute	24	2190	8760
Silicate Plant Feed Mix Baghouse		138	35,984	scf/minute	24	2190	8760
Silicate Plant Lime Baghouse		139	3,000	scf/minute	24	2190	8760
Silicate Plant Production Baghouse		141	3,300	scf/minute	24	2190	8760
Silicate Plant Ventilation Baghouse (Pack)		142	42,000	scf/minute	24	2190	8760
Silicates Plant Baghouse 5DC-01		114326	2,000	scf/minute	24	2190	8760
Mortar Plant Ventilation Baghouse		146	38,465	scf/minute	24	2190	8760
Pellet Plant Ventilation Baghouse - Cold		147	18,549	scf/minute	24	2190	8760
Pellet Plant Ventilation Baghouse - Hot		148	10,500	scf/minute	24	2080.5	8322
Chromosorb Ventilation Baghouse - South		149	7,800	scf/minute	24	2190	8760
Celite Analytical Filter Aid Baghouse		152	138	scf/minute	24	2190	8760
Experimental Plant Ventilation Baghouse		5935	1,000	scf/minute	24	2190	8760
Preseparator Waste Baghouse		136	20,000	scf/minute	24	2130	8520
General Waste Baghouse		137	24,150	scf/minute	24	2190	8760
Recirculating System Ventilation Baghouse		135	16,714	scf/minute	24	2130	8520
4 Dry End Baghouse		112	44,320	scf/minute	24	2190	8760
4 Bulk Bin Baghouse		103514	3,360	scf/minute	24	2190	8760
978 Baghouse		110	32,900	scf/minute	24	2190	8760
Crushing Plant Ventilation Baghouse		100	35,700	scf/minute	24	2190	8760
Soda Ash Baghouse		109452	800	scf/minute	24	2190	8760
Sackroom Baghouse		153	4,976	scf/minute	24	2190	8760
Chromosorb Rotocyclone		150	10,000	scf/minute	24	2190	8760

Table 5.1 Operating Equipment Description (Continued)

Equipment Description			Equipment Specification		Operating Limitations		
Equipment Item	Process Line	District DeviceNo	Size	Units	On-line		
					(hr/day)	(hr/qtr)	(hr/yr)
Feed Bin Baghouse (BH901)	Milling Circuit	108935	2,550	scf/minute	24	2190	8760
Baghouse (BH916)	Milling Circuit	108940	13,243	scf/minute	24	2190	8760
Process Baghouse (BH912)	Milling Circuit	110203	13,000	scf/minute	24	2190	8760
Baghouse BH101	Silos	110191	2,411	scf/minute	24	2190	8760
Baghouse BH102	Silos	110192	2,411	scf/minute	24	2190	8760
Baghouse BH103	Silos	110193	2,411	scf/minute	24	2190	8760
Baghouse BH104	Silos	110194	2,411	scf/minute	24	2190	8760
Baghouse BH105	Silos	110195	2,411	scf/minute	24	2190	8760
Baghouse BH106	Silos	110196	2,411	scf/minute	24	2190	8760
Baghouse BH107	Silos	110197	2,411	scf/minute	24	2190	8760
Baghouse BH108	Silos	110198	2,411	scf/minute	24	2190	8760
Baghouse BH925A	Silos	110641	720	scf/minute	24	2190	8760
Baghouse BH925B	Silos	110642	720	scf/minute	24	2190	8760
Baghouse BH109A	Silos	110649	1,500	scf/minute	24	2190	8760
Baghouse BH109B	Silos	110650	1,500	scf/minute	24	2190	8760
Baghouse BH110A	Silos	110651	1,500	scf/minute	24	2190	8760
Baghouse BH110B	Silos	110652	1,500	scf/minute	24	2190	8760
Packing Sta BH125	Bagging and Packing	110525	14,259	scf/minute	24	2190	8760
Bin Vent BH131A1	Bagging and Packing	110532	1,031	scf/minute	24	2190	8760
Bin Vent BH131A2	Bagging and Packing	110533	1,031	scf/minute	24	2190	8760
Bin Vent BH131B1	Bagging and Packing	110534	1,031	scf/minute	24	2190	8760
Bin Vent BH131B2	Bagging and Packing	110535	1,031	scf/minute	24	2190	8760
Grizzly Feeder	Mobile Plant	110481	178	short tons/hour	24	2190	4380
Screening	Mobile Plant	110489	178	short tons/hour	24	2190	4380
Conveyors (10)	Mobile Plant	Note 1	178	short tons/hour	24	2190	4380
Crusher	Mobile Plant	110486	178	short tons/hour	24	2190	4380
Raw Crude Transfer to Ground Storage	Mobile Plant	NA	178	short tons/hour	24	2190	4380
Oversize Transfer to Reject Pile	Mobile Plant	110493	17	short tons/hour	24	2190	4380
Storage Piles Radial Stacking	Mobile Plant	110500	161	short tons/hour	24	2190	6570
Storage Piles (4) Fugitive Emissions	Mobile Plant	110561/110562	9	acres surface area	24	2190	8760
7 Grizzly Feeder/Primary Screen	Line 7	109777	3000	short tons/day	24	2190	8760
7 Conveyor Transfer Points (5)	Line 7	various	3000	short tons/day	24	2190	8760
7 Bucket Elevator (2)	Line 7	109781	3000	short tons/day	24	2190	8760

Notes

1. Conveyors consist of APCD Device Numbers 110483, 110484, 110487, 110490, 110491, 110492, 110495, 110497, 110498 and 110499

Table 5.2 Equipment Emission Factors

Equipment Description			Emission Factors									References
Equipment Item	Process Line	District DeviceNo	NOx	ROC	CO	SOx	PM	PM10	PM2.5	GHG	Units	
Silicates Boiler #1	NG	81	0.098	0.0054	0.0824	--	0.0075	0.0075	0.0075	117.00	lb/MMBtu	District PGD No 1., AP-42 Section 1.4, SOx and PM Federally Enforceable Limits, Rule 309.E NOx (lb/hr) and ATC 9240-02 District PGD No 1., AP-42 Section 1.4, PM Federally Enforceable Limits, ATC 9240-02
Silicates Boiler #1	NG	81	140	--	--	0.0137	--	--	--	117.00	See Reference	
Silicates Boiler #2	NG	82	--	--	--	--	0.0075	0.0075	0.0075	117.00	lb/MMBtu	
Silicates Boiler #2	NG	82	0.036	0.0034	0.297	0.0137	0.0140	0.0140	0.0140	117.00	lb/MMBtu	
Silicates Conveyor Dryer		143	140	--	--	0.128	--	--	--	117.00	See Reference	District PGD No 1., NOx (lb/hr) SOx (lb/MMBtu) District PGD No 1., NOx (lb/hr) SOx (lb/MMBtu)
Silicates Flash Dryer		140	140	--	--	0.128	--	--	--	117.00	See Reference	
Pellet Plant Dryer		5843	0.098	0.0054	0.082	0.0137	0.0075	0.0075	0.0075	117.00	lb/MMBtu	District PGD No 1., AP-42 Section 1.4 District PGD No 1., AP-42 Section 1.5 PTO 5840 R4 PTO 5840 R4 PTO 12105
Pellet Plant Kiln		5844	0.098	0.0054	0.082	0.0137	0.0075	0.0075	0.0075	117.00	lb/MMBtu	
Kiln Furnace	Line 7	103370								117.00	lb/MMBtu	
Combined 7 System Kiln and Furnace outlet from Venturi Scrubber/Package Bed Tower	Line 7	109857								117.00	lb/MMBtu	
	Line 7	103370 & 109857	0.0925	0.044	0.450	0.050	0.067	0.067	0.067		lb/minute	
Kiln (NG) (Bypass mode)	Line 7	103370	0.089	0.005	0.246	0.014				117.00	lb/MMBtu	PTO 12105 - Note no PM because in bypass mode exhaust to BH 717
Furnace & Kiln Pilots (NG)	Line 7		0.098	0.0054	0.0824	0.0137	0.0075	0.0075	0.0075	117.00	lb/MMBtu	District PGD No 1., AP-42 Section 1.4
Solvent Use - Photochemically Reactive			--	8	--	--	--	--	--	--	lb/hr	District Rule 317.B.2
Solvent Use -non-Photochemically Reactive			--	450	--	--	--	--	--	--	lb/hr	District Rule 317.B.3
Water Pump Engine		391449	0.448	0.213	5.597	0.006	0.010	0.010	0.010	556.58	grams/BHP-HR	ATC 14984 ATC 14156, GHG from Part 2 Emergency Generator ID 103521 PTO 14370, SOX emission rate from ATC 14156.
Emergency Standby Lake Pump Engine		8919	2.8	0.2	2.6	0.01	0.15	0.15	0.15	556.58	grams/BHP-HR	
Admin Building Emergency Standby Engine		387654	6.9	0.999	8.5	0.01	0.15	0.15	0.15	556.58	grams/BHP-HR	

Table 5.2 Equipment Emission Factors (Continued)

Equipment Description			Emission Factors									References
Equipment Item	Process Line	District DeviceNo	NOx	ROC	CO	SOx	PM	PM10	PM2.5	GHG	Units	
3 Air Sifter Ventilation Baghouse	Line 3	6471					0.00044	0.00044	0.00044		gr/dscf	ATC 9551
345 Baghouse		108					0.007	0.002	0.002		gr/dscf	ATC 8202-01
378 Baghouse		109					0.0074	0.0074	0.0074		gr/dscf	ATC 9696-01
3 Bulk Bin Baghouse		151					0.0044	0.0044	0.0044		gr/dscf	ATC 9193
5 Air Sifter Ventilation Baghouse	Line 5	6472					0.00044	0.00044	0.00044		gr/dscf	ATC 9551
578 Baghouse		119					0.005	0.005	0.005		gr/dscf	ATC 9696-01
6 Super Fine Super Floss Baghouse	Line 6	126					0.3	0.3	0.3		gr/dscf	Rule 304
6 Dry End Ventilation Baghouse	Line 6	125					0.3	0.3	0.3		gr/dscf	Rule 304
6 Automatic Packing Station Baghouse (678)	Line 6	103363					0.022	0.022	0.022		gr/dscf	NSPS OOO
616 Ventilation Baghouse	Line 6	128					0.022	0.022	0.022		gr/dscf	NSPS OOO
7 Wet End Baghouse BH721	Line 7	110724					0.005	0.005	0.005		gr/dscf	PTO 12105
7 Dry End Baghouse BH775	Line 7	110720					0.005	0.005	0.005		gr/dscf	PTO 12105
7 Dry End Baghouse BH777	Line 7	110721					0.005	0.005	0.005		gr/dscf	PTO 12105
7 Dry End Baghouse BH778	Line 7	110722					0.005	0.005	0.005		gr/dscf	PTO 12105
7 Dry End Baghouse BH789	Line 7	110723					0.005	0.005	0.005		gr/dscf	PTO 12105
7 Kih Bypass BH717	Line 7	109846					0.005	0.005	0.005		gr/dscf	PTO 12105
Mill Ventilation Baghouse (1178)		102					0.300	0.300	0.300		gr/dscf	Rule 304
Snow Floss Plant Baghouse		133					0.3	0.3	0.3		gr/dscf	Rule 304
Silicate Plant Flash Dryer Baghouse		103474					0.3	0.3	0.3		gr/dscf	Rule 304
Silicate Plant Feed Mix Baghouse		138					0.3	0.3	0.3		gr/dscf	Rule 304
Silicate Plant Lime Baghouse		139					0.3	0.3	0.3		gr/dscf	Rule 304
Silicate Plant Production Baghouse		141					0.3	0.3	0.3		gr/dscf	Rule 304
Silicate Plant Ventilation Baghouse (Pack)		142					0.0072	0.0072	0.0072		gr/dscf	ATC 9696-01
Silicates Plant Baghouse 5DC-01		114326					0.005	0.005	0.005		gr/dscf	PTO 13570
Mortar Plant Ventilation Baghouse		146					0.3	0.3	0.3		gr/dscf	Rule 304
Pellet Plant Ventilation Baghouse - Cold		147					0.3	0.3	0.3		gr/dscf	Rule 304
Pellet Plant Ventilation Baghouse - Hot		148	140			200	0.004	0.004	0.004		See Reference	NOx and SOx (lb/hr) Rule 309, PM (gr/dscf) ATC 10257
Chromosorb Ventilation Baghouse - South		149					0.3	0.3	0.3		gr/dscf	Rule 304
Celite Analytical Filter Aid Baghouse		152					0.3	0.3	0.3		gr/dscf	Rule 304
Experimental Plant Ventilation Baghouse		5935					0.3	0.3	0.3		gr/dscf	Rule 304
Preseparator Waste Baghouse		136					0.005	0.005	0.005		gr/dscf	ATC 10783
General Waste Baghouse		137					0.0045	0.0045	0.0045		gr/dscf	ATC 10023
Recirculating System Ventilation Baghouse		135					0.005	0.005	0.005		gr/dscf	ATC 10858
4 Dry End Baghouse		112					0.3	0.3	0.3		gr/dscf	Rule 304
4 Bulk Bin Baghouse		103514					0.0044	0.0044	0.0044		gr/dscf	ATC 9193
978 Baghouse		110					0.3	0.3	0.3		gr/dscf	Rule 304
Crushing Plant Ventilation Baghouse		100					0.0059	0.0059	0.0059		gr/dscf	ATC 9192
Soda Ash Baghouse		109452					0.005	0.005	0.005		gr/dscf	ATC 11083
Sackroom Baghouse		153					0.3	0.3	0.3		gr/dscf	Rule 304
Chromosorb Rotoclone		150					0.3	0.3	0.3		gr/dscf	Rule 304

Table 5.2 Equipment Emission Factors (Continued)

Equipment Description			Emission Factors									References
Equipment Item	Process Line	District DeviceNo	NOx	ROC	CO	SOx	PM	PM10	PM2.5	GHG	Units	
Feed Bin Baghouse (BH901)	Milling Circuit	108935					0.005	0.005	0.005		gr/scf	ATC 12091
Baghouse (BH916)	Milling Circuit	108940					0.005	0.005	0.005		gr/scf	ATC 12091
Process Baghouse (BH912)	Milling Circuit	110203					0.005	0.005	0.005		gr/scf	ATC 12091
Baghouse BH101	Silos	110191					0.005	0.005	0.005		gr/dscf	ATC 12208
Baghouse BH102	Silos	110192					0.005	0.005	0.005		gr/dscf	ATC 12208
Baghouse BH103	Silos	110193					0.005	0.005	0.005		gr/dscf	ATC 12208
Baghouse BH104	Silos	110194					0.005	0.005	0.005		gr/dscf	ATC 12208
Baghouse BH105	Silos	110195					0.005	0.005	0.005		gr/dscf	ATC 12208
Baghouse BH106	Silos	110196					0.005	0.005	0.005		gr/dscf	ATC 12208
Baghouse BH107	Silos	110197					0.005	0.005	0.005		gr/dscf	ATC 12208
Baghouse BH108	Silos	110198					0.005	0.005	0.005		gr/dscf	ATC 12208
Baghouse BH925A	Silos	110641					0.005	0.005	0.005		gr/dscf	ATC 12208
Baghouse BH925B	Silos	110642					0.005	0.005	0.005		gr/dscf	ATC 12208
Baghouse BH109A	Silos	110649					0.005	0.005	0.005		gr/dscf	ATC 12208
Baghouse BH109B	Silos	110650					0.005	0.005	0.005		gr/dscf	ATC 12208
Baghouse BH110A	Silos	110651					0.005	0.005	0.005		gr/dscf	ATC 12208
Baghouse BH110B	Silos	110652					0.005	0.005	0.005		gr/dscf	ATC 12208
Packing Sta BH125	Bagging and Packing	110525					0.005	0.005	0.005		gr/dscf	ATC 12398
Bin Vent BH131A1	Bagging and Packing	110532					0.005	0.005	0.005		gr/dscf	ATC 12398
Bin Vent BH131A2	Bagging and Packing	110533					0.005	0.005	0.005		gr/dscf	ATC 12398
Bin Vent BH131B1	Bagging and Packing	110534					0.005	0.005	0.005		gr/dscf	ATC 12398
Bin Vent BH131B2	Bagging and Packing	110535					0.005	0.005	0.005		gr/dscf	ATC 12398
Grizzly Feeder	Mobile Plant	110481					1.40E-04	4.60E-05	1.30E-05		lb/ton material	ATC 12315
Screening	Mobile Plant	110489					3.60E-03	2.20E-03	ND		lb/ton material	ATC 12315
Conveyors (10)	Mobile Plant	Note 1					1.40E-04	4.60E-05	1.30E-05		lb/ton material	ATC 12315
Crusher	Mobile Plant	110486					2.20E-03	7.40E-04	5.00E-05		lb/ton material	ATC 12315
Raw Crude Transfer to Ground Storage	Mobile Plant	NA					3.03E-05	1.43E-05	2.17E-06		lb/ton material	ATC 12315
Oversize Transfer to Reject Pile	Mobile Plant	110493					3.03E-05	1.43E-05	2.17E-06		lb/ton material	ATC 12315
Storage Piles Radial Stacking	Mobile Plant	110500					3.03E-05	1.43E-05	2.17E-06		lb/ton material	ATC 12315
Storage Piles (4) Fugitive Emissions	Mobile Plant	110561/110562					29.69	24.74	3.71		lb/acre surface area	ATC 12315
7 Grizzly Feeder/Primary Screen	Line 7	109777					0.00220	0.00074	0.00074		lb/ton	PTO 12105
7 Conveyor Transfer Points (5)	Line 7	various					0.00014	0.00005	0.00005		lb/ton	PTO 12105
7 Bucket Elevator (2)	Line 7	109781					0.00014	0.00005	0.00005		lb/ton	PTO 12105

Table 5.3 Short Term Emission Limits

Equipment Description			NOx		ROC		CO		SOx		PM		PM10		PM2.5		GHG		Federal Enforceability
Equipment Item	Process Line	District Device No	lb/hr	lb/day	lb/hr	lb/day	lb/hr	lb/day	lb/hr	lb/day	lb/hr	lb/day	lb/hr	lb/day	lb/hr	lb/day	lb/hr	lb/day	
Silicates Boiler #1	NG	81	1.52	36.46	0.08	2.01	1.28	30.65	--	--	0.12	2.79	0.12	2.79	0.12	2.79	1813.50	43,524	AE
Silicates Boiler #1	NG	81	140.00	3,360.00	--	--	--	--	0.21	5.10	--	--	--	--	--	--	1813.50	43,524	FE
Silicates Boiler #2	NG	82	--	--	--	--	--	--	--	--	0.17	4.14	0.17	4.14	0.17	4.14	2691.00	64,584	AE
Silicates Boiler #2	NG	82	0.83	19.87	0.08	1.88	6.83	163.94	0.32	7.56	0.32	7.73	0.32	7.73	0.32	7.73	2691.00	64,584	FE
Silicates Conveyor Dryer		143	140.0	3,360.0	--	--	--	--	5.76	138.24	--	--	--	--	--	--	5,265.00	126,360	FE
Silicates Flash Dryer		140	140.0	3,360.0	--	--	--	--	2.24	53.76	--	--	--	--	--	--	2,047.50	49,140	FE
Pellet Plant Dryer		5843	0.44	10.58	0.02	0.58	0.37	8.86	0.06	1.48	0.03	0.81	0.03	0.81	0.03	0.81	526.50	12,636	FE
Pellet Plant Kiln		5844	0.43	10.35	0.02	0.57	0.36	8.66	0.06	1.45	0.03	0.79	0.03	0.79	0.03	0.79	514.80	12,355	FE
Kiln	Line 7	103370	--	--	--	--	--	--	--	--	--	--	--	--	--	--	5850.00	140,400	FE
Furnace	Line 7	109857	--	--	--	--	--	--	--	--	--	--	--	--	--	--	5265.00	126,360	FE
Combined 7 System Kiln and Furnace outlet from Venturi Scrubber/Packge Bed Tower	Line 7	103370 & 109857	5.55	133.20	2.63	63.12	27.00	648.00	3.00	72.00	4.00	96.00	4.00	96.00	4.00	96.00	--	--	FE
Kiln (NG) (Bypass mode)	Line 7	103370	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
Furnace & Kiln Pilots (NG)	Line 7		0.39	9.41	0.02	0.52	0.33	7.91	0.05	1.32	0.03	0.72	0.03	0.72	0.03	0.72	468.00	11,232	FE
Solvent Use - Photochemically Reactive			--	--	8.00	40.00	--	--	--	--	--	--	--	--	--	--	--	--	FE
Solvent Use -non-Photochemically Reactive			--	--	450.00	3,000.00	--	--	--	--	--	--	--	--	--	--	--	--	FE
Water Pump Engine		391449	0.17	4.05	0.08	1.92	2.11	50.64	0.00	0.05	0.0038	0.09	0.00	0.09	0.00	0.09	209.64	5,031.29	FE
Emergency Standby Lake Pump Engine		8919	1.23	2.45	0.09	0.18	1.14	2.28	0.00	0.01	0.07	0.13	0.07	0.13	0.07	0.13	243.96	487.93	AE
Admin Buiding Emergency Standby Engine		387654	3.80	7.60	0.55	1.10	4.68	9.36	0.01	0.01	0.08	0.17	0.08	0.17	0.08	0.17	306.49	612.97	AE

Note: Emissions not calculated for Kiln Bypass because the Kiln annual hour limit includes kiln bypass hours and normal kiln operational hourly and daily emissions are higher than bypass emissions.

Table 5.3 Short Term Emission Limits (Continued)

Equipment Description			NOx		ROC		CO		SOx		PM		PM10		PM2.5		GHG		Federal Enforceability
Equipment Item	Process Line	District Device No	lb/hr	lb/day	lb/hr	lb/day	lb/hr	lb/day	lb/hr	lb/day	lb/hr	lb/day	lb/hr	lb/day	lb/hr	lb/day	lb/hr	lb/day	
3 Air Sifter Ventilation Baghouse		6471	--	--	--	--	--	--	--	--	0.00	0.04	0.00	0.04	0.00	0.04	--	--	FE
345 Baghouse		108	--	--	--	--	--	--	--	--	1.20	28.80	0.34	8.23	0.34	8.23	--	--	FE
378 Baghouse/ 3 Dry End		109	--	--	--	--	--	--	--	--	2.86	68.73	2.86	68.73	2.86	68.73	--	--	FE
3 Bulk Bin Baghouse		151	--	--	--	--	--	--	--	--	0.13	3.04	0.13	3.04	0.13	3.04	--	--	FE
5 Air Sifter Ventilation Baghouse		6472	--	--	--	--	--	--	--	--	0.00	0.04	0.00	0.04	0.00	0.04	--	--	FE
578 Baghouse		119	--	--	--	--	--	--	--	--	1.35	32.40	1.35	32.40	1.35	32.40	--	--	FE
6 Super Fine Super Floss Baghouse	Line 6	126	--	--	--	--	--	--	--	--	40.00	960.00	40.00	960.00	40.00	960.00	--	--	FE
6 Dry End Ventilation Baghouse	Line 6	125	--	--	--	--	--	--	--	--	40.00	960.00	40.00	960.00	40.00	960.00	--	--	FE
6 Automatic Packing Station Baghouse (678)	Line 6	103363	--	--	--	--	--	--	--	--	5.66	135.77	5.66	135.77	5.66	135.77	--	--	FE
616 Ventilation Baghouse	Line 6	128	--	--	--	--	--	--	--	--	0.57	13.58	0.57	13.58	0.57	13.58	--	--	FE
7 Wet End Baghouse BH721	Line 7	110724	--	--	--	--	--	--	--	--	0.03	0.71	0.03	0.71	0.03	0.71	--	--	FE
7 Dry End Baghouse BH775	Line 7	110720	--	--	--	--	--	--	--	--	0.16	3.92	0.16	3.92	0.16	3.92	--	--	FE
7 Dry End Baghouse BH777	Line 7	110721	--	--	--	--	--	--	--	--	1.35	32.42	1.35	32.42	1.35	32.42	--	--	FE
7 Dry End Baghouse BH778	Line 7	110722	--	--	--	--	--	--	--	--	0.49	11.73	0.49	11.73	0.49	11.73	--	--	FE
7 Dry End Baghouse BH789	Line 7	110723	--	--	--	--	--	--	--	--	0.60	14.44	0.60	14.44	0.60	14.44	--	--	FE
7 Kln Bypass BH717	Line 7	109846	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	FE
Mill Ventilation Baghouse (1178)		102	--	--	--	--	--	--	--	--	40.00	960.00	40.00	960.00	40.00	960.00	--	--	FE
Snow Floss Plant Baghouse		133	--	--	--	--	--	--	--	--	33.37	800.93	33.37	800.93	33.37	800.93	--	--	FE
Silicate Plant Flash Dryer Baghouse		103474	--	--	--	--	--	--	--	--	37.80	907.20	37.80	907.20	37.80	907.20	--	--	FE
Silicate Plant Feed Mix Baghouse		138	--	--	--	--	--	--	--	--	40.00	960.00	40.00	960.00	40.00	960.00	--	--	FE
Silicate Plant Lime Baghouse		139	--	--	--	--	--	--	--	--	7.71	185.14	7.71	185.14	7.71	185.14	--	--	FE
Silicate Plant Production Baghouse		141	--	--	--	--	--	--	--	--	8.49	203.66	8.49	203.66	8.49	203.66	--	--	FE
Silicate Plant Ventilation Baghouse (Pack)		142	--	--	--	--	--	--	--	--	2.59	62.21	2.59	62.21	2.59	62.21	--	--	FE
Silicates Plant Baghouse SDC-01		114326	--	--	--	--	--	--	--	--	0.09	2.06	0.09	2.06	0.09	2.06	--	--	FE
Mortar Plant Ventilation Baghouse		146	--	--	--	--	--	--	--	--	40.00	960.00	40.00	960.00	40.00	960.00	--	--	FE
Pellet Plant Ventilation Baghouse - Cold		147	--	--	--	--	--	--	--	--	40.00	960.00	40.00	960.00	40.00	960.00	--	--	FE
Pellet Plant Ventilation Baghouse - Hot		148	140.0	3360.0	--	--	--	--	200.0	4800.0	0.36	8.64	0.36	8.64	0.36	8.64	--	--	FE
Chromosorb Ventilation Baghouse - South		149	--	--	--	--	--	--	--	--	20.06	481.37	20.06	481.37	20.06	481.37	--	--	FE
Celite Analytical Filter Aid Baghouse		152	--	--	--	--	--	--	--	--	0.35	8.52	0.35	8.52	0.35	8.52	--	--	FE
Experimental Plant Ventilation Baghouse		5935	--	--	--	--	--	--	--	--	2.57	61.71	2.57	61.71	2.57	61.71	--	--	FE
Preseparator Waste Baghouse		136	--	--	--	--	--	--	--	--	0.86	20.57	0.86	20.57	0.86	20.57	--	--	FE
General Waste Baghouse		137	--	--	--	--	--	--	--	--	0.93	22.36	0.93	22.36	0.93	22.36	--	--	FE
Recirculating System Ventilation Baghouse		135	--	--	--	--	--	--	--	--	0.72	17.19	0.72	17.19	0.72	17.19	--	--	FE
4 Dry End Baghouse		112	--	--	--	--	--	--	--	--	40.00	960.00	40.00	960.00	40.00	960.00	--	--	FE
4 Bulk Bin Baghouse		103514	--	--	--	--	--	--	--	--	0.13	3.04	0.13	3.04	0.13	3.04	--	--	FE
978 Baghouse		110	--	--	--	--	--	--	--	--	40.00	960.00	40.00	960.00	40.00	960.00	--	--	FE
Crushing Plant Ventilation Baghouse		100	--	--	--	--	--	--	--	--	1.81	43.33	1.81	43.33	1.81	43.33	--	--	FE
Soda Ash Baghouse		109452	--	--	--	--	--	--	--	--	0.03	0.82	0.03	0.82	0.03	0.82	--	--	FE
Sackroom Baghouse		153	--	--	--	--	--	--	--	--	12.80	307.09	12.80	307.09	12.80	307.09	--	--	FE
Chromosorb Rotoclone		150	--	--	--	--	--	--	--	--	25.71	617.14	25.71	617.14	25.71	617.14	--	--	FE

Note: Emissions not calculated for Kln Bypass baghouse because the Kln annual hour limit includes kiln bypass hours and normal kiln operational hourly and daily emissions are higher than bypass baghouse emissions.

Table 5.3 Short Term Emission Limits (Continued)

Equipment Description			NOx		ROC		CO		SOx		PM		PM10		PM2.5		GHG		Federal Enforceability
Equipment Item	Process Line	District Device No	lb/hr	lb/day	lb/hr	lb/day	lb/hr	lb/day	lb/hr	lb/day	lb/hr	lb/day	lb/hr	lb/day	lb/hr	lb/day	lb/hr	lb/day	
Feed Bin Baghouse (BH901)	Milling Circuit	108935	--	--	--	--	--	--	--	--	0.11	2.62	0.11	2.62	0.11	2.62	--	--	FE
Baghouse (BH916)	Milling Circuit	108940	--	--	--	--	--	--	--	--	0.57	13.62	0.57	13.62	0.57	13.62	--	--	FE
Process Baghouse (BH912)	Milling Circuit	110203	--	--	--	--	--	--	--	--	0.56	13.37	0.56	13.37	0.56	13.37	--	--	FE
Baghouse BH101	Silos	110191	--	--	--	--	--	--	--	--	0.10	2.48	0.10	2.48	0.10	2.48	--	--	FE
Baghouse BH102	Silos	110192	--	--	--	--	--	--	--	--	0.10	2.48	0.10	2.48	0.10	2.48	--	--	FE
Baghouse BH103	Silos	110193	--	--	--	--	--	--	--	--	0.10	2.48	0.10	2.48	0.10	2.48	--	--	FE
Baghouse BH104	Silos	110194	--	--	--	--	--	--	--	--	0.10	2.48	0.10	2.48	0.10	2.48	--	--	FE
Baghouse BH105	Silos	110195	--	--	--	--	--	--	--	--	0.10	2.48	0.10	2.48	0.10	2.48	--	--	FE
Baghouse BH106	Silos	110196	--	--	--	--	--	--	--	--	0.10	2.48	0.10	2.48	0.10	2.48	--	--	FE
Baghouse BH107	Silos	110197	--	--	--	--	--	--	--	--	0.10	2.48	0.10	2.48	0.10	2.48	--	--	FE
Baghouse BH108	Silos	110198	--	--	--	--	--	--	--	--	0.10	2.48	0.10	2.48	0.10	2.48	--	--	FE
Baghouse BH925A	Silos	110641	--	--	--	--	--	--	--	--	0.03	0.74	0.03	0.74	0.03	0.74	--	--	FE
Baghouse BH925B	Silos	110642	--	--	--	--	--	--	--	--	0.03	0.74	0.03	0.74	0.03	0.74	--	--	FE
Baghouse BH109A	Silos	110649	--	--	--	--	--	--	--	--	0.06	1.54	0.06	1.54	0.06	1.54	--	--	FE
Baghouse BH109B	Silos	110650	--	--	--	--	--	--	--	--	0.06	1.54	0.06	1.54	0.06	1.54	--	--	FE
Baghouse BH110A	Silos	110651	--	--	--	--	--	--	--	--	0.06	1.54	0.06	1.54	0.06	1.54	--	--	FE
Baghouse BH110B	Silos	110652	--	--	--	--	--	--	--	--	0.06	1.54	0.06	1.54	0.06	1.54	--	--	FE
Packing Sta BH125	Bagging and Packing	110525	--	--	--	--	--	--	--	--	0.61	14.67	0.61	14.67	0.61	14.67	--	--	FE
Bin Vent BH131A1	Bagging and Packing	110532	--	--	--	--	--	--	--	--	0.04	1.06	0.04	1.06	0.04	1.06	--	--	FE
Bin Vent BH131A2	Bagging and Packing	110533	--	--	--	--	--	--	--	--	0.04	1.06	0.04	1.06	0.04	1.06	--	--	FE
Bin Vent BH131B1	Bagging and Packing	110534	--	--	--	--	--	--	--	--	0.04	1.06	0.04	1.06	0.04	1.06	--	--	FE
Bin Vent BH131B2	Bagging and Packing	110535	--	--	--	--	--	--	--	--	0.04	1.06	0.04	1.06	0.04	1.06	--	--	FE
Grizzly Feeder	Mobile Plant	110481	--	--	--	--	--	--	--	--	0.02	0.60	0.01	0.20	0.00	0.06	--	--	FE
Screening	Mobile Plant	110489	--	--	--	--	--	--	--	--	0.64	15.38	0.39	9.40	0.00	0.00	--	--	FE
Conveyors (10)	Mobile Plant	Note 1	--	--	--	--	--	--	--	--	0.25	5.98	0.08	1.97	0.02	0.56	--	--	FE
Crusher	Mobile Plant	110486	--	--	--	--	--	--	--	--	0.39	9.40	0.13	3.16	0.01	0.21	--	--	FE
Raw Crude Transfer to Ground Storage	Mobile Plant	NA	--	--	--	--	--	--	--	--	0.01	0.13	0.00	0.06	0.00	0.01	--	--	FE
Oversize Transfer to Reject Pile	Mobile Plant	110493	--	--	--	--	--	--	--	--	0.00	0.01	0.00	0.01	0.00	0.00	--	--	FE
Storage Piles Radial Stacking	Mobile Plant	110500	--	--	--	--	--	--	--	--	0.00	0.12	0.00	0.06	0.00	0.01	--	--	FE
Storage Piles (4) Fugitive Emissions	Mobile Plant	110561/110562	--	--	--	--	--	--	--	--	1.46	1.46	1.22	1.22	0.18	0.18	--	--	FE
7 Grizzly Feeder/Primary Screen	Mobile Plant	109777	--	--	--	--	--	--	--	--	0.28	6.60	0.09	2.22	0.09	2.22	--	--	FE
7 Conveyor Transfer Points (5)	Mobile Plant	various	--	--	--	--	--	--	--	--	0.09	2.10	0.03	3.45	0.03	3.45	--	--	FE
7 Bucket Elevator (2)	Mobile Plant	109781	--	--	--	--	--	--	--	--	0.04	0.84	0.01	0.28	0.01	0.28	--	--	FE

Notes:

- (1) Item # refers to the ICE Item # in Table 1.0
- (2) Totals only apply to engines shown in this table. Totals may not appear correct due to rounding.
- (3) Because of rounding, values in this table shown as 0.00 are less than 0.005, but greater than zero.
- (4) Includes correction to 7 Grizzly Feeder, Conveyors Transfer, and Bucket Elevator emissions. PTO 12105 inadvertently divided hours emissions by 24 rather than daily by 24.

Table 5.4 Long Term Emission Limits

Equipment Description			NOx		ROC		CO		SOx		PM		PM10		PM2.5		GHG		Federal Enforceability
Equipment Item	Process Line	District DeviceNo	TPQ	TPY	TPQ	TPY	TPQ	TPY	TPQ	TPY	TPQ	TPY	TPQ	TPY	TPQ	TPY	TPQ	TPY	
Silicates Boiler #1		81	0.110	0.441	0.006	0.024	0.093	0.371	--	--	0.008	0.034	0.008	0.034	0.008	0.022	132	527	AE
Silicates Boiler #1		81	10.161	40.645	--	--	--	--	0.015	0.062	--	--	--	--	--	--	132	527	FE
Silicates Boiler #2		82	--	--	--	--	--	--	0.336	1.342	--	--	--	--	--	--	2,866	11,464	AE
Silicates Boiler #2		82	0.882	3.527	0.083	0.333	7.275	29.100	--	--	0.343	1.372	0.343	1.372	0.343	1.372	2,866	11,464	FE
Silicates Conveyor Dryer		143	153.300	613.200	--	--	--	--	6.307	25.229	--	--	--	--	--	--	5,765	23,061	FE
Silicates Flash Dryer		140	153.300	613.200	--	--	--	--	2.453	9.811	--	--	--	--	--	--	2,242	8,968	FE
Pellet Plant Dryer		5843	0.483	1.932	0.027	0.106	0.404	1.616	0.068	0.270	0.037	0.148	0.037	0.148	0.037	0.148	577	2,306	FE
Pellet Plant Kiln		5844	0.472	1.889	0.026	0.104	0.395	1.580	0.066	0.264	0.036	0.145	0.036	0.145	0.036	0.145	564	2,255	FE
Kiln	Line 7	103370	--	--	--	--	--	--	--	--	--	--	--	--	--	--	6,406	21,139	FE
Furnace	Line 7	109857	--	--	--	--	--	--	--	--	--	--	--	--	--	--	5,765	19,025	FE
Combined 7 System Kiln and Furnace outlet from																			
Venturi Scrubber/Packge Bed Tower	Line 7	103370 & 109857	6.077	20.055	2.880	9.504	29.565	97.565	3.285	10.841	4.380	14.454	4.380	14.454	4.380	14.454	--	--	FE
Kiln (NG) (Bypass mode)	Line 7	103370	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	AE
Furnace & Kiln Pilots (NG)	Line 7		0.429	1.717	0.024	0.095	0.361	1.444	0.060	0.240	0.033	0.131	0.033	0.131	0.033	0.131	512	2,050	FE
Solvent Use - Photochemically Reactive			--	--	--	1.825	7.300	--	--	--	--	--	--	--	--	--	--	--	FE
Solvent Use - non-Photochemically Reactive			--	--	--	136.875	547.500	--	--	--	--	--	--	--	--	--	--	--	FE
Water Pump Engine		391449	0.185	0.739	0.088	0.351	2.310	9.242	0.002	0.009	0.004	0.016	0.004	0.016	0.004	0.016	229.55	918.21	FE
Emergency Standby Lake Pump Engine		8919	0.008	0.031	0.001	0.002	0.007	0.028	0.000	0.000	0.000	0.002	0.000	0.002	0.000	0.002	1.52	6.10	AE
Admin Building Emergency Standby Engine		387654	0.009	0.038	0.001	0.006	0.012	0.047	0.000	0.000	0.000	0.001	0.000	0.001	0.000	0.001	0.77	3.06	AE

Note: Emissions not calculated for Kiln Bypass because the Kiln annual hour limit includes kiln bypass hours and

Table 5.4 Long Term Emission Limits (Continued)

Equipment Description			NOx		ROC		CO		SOx		PM		PM10		PM2.5		GHG		Federal	
Equipment Item	Process Line	District DeviceNo	TPQ	TPY	TPQ	TPY	TPQ	TPY	TPQ	TPY	TPQ	TPY	TPQ	TPY	TPQ	TPY	TPQ	TPY	Enforceability	
3 Air Sifter Ventilation Baghouse		6471	--	--	--	--	--	--	--	--	0.002	0.008	0.002	0.008	0.002	0.008	--	--	FE	
345 Baghouse		108	--	--	--	--	--	--	--	--	1.314	5.256	0.375	1.502	0.375	1.502	--	--	FE	
378 Baghouse		109	--	--	--	--	--	--	--	--	3.136	12.543	3.136	12.543	3.136	12.543	--	--	FE	
3 Bulk Bin Baghouse		151	--	--	--	--	--	--	--	--	0.139	0.555	0.139	0.555	0.139	0.555	--	--	FE	
5 Air Sifter Ventilation Baghouse		6472	--	--	--	--	--	--	--	--	0.002	0.008	0.002	0.008	0.002	0.008	--	--	FE	
578 Baghouse		119	--	--	--	--	--	--	--	--	1.478	5.913	1.478	5.913	1.478	5.913	--	--	FE	
6 Super Fine Super Floss Baghouse	Line 6	126	--	--	--	--	--	--	--	--	43.800	175.200	43.800	175.200	43.800	175.200	--	--	FE	
6 Dry End Ventilation Baghouse	Line 6	125	--	--	--	--	--	--	--	--	43.800	175.200	43.800	175.200	43.800	175.200	--	--	FE	
6 Automatic Packing Station Baghouse (678)	Line 6	103363	--	--	--	--	--	--	--	--	6.195	24.778	6.195	24.778	6.195	24.778	--	--	FE	
616 Ventilation Baghouse	Line 6	128	--	--	--	--	--	--	--	--	0.619	2.478	0.619	2.478	0.619	2.478	--	--	FE	
7 Wet End Baghouse BH721	Line 7	110724	--	--	--	--	--	--	--	--	0.032	0.129	0.032	0.129	0.032	0.129	--	--	FE	
7 Dry End Baghouse BH775	Line 7	110720	--	--	--	--	--	--	--	--	0.179	0.716	0.179	0.716	0.179	0.716	--	--	FE	
7 Dry End Baghouse BH777	Line 7	110721	--	--	--	--	--	--	--	--	1.479	5.917	1.479	5.917	1.479	5.917	--	--	FE	
7 Dry End Baghouse BH778	Line 7	110722	--	--	--	--	--	--	--	--	0.535	2.141	0.535	2.141	0.535	2.141	--	--	FE	
7 Dry End Baghouse BH789	Line 7	110723	--	--	--	--	--	--	--	--	0.659	2.635	0.659	2.635	0.659	2.635	--	--	FE	
7 Kiln Bypass BH717	Line 7	109846	--	--	--	--	--	--	--	--							--	--	FE	
Mill Ventilation Baghouse (1178)		102	--	--	--	--	--	--	--	--	43.800	175.200	43.800	175.200	43.800	175.200	--	--	FE	
Snow Floss Plant Baghouse		133	--	--	--	--	--	--	--	--	36.542	146.169	36.542	146.169	36.542	146.169	--	--	FE	
Silicate Plant Flash Dryer Baghouse		103474	--	--	--	--	--	--	--	--	41.391	165.564	41.391	165.564	41.391	165.564	--	--	FE	
Silicate Plant Feed Mix Baghouse		138	--	--	--	--	--	--	--	--	43.800	175.200	43.800	175.200	43.800	175.200	--	--	FE	
Silicate Plant Lime Baghouse		139	--	--	--	--	--	--	--	--	8.447	33.789	8.447	33.789	8.447	33.789	--	--	FE	
Silicate Plant Production Baghouse		141	--	--	--	--	--	--	--	--	9.292	37.167	9.292	37.167	9.292	37.167	--	--	FE	
Silicate Plant Ventilation Baghouse (Pack)		142	--	--	--	--	--	--	--	--	2.838	11.353	2.838	11.353	2.838	11.353	--	--	FE	
Silicates Plant Baghouse 5DC-01		114326	--	--	--	--	--	--	--	--	0.094	0.375	0.094	0.375	0.094	0.375	--	--	FE	
Mortar Plant Ventilation Baghouse		146	--	--	--	--	--	--	--	--	43.800	175.200	43.800	175.200	43.800	175.200	--	--	FE	
Pellet Plant Ventilation Baghouse - Cold		147	--	--	--	--	--	--	--	--	43.800	175.200	43.800	175.200	43.800	175.200	--	--	FE	
Pellet Plant Ventilation Baghouse - Hot		148	145.635	582.540	--	--	--	--	--	208.050	832.200	0.374	1.498	0.374	1.498	0.374	1.498	--	--	FE
Chromosorb Ventilation Baghouse - South		149	--	--	--	--	--	--	--	--	21.963	87.850	21.963	87.850	21.963	87.850	--	--	FE	
Celite Analytical Filter Aid Baghouse		152	--	--	--	--	--	--	--	--	0.389	1.554	0.389	1.554	0.389	1.554	--	--	FE	
Experimental Plant Ventilation Baghouse		5935	--	--	--	--	--	--	--	--	2.816	11.263	2.816	11.263	2.816	11.263	--	--	FE	
Preseparator Waste Baghouse		136	--	--	--	--	--	--	--	--	0.913	3.651	0.913	3.651	0.913	3.651	--	--	FE	
General Waste Baghouse		137	--	--	--	--	--	--	--	--	1.020	4.080	1.020	4.080	1.020	4.080	--	--	FE	
Recirculating System Ventilation Baghouse		135	--	--	--	--	--	--	--	--	0.763	3.051	0.763	3.051	0.763	3.051	--	--	FE	
4 Dry End Baghouse		112	--	--	--	--	--	--	--	--	43.800	175.200	43.800	175.200	43.800	175.200	--	--	FE	
4 Bulk Bin Baghouse		103514	--	--	--	--	--	--	--	--	0.139	0.555	0.139	0.555	0.139	0.555	--	--	FE	
978 Baghouse		110	--	--	--	--	--	--	--	--	43.800	175.200	43.800	175.200	43.800	175.200	--	--	FE	
Crushing Plant Ventilation Baghouse		100	--	--	--	--	--	--	--	--	1.977	7.908	1.977	7.908	1.977	7.908	--	--	FE	
Soda Ash Baghouse		109452	--	--	--	--	--	--	--	--	0.038	0.150	0.038	0.150	0.038	0.150	--	--	FE	
Sackroom Baghouse		153	--	--	--	--	--	--	--	--	14.011	56.044	14.011	56.044	14.011	56.044	--	--	FE	
Chromosorb Rotoclone		150	--	--	--	--	--	--	--	--	28.157	112.629	28.157	112.629	28.157	112.629	--	--	FE	

Note: Emissions not calculated for Kiln Bypass baghouse because the Kiln annual hour limit includes kiln bypass hours and normal kiln operational hourly and daily emissions are higher than bypass baghouse emissions.

Table 5.4 Long Term Emission Limits (Continued)

Equipment Description			NOx		ROC		CO		SOx		PM		PM10		PM2.5		GHG		Federal Enforceability
Equipment Item	Process Line	District DeviceNo	TPQ	TPY	TPQ	TPY	TPQ	TPY	TPQ	TPY	TPQ	TPY	TPQ	TPY	TPQ	TPY	TPQ	TPY	
Feed Bin Baghouse (BH901)	Milling Circuit	108935	--	--	--	--	--	--	--	--	0.120	0.479	0.120	0.479	0.120	0.479	--	--	FE
Baghouse (BH916)	Milling Circuit	108940	--	--	--	--	--	--	--	--	0.621	2.486	0.621	2.486	0.621	2.486	--	--	FE
Process Baghouse (BH912)	Milling Circuit	110203	--	--	--	--	--	--	--	--	0.610	2.440	0.610	2.440	0.610	2.440	--	--	FE
Baghouse BH101	Silos	110191	--	--	--	--	--	--	--	--	0.113	0.453	0.113	0.453	0.113	0.453	--	--	FE
Baghouse BH102	Silos	110192	--	--	--	--	--	--	--	--	0.113	0.453	0.113	0.453	0.113	0.453	--	--	FE
Baghouse BH103	Silos	110193	--	--	--	--	--	--	--	--	0.113	0.453	0.113	0.453	0.113	0.453	--	--	FE
Baghouse BH104	Silos	110194	--	--	--	--	--	--	--	--	0.113	0.453	0.113	0.453	0.113	0.453	--	--	FE
Baghouse BH105	Silos	110195	--	--	--	--	--	--	--	--	0.113	0.453	0.113	0.453	0.113	0.453	--	--	FE
Baghouse BH106	Silos	110196	--	--	--	--	--	--	--	--	0.113	0.453	0.113	0.453	0.113	0.453	--	--	FE
Baghouse BH107	Silos	110197	--	--	--	--	--	--	--	--	0.113	0.453	0.113	0.453	0.113	0.453	--	--	FE
Baghouse BH108	Silos	110198	--	--	--	--	--	--	--	--	0.113	0.453	0.113	0.453	0.113	0.453	--	--	FE
Baghouse BH925A	Silos	110641	--	--	--	--	--	--	--	--	0.034	0.135	0.034	0.135	0.034	0.135	--	--	FE
Baghouse BH925B	Silos	110642	--	--	--	--	--	--	--	--	0.034	0.135	0.034	0.135	0.034	0.135	--	--	FE
Baghouse BH109A	Silos	110649	--	--	--	--	--	--	--	--	0.070	0.282	0.070	0.282	0.070	0.282	--	--	FE
Baghouse BH109B	Silos	110650	--	--	--	--	--	--	--	--	0.070	0.282	0.070	0.282	0.070	0.282	--	--	FE
Baghouse BH110A	Silos	110651	--	--	--	--	--	--	--	--	0.070	0.282	0.070	0.282	0.070	0.282	--	--	FE
Baghouse BH110B	Silos	110652	--	--	--	--	--	--	--	--	0.070	0.282	0.070	0.282	0.070	0.282	--	--	FE
Packing Sta BH125	Bagging and Packing	110525	--	--	--	--	--	--	--	--	0.669	2.677	0.669	2.677	0.669	2.677	--	--	FE
Bin Vent BH131A1	Bagging and Packing	110532	--	--	--	--	--	--	--	--	0.048	0.194	0.048	0.194	0.048	0.194	--	--	FE
Bin Vent BH131A2	Bagging and Packing	110533	--	--	--	--	--	--	--	--	0.048	0.194	0.048	0.194	0.048	0.194	--	--	FE
Bin Vent BH131B1	Bagging and Packing	110534	--	--	--	--	--	--	--	--	0.048	0.194	0.048	0.194	0.048	0.194	--	--	FE
Bin Vent BH131B2	Bagging and Packing	110535	--	--	--	--	--	--	--	--	0.048	0.194	0.048	0.194	0.048	0.194	--	--	FE
Grizzly Feeder	Mobile Plant	110481	--	--	--	--	--	--	--	--	0.027	0.055	0.009	0.018	0.003	0.005	--	--	FE
Screening	Mobile Plant	110489	--	--	--	--	--	--	--	--	0.702	1.403	0.429	0.858	0.000	0.000	--	--	FE
Conveyors (10)	Mobile Plant	Note 1	--	--	--	--	--	--	--	--	0.273	0.546	0.090	0.179	0.025	0.051	--	--	FE
Crusher	Mobile Plant	110486	--	--	--	--	--	--	--	--	0.429	0.858	0.144	0.288	0.010	0.019	--	--	FE
Raw Crude Transfer to Ground Storage	Mobile Plant	NA	--	--	--	--	--	--	--	--	0.006	0.012	0.003	0.006	0.000	0.001	--	--	FE
Oversize Transfer to Reject Pile	Mobile Plant	110493	--	--	--	--	--	--	--	--	0.001	0.012	0.000	0.006	0.000	0.001	--	--	FE
Storage Piles Radial Stacking	Mobile Plant	110500	--	--	--	--	--	--	--	--	0.005	0.017	0.002	0.055	0.000	0.008	--	--	FE
Storage Piles (4) Fugitive Emissions	Mobile Plant	110561/110562	--	--	--	--	--	--	--	--	0.033	0.134	0.028	0.111	0.004	0.017	--	--	FE
7 Grizzly Feeder/Primary Screen	Line 7	109777	--	--	--	--	--	--	--	--	0.301	1.205	0.101	0.405	0.101	0.405	--	--	FE
7 Conveyor Transfer Points (5)	Line 7	various	--	--	--	--	--	--	--	--	0.019	0.077	0.006	0.025	0.006	0.025	--	--	FE
7 Bucket Elevator (2)	Line 7	109781	--	--	--	--	--	--	--	--	0.019	0.077	0.006	0.025	0.006	0.025	--	--	FE

Notes:

- (1) Item # refers to the ICE Item # in Table 1.0
- (2) Totals only apply to engines shown in this table. Totals may not appear correct due to rounding.
- (3) Because of rounding, values in this table shown as 0.00 are less than 0.005, but greater than zero.
- (4) Includes correction to 7 Grizzly Feeder, Coveryor Transfer, and Bucket Elevator emissions. PTO 12105 inadvertently divided hours emissions by 24 rather than daily by 24.

Table 5.5 Permitted Facility Emissions

A. Hourly

Equipment Category	NOx	ROC	CO	SOx	PM	PM10	PM2.5	GHG
External Combustion - Boilers	140.83	0.16	8.11	0.53	0.44	0.44	0.44	4,504.50
External Combustion - Dryers	280.44	0.02	0.37	8.06	0.03	0.03	0.03	7,839.00
External Combustion - Kilns & Furnaces	5.55	2.63	27.00	3.00	4.00	4.00	4.00	11,115.00
External Combustion - Pilots	0.39	0.02	0.33	0.05	0.03	0.03	0.03	468.00
Solvent Usage	--	458.00	--	--	--	--	--	--
Baghouses	140.00	--	--	200.00	493.94	493.09	493.09	--
Rotoclone	--	--	--	--	25.71	25.71	25.71	--
Mobile Plant	--	--	--	--	2.78	1.84	0.22	--
Internal Combustion Engines	5.20	0.72	7.93	0.01	0.15	0.15	0.15	760.09
Totals (lb/hr)	572.41	461.56	43.74	211.66	527.09	525.29	523.67	24,686.59

B. Daily

Equipment Category	NOx	ROC	CO	SOx	PM	PM10	PM2.5	GHG
External Combustion - Boilers	3,379.87	3.89	194.60	12.66	10.52	10.52	10.52	108,108.00
External Combustion - Dryers	6,730.58	0.58	8.86	193.48	0.81	0.81	0.81	188,136.00
External Combustion - Kilns & Furnaces	133.20	63.12	648.00	72.00	96.00	96.00	96.00	266,760.00
External Combustion - Pilots	9.41	0.52	7.91	1.32	0.72	0.72	0.72	11,232.00
Solvent Usage	--	3,040.00	--	--	--	--	--	--
Baghouses	3,360.00	--	--	4,800.00	11,854.62	11,834.05	11,834.05	--
Rotoclone	--	--	--	--	617.14	617.14	617.14	--
Mobile Plant	--	--	--	--	33.08	16.06	1.03	--
Internal Combustion Engines	14.10	3.20	62.28	0.07	0.39	0.39	0.39	6,132.19
Totals (lb/day)	13,627.17	3,111.31	921.64	5,079.52	12,613.27	12,575.69	12,560.65	580,368.19

C. Quarterly

Equipment Category	NOx	ROC	CO	SOx	PM	PM10	PM2.5	GHG
External Combustion - Boilers	11.04	0.09	7.37	0.35	0.35	0.35	0.35	2,997.54
External Combustion - Dryers	307.08	0.03	0.40	8.83	0.04	0.04	0.04	8,583.71
External Combustion - Kilns & Furnaces	6.08	2.88	29.57	3.29	4.38	4.38	4.38	12,170.93
External Combustion - Pilots	0.43	0.02	0.36	0.06	0.03	0.03	0.03	512.46
Solvent Usage	--	138.70	--	--	--	--	--	--
Baghouses	145.64	--	--	208.05	540.80	539.86	539.86	--
Rotoclone	--	--	--	--	28.16	28.16	28.16	--
Mobile Plant	--	--	--	--	1.48	0.70	0.04	--
Internal Combustion Engines	0.20	0.09	2.33	0.00	0.00	0.00	0.00	231.84
Totals (TPQ)	470.47	141.81	40.03	220.58	575.24	573.53	572.87	24,496.47

D. Annual

Equipment Category	NOx	ROC	CO	SOx	PM	PM10	PM2.5	GHG
External Combustion - Boilers	44.17	0.36	29.47	1.40	1.41	1.41	1.39	11,990.16
External Combustion - Dryers	1,228.33	0.11	1.62	35.31	0.15	0.15	0.15	34,334.82
External Combustion - Kilns & Furnaces	20.05	9.50	97.56	10.84	14.45	14.45	14.45	40,164.05
External Combustion - Pilots	1.72	0.09	1.44	0.24	0.13	0.13	0.13	2,049.84
Solvent Usage	--	554.80	--	--	--	--	--	--
Baghouses	582.54	--	--	832.20	2,163.20	2,159.45	2,159.45	--
Rotoclone	--	--	--	--	112.63	112.63	112.63	--
Mobile Plant	--	--	--	--	3.14	1.52	0.10	--
Internal Combustion Engines	0.81	0.36	9.32	0.01	0.02	0.02	0.02	927.37
Totals (TPY)	1,877.62	565.22	139.41	880.00	2,295.12	2,289.75	2,288.32	89,466.25

Table 5.6 Estimated Federal Potential to Emit

A. Hourly

Equipment Category	NOx	ROC	CO	SOx	PM	PM10	PM2.5	GHG
External Combustion - Boilers	140.83	0.16	8.11	0.53	0.44	0.44	0.44	4,504.50
External Combustion - Dryers	280.44	0.02	0.37	8.06	0.03	0.03	0.03	7,839.00
External Combustion - Kilns & Furnace	5.55	2.63	27.00	3.00	4.00	4.00	4.00	11,115.00
External Combustion - Pilots	0.39	0.02	0.33	0.05	0.03	0.03	0.03	468.00
Solvent Usage	--	458.00	--	--	--	--	--	--
Baghouses	140.00	--	--	200.00	493.94	493.09	493.09	--
Rotoclone	--	--	--	--	25.71	25.71	25.71	--
Mobile Plant	--	--	--	--	2.78	1.84	0.22	--
Internal Combustion Engines	5.20	0.72	7.93	0.01	0.15	0.15	0.15	760.09
Exempt Equipment	5.42	1.02	15.09	0.50	0.26	0.26	0.26	821.36
Totals (lb/hr)	577.83	462.57	58.83	212.16	527.35	525.55	523.93	25,507.95

B. Daily

Equipment Category	NOx	ROC	CO	SOx	PM	PM10	PM2.5	GHG
External Combustion - Boilers	3,379.87	3.89	194.60	12.66	10.52	10.52	10.52	108,108.00
External Combustion - Dryers	6,730.58	0.58	8.86	193.48	0.81	0.81	0.81	188,136.00
External Combustion - Kilns & Furnace	133.20	63.12	648.00	72.00	96.00	96.00	96.00	266,760.00
External Combustion - Pilots	9.41	0.52	7.91	1.32	0.72	0.72	0.72	11,232.00
Solvent Usage	--	3,040.00	--	--	--	--	--	--
Baghouses	3,360.00	--	--	4,800.00	11,854.62	11,834.05	11,834.05	--
Rotoclone	--	--	--	--	617.14	617.14	617.14	--
Mobile Plant	--	--	--	--	33.08	16.06	1.03	--
Internal Combustion Engines	14.10	3.20	62.28	0.07	0.39	0.39	0.39	6,132.19
Exempt Equipment	130.14	24.37	362.24	12.03	6.29	6.29	6.29	19,712.75
Totals (lb/day)	13,757.31	3,135.67	1,283.88	5,091.55	12,619.56	12,581.97	12,566.94	600,080.93

C. Quarterly

Equipment Category	NOx	ROC	CO	SOx	PM	PM10	PM2.5	GHG
External Combustion - Boilers	11.04	0.09	7.37	0.35	0.35	0.35	0.35	2,997.54
External Combustion - Dryers	307.08	0.03	0.40	8.83	0.04	0.04	0.04	8,583.71
External Combustion - Kilns & Furnace	6.08	2.88	29.57	3.29	4.38	4.38	4.38	12,170.93
External Combustion - Pilots	0.43	0.02	0.36	0.06	0.03	0.03	0.03	512.46
Solvent Usage	--	138.70	--	--	--	--	--	--
Baghouses	145.64	--	--	208.05	540.80	539.86	539.86	--
Rotoclone	--	--	--	--	28.16	28.16	28.16	--
Mobile Plant	--	--	--	--	1.48	0.70	0.04	--
Internal Combustion Engines	0.20	0.09	2.33	0.00	0.00	0.00	0.00	231.84
Exempt Equipment	5.94	1.11	16.53	0.55	0.29	0.29	0.29	899.39
Totals (TPQ)	476.41	142.92	56.55	221.12	575.53	573.82	573.15	25,395.87

D. Annual

Equipment Category	NOx	ROC	CO	SOx	PM	PM10	PM2.5	GHG
External Combustion - Boilers	44.17	0.36	29.47	1.40	1.41	1.41	1.39	11,990.16
External Combustion - Dryers	1,228.33	0.11	1.62	35.31	0.15	0.15	0.15	34,334.82
External Combustion - Kilns & Furnace	20.05	9.50	97.56	10.84	14.45	14.45	14.45	40,164.05
External Combustion - Pilots	1.72	0.09	1.44	0.24	0.13	0.13	0.13	2,049.84
Solvent Usage	--	554.80	--	--	--	--	--	--
Baghouses	582.54	--	--	832.20	2,163.20	2,159.45	2,159.45	--
Rotoclone	--	--	--	--	112.63	112.63	112.63	--
Mobile Plant	--	--	--	--	3.14	1.52	0.10	--
Internal Combustion Engines	0.81	0.36	9.32	0.01	0.02	0.02	0.02	927.37
Exempt Equipment	23.75	4.45	66.11	2.19	1.15	1.15	1.15	3,597.58
Totals (TPY)	1,901.37	569.67	205.52	882.20	2,296.27	2,290.90	2,289.47	93,063.82

Table 5.7 HAP Emission Factors

Equipment Category	Description	Benzene	Dichlorobenzene	Naphthalene	Antimony	Arsenic	Beryllium	Cadmium	Chromium	Cobalt	Lead	Manganese	Mercury	Nickel	Selenium	Acetaldehyde	Acrolein	1,3-butadiene	Chlorobenzene	Ethylbenzene	HCL	Toluene	Xylene	Formaldehyde	PAH	Hexane	Units
Boilers	Silicates Boiler #1	5.69E-06	--	2.94E-07	--	1.96E-07	1.18E-08	1.08E-06	1.37E-06	8.24E-08	--	3.73E-07	2.55E-07	2.06E-06	2.35E-08	3.04E-06	2.65E-06	--	--	6.76E-06	--	2.52E-05	1.93E-05	1.21E-05	3.92E-07	4.51E-06	lb/MMBtu
	Silicates Boiler #2	5.69E-06	--	2.94E-07	--	1.96E-07	1.18E-08	1.08E-06	1.37E-06	8.24E-08	--	3.73E-07	2.55E-07	2.06E-06	2.35E-08	3.04E-06	2.65E-06	--	--	6.76E-06	--	2.52E-05	1.93E-05	1.21E-05	3.92E-07	4.51E-06	lb/MMBtu
Dryers/Heaters	Silicates Conveyor Dryer	5.69E-06	--	2.94E-07	--	1.96E-07	1.18E-08	1.08E-06	1.37E-06	8.24E-08	--	3.73E-07	2.55E-07	2.06E-06	2.35E-08	3.04E-06	2.65E-06	--	--	6.76E-06	--	2.52E-05	1.93E-05	1.21E-05	3.92E-07	4.51E-06	lb/MMBtu
	Silicates Flash Dryer	5.69E-06	--	2.94E-07	--	1.96E-07	1.18E-08	1.08E-06	1.37E-06	8.24E-08	--	3.73E-07	2.55E-07	2.06E-06	2.35E-08	3.04E-06	2.65E-06	--	--	6.76E-06	--	2.52E-05	1.93E-05	1.21E-05	3.92E-07	4.51E-06	lb/MMBtu
	Pellet Plant Dryer	7.84E-06	--	2.94E-07	--	1.96E-07	1.18E-08	1.08E-06	1.37E-06	8.24E-08	--	3.73E-07	2.55E-07	2.06E-06	2.35E-08	4.22E-06	2.65E-06	--	--	9.31E-06	--	3.59E-05	2.67E-05	1.67E-05	3.92E-07	6.18E-06	lb/MMBtu
Kilns	Pellet Plant Kiln	7.84E-06	--	2.94E-07	--	1.96E-07	1.18E-08	1.08E-06	1.37E-06	8.24E-08	--	3.73E-07	2.55E-07	2.06E-06	2.35E-08	4.22E-06	2.65E-06	--	--	9.31E-06	--	3.59E-05	2.67E-05	1.67E-05	3.92E-07	6.18E-06	lb/MMBtu
	7 System Kiln	5.69E-06	--	2.94E-07	--	1.96E-07	1.18E-08	1.08E-06	1.37E-06	8.24E-08	--	3.73E-07	2.55E-07	2.06E-06	2.35E-08	3.04E-06	2.65E-06	--	--	6.76E-06	--	2.52E-05	1.93E-05	1.21E-05	3.92E-07	4.51E-06	lb/MMBtu
Furnaces	7 System Furnace	5.69E-06	--	2.94E-07	--	1.96E-07	1.18E-08	1.08E-06	1.37E-06	8.24E-08	--	3.73E-07	2.55E-07	2.06E-06	2.35E-08	3.04E-06	2.65E-06	--	--	6.76E-06	--	2.52E-05	1.93E-05	1.21E-05	3.92E-07	4.51E-06	lb/MMBtu
Pilots	7 System Furnace & Kiln Pilots	7.84E-06	--	2.94E-07	--	1.96E-07	1.18E-08	1.08E-06	1.37E-06	8.24E-08	--	3.73E-07	2.55E-07	2.06E-06	2.35E-08	4.22E-06	2.65E-06	--	--	9.31E-06	--	3.59E-05	2.67E-05	1.67E-05	3.92E-07	6.18E-06	lb/MMBtu
Solvent Usage	Solvent Use - Photochemically Reactive	0.365	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.365	0.365	--	--	--	ton/yr
	Solvent Use -non-Photochemically Reactive	27.375	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	27.375	27.375	--	--	--	ton/yr
Baghouses	All Bagothouses	--	--	--	2.00	5.00	1.00	2.00	100.00	5.00	2.00	60.00	0.30	120.00	10.00	--	--	--	--	--	--	--	--	--	--	--	ppm
Rotoclone	Rotoclone	--	--	--	2.00	5.00	1.00	2.00	100.00	5.00	2.00	60.00	0.30	120.00	10.00	--	--	--	--	--	--	--	--	--	--	--	ppm
Mobile Plant	All Mobile Plant Equipment	--	--	--	2.00	5.00	1.00	2.00	100.00	5.00	2.00	60.00	0.30	120.00	10.00	--	--	--	--	--	--	--	--	--	--	--	ppm
Exempt Equipment	Diesel IC Engines	1.86E-01	--	1.97E-02	--	1.60E-03	--	1.50E-03	6.00E-04	--	8.30E-03	3.10E-03	2.00E-03	3.90E-03	2.20E-03	7.83E-01	3.39E-02	2.17E-01	2.00E-04	1.09E-02	1.86E-01	1.05E-01	4.24E-02	1.73E+00	5.59E-02	2.69E-02	lb/1000 gal
	Gasoline IC Engines	8.09E-02	--	--	--	--	--	--	--	--	--	--	--	--	--	4.18E-02	--	--	--	1.55E-02	--	2.49E-01	7.64E-02	6.28E-02	--	9.49E-02	lb/MMBtu
	External Combustion Equipment	2.06E-06	1.18E-06	5.98E-07	--	1.96E-07	1.18E-08	1.08E-06	1.37E-06	8.24E-08	--	3.73E-07	2.55E-07	2.06E-06	2.35E-08	--	--	--	--	--	--	3.33E-06	--	7.35E-04	8.65E-08	1.76E-03	lb/MMBtu

Table 5.8 Facility HAP Potential to Emit (tpy) Estimate

Equipment Category	Description	Benzene	Dichlorobenzene	Naphthalene	Antimony	Arsenic	Beryllium	Cadmium	Chromium	Cobalt	Lead	Manganese	Mercury	Nickel	Selenium	Acetaldehyde	Acrolein	1,3-butadiene	Chlorobenzene	Ethylbenzene	HCL	Toluene	Xylene	Formaldehyde	PAH	Hexane	Total HAPs
Boilers	Silicates Boiler #1	0.00	--	0.00	--	0.00	0.00	0.00	0.00	0.00	--	0.00	0.00	0.00	0.00	--	--	--	--	--	--	0.00	--	0.00	0.00	0.00	0.00
	Silicates Boiler #2	0.00	--	0.00	--	0.00	0.00	0.00	0.00	0.00	--	0.00	0.00	0.00	0.00	--	--	--	--	--	--	0.00	--	0.00	0.00	0.00	0.01
Dryers/Heaters	Silicates Conveyor Dryer	0.00	--	0.00	--	0.00	0.00	0.00	0.00	0.00	--	0.00	0.00	0.00	0.00	--	--	--	--	--	--	0.00	--	0.00	0.00	0.00	0.01
	Silicates Flash Dryer	0.00	--	0.00	--	0.00	0.00	0.00	0.00	0.00	--	0.00	0.00	0.00	0.00	--	--	--	--	--	--	0.00	--	0.00	0.00	0.00	0.00
	Pellet Plant Dryer	0.00	--	0.00	--	0.00	0.00	0.00	0.00	0.00	--	0.00	0.00	0.00	0.00	--	--	--	--	--	--	0.00	--	0.00	0.00	0.00	0.00
Kilns	Pellet Plant Kiln	0.00	--	0.00	--	0.00	0.00	0.00	0.00	0.00	--	0.00	0.00	0.00	0.00	--	--	--	--	--	--	0.00	--	0.00	0.00	0.00	0.00
	7 System Kiln	0.00	--	0.00	--	0.00	0.00	0.00	0.00	0.00	--	0.00	0.00	0.00	0.00	--	--	--	--	--	--	0.00	--	0.00	0.00	0.00	0.01
Furnaces	7 System Furnace	0.00	--	0.00	--	0.00	0.00	0.00	0.00	0.00	--	0.00	0.00	0.00	0.00	--	--	--	--	--	--	0.00	--	0.00	0.00	0.00	0.01
Pilots	7 System Furnace & Kiln Pilots	0.00	--	0.00	--	0.00	0.00	0.00	0.00	0.00	--	0.00	0.00	0.00	0.00	--	--	--	--	--	--	0.00	--	0.00	0.00	0.00	0.00
Solvent Usage	Solvent Use - Photochemically Reactive	0.37	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.37	0.37	--	--	--	1.10
	Solvent Use -non-Photochemically Reactive	27.38	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	27.38	27.38	--	--	--	82.13
Baghouses	All Bagothouses	--	--	--	0.00	0.01	0.00	0.00	0.22	0.01	0.00	0.13	0.00	0.26	0.02	--	--	--	--	--	--	--	--	--	--	--	0.66
Rotoclone	Rotoclone	--	--	--	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.01	0.00	0.01	0.00	--	--	--	--	--	--	--	--	--	--	--	0.03
Mobile Plant	All Mobile Plant Equipment	--	--	--	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	--	--	--	--	--	--	--	--	--	--	--	0.00
Exempt Equipment	Diesel IC Engines	0.01	--	0.00	--	0.00	--	0.00	0.00	--	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.01	0.00	0.00	0.01	0.01	0.00	0.11	0.00	0.00	0.21
	Gasoline IC Engines	1.97	--	--	--	--	--	--	--	--	--	--	--	--	--	1.02	--	--	--	0.38	--	6.09	1.87	1.53	--	2.32	15.19
	External Combustion Equipment	0.00	0.00	0.00	--	0.00	0.00	0.00	0.00	0.00	--	0.00	0.00	0.00	0.00	--	--	--	--	--	--	0.00	--	0.02	0.00	0.04	0.06
SUB-TOTAL HAPS (tpy) =		29.73	0.00	0.00	0.00	0.01	0.00	0.01	0.23	0.01	0.01	0.14	0.00	0.27	0.02	1.07	0.00	0.01	0.00	0.38	0.01	33.86	29.61	1.67	0.00	2.36	99.42
TOTAL HAPS (tpy) =		99.42																									

1. These are estimates only, and are not intended to represent emission limits.

Table 5.9 Stationary Source HAP Potential to Emit (tpy) Estimate

Facility	Benzene	Dichlorobenzene	Naphthalene	Antimony	Arsenic	Beryllium	Cadmium	Chromium	Cobalt	Lead	Manganese	Mercury	Nickel	Selenium	Acetaldehyde	Acrolein	1,3-butadiene	Chlorobenzene	Ethylbenzne	HCL	Toluene	Xylene	Formaldehyde	PAH	Hexane	Total HAPs	
Main Plant	29.73	0.00	0.00	0.00	0.01	0.00	0.01	0.23	0.01	0.01	0.14	0.00	0.27	0.02	1.07	0.00	0.01	0.00	0.38	0.01	33.86	29.61	1.67	0.00	2.36	99.42	
Celpure	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01		
Stationary Source Total HAPs (tpy) = 29.73 0.00 0.00 0.00 0.01 0.00 0.01 0.23 0.01 0.01 0.14 0.00 0.28 0.02 1.07 0.00 0.01 0.00 0.38 0.01 33.86 29.61 1.67 0.00 2.36 99.43																											

1. These are estimates only, and are not intended to represent emission limits.

Table 5.10 Estimated Permit Exempt Emissions

Annual

Item	Equipment Category	NOx	ROC	CO	SOx	PM	PM10	PM2.5	GHG
	Diesel Fired Mobile Quarry Flood Light ICE	12.17	0.99	2.62	1.39	0.81	0.81	0.81	451.44
	Gasoline Fired Air Compressor ICE	0.77	1.51	30.77	0.01	0.05	0.05	0.05	0.00
	Gasoline Fired Concrete Mixer ICE	0.43	0.85	17.31	0.01	0.03	0.03	0.03	0.00
	Gasoline Fired Stripper ICE	0.17	0.33	6.73	0.00	0.01	0.01	0.01	0.00
	Natural Gas Air Blower ICE	3.75	0.20	3.15	0.27	0.02	0.02	0.02	230.27
	Natural Gas Air Compressor ICE	2.62	0.14	2.20	0.19	0.01	0.01	0.01	160.66
	Natural Gas Emergency Generator ICE	0.40	0.02	0.33	0.03	0.00	0.00	0.00	24.45
	Propane Fired Vacuum System ICE	1.25	0.27	1.16	0.01	0.05	0.04	0.04	112.08
	CAFA Rotary Kiln	0.05	0.00	0.04	0.01	0.00	0.00	0.00	56.37
	2 Shrink Wrap Units	0.69	0.04	0.58	0.09	0.05	0.05	0.05	819.94
	Shrink Wrap Gun	0.09	0.00	0.07	0.01	0.01	0.01	0.01	102.49
	Experimental Plant Dryer	0.13	0.01	0.11	0.02	0.01	0.01	0.01	153.74
	Main Kiln	0.64	0.04	0.54	0.08	0.05	0.05	0.05	768.69
	6" Kiln	0.09	0.00	0.07	0.01	0.01	0.01	0.01	102.49
	Acid Washed Filter Aid Kiln	0.26	0.01	0.22	0.03	0.02	0.02	0.02	307.48
	Acid Washed Filter Aid Furnace	0.26	0.01	0.22	0.03	0.02	0.02	0.02	307.48
	Totals (TPY)	23.75	4.45	66.11	2.19	1.15	1.15	1.15	3597.58

DRAFT

This page left intentionally blank.

6.0 Air Quality Impact Analysis

6.1 Modeling

Prior to the modification to System 7 (PTO 12105 issued March 1, 2014) air quality modeling was not required for this stationary source. The potential to emit from the System 7 permit modification exceeded the Air Quality Impact Analysis (AQIA) emission trigger requirements of Rule 803 for CO. As a consequence the total CO emissions from the 7 System were modeled using ISC-ST3 software and combined with the ambient background CO concentrations. Total concentrations were below the eight hour and one hour California State Ambient Air Quality Standards (AAQS). The modeling protocol and ISC-ST3 input and output files can be found in the administrative file for PTO 12105. The results of the analysis are shown below:

Pollutant	Averaging Period	Modeled Impact ($\mu\text{g}/\text{m}^3$)	Background ($\mu\text{g}/\text{m}^3$)	Total ($\mu\text{g}/\text{m}^3$)	California AAQS ($\mu\text{g}/\text{m}^3$)
CO	1 Hour	120.4	2,415	2,535	23,000
	8 Hour	84.3	1,349	1,349	10,000

6.2 Increments

An air quality increment analysis was not required for this stationary source.

6.3 Monitoring

Air quality monitoring is not required for this stationary source.

6.4 Health Risk Assessment

The Imerys Lompoc Plant stationary source is subject to the Air Toxics Hot-Spots Program (AB-2588). The most recent health risk assessment (HRA) for the facility was prepared by the District on June 15, 1998 under the requirements of the Air Toxics “Hot Spots” Information and Assessment Act of 1987 (AB 2588). The HRA is based on 1994 toxic emissions inventory data submitted to the District by Celite Corporation.

Based on the 1994 toxic emissions inventory for the Lompoc Plant, cancer and non-cancer toxics risks off the property were estimated to be below the District’s AB2588 significance thresholds.

In March 2012, an air toxics Health Risk Assessment (HRA) was conducted for the 7 System modernization project as permitted under ATC 12105-17. These risk values were then added to existing health risk values for the facility that were calculated for an HRA performed in 1998 as a part of the AB2588 process for this facility. The total Cancer risk and chronic and acute non-cancer Hazard Index (HI) risk values were calculated and compared to *significance thresholds* for cancer and chronic and acute non-cancer risk adopted by the District’s Board of Directors. The calculated risk values and applicable thresholds are shown below:

DRAFT

	Cancer Risk /million	Chronic Non-Cancer Risk	Acute Non-Cancer Risk
Proposed Project	1.11	0.134	0.004
Existing Stationary Source	8.82	0.090	0.083
Total Post-Project	9.93	0.224	0.087
District Significance Threshold	10	1	1

Based on these results, the the Imerys Lompoc plant does not present a significant risk to the offsite and surrounding communities.

Imerys is in the process of completing an updated Air Toxics Emission Inventory Plan (ATEIP) and Air Toxics Emission Inventory Report (ATEIR) under the AB2588 “Hot Spots” program. These documents will reflect the entire Imerys Filtration Minerals, Inc. Stationary Source, including the 7 System modernization project. Once approved, a health risk assessment for the entire facility will be performed in accordance with Air Toxic "Hot Spots" risk procedures.

7.0 CAP Consistency, Offset Requirements, and ERCs

7.1. General

The Imerys Lompoc Plant stationary source is located in an ozone non-attainment area. Santa Barbara County has not attained the state ozone ambient air quality standards. The County also does not meet the state PM₁₀ ambient air quality standards. Therefore, emissions from all emission units at the stationary source and its constituent facilities must be consistent with the provisions of the USEPA and State approved Clean Air Plans (CAP) and must not interfere with progress towards attainment of federal and state ambient air quality standards. Under District regulations, any modifications at the Lompoc Plant (or the Imerys Lompoc stationary source) that result in an emissions increase of any non-attainment pollutant exceeding 25 lbs/day must apply BACT (NAR). Additional increases may trigger offsets at the source or elsewhere so that there is a net air quality benefit for Santa Barbara County. These offset threshold levels are 25 tons per year for nonattainment pollutants or precursors, and 240 lbs per day for attainment pollutants and precursors.

7.2. Clean Air Plan

The 2007 Clean Air Plan, adopted by the District Board on August 16, 2007, addressed both federal and state requirements, serving as the maintenance plan for the federal eight-hour ozone standard and as the state triennial update required by the Health and Safety Code to demonstrate how the District will expedite attainment of the state eight-hour ozone standard. The plan was developed for Santa Barbara County as required by both the 1998 California Clean Air Act and the 1990 Federal Clean Air Act Amendments.

In August 2017 the District Board adopted the 2016 Clean Air Plan. The 2016 Plan provides a three-year update to the 2010 Clean Air Plan. As Santa Barbara County has yet to attain the state eight-hour ozone standard, the 2016 Clean Air Plan demonstrates how the District plans to attain that standard. The 2016 Clean Air Plan therefore satisfies all state triennial planning requirements.

7.3. Offset Requirements

The Imerys stationary source potential to emit exceeds the Rule 802 emission offset threshold for ROC, NO_x, SO_x, PM and PM₁₀. Imerys must therefore offset emission increases in these pollutants/precursors consistent with Rule 802.

Imerys' historic use of ERCs to meet its emission offset obligations is listed below in Tables 7.1 and 7.2. Table 7.1 shows the potential to emit increase resulting from each permit action. Table 7.2 shows the resultant Emission Reduction Credit emission offset liability after application of the emission offset ratio. The ratio is required to show the use of the credits results in a net air quality benefit.

Note that Table 7.1 and 7.2 only shows those permits for which a PTO permit was issued or a PTO application was deemed complete. There are seven other permits that require ERCs, but where the permit to operate application has not been submitted and deemed complete.

Table 7.1 - Offset Liability Table for Imerys Filtration Minerals Source
Updated: September 19, 2018

Item	Permit	Issue Date	ERC Returned?	Project	Offset Liability ---- tons/year ----					ERC Source	Notes
					NO _x	ROC	SO _x	PM	PM ₁₀		
1	Prior Offset Liabilities	08/26/16	n/a	ERCs required prior to Aug 26, 2016	0.000	0.000	0.000	0.000	0.000	n/a	(a)
2	ATC 14897	01/17/17	No	Soda Ash Feeder vent line	0.000	0.000	0.000	0.125	0.125	0339	(b)
3	ATC 14908	04/06/17	No	Baghouse 789 modification	0.000	0.000	0.000	0.494	0.494	0442	(b)
4	ATC 14942	05/12/17	No	New storage silos at Celpure Plant	0.000	0.000	0.000	0.143	0.143	0444	(b)
5	ATC 14984	07/25/17	No	171 bhp prime diesel generator engine	0.739	0.351	0.009	0.016	0.016	0445	(b)
6	ATC 14999	08/22/17	No	System 7 line modification	0.000	0.000	0.000	0.168	0.168	0449	(b)
7	PTO 14860	10/31/17	No	Powder mills project	0.000	0.000	0.000	0.144	0.041	0451	(b)
8	ATC 15060	12/19/17	No	Celpure system changes	0.000	0.000	0.269	0.405	0.405	0451	(b)
9	ATC 15077	03/22/18	No	Celpure plant modifications	2.779	0.154	0.367	0.955	0.955	0457	(b)
10	ATC 15176	09/24/18	No	Burner and baghouse modifications	0.684	0.076	0.192	0.138	0.138	0472	(b)

TOTALS (tpy) = 4.202 0.581 0.837 2.588 2.485

Notes

- (a) Imerys Minerals California Source did not require offsets prior to August 26, 2016.
 (b) See Table 7.2 for ERCs required to mitigate the offset liability. ERC Source denotes the ERC Certificate # used by the ATC permit.
 (c) Permits with zero emission increases not shown in this table.
 (d) ERCs used after August 26, 2016 may be returned to the Source Register. This line item reflects such a return. It is entered as a negative entry to balance this ledger. Original entry is not revised.

Table 7.2 - Emission Reduction Credits Table for Imerys Filtration Minerals Source
Updated: September 19, 2018

Item	Permit	Surrender Date	ERC Returned?	Emission Reduction Credits ---- tons/year ----					Offset Ratio	ERC Source	NOTES
				NO _x	ROC	SO _x	PM	PM ₁₀			
1	Prior ERCs	08/26/16	n/a	0.000	0.000	0.000	0.000	0.000	n/a	n/a	(a)
2	ATC 14897	01/17/17	No	0.000	0.000	0.000	0.138	0.138	1.1	0339	--
3	ATC 14908	04/06/17	No	0.000	0.000	0.000	0.543	0.543	1.1	0442	--
4	ATC 14942	05/12/17	No	0.000	0.000	0.000	0.157	0.157	1.1	0444	--
5	ATC 14984	07/25/17	No	0.813	0.386	0.010	0.018	0.018	1.1	0445	--
6	ATC 14999	08/22/17	No	0.000	0.000	0.000	0.185	0.185	1.1	0449	--
7	PTO 14860	10/31/17	No	0.000	0.000	0.000	0.158	0.045	1.1	0451	--
8	ATC 15060	12/19/17	No	0.000	0.000	0.296	0.446	0.446	1.1	0451	--
9	ATC 15077	03/22/18	No	3.057	0.169	0.404	1.051	1.051	1.1	0457	(c)
10	ATC 15176	09/24/18	No	0.752	0.083	0.211	0.152	0.152	1.1	0472	(d)

TOTALS (tpy) = 4.622 0.639 0.921 2.847 2.734

Notes

- (a) Imerys Minerals California Source did not provide ERCs for pre-August 26, 2016 offset liabilities.
 (b) **Brown text** cells require data entry. Do not enter data in **Black text** cells
 (c) ATC 15077. NO_x ERCs (0.169 tpy NO_x) used to offset ROC increase of 0.154 tpy. IP trade at 1:1. Total NO_x ERCs used = 3.226 tpy.
 (d) ATC 15176. NO_x ERCs (0.092 tpy NO_x) used to offset ROC increase of 0.084 tpy. IP trade at 1:1. Total NO_x ERCs used = 0.836 tpy

7.4. Emission Reduction Credits

Imerys currently holds emission reduction credits as follows:

ERC No.	Pollutant	tons/year
173	NO _x	3.150
	SO _x	193.720
	PM	22.570
	PM ₁₀	0.000

ERC No.	Pollutant	tons/year
472	NO _x	12.394
	ROC	0.164
	CO	2.620
	SO _x	0.326
	PM	27.209
	PM ₁₀	7.182

ERC No.	Pollutant	tons/year
471	NO _x	
	ROC	
	CO	
	SO _x	
	PM	0.442
	PM ₁₀	0.442

ERC no. 173 was created from the elimination of the System 7 Furnace, CHEAF, and process baghouses and the addition of a new SO_x and PM/PM₁₀ 7 System Venturi Scrubber/Packed Bed Tower control device. ERC 472 was created from Imerys permanently shutting down 3 System and 5 System diatomaceous earth processing lines. Emissions reductions were created by removing the 3 System Furnace, Kiln, CHEAF, and process baghouses, and the 5 System Furnace, Kiln, Scrubber and process baghouse. ERC no. 471 was created when Imerys cancelled a project that required ERCs.

An additional ERC will be issued to Imerys when this permit, Part 70, PTO 5840-R6, is final. Imerys applied for emission reduction credits for the shutdown of 6 System processing line on October 31, 2016. The District issued a Final Decision of Issuance (DOI) number 106 on June 16, 2017 approving the ERCs once a permit to operate covering the decommissioning of the equipment is issued. Imerys submitted PTO Application 5840-10 to decommission the equipment on June 1, 2018. The application we deemed complete on June 28, 2018.

This permit (Part 70 PTO 5840-R-6) permanently decommissions the following 6 System processing equipment: 6 System CHEAF (Device ID 121), 6 Furnace (Device ID 47), 6 Kiln (Device ID 103345), (601 Dry End Baghouse (Device ID 103367), 602 Dry End Baghouse (Device ID 103365), 6 Natural Baghouse (Device ID 122), 6 Natural Ventilation Baghouse (Device ID 123) and all other dedicated 6 System equipment. In addition, Imerys is required to remove all external combustion burners from the 6 Kiln and the 6 Furnace and remove the process air conveyance blowers from the 6 CHEAF and subject baghouses. In an inspection conducted on July, 3, 2018 District inspection staff concluded the decommissioned equipment met the DOI decommissioning requirements.

The ERCs from DOI 106 are listed below:

DOI No.	Pollutant	tons/quart	tons/year
106	NO _x	1.632	6.528
	ROC	0.606	2.422
	CO	0.547	2.189
	SO _x	0.049	0.196
	PM	7.473	29.892
	PM10	3.737	14.947

8.0 Lead Agency Permit Consistency

To the best of the District's knowledge, no other governmental agency's permit requires air quality mitigation.

9.0 Permit Conditions

This section lists the applicable permit conditions for the Lompoc Plant. Section A lists the standard administrative conditions. Section B lists ‘generic’ permit conditions, including emission standards, for all equipment in this permit. Section C lists conditions affecting specific equipment. Section D lists non-federally enforceable (i.e., District only) permit conditions. Conditions listed in Sections A, B and C are enforceable by the USEPA, the District, the State of California and the public. Conditions listed in Section D are enforceable only by the District and the State of California. Where any reference contained in Sections 9.A, 9.B or 9.C refers to any other part of this permit that part of the permit referred to is federally enforceable.

For the purposes of submitting compliance certifications or establishing whether or not a person has violated or is in violation of any standard in this permit, nothing in the permit shall preclude the use, including the exclusive use, of any credible evidence or information, relevant to whether a source would have been in compliance with applicable requirements if the appropriate performance or compliance test had been performed.

Given below is a list of the specific conditions which is linked to that condition.

- 9.A [Standard Administrative Conditions](#)
 - A.1 [Compliance with Permit Conditions](#)
 - A.2 [Emergency Provisions](#)
 - A.3 [Risk Management Plan](#)
 - A.4 [Right of Entry.](#)
 - A.5 [Permit Life](#)
 - A.6 [Payment of Fees](#)
 - A.7 [Prompt Reporting of Deviations](#)
 - A.8 [Permit Shield](#)
 - A.9 [Reporting Requirements/Compliance Certification](#)
 - A.10 [Federally-enforceable Conditions](#)
 - A.11 [Recordkeeping Requirements](#)
 - A.12 [Conditions for Permit Reopening](#)
 - A.13 [Severability](#)
 - A.14 [Consistency with Analysis](#)
 - A.15 [Equipment Maintenance](#)
 - A.16 [Compliance](#)
 - A.17 [Conflict Between Permits](#)
 - A.18 [Access to Records and Facilities](#)
 - A.19 [Equipment Identification](#)
 - A.20 [Emission Factor Revisions](#)
 - A.21 [Grounds for Revocation](#)
 - A.22 [Transfer of Owner/Operator](#)
 - A.23 [Reimbursement of Costs](#)
- 9.B [Generic Conditions](#)
 - B.1 [Circumvention \(Rule 301\)](#)
 - B.2 [Visible Emissions \(Rule 302\)](#)
 - B.3 [Nuisance \(Rule 303\)](#)
 - B.4 [PM Concentration - Northern Zone \(Rule 304\)](#)
 - B.5 [Dust and Fumes - North Zone \(Rule 306\)](#)
 - B.6 [Specific Contaminants \(Rule 309\)](#)

- B.7 [Sulfur Content of Fuels \(Rule 311\)](#)
- B.8 [Organic Solvents \(Rule 317\)](#)
- B.9 [Solvent Cleaning Operations \(Rule 321\)](#)
- B.10 [Metal Surface Coating Thinner and Reducer \(Rule 322\)](#)
- B.11 [Architectural Coatings \(Rule 323.1\)](#)
- B.12 [Disposal and Evaporation of Solvents \(Rule 324\)](#)
- B.13 [Motor Vehicle and Mobile Equipment Coating Operations \(Rule 339\)](#)
- B.14 [Adhesives and Sealants. \(Rule 353\)](#)
- B.15 [Emergency Episode Plan](#)
- B.16 [CARB Registered Portable Equipment](#)
- B.17 [Rule 360 Compliance](#)

9.C [Equipment Specific Conditions](#)

- C.1 [Internal Combustion Engines](#)
- C.2 [Combustion Equipment – Silicates Boilers](#)
- C.3 [Combustion Equipment –and Silicates Dryers External Combustion Units](#)
- C.4 [Combustion Equipment – Pellet Plant Dryer and Pellet Plant Kiln](#)
- C.5 [Combustion Equipment - Line 7 Kiln and Furnace](#)
- C.6 [Baghouses](#)
- C.7 [Material Handling Equipment](#)
- C.8 [Rotoclones](#)
- C.9 [Mobile Plant](#)
- C.10 [Solvent Cleaning and Degreasing](#)
- C.11 [Equipment Throughput Limitations](#)
- C.12 [Source Testing](#)
- C.13 [Offsite Fugitive Dust Monitoring](#)
- C.14 [40 CFR Part 64 - Compliance Assurance Monitoring \(CAM\)](#)
- C.15 [Semi-Annual Monitoring/Compliance Verification Reports](#)
- C.16 [Documents Incorporated by Reference](#)

9.D [District-Only Conditions](#)

- D.1 [Combustion Equipment – Boilers](#)
- D.2 [Combustion Equipment –Diesel Internal Combustion Engines](#)
- D.3 [Abrasive Blasting Equipment](#)
- D.4 [Process Monitoring Systems - Operation and Maintenance](#)
- D.5 [Annual Compliance Verification Reports](#)
- D.6 [Reimbursement of Costs](#)

9.A *Standard Administrative Conditions*

In case of discrepancy between the wording of a condition and the applicable District rule, the wording of the rule shall control. The following federally-enforceable administrative permit conditions apply to the Lompoc Plant:

A.1 *Compliance with Permit Conditions.*

- (a) The permittee shall comply with all permit conditions in Sections 9.A, 9.B and 9.C (Parts I&II).
- (b) This permit does not convey property rights or exclusive privilege of any sort.

- (c) Any permit noncompliance constitutes a violation of the Clean Air Act and is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or for denial of a permit renewal application
 - (d) It shall not be a defense for the permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.
 - (e) A pending permit action or notification of anticipated noncompliance does not stay any permit condition.
 - (f) Within a reasonable time period, the permittee shall furnish any information requested by the Control Officer, in writing, for the purpose of determining:
 - (i) compliance with the permit, or
 - (ii) whether or not cause exists to modify, revoke and reissue, or terminate a permit or for an enforcement action.
 - (g) In the event that any condition herein is determined to be in conflict with any other condition contained herein, then, if principles of law do not provide to the contrary, the condition most protective of air quality and public health and safety shall prevail to the extent feasible. [Ref: 40 CFR Part 70.6.(a)(6), District Rules 1303.D.1]
- A.2 **Emergency Provisions.** For the purpose of seeking regulatory, relief the permittee shall comply with the requirements of District Rule 505 (sections A, B.1 and D (Breakdown Conditions) and/or District Rule 1303.F, whichever is applicable to the emergency situation. In order to maintain an affirmative defense under Rule 1303.F, the permittee shall provide the District, in writing, a “notice of emergency” within 2 days of the emergency. The “notice of emergency” shall contain the information/documentation listed in Sections (1) through (5) of Rule 1303.F. [Ref: 40 CFR 70.6(g), District Rule 1303.F]
- A.3 **Risk Management Plan.** Should the Imerys facility, as defined in 40 CFR 68.3, become subject to part 68, then the owner or operator shall submit a risk management plan (RMP) by the date specified in 40 CFR 68.10. The facility shall certify compliance as part of the annual certification as required by 40 CFR part 70. [40 CFR 68.10]
- A.4 **Right of Entry.** The Regional Administrator of USEPA, the Control Officer, or their authorized representatives, upon the presentation of credentials, shall be permitted to enter upon the premises where a Part 70 Source is located or where records must be kept:
- (a) To inspect the stationary source, including monitoring and control equipment, work practices, operations, and emission-related activity, at reasonable times;
 - (b) To inspect and duplicate, at reasonable times, records required by this Permit to Operate;
 - (c) To sample substances or monitor emissions from the source or assess other parameters to assure compliance with the permit or applicable requirements, at reasonable times. Monitoring of emissions can include source testing.
- [Ref: District Rule 1303.D.2]
- A.5 **Permit Life.** The Part 70 permit shall become invalid three years from the date of issuance unless a timely and complete renewal application is submitted to the District. Any operation of the

source to which this Part 70 permit is issued beyond the expiration date of this Part 70 permit and without a valid Part 70 operating permit (or a complete Part 70 permit renewal application) shall be a violation of the CAAA, § 502(a) and 503(d) and of the District rules.

The permittee shall apply for renewal of the Part 70 permit no later than 6 months before the date of the permit expiration. Upon submittal of a timely and complete renewal application, the Part 70 permit shall remain in effect until the Control Officer issues or denies the renewal application. [Ref: District Rule 1304.D.1]

- A.6 **Payment of Fees.** The permittee shall reimburse the District for all its Part 70 permit processing and compliance expenses for the stationary source on a timely basis. Failure to reimburse on a timely basis shall be a violation of this permit and of applicable requirements and can result in forfeiture of the Part 70 permit. Operation without a Part 70 permit subjects the source to potential enforcement action by the District and the USEPA pursuant to section 502(a) of the Clean Air Act. [Ref: District Rules 1303.D.1 and 1304.D.11, 40 CFR 70.6(a)(7)]
- A.7 **Prompt Reporting of Deviations.** The Permittee shall submit a written report to the District documenting each and every deviation from the requirements of this permit or any applicable federal requirements within seven (7) days after discovery of the violation, but not later than six (6) months days after the date of occurrence. The report shall clearly document 1) the probable cause and extent of the deviation 2) equipment involved, 3) the quantity of excess pollutant emissions, if any, and 4) actions taken to correct the deviation. The requirements of this condition shall not apply to deviations reported to District in accordance with Rule 505 (*Breakdown Conditions*), or Rule 1303.F (*Emergency Provisions*). [District Rule 1303.D.1, 40 CFR 70.6(a)(3)]
- A.8 **Permit Shield.** A permit shield has been granted for the rules, regulations, and standards listed in section 1.6.4 of this permit. This shield shall remain in effect until expiration of this permit or re-opening and re-issuance of this permit. [District Rule 1303]
- A.9 **Reporting Requirements/Compliance Certification.** The permittee shall submit compliance certification reports to the USEPA and the Control Officer every six months. These reports shall be submitted on District forms and shall identify each applicable requirement/condition of the permit, the compliance status with each requirement/condition, the monitoring methods used to determine compliance, whether the compliance was continuous or intermittent, and include detailed information on the occurrence and correction of any deviations (excluding emergency upsets) from permit requirement. The reporting periods shall be each half of the calendar year, e.g., January through June for the first half of the year. These reports shall be submitted by September 1 and March 1, respectively, each year. Supporting monitoring data shall be submitted in accordance with the “Semi-Annual Monitoring/Compliance Verification Report” condition in section 9.C (Parts I&II). The permittee shall include a written statement from the responsible official, which certifies the truth, accuracy, and completeness of the reports. [Ref: District Rules 1303.D.1, 1302.D.3, 1303.2.c].
- A.10 **Federally-enforceable Conditions.** Each federally enforceable condition in this permit shall be enforceable by the USEPA and members of the public. None of the conditions in the District-only enforceable section of this permit are federally enforceable or subject to the public/USEPA review [Ref: CAAA, § 502(b)(6), 40 CFR 70.6(b)]
- A.11 **Recordkeeping Requirements.** The permittee shall maintain records of required monitoring information that include the following:

- (a) The date, place as defined in the permit, and time of sampling or measurements;

- (b) The date(s) analyses were performed;
- (c) The company or entity that performed the analyses;
- (d) The analytical techniques or methods used;
- (e) The results of such analyses; and
- (f) The operating conditions as existing at the time of sampling or measurement;

The records (electronic or hard copy), as well as all supporting information including calibration and maintenance records, shall be maintained for a minimum of five (5) years from date of initial entry by the permittee and shall be made available to the District upon request. "Supporting information" includes all calibration and maintenance records and all original strip-chart recordings for continuous monitoring instrumentation, and copies of all logs and reports required by the permit. [Ref: District Rule 1303.D.1.f, 40 CFR 70.6(a)(3)(ii)(A)]

A.12 **Conditions for Permit Reopening.** The permit shall be reopened and revised for cause under any of the following circumstances:

- (a) Additional Requirements: If additional applicable requirements (e.g., NSPS or MACT) become applicable to the source which has an unexpired permit term of three (3) or more years, the permit shall be reopened. Such a reopening shall be completed no later than 18 months after promulgation of the applicable requirement. However, no such reopening is required if the effective date of the requirement is later than the date on which the permit is due to expire, unless the original permit or any of its terms and conditions has been extended. All such re-openings shall be initiated only after a 30 day notice of intent to reopen the permit has been provided to the permittee, except that a shorter notice may be given in case of an emergency.
- (b) Inaccurate Permit Provisions: If the District or the USEPA determines that the permit contains a material mistake or that inaccurate statements were made in establishing the emission standards or other terms or conditions of the permit, the permit shall be reopened. Such re-openings shall be made as soon as practicable.
- (c) Applicable Requirement: If the District or the USEPA determines that the permit must be revised or revoked to assure compliance with any applicable requirement including a federally enforceable requirement, the permit shall be reopened. Such re-openings shall be made as soon as practicable. (d) Administrative procedures to reopen a permit shall follow the same procedures as apply to initial permit issuance. Re-openings shall affect only those parts of the permit for which cause to reopen exists.
- (d) Administrative procedures to reopen a permit shall follow the same procedures as apply to initial permit issuance. Re-openings shall affect only those parts of the permit for which cause to reopen exists.
- (e) If a permit is reopened, the expiration date does not change. Thus, if the permit is reopened, and revised, then it will be reissued with the expiration date applicable to the re-opened permit. [Ref: 40 CFR 70.7(f), 40 CFR 70.6(a)]

A.13 **Severability.** In the event that any condition herein is determined to be invalid, all other conditions shall remain in force. [Ref: Rule 1303]

A.14 **Consistency with Analysis.** Operation under this permit shall be conducted consistent with all written data, specifications and assumptions included with the application and supplements

thereof (as documented in the District's project file), and with the District's analyses contained within this permit (including any documents specifically referenced herein)." [Ref: Rule 206]

- A.15 **Equipment Maintenance.** The equipment listed in this permit shall be properly maintained and kept in good condition at all times. The equipment manufacturer's maintenance manual, maintenance procedures and/or maintenance checklists (if any) shall be kept on site. [Ref: Rule 206]
- A.16 **Compliance.** Nothing contained within this permit shall be construed to allow the violation of any local, State or Federal rule, regulation, ambient air quality standard or air quality increment. [Ref: Rule 1303]
- A.17 **Conflict Between Permits.** The requirements or limits that are more protective of air quality shall apply if any conflict arises between the requirements and limits of this permit and any other permitting actions associated with the equipment permitted herein. [Ref: Rule 1303]
- A.18 **Access to Records and Facilities.** As to any condition that requires for its effective enforcement the inspection of records or facilities by the District or its agents, Imerys shall make such records available or provide access to such facilities upon notice from the District. Access shall mean access consistent with California Health and Safety Code Section 41510 and Clean Air Act Section 114A. [Ref: Rule 1303]
- A.19 **Equipment Identification.** Identifying tag(s) or name plate(s) shall be displayed on the equipment to show manufacturer, model number, and serial number. The tag(s) or plate(s) shall be issued by the manufacturer and shall be affixed to the equipment in a permanent and conspicuous position. If tags are unavailable due to equipment age Imerys shall install identifying tags uniquely identifying each such piece of equipment. [Ref: Rule 206]
- A.20 **Emission Factor Revisions.** The District may update the emission factors for any calculation based on USEPA AP-42 or District emission factors at the next permit modification or permit reevaluation to account for USEPA and/or District revisions to the underlying emission factors. [Ref: Rule 1303]
- A.21 **Grounds for Revocation.** Failure to abide by and faithfully comply with this permit shall constitute grounds for the APCO to petition for permit revocation pursuant to Health and Safety Code section 42307 *et seq.* [Ref: Rule 1303]
- A.22 **Transfer of Owner/Operator.** This permit is only valid for the owner and operator listed on this permit unless a *Transfer of Owner/Operator* application has been applied for and received by the District. Any transfer of ownership or change in operator shall be done in a manner as specified in District Rule 203. District Form –01T and the appropriate filing fee shall be submitted to the District within 30 days of the transfer.
- A.23 **Reimbursement of Costs.** All reasonable expenses, as defined in District Rule 210, incurred by the District, District contractors, and legal counsel for the activities listed below that follow the issuance of this permit, including but not limited to permit condition implementation, compliance verification and emergency response, directly and necessarily related to enforcement of the permit shall be reimbursed by the permittee as required by Rule 210. Reimbursable activities include work involving: permitting, compliance, CEMS, modeling/AQIA, ambient air monitoring and air toxics.

9.B Generic Conditions

In case of discrepancy between the wording of a condition and an applicable federal or District rule, the wording of the rule shall control. The generic conditions listed below apply to all emission units regardless of their category or emission rates. These conditions are federally enforceable. Compliance with these requirements is discussed in Section 3.

- B.1 Circumvention (Rule 301).** A person shall not build, erect, install, or use any article, machine, equipment or other contrivance, the use of which, without resulting in a reduction in the total release of air contaminants to the atmosphere, reduces or conceals an emission which would otherwise constitute a violation of Division 26 (Air Resources) of the Health and Safety Code of the State of California or of SBCAPCD Rules and Regulations. This Rule shall not apply to cases in which the only violation involved is of Section 41700 of the Health and Safety Code of the State of California, or of District Rule 303. *[Ref: District Rule 301]*
- B.2 Visible Emissions (Rule 302).** Imerys shall not discharge into the atmosphere from any single source of emission any air contaminants for a period or periods aggregating more than three minutes in any one hour which is:
- (a) As dark or darker in shade as that designated as No. 1 on the Ringlemann Chart, as published by the United States Bureau of Mines, or
 - (b) Of such opacity as to obscure an observer's view to a degree equal to or greater than does smoke described in subsection B.2(a) above.
- Compliance shall be determined by visible emission evaluations by certified observers. All visible emission observations and inspections sheets and records shall be maintained consistent with the recordkeeping condition of this permit. *[Ref: District Rule 302]*.
- B.3 Nuisance (Rule 303).** No pollutant emissions from any source at Imerys shall create nuisance conditions. No operations shall endanger health, safety or comfort, nor shall they damage any property or business. *[Ref: District Rule 303]*
- B.4 PM Concentration - Northern Zone (Rule 304).** Imerys shall not discharge into the atmosphere, from any source, particulate matter in excess of 0.3 grain per cubic foot of gas at standard conditions. *[Ref: District Rule 304]*
- B.5 Dust and Fumes - North Zone (Rule 306).** Imerys shall not discharge into the atmosphere, from any source, particulate matter in excess of the concentrations listed in Table 306 (a) of Rule 306. *[Ref: District Rule 306]*
- B.6 Specific Contaminants (Rule 309).** Imerys shall not discharge into the atmosphere from any single source, sulfur compounds or combustion contaminants in excess of the applicable standards listed in Sections A and E of Rule 309. *[Ref: District Rule 309]*.
- B.7 Sulfur Content of Fuels (Rule 311).** Imerys shall not burn fuel oil #6 with a sulfur content in excess of 0.5% (by weight), fuel oil #2 with a sulfur content in excess of 0.05% (by weight), #4 fuel oil with sulfur content in excess of 0.31% (by weight) or, gaseous fuel (including propane) in excess of 796 ppmvd or 50 gr/100scf (calculated as H₂S). Imerys shall demonstrate compliance and maintain records for the different fuel types as follows *[Ref: District Rule 311]*:

- (a) Fuel oil #2, #4, #6: The permittee shall comply with (i) or (ii)
 - (i) For each calendar year in which #2, #4 or #6 fuel oil was used, Imerys shall obtain the total sulfur content of the liquid fuel (of each) measured in accordance with ASTM D-2622, D-129, D-1552 or an equivalent reference method which has been previously approved, in writing, by the District.
 - (ii) Imerys shall maintain written documentation of the total sulfur content of the fuel on a per shipment or quarterly basis. Such documentation shall consist of at least one of the following:
 - (1) vendor certification
 - (2) vendor bill of lading
 - (3) vendor laboratory analysis
 - (4) equivalent reference testing results which have prior written District approval
 - (b) Diesel Oil or Gasoline; : The permittee shall comply with (i) or (ii)
 - (i) Annually, Imerys shall obtain measurements of the total sulfur content of the liquid fuel in accordance with ASTM D-2622, D-129, D-1552 or an equivalent reference method which has been previously approved, in writing, by the District.
 - (ii) Imerys shall maintain written documentation of the total sulfur content of the fuel on a per shipment basis or quarterly basis. Such documentation shall consist of at least one of the following:
 - (1) vendor certification
 - (2) vendor bill of lading
 - (3) vendor laboratory analysis
 - (4) equivalent reference testing results which have prior written District approval
 - (c) Natural gas or Propane: Imerys shall maintain billing records or other data showing that the fuel gas or propane is obtained from a natural gas utility. These records shall be obtained at least annually..
- B.8 **Organic Solvents (Rule 317).** Imerys shall comply with the emission standards listed in Section B of Rule 317. Compliance with this condition shall be based on Imerys's compliance with Rule 317. *[Ref: District Rule 317]*
- B.9 **Solvent Cleaning Operations (Rule 321).** Imerys shall comply with the operating requirements of this rule when performing solvent cleaning operations unless relieved by rule exemption. Compliance with this condition shall be based on Imerys's compliance with Condition 9.C.10 of this permit. *[Ref: District Rule 321]*
- B.10 **Metal Surface Coating Thinner and Reducer (Rule 322).** The use of photochemically reactive solvents as thinners or reducers in metal surface coatings is prohibited. Compliance with this condition shall be based on Imerys's compliance with Condition 9.C.10 of this permit and facility inspections. *[Ref: District Rule 322]*

- B.11 **Architectural Coatings (Rule 323.1).** Imerys shall comply with the coating ROC content and handling standards listed in Section D of Rule 323.1 as well as the Administrative requirements listed in Section F of Rule 323.1. Compliance with this condition shall be based on Imerys's compliance with Condition 9.C.10 of this permit and facility inspections. *[Ref: District Rule 323.1]*
- B.12 **Disposal and Evaporation of Solvents (Rule 324).** Imerys shall not dispose through atmospheric evaporation of more than one and a half gallons of any photochemically reactive solvent per day. Compliance with this condition shall be based on Imerys's compliance with Condition 9.C.10 of this permit and facility inspections. *[Ref: District Rule 324]*
- B.13 **Motor Vehicle and Mobile Equipment Coating Operations (Rule 339).** Imerys shall comply with the requirements of this rule when performing coating operations unless relieved by rule exemption. Compliance with this condition shall be based on Imerys's compliance with Condition 9.C.10 of this permit. *[Ref: District Rule 339]*
- B.14 **Adhesives and Sealants. (Rule 353).** The permittee shall not use adhesives, adhesive bonding primers, adhesive primers, sealants, sealant primers, or any other primers, unless the permittee complies with the following:
- (a) Such materials used are purchased or supplied by the manufacturer or suppliers in containers of 16 fluid ounces or less; or alternately
 - (b) When the permittee uses such materials from containers larger than 16 fluid ounces and the materials are not exempt by Rule 353, Section B.1, the total reactive organic compound emissions from the use of such material shall not exceed 200 pounds per year unless the substances used and the operational methods comply with Sections D, E, F, G, and H of Rule 353. Compliance shall be demonstrated by recordkeeping in accordance with Section B.2 and/or Section O of Rule 353. *[Ref: District Rule 353]*
- B.15 **Emergency Episode Plan.** Imerys shall implement the District-approved Emergency Episode Plan issued for the Lompoc Plant as necessary. *[Ref: District Rule 1303, 40 CFR 70.6]*
- B.16 **CARB Registered Portable Equipment.** State registered portable equipment shall comply with State registration requirements. A copy of the State registration shall be readily available whenever the equipment is at the facility. *[Ref: District Rule 202]*
- B.17 **Rule 360 Compliance.** Any boiler or hot water heater rated at or less than 2.000 MMBtu/hr and manufactured and or installed after October 17, 2003 shall be certified per the provisions of Rule 360 (as revised on March 15, 2018). An ATC/PTO permit shall be obtained prior to installation of any grouping of Rule 360 applicable boilers or hot water heaters whose combined system design heat input rating exceeds 2.000 MMBtu/hr *[Ref: District Rule 360]*

9.C *Equipment Specific Conditions*

This section includes non-generic federally enforceable conditions including emissions and operation limits, monitoring and recordkeeping and reporting for each specific equipment group. This section may also contain other non-generic requirements.

C.1 **Internal Combustion Engines.** The following equipment is included in this emissions unit category:

Device Name	Imerys ID	District DeviceNo
<i>Combustion Equipment</i>		
Powder Mills Emergency Natural Gas ICE	1017	8069
Prime Diesel Water Pump Engine		391449

- (a) Emission Limits Emissions from the Prime Diesel Water Pump Engine shall not exceed 35 ppmv NO_x at 15 % O₂, 48 ppmv ROC at 15% O₂ and 721 ppmv CO at 15% O₂. [ATC 14984]
- (b) Operational Limits: The following operational limits apply to the IC engines:
 - (i) *Powder Mills Emergency Engine Hour Limit.* Imerys shall not operate the Natural Gas IC engine listed above more than 200 hours per year. [Ref: Rule 202.F.1(d)]
 - (ii) *Diesel Fuel Sulfur Limit.* The total sulfur content of the diesel fuel used shall not exceed 15 ppmv.
- (c) Monitoring: The following monitoring conditions apply to the IC engine:
 - (i) *Operating Hours* - Imerys shall record the hours of operation of the IC engines through the use of dedicated, non-resettable hour meters. The Prime Diesel Water pump engine shall have a minimum display of 9,999 hours [ATC 14984].
 - (ii) *Fuel Meter.* The Prime Diesel Water Pump Engine shall be equipped with a non-resettable fuel meter or, where approved by the Control Officer in writing, an alternative device, method, or technique for determining fuel consumption. The fuel meter shall be calibrated periodically pursuant to the recommendations of the manufacturer and shall be maintained in proper operating condition. [ATC 14984].
 - (iii) *Diesel Fuel Sulfur Limit.* Compliance with the diesel fuel sulfur limit shall be based upon information provided on the diesel fuel by fuel vendor analysis, or documentation for each fuel shipment that the fuel meets California Code of Regulations, Title 13, Section 2281 standards (i.e., ARB "Clean Diesel"). Alternately, the permittee shall annually sample and perform a fuel total sulfur analysis consistent with appropriate ASTM procedures. [ATC 14984].
 - (iv) *Prime Diesel Water Pump Engine Inspection and Maintenance Plan.* Imerys shall implement the District approved ICE Inspection and Maintenance (I&M) Plan as required by Rule 333, Section F. [ATC 14984].

- (v) *Prime Diesel Water Pump Engine Quarterly Portable Analyzer Monitoring.* Imerys shall perform quarterly portable analyzer NO_x, CO, and ROC monitoring during each calendar quarter in which a source test is not performed and the engine is operated in excess of 20 hours per quarter. The compliance procedures outlined in Section F.3 of Rule 333 shall be followed for the portable analyzer monitoring. [ATC 14984].
- (vi) *Prime Diesel Pump Engine Source Testing.*
 - (1) Source testing shall be required for NO_x, CO, and ROC if the result from a portable analyzer reading exceeds a threshold of 35 ppmvd NO_x @ 15% O₂, unless compliance with this threshold is demonstrated by a retest within 15 days of the initial reading. A source test shall be conducted within 60 days of the initial over-the-threshold reading if triggered by this criteria. If source testing of the engine demonstrates compliance with the NO_x, CO, and ROC emission limits specified in 9.C.1(a) of this condition, the engine shall not be subject to another source test for two years from the date of the initial compliant source test. After two years, source testing may again be triggered based on the result of a portable analyzer reading, unless compliance is demonstrated by a retest within 15 days of the initial reading. If the engine does not demonstrate compliance with the NO_x, CO, and ROC emission limits in any source test, it shall be source tested every two years thereafter.
 - (2) If requested in writing by the District, a source test for PM shall be conducted within 60 days of the written request. The PM emission rate from the engine shall be determined using EPA Method 5 or a District-approved alternate method. Source testing shall be conducted at typical engine operating conditions.
 - (3) If source testing is required it shall be done consistent with Conditions 9.C.12.(c) through (f) of this permit..
- (d) Recordkeeping.
 - (i) *Hours of Operation.* The annual hours of operation for each engine. For the Prime Diesel Water Pump Engine a log shall be maintained that details the number of operating hours each day and total days of operation throughout the month for the engine. In addition, the cumulative total daily and annual hours for the engine shall be recorded. [ATC 14984].
 - (ii) *Prime Diesel Water Pump Engine Fuel Use.* The total amount of diesel fuel combusted in the engine shall be recorded on a monthly and annual basis in units of gallons. [ATC 14984]
 - (iii) *Portable Analyzer Monitoring Results.* Results of the portable analyzer monitoring required by Rule 333 and as specified in c.v of this condition. [ATC 14984]

- (iv) *Engine Inspection and Maintenance Logs.* IC engine inspection and maintenance logs shall be maintained, including quarterly inspection results, consistent with the Rule 333 Inspection and Maintenance Plan reporting requirements. [ATC 14984]
- (v) *Prime Diesel Water Pump Engine Source Test Results.* Results of the source tests if required. [ATC 14984]
- (e) Reporting. On a semi-annual basis, a report detailing the previous six month's activities shall be provided to the District. The report must list all the data required by Condition 9.C.15 of this permit (Semi-Annual Monitoring/Compliance Verification Reports). [ATC 14984]

C.2 Combustion Equipment – Silicates Boilers. The following equipment is included in this emissions unit category:

Device Name	Imerys ID	District DeviceNo
<i>Combustion Equipment</i>		
Silicate Plant Boiler #1	SPB1	81
Silicate Plant Boiler #2	SPB2	82

- (a) Emission Limits: Mass emissions from the boilers listed above shall not exceed the limits listed in Table 5.3 and Table 5.4, except for the PM limits which are District-only enforceable. In addition, the following specific emission limits apply:
 - (i) *Boiler #1 Limits* - Regardless of fuel type, emissions of PM from Boiler #1 shall not exceed 0.3 grains per standard cubic foot of exhaust gas, and emissions of sulfur compounds (calculated as SO₂) shall not exceed 0.2% by volume (2000 ppmv). Compliance shall be based on the reporting requirements of permit condition C.15 listed in this permit. [Ref: Rule 304, 309.A.1, 40 CFR 70.6]
 - (ii) *Boiler #2 Limits* - When operated on natural gas, emissions of NO_x from Boiler #2 shall not exceed either 30 ppmv or 0.036 lb/MMBtu of heat input. Emissions of carbon monoxide from Boiler #2 shall not exceed 400 ppmv regardless of fuel type. The ppmv limits in this condition are referenced at dry stack-gas conditions and 3% by volume stack-gas oxygen. Compliance shall be based on source testing. [Ref: Rule 342, ATC 9240-02 PCs 2, 6 & 7]
- (b) Operational Limits: The following operational limits apply:
 - (i) *Boiler #1 Operational Limits:*
 - (1) *Tuning Requirements* - Boiler #1 shall be tuned at least once every 12 months in accordance with the procedure in Attachment 1 of Rule 342. [Ref: Rule 342.D.2 and G]
 - (2) *Fuel Gas Sulfur Limit for Boiler #1* - The sulfur content of natural gas combusted shall not exceed 50 gr/100scf (797 ppmv) total sulfur

calculated as hydrogen sulfide at standard conditions. Imerys shall demonstrate compliance by use of utility (PUC-quality) natural gas.

- (3) *Heat Input Limit* - Operation of Boiler #1 shall not exceed 8,999 MMBtu/yr.
- (ii) *Boiler #2 Operational Limits [Ref: ATC 9240-02]:*
 - (1) *PUC Quality Gas Requirement* - Boiler #2 shall be fired only on PUC-quality natural gas when it is fired on gaseous fuel.
 - (2) *Fuel Gas Sulfur and Hydrogen Sulfide Limits for Boiler #2* - The total sulfur and hydrogen sulfide contents of the natural gas combusted shall not exceed 80 ppmv and 4 ppmv, respectively, calculated as hydrogen sulfide at standard conditions. Imerys shall demonstrate compliance with gas analyses provided by the gas utility.
 - (3) *Boiler #2 Heat Input and Hourly Limits* - Imerys shall not operate Boiler #2 in excess of 110% of the hourly heat input at which it has been source tested and found to be in compliance. However, in no case shall Boiler #2 be operated at over 23 MMBtu/hr or 195,960 MMBtu/yr.
 - (4) *PUC Natural Gas Curtailment* - PUC-quality natural gas shall be used at all times in Silicates Boiler #2 when it is in operation except during periods of natural gas curtailment as imposed by the gas utility.
 - (5) *Annual Hours Limit* - Operation of Boiler #2 shall not exceed 8,520 hours/yr.
- (iii) *Fuel Oil Limits* - Fuel oil #2 or #6 may be used so long as the total annual time for each boiler operating on each fuel oil is less than 168 hours per year (cumulative for both #2 and #6 fuels), excluding equipment testing time not exceeding 24 hours per year. The sulfur content of #6 fuel oil combusted shall not exceed 0.5% by weight total sulfur calculated as sulfur at standard conditions. The sulfur content of the fuel oil #2 shall not exceed 0.05%, weight total sulfur, calculated as sulfur at standard conditions Imerys shall verify sulfur content by complying with 9.B.7. [Ref: Rule 311, ATC 9240-02; ATC 10361]
- (iv) At no time shall Boiler #1 and Boiler #2 be operated simultaneously. [Ref PTO 9240 PC 3]
- (c) Monitoring: The following monitoring conditions apply to the boilers:
 - (i) *Source Testing* - Imerys shall perform source testing of air emissions and process parameters listed in Table 9.11 (Source Test Requirements for External Combustion Units) in accordance with the requirements of Rule 342, Sections F, G and H. The test frequency of Boiler #1 and Boiler #2 shall be biennial. Source testing shall be consistent with permit Condition 9.C.12 (Source Testing).
 - (1) Imerys shall monitor the hours of operation of Boiler #1. If Boiler #1 operates less than 200 hours in a calendar year, no source testing shall be

required. If Boiler #1 operates 200 hours or more in a calendar year, then Imerys shall submit a written notification to the District within seven days of operating 200 hours. The notification shall propose a date to complete the source test on Boiler #1 for District approval.

- (ii) Source testing shall be performed on a fuel approved by the District considering such factors as the predominant fuel used in the past year and the results of previous testing on the various fuels permitted. Imerys shall propose the fuel for testing in the source test plan for District consideration. [Ref: Rule 342.G.1, 40 CFR 70.6]
- (iii) *Fuel Gas Metering* - Imerys shall monitor fuel gas used by Boiler #1 and #2 by use of a dedicated, pressure corrected, fuel use totalizing flow meter. [Ref: Rule 342.I.2, ATC 9240-02 PCs 8 & 9]
- (iv) *Fuel Oil Metering*. The volumes of #2 and #6 fuel oils used by Boilers #1 and #2 shall be monitored by use of a dedicated fuel use totalizer capable of recording gallons of liquid fuel used during each two hour period by each Boiler #2. A single dedicated meter capable of monitoring both #2 and #6 fuel oil for each boiler is acceptable. The meters shall be included in and operated consistent with Imerys's *Process Monitor Calibration and Maintenance Plan*.
- (v) *Fuel Gas Data* – Imerys shall monitor the higher heating value and total sulfur content of the fuel gas combusted in the boilers by taking annual gas samples for third party lab analysis for the higher heating value (HHV) in accordance with condition 9.B.7.
- (vi) *Fuel Oil Data* – Imerys shall monitor the higher heating value and total sulfur content of the liquid fuel combusted in the boilers by taking annual gas samples for third party lab analysis for the higher heating value (HHV) in accordance with condition 9.B.7.
- (d) Recordkeeping: Imerys shall maintain the following records for each boiler
 - (i) *Fuel Volumes* - The monthly and annual usage of each fuel including the date that a change of fuel is made and the fuel types prior to the change and after the change for each boiler. Imerys shall record such usage in a format that District personnel are able to use the data to verify compliance during a typical District inspection. [Ref: Rule 342.I.1, ATC 9240-02 PC 12.a and b; ATC 10361]
 - (ii) *Fuel Gas Data* - Imerys shall maintain written documentation of the higher heating value and total sulfur content of the fuel gas on an annual basis. Such documentation shall consist of at least one of the following: (1) vendor certification; (2) vendor bill of lading; (3) vendor laboratory analysis; (4) equivalent reference testing results which have prior written District approval. The record of the higher heating value, and the total sulfur content of the fuel gas used by the boilers shall be maintained in accordance with condition 9.B.7. [Ref: ATC 9240-02, Rule 342]
 - (iii) *Fuel Oil Data* - Imerys shall maintain written documentation of the higher heating value and total sulfur content of the liquid fuel on a per-shipment or

blanket purchase order basis. Such documentation shall consist of at least one of the following: (1) vendor certification; (2) vendor bill of lading; (3) vendor laboratory analysis; (4) equivalent reference testing results which have prior written District approval. The record of the higher heating value and the total sulfur content of the liquid fuel used by the boilers shall be maintained in accordance with condition 9.B.7. [Ref: ATC 9240-02, Rule 342]

- (iv) *Boiler #1* – Imerys shall maintain the following records for Boiler #1:
 - (1) *Tune-ups* - Imerys shall maintain documentation that verifies that the tune-ups required for Boiler #1 according to Condition 9.C.2.(b) were performed.
 - (2) *Fuel Oil #2 Operating Hours* - Imerys shall record the hours of operation of Boiler #1 while burning fuel oil #2 and during equipment testing.
- (v) *Boiler #2* - Imerys shall maintain the following records for Boiler #2:
 - (1) *Fuel Oil Operating Hours* - Imerys shall record the hours of operation of Boiler #2 while burning fuel oil #2 or #6 under the exemption in Rule 342 (natural gas curtailment) and during equipment testing. [Ref: Rule 342.1.2, ATC 9240-02]
 - (2) *Maintenance Logs* - Imerys shall maintain maintenance logs for Boiler #2, the emission control system, and the fuel flow meters. [Ref: ATC 9240-02]
- (e) **Reporting:** On a semi-annual basis, a report detailing the previous six month’s activities shall be provided to the District. The report must list all the data required by condition 9.C.15 of this permit (*Semi-Annual Monitoring/Compliance Verification Reports*). [Ref: District Rules 311, 342, 1303, PTO 9240, 40 CFR 70.6]

C.3 Combustion Equipment –Silicates Dryers External Combustion Units. The following equipment is included in this emissions unit category:

Device Name	Imerys ID	District DeviceNo
<i>Combustion Equipment</i>		
Silicates Conveyor Dryer	SPCD	143
Silicates Flash Dryer	SPFD	140

- (a) **Emission Limits:** Mass emissions from the external combustion units listed above shall not exceed the limits listed in Table 5.3 and Table 5.4. [Ref: 304, 309.E.3, 311.C]
- (b) **Operational Limits:** There shall be no visible emissions when the Silicate Conveyor Dryer exhaust stream is re-routed to atmosphere:

- (c) Monitoring:
- (i) *Burner Adjustment*. Imerys shall biennially clean and adjust the burners of the Silicates Conveyor Dryer (Device No 143), and the Silicates Flash Dryer (140). [Ref: 40 CFR 70.6]
 - (ii) *Source Testing* - Imerys shall perform biennial source testing of air emissions and process parameters listed in Table 9.11 (Source Test Requirements) for the Silicates Conveyor Dryer (Device No 143). This unit shall be the first unit tested in Group 1 of Table 9.9. One zone (stack) must be tested; the zone to be tested and the method used to determine compliance with permitted emission limits shall be included in the source test plan for approval by the District. [Ref: 40 CFR 70.6]
 - (iii) *Exhaust Stream Re-routing*. Each instance the Silicate Conveyor Dryer exhaust stream is re-routed to atmosphere Imerys shall:
 - (1) Conduct a USEPA Method 22 observation during equipment operations within 24 hours of exhaust re-routing. The Method 22 readings shall be a minimum of six minutes. If visible emissions are detected Imerys shall take corrective action to eliminate the emissions and record the action(s) taken in response to the visible emissions. [ATC 14488]
 - (2) Notify the District within three working days of exhaust re-routing and provide the Method 22 results with the notification. [ATC 14488]
- (d) Recordkeeping: Imerys shall maintain the following records for the Silicates Conveyor Dryer (Device No 143), and the Silicates Flash Dryer (Device No 140):
- (i) *Burner Maintenance* - Imerys shall record the dates that burners are cleaned and/or adjusted.
 - (ii) *Fuel Sulfur Content* - Imerys shall maintain the documentation required by Condition 9.B.7 for fuels. [Ref: 40 CFR 70.6].
 - (iii) *Silicate Conveyor Dryer Exhaust Stream Re-Routing* - Imerys shall record the following readings obtained by the USEPA Method 22 inspections: the date and time of reading, name of reader, equipment item and whether fugitive emissions were observed, and if visible emissions were observed the corrective actions taken. [ATC 14488]
- (e) Reporting: On a semi-annual basis, a report detailing the previous six month's activities shall be provided to the District. The report must list all the data required by condition 9.C.15 of this permit (*Semi-Annual Monitoring/Compliance Verification Reports*). [Ref: District Rules 311.C and 1303, 40 CFR 70.6]

C.4 **Combustion Equipment – Pellet Plant Dryer and Pellet Plant Kiln.** The following equipment is included in this emissions unit category:

Device Name	Imerys ID	District Device No
<i>Combustion Equipment</i>		
Pellet Plant Dryer		5843
Pellet Plant Kiln		5844

- (a) Emission Limits: Mass emissions from the Pellet Plant Dryer and Kiln listed above shall not exceed the limits listed in Table 5.3 and Table 5.4. [Ref: PTO 12651]
- (b) Operational Limits: The following operational limits apply:
 - (i) *Heat Input Limits*. The hourly, daily and annual heat input limits to each unit shall not exceed the values listed in Table 5.1. These limits are based on the design rating of the unit and the annual heat input value as listed in the permit application. Unless otherwise designated by the District, the following fuel content shall be used for determining compliance: Natural Gas = 1,050 Btu/scf.
 - (ii) *Public Utility Natural Gas Fuel Sulfur Limit*. The total sulfur and hydrogen sulfide (H₂S) content (calculated as H₂S at standard conditions, 60°F and 14.7 psia) of the public utility natural gas fuel shall not exceed 80 ppmv and 4 ppmv respectively. Compliance with this condition shall be based on billing records or other data showing that the fuel gas is obtained from a public utility gas company.
- (c) Monitoring. The equipment permitted herein is subject to the following monitoring requirements:
 - (i) *Fuel Usage*. The volume of fuel gas used in the units shall be determined by hour meter method listed below. Except for changing to the Default Rating Method, written District approval is required to change to a different method. Units subject to the Rule 361.D.2 low use exemption shall use the fuel meter option.
 - (1) Fuel Use Meter. The volume of fuel gas (in units of standard cubic feet) used shall be measured through the use of a dedicated District-approved fuel meter. The meter shall be temperature and pressure corrected. The fuel meter shall be accurate to within five percent (5%) of the full scale reading. The meter shall be calibrated according to manufacturer's specifications and the calibration records shall be made available to the District upon request.
 - (2) Hour Meter. The volume of natural gas (in units of standard cubic feet) used in the units shall be determined through the use of a dedicated District-approved hour meter or District-approved electronic management system that is capable of tracking and logging the unit's

time on/off. Fuel usage shall be calculated based on the actual hours of operation (hours/year) times the heat input rating of the unit (Btu/hr) and divided by the District-approved heating value of the fuel (Btu/scf).

- (3) Default Rating Method. The volume of natural gas (in units of standard cubic feet) used shall be reported as permitted annual heat input limit for the unit (Btu/year) divided by the District-approved heating value of the fuel (Btu/scf).
- (d) Recordkeeping: Imerys shall maintain the following records for the Pellet Plant Dryer, and the Pellet Plant Kiln.
 - (i) *Hours of Operation.* Total monthly hours of operation summarized monthly and annually.
 - (ii) *Fuel Use.* The volume of fuel gas used by each unit each year (in units of standard cubic feet) as determined by the fuel use monitoring condition above.
 - (iii) *Maintenance Logs.* Maintenance logs for the units and hour meters (as applicable).
- (e) Reporting: On a semi-annual basis, a report detailing the previous six month's activities shall be provided to the District. The report must list all the data required by condition 9.C.15 of this permit (*Semi-Annual Monitoring/Compliance Verification Reports*. [Ref: PTO 12651, District Rules 311.C and 1303, 40 CFR 70.6])

C.5 Combustion Equipment - Line 7 Kiln and Furnace. The following equipment is included in this emissions unit category:

Device Name	Imerys ID	District Device No
Combustion Equipment		
Line 7 Kiln		103370
Line 7 Furnace		109857

- (a) Emission Limits: Mass emissions from the kiln and furnace listed above shall not exceed the limits listed in Table 5.3 and Table 5.4.
 - (i) *Combined Furnace (Device No. 109857) and Kiln (Device No. 103370) Oxides of Nitrogen (NO_x) BACT Emission Limits.* The combined NO_x (as NO₂) outlet emission rate from the listed devices shall not exceed 5.55 lb/hr on a clock hour basis. Compliance with this condition shall be based on the source testing and monitoring conditions of this permit.
 - (ii) *Combined Furnace (Device No. 109857) and Kiln (Device No. 103370) Reactive Organic Compound (ROC) BACT Emission Limits.* The combined ROC outlet emission rate from the listed devices shall not exceed 2.63 lb/hr on a clock hour basis. Compliance with this condition shall be based on the source testing and monitoring conditions of this permit.

- (iii) *Venturi/Packed Bed Tower (Device No. 109866) Oxides of Sulfur (SO_x) BACT Emission Limits.* The SO_x (as SO₂) outlet emission rate shall not exceed 0.05 lbs/minute, or the 7 System Venturi Scrubber/Packed Bed Tower shall achieve a removal efficiency of 99.75% by mass of the inlet rate, whichever is less stringent. Compliance with this condition shall be based on the source testing and monitoring conditions of this permit.
- (iv) *7 System Venturi Scrubber/Packed Bed Tower (Device No. 109866) Particulate Matter (PM/PM₁₀) BACT Emission Limits.* The particulate (PM/PM₁₀) stack concentration shall not exceed 0.005 grains/dscf, or the 7 System Venturi Scrubber/Packed Bed Tower shall achieve a removal efficiency of 99.8% by mass of the inlet rate, whichever is less stringent. Compliance with this condition shall be based on the source testing and monitoring conditions of this permit.

(b) Operational Limits:

- (i) *Annual Operating Limit.* Operation shall not exceed 7,227 hours per calendar year.
- (ii) *Heat Input Limits.* The hourly, daily and annual heat input limits to the furnace (Dev No. 109857) and kiln (Dev No. 103370) shall not exceed the values listed below. These limits are based on the design rating of the burners and the annual heat input value as listed in the permit application. Unless otherwise designated by the Control Officer, the following fuel heat content shall be used for determining compliance: natural gas = 1,050 Btu/scf.

Device	District Device No	Combustion Operating Limits		
		Heat Input (MMBTU)		
		(per day)	(per quarter)	(per year)
Furnace (FR705)	109857	1,080.00	98,550.00	325,215.00
Kiln (KN723)	103370	1,200.00	109,500.00	361,350.00

- (iii) *PUC Quality Natural Gas Fuel Sulfur Limit.* The total sulfur content (calculated as hydrogen sulfide at standard conditions, 60°F and 14.7 psia) of the PUC quality natural gas fuel shall not exceed 80 ppmv.
- (iv) *Emergency Backup Diesel Fuel.* The System 7 furnace (Dev No. 109857), and kiln (Dev No. 103370) shall be fired on ultra-low sulfur #2 diesel fuel oil (CARB diesel) for no more than 200 hours per year. Diesel shall only be used in the event of curtailment of the supply of natural gas. System testing, not exceeding 24 hours per year, is included in the above annual limit.
- (v) *Diesel Fuel Sulfur Content Limit.* The total sulfur content of the emergency backup diesel fuel shall not exceed 0.0015 percent by weight and shall meet the specifications of CARB diesel.

- (vi) *Kiln Operations.* Emissions from the Kiln shall be controlled at all times by the 7 System Venturi Scrubber/Packed Bed Tower (Dev No. 109866) during production mode or the baghouse BH717 (Dev No. 109846) during the kiln bypass mode.
- (vii) *Venturi Scrubber.* The venturi scrubber (Dev. No. 109866) shall be operating when crude is processed or being added to System 7 equipment. The venturi scrubber shall be operated within the ranges listed below. Operating does not include System 7 startup and shutdown which shall be limited to forty-five (45) minutes. Compliance with this condition shall be based on the monitoring and recordkeeping conditions of this permit.

Venturi Scrubber Operating Limits	
Throat/Tangential Nozzle Scrubber Liquid Recirculating Flow	720 – 1300 gpm
Gas Stream Pressure Drop Across Venturi Throat	63 - 78 in H ₂ O

- (viii) *Packed Bed Tower.* The packed bed tower (Dev. No. 109866) shall be operating when crude is processed or being added to System 7 equipment. The packed bed tower shall be operated within the ranges listed below. Operating does not include System 7 startup and shutdown which shall be limited to forty-five (45) minutes. Compliance with this condition shall be based on the monitoring and recordkeeping conditions of this permit.

Packed Bed Tower Operating Limits	
Packing Spray Alkaline Scrubber Liquid Recirculating Flow	850 – 1300 gpm
Gas Stream Pressure Drop Across the Packed Bed	1 – 8 in H ₂ O

- (ix) *Packed Bed Tower Alkaline Scrubbing Liquid pH.* The packed bed alkaline scrubbing liquid shall be an aqueous solution containing sodium carbonate (soda ash) and the scrubbing liquid to the packed bed spray lance shall be maintained at a pH range of 7.5 to 10. Compliance with this condition shall be based on the monitoring and recordkeeping conditions of this permit.
- (x) *Packed Bed Tower Eliminator Water Wash Cycle.* The packed bed tower mist eliminator water wash cycle shall be conducted hourly for a period lasting ten minutes or greater.
- (xi) *Kiln Bypass Operating Mode.* System 7 may operate in a kiln bypass mode not to exceed a maximum of 2920 hours per year. Kiln bypass mode is defined as a limited operating condition where the kiln burner is fired on PUC quality natural gas with no processing of product anywhere in the System 7 line. Prior to entering the kiln bypass mode, the kiln drum shall be emptied of all product material. When operating in the kiln bypass mode, System 7 emissions shall only be generated by the burner of the System 7 kiln (Device No. 103370) and the kiln exhaust controlled by the baghouse BH717 (Dev No. 109846).
- (xii) *D-Family Crude Throughput.* The 7 System shall not process crude blends with greater than 43% D-Family crude types by weight.

- (c) Monitoring: The following monitoring conditions apply to the kiln and furnace:
- (i) Imerys shall monitor natural gas burned in the System 7 kiln burner and the furnace burner using a dedicated District-approved temperature and pressure corrected non-resettable totalizing fuel gas flow meter on each burner capable of recording standard cubic feet of fuel gas burned.
 - (ii) Imerys shall monitor #2 diesel fuel oil burned in the System 7 kiln burner and furnace burner using a dedicated District-approved non-resettable totalizing liquid fuel meter on each burner capable of recording gallons of fuel burned.
 - (iii) On an annual basis, Imerys shall maintain a log of the date and number of hours #2 diesel fuel oil was burned in the System 7 kiln burner and furnace burner.
 - (iv) Compliance with permit Condition 9.C.5(b)(v) shall be based on information provided by fuel vendor analysis, or documentation for each fuel shipment that the fuel meets California Code of Regulations, Title 13, Section 2281 standards (i.e., ARB “Clean Diesel”).
 - (v) Imerys shall monitor the feed rate of wet DE crude ore in short tons per hour to the System 7. All wet DE crude ore feed processed by System 7 shall be measured at the WB702A, B and C weigh belts (Device Number 103383).
 - (vi) Imerys shall monitor the crude type being processed on each weigh belt WB 702A, WB 702B and WB 702C at all times.
 - (vii) Imerys shall calibrate, maintain and operate monitoring devices that continuously measure and record the gas stream pressure drop across the venturi scrubber throat in inches of water column and the scrubbing liquid recirculating flow rate in gallons per minute. System description, meter specifications (including range and accuracy), calibration, and maintenance of this system shall be included in the *System 7 Process Monitor Calibration and Maintenance Plan*.
 - (viii) Imerys shall calibrate, maintain and operate monitoring devices that continuously measure and record the packed bed tower alkaline scrubber liquid recirculating flow rate in gallons per minute and the gas stream pressure drop across the packed bed in inches of water column. System description, meter specifications (including range and accuracy), calibration, and maintenance of this system shall be included in the *System 7 Process Monitor Calibration and Maintenance Plan*.
 - (ix) Imerys shall calibrate, maintain and operate monitoring devices that continuously measure and record the packed bed tower alkaline scrubber liquid pH.
 - (x) Imerys shall maintain a log of the date and number of hours the System 7 kiln is operated in the kiln bypass operating mode.
 - (xi) Imerys shall monitor SO_x emissions from the packed bed tower stack by implementing the provisions of the District approved *System 7 SO_x Monitoring Protocol*.

- (xii) Imerys shall perform daily portable analyzer monitoring of the 7 System Venturi Scrubber/Packed Bed Tower exhaust outlet for NO_x, SO_x and CO. The procedures outlined in the District approved *System 7 Portable Analyzer Monitoring Plan* shall be followed for all portable analyzer monitoring. Calculated mass emission rates based on portable analyzer instrument readings shall not exceed the limits specified in Table 5.3 of this permit.
- (d) Recordkeeping: Imerys shall maintain the following records for the 7 System kiln and furnace:
 - (i) System 7 wet DE crude ore feed rate in short tons per hour, for each weigh belt WB 702A, WB 702B and WB 702C.
 - (ii) Crude type being processed on each weigh belt WB 702A, WB 702B and WB 702C. This data shall be used in conjunction with the data required in Condition 9.C.5(d)(i) to calculate and record the maximum hourly D-Family crude usage in weight percent.
 - (iii) The volume (in units of standard cubic feet) of PUC quality natural gas burned in the furnace and kiln burners each day.
 - (iv) The volume (in units of gallons) of diesel fuel burned in the furnace and kiln burners each day.
 - (v) The number of days and hours the furnace and kiln burners were fired on PUC quality natural gas each month.
 - (vi) The number of days and hours the furnace and kiln burners were fired on diesel fuel each month.
 - (vii) Diesel fuel vendor analysis or other documentation to demonstrate compliance with permit Condition 9.C.5(b)(v) of this permit.
 - (viii) Imerys shall maintain the following records for the venturi scrubber:
 - (1) Once per day, Imerys shall determine and record an arithmetic average over a 2-hour period of scrubber liquid recirculating flow to the throat and tangential nozzles and the gas stream pressure drop across the venturi throat (per NSPS Subpart UUU).
 - (2) Each instance in which the venturi operated outside of any of the parameter limits in permit Condition 9.C.5 (b)(vii), the reason for operating outside of the limits, how long the operation persisted, and the corrective actions taken to resume operations within the limits.
 - (3) On a quarterly basis, the number of hours of downtime for each monitor and a log documenting the nature and duration of each monitor malfunction, maintenance or repair action.

- (4) All records required by the *System 7 Process Monitor Calibration and Maintenance Plan*.
- (ix) Imerys shall maintain the following records for the packed bed tower:
 - (1) Once per day, Imerys shall determine and record an arithmetic average over a 2-hour period of alkaline scrubber liquid recirculating flow to the spray lances and the gas stream pressure drop across the packed bed (per NSPS Subpart UUU). The scrubbing liquid pH shall be determined and recorded once per day.
 - (2) Each instance in which the packed bed tower operated outside of any of the parameter limits in permit Conditions 9.C.5(b)(viii) and 9.C.5(b)(ix), the reason for operating outside of the limits, how long the operation persisted, and the corrective actions taken to resume operations within the limits.
 - (3) On a quarterly basis, the number of hours of downtime for each monitor and a log documenting the nature and duration of each monitor malfunction, maintenance or repair action.
 - (4) All records required by the *System 7 Process Monitor Calibration and Maintenance Plan*.
- (x) Dates and daily number of hours that System 7 kiln is operated in kiln bypass mode.
- (xi) Imerys shall record the results of the measurements of the sulfur content of the DE crude ore throughput at the inlet to the furnace. Total sulfur results shall be reported as percent by weight.
- (xii) Results of the daily 7 System Venturi Scrubber/Packed Bed Tower portable analyzer monitoring required by Condition 9.C.5(c)(xiii) of this permit. All records required by the *System 7 Portable Analyzer Monitoring Plan* shall also be recorded.
- (e) Reporting: On a semi-annual basis, a report detailing the previous six month's activities shall be provided to the District. The report must list all the data required by condition 9.C.15 of this permit (*Semi-Annual Monitoring/Compliance Verification Reports*). [Ref: PTO 12105, 40 CFR 70.6]
- (f) Best Available Control Technology (BACT): The permittee shall apply emission control technology and plant design measures that represent Best Available Control Technology ("BACT") to the operation of the equipment/facilities as described in Condition 9.C.5. Conditions 9.C.5(a), 9.C.5(b), 9.C.5(c), 9.C.5(d) and 9.C.5(e) define the specific control technology and performance standard emission limits for BACT. The BACT shall be in place, and shall be operational at all times, for the life of the project. BACT related monitoring, recordkeeping and reporting requirements are defined in those specific permit conditions. BACT related requirements are also defined in the Source Testing permit condition herein.

DRAFT

- (g) Modification Requirements: Prior to making any modifications to the System 7 line, including tie-ins to any other processing equipment or processing lines at the facility, Imerys shall obtain a new Authority to Construct (ATC) permit or modification to this permit.

C.6 Baghouses. The following equipment is included in this emissions unit category:

Device Name	Type	Imerys ID	District Device No	Device Name	Type	Imerys ID	District Device No
Crushing Plant Vent. BH	Enclosed	CRVBH	100	Feed Bin Baghouse (BH901)	Enclosed	BH901	108935
Mill Ventilation Baghouse	Enclosed	11VBH	102	Baghouse (BH916)	Enclosed	BH916	108940
345 Baghouse	Enclosed	345BH	108	Soda Ash Baghouse	Enclosed	SABH	109452
378 Baghouse	Enclosed	378BH	109				
978 Baghouse	Enclosed	978BH	110	7 Kiln Bypass BH717	Enclosed	BH717	109846
4 Dry End Baghouse	Open	4DBH	112	Baghouse BH101	Enclosed	BH101	110191
578 Baghouse	Enclosed	578BH	119	Baghouse BH102	Enclosed	BH102	110192
6 Dry End Ventilation Baghouse	Open	6DVBH	125	Baghouse BH103	Enclosed	BH103	110193
6 Super Fine Super Floss Baghouse	Open	6SFSF	126	Baghouse BH104	Enclosed	BH104	110194
616 Ventilation Baghouse	Enclosed	616VBH	128	Baghouse BH105	Enclosed	BH105	110195
Snow Floss Plant Baghouse	Open	SFPBH	133	Baghouse BH106	Enclosed	BH106	110196
Recirculating System Ventilation Baghouse	Enclosed	RSVBH	135	Baghouse BH107	Enclosed	BH107	110197
Preseparator Waste Baghouse	Enclosed	PSWBH	136	Baghouse BH108	Enclosed	BH108	110198
General Waste Baghouse	Enclosed	GWBH	137	Process Baghouse (BH912)	Enclosed	BH912	110203
Silicate Plant Feed Mix Baghouse	Enclosed	SPFMBH	138	Packing Sta BH125	Enclosed	BH125	110525
Silicate Plant Lime Baghouse	Enclosed	SPLTBH	139	Bin Vent BH131A1	Enclosed	BH131A1	110532
Silicate Plant Production Baghouse	Enclosed	SPPBH	141	Bin Vent BH131A2	Enclosed	BH131A2	110533
Silicate Plant Ventilation Baghouse (Pack)	Enclosed	SPVBH	142	Bin Vent BH131B1	Enclosed	BH131B1	110534
Mortar Plant Ventilation Baghouse	Enclosed	MPVBH	146	Bin Vent BH131B2	Enclosed	BH131B2	110535
Pellet Plant Ventilation Baghouse - Cold	Enclosed	PPCVBH	147	Baghouse BH925A	Enclosed	BH925A	110641
Pellet Plant Ventilation Baghouse - Hot	Enclosed	PPHVBH	148	Baghouse BH925B	Enclosed	BH925B	110642
Chromosorb Ventilation Baghouse - South	Enclosed	CPVBHS	149	Baghouse BH109A	Enclosed	BH109A	110649
3 Bulk Bin Baghouse	Enclosed	3BBVBH	151	Baghouse BH109B	Enclosed	BH109B	110650
Celite Analytical Filter Aid Baghouse	Open	CAFABH	152	Baghouse BH110A	Enclosed	BH110A	110651
Sackroom Baghouse	Open	SRBH	153	Baghouse BH110B	Enclosed	BH110B	110652
Experimental Plant Ventilation Baghouse	Open	XBBH	5935	7 Dry End Baghouse BH775	Enclosed	BH775	110720
3 Air Sifter Ventilation Baghouse	Enclosed	3ASBH	6471	7 Dry End Baghouse BH777	Enclosed	BH777	110721
5 Air Sifter Ventilation Baghouse	Enclosed	5ASBH	6472	7 Dry End Baghouse BH788	Enclosed	BH788	110722
6 Automatic Packing Station Baghouse (678)	Enclosed	678BH	103363	7 Dry End Baghouse BH789	Enclosed	BH789	110723
Silicate Plant Flash Dryer Baghouse	Enclosed	SPFDBH	103474	7 Wet End Baghouse BH721	Enclosed	BH721	110724
4 Bulk Bin Baghouse	Enclosed	4BBVBH	103514	Baghouse 5DC-01	Enclosed	5DC-01	114326

- (a) **Emission Limits:** Mass emissions from baghouses listed above shall not exceed the limits listed in Table 5.3 and Table 5.4. In addition, the following specific emission limits apply:

- (i) **Concentration Limits and Mass Emission Rates** - Controlled emissions of particulate matter from each baghouse shall not exceed the concentration limit listed for it in Table 9.1.

- (ii) *SO_x and NO_x Limits.* Exhaust emissions from the Pellet Plant Ventilation Baghouse – Hot shall not exceed 2,000 ppmv. Additionally, the SO_x and NO_x limits listed in Table 9.2 shall not be exceeded.
- (b) Operational Limits: The following operational limits shall apply:
 - (i) *Operating Schedule.* The equipment listed in Table 9.3 shall not exceed the hours of operation specified in the table. [Ref: ATC 9696-01; ATC 9156; ATC 10257; ATC 10783; ATC 10858; ATC 10866; ATC 12091; ATC 12091-03; ATC 12208-02; ATC 12398; ATC 12398-01]
 - (ii) *Pressure Drop.* Except during startup operations as defined below, the baghouses listed in Table 9.3 shall operate within the pressure drop range indicated. Startup operations begin with powering up the exhaust blower associated with the baghouse and end with the pressure drop across the baghouse reaching steady state or when the elapsed time since powering up reaches 3 hours, whichever is sooner. [Ref: ATC 9551-01, ATC 9193; ATC 9696-01; ATC 9192; ATC 10023; ATC 10257; ATC 10783; ATC 10858; ATC 12091; ATC 12091-03; ATC 12208-02; ATC 12398; ATC 12398-01; ATC 13570 and PTO 12105].
 - (iii) *Air Flow Rate -* Baghouses listed in Table 9.3 shall not exceed the airflow rate specified. [Ref: ATC-mod 9551; ATC 11008; ATC-mod 9193; ATC 9696-01; ATC 9192-01; ATC 11083; ATC 10023; ATC 10257; ATC 10783; ATC 10858; ATC 12091; ATC 12091-03; ATC 12208-02; ATC 12398; ATC 12398-01; ATC 13544 ATC 13570]
 - (iv) *Best Available Control Technology (BACT) -* The permittee shall apply emission control technology and plant design measures that represent Best Available Control Technology (“BACT”) to the operation of the baghouses checked off in the “BACT Required” column of Table 9.1. The BACT Control Technology Performance Standards in Table 4.2 and the PM/PM₁₀ emission limits in Table 9.1 define the specific control technology and performance standard emission limits for BACT. The BACT shall be in place, and shall be operational at all times, for the life of the project.. [Ref: ATC 8202; ATC 12091, ATC 12208; ATC 12398, ATC 12105]

Table 9.1 Baghouse Stack Concentrations and Emissions

Device Name	District Device No	PM (PM10) Limit (gr/dscf)	PM (PM10) Limit Federal Enforceability	NSPS Subpart OOO Emission Limit (gr/dscf)	NSPS Opacity OOO Limit	5840-R6 Opacity Limit	BACT Required
<i>Capture System</i>							
Crushing Plant Vent. BH	100	0.0059	ATC 9192		NA	No VE	
345 Baghouse	108	0.007 (0.002)	ATC 8202-01	0.022	7%	No VE	✓
378 Baghouse	109	0.0074	ATC 9696-01	0.022	7%	No VE	
578 Baghouse	119	0.005	ATC 14860	0.022	7%	No VE	✓
616 Ventilation Baghouse	128	0.022	NSPS OOO	0.022	7%	No VE	
Recirculating System Ventilation Baghouse	135	0.005	ATC 14999	0.04	No VE	No VE	✓
Preseparator Waste Baghouse	136	0.005	ATC 10783	NA	NA	No VE	
General Waste Baghouse	137	0.0045	ATC 10023	0.022	7%	No VE	
Silicate Plant Ventilation Baghouse (Pack)	142	0.0072	ATC 9696-01	0.022	7%	No VE	
Pellet Plant Ventilation Baghouse - Hot	148	0.004	ATC 10257	0.022	7%	No VE	
3 Bulk Bin Baghouse	151	0.0044	ATC 9193	0.022	7%	No VE	
3 Air Sifter Ventilation Baghouse	6471	0.00044	ATC 9551	0.022	7%	No VE	
5 Air Sifter Ventilation Baghouse	6472	0.00044	ATC 9551	0.022	7%	No VE	
6 Automatic Packing Station Baghouse (678)	103363	0.022	NSPS OOO	0.022	7%	No VE	
4 Bulk Bin Baghouse	103514	0.0044	ATC 9193	0.022	7%	No VE	
Feed Bin Baghouse (BH901)	108935	0.005 (0.005)	ATC 12091	0.022	7%	No VE	✓
Baghouse (BH916)	108940	0.005 (0.005)	ATC 12091	0.022	7%	No VE	✓
Soda Ash Baghouse	109452	0.0037	ATC 14897	0.04	No VE	No VE	✓
7 Kiln Bypass BH717	109846	0.005 (0.005)	PTO 12105	0.04	7%	No VE	✓
Baghouse BH101	110191	0.005 (0.005)	ATC 12208	0.04	7%	No VE	✓
Baghouse BH102	110192	0.005 (0.005)	ATC 12208	0.04	7%	No VE	✓
Baghouse BH103	110193	0.005 (0.005)	ATC 12208	0.04	7%	No VE	✓
Baghouse BH104	110194	0.005 (0.005)	ATC 12208	0.04	7%	No VE	✓
Baghouse BH105	110195	0.005 (0.005)	ATC 12208	0.04	7%	No VE	✓
Baghouse BH106	110196	0.005 (0.005)	ATC 12208	0.04	7%	No VE	✓
Baghouse BH107	110197	0.005 (0.005)	ATC 12208	0.04	7%	No VE	✓
Baghouse BH108	110198	0.005 (0.005)	ATC 12208	0.04	7%	No VE	✓
Process Baghouse (BH912)	110203	0.005 (0.005)	ATC 12091	0.04	7%	No VE	✓
Packing Sta BH125	110525	0.005 (0.005)	ATC 12398	0.04	7%	No VE	✓
Bin Vent BH131A1	110532	0.005 (0.005)	ATC 12398	0.04	7%	No VE	✓
Bin Vent BH131A2	110533	0.005 (0.005)	ATC 12398	0.04	7%	No VE	✓
Bin Vent BH131B1	110534	0.005 (0.005)	ATC 12398	0.04	7%	No VE	✓
Bin Vent BH131B2	110535	0.005 (0.005)	ATC 12398	0.04	7%	No VE	✓
Baghouse BH925A	110641	0.005 (0.005)	ATC 12208	0.04	7%	No VE	✓
Baghouse BH925B	110642	0.005 (0.005)	ATC 12208	0.04	7%	No VE	✓
Baghouse BH109A	110649	0.005 (0.005)	ATC 12208	0.04	7%	No VE	✓
Baghouse BH109B	110650	0.005 (0.005)	ATC 12208	0.04	7%	No VE	✓
Baghouse BH110A	110651	0.005 (0.005)	ATC 12208	0.04	7%	No VE	✓
Baghouse BH110B	110652	0.005 (0.005)	ATC 12208	0.04	7%	No VE	✓
7 Dry End Baghouse BH775	110720	0.005 (0.005)	PTO 12105	0.04	7%	No VE	✓
7 Dry End Baghouse BH777	110721	0.005 (0.005)	PTO 12105	0.04	7%	No VE	✓
7 Dry End Baghouse BH788	110722	0.005 (0.005)	PTO 12105	0.04	7%	No VE	✓
7 Dry End Baghouse BH789	110723	0.005 (0.005)	PTO 12105	0.04	7%	No VE	✓
7 Wet End Baghouse BH721	110724	0.005 (0.005)	PTO 12105	0.04	7%	No VE	✓
Baghouse 5DC-01	114326	0.005 (0.005)	ATC 13570	NA	7%	No VE	
All other baghouses		0.3	Rule 304	NA	20%	Rule 302	NA

Table 9.2 SOx/NOx Emission Limits

Device Name	Imerys ID	District DeviceNo	SOx (lb/hr)	NOx (lb/hr)
<i>Capture System</i>				
Pellet Plant Ventilation Baghouse - Hot	PPHVBH	148	200	140

- (v) *Enclosed Equipment* – Milling Circuit equipment (mill, classifiers, waste bin and all product transport lines, screw conveyors, and transfer points serving this equipment), Silos equipment (product silos, bulk bins and inlet and outlet hose stations and all product transport lines and transfer points serving this equipment) and Bagging and Packing equipment (bag fillers, bins and all product transport lines and transfer points serving this equipment) shall be closed to the atmosphere and all particulates vented through a baghouse. [Ref: ATC 12091, ATC 12208; ATC 12398]
- (vi) *System #7 Kiln Bypass Baghouse Use Restriction.* The System #7 Kiln Bypass Baghouse (Device ID 109846) may only operate to control particulate matter from the kiln exhaust during kiln bypass operating mode. No other use of this baghouse is permitted. (PTO 12105)
- (c) Monitoring: The following source testing and periodic monitoring conditions shall apply:
 - (i) *Inspection and Maintenance Plans (I&M Plans)* - Imerys shall implement baghouse inspections in accordance with the District-approved Baghouse Inspection and Maintenance Plans (and any District-approved manufacturer supplements). These include, but are not necessarily limited to all baghouses installed under an Authority to Construct (ATC) as listed in Table 9.4. These plans, and any subsequent District-approved revisions, are incorporated by reference as an enforceable part of this permit.
 - (ii) *Inspection and Maintenance Procedures for Enclosed Baghouses* – Each baghouse shall be maintained consistent with manufacturer recommended weekly, monthly, and annual maintenance practices listed in the manufacturer literature. All socks associated with the baghouses specified in Table 9.5 shall be replaced during scheduled overhaul, i.e. typically every three years.
 - (1) Silicate Plant Production baghouses shall be inspected internally each week.
 - (2) Ventilation baghouses shall be inspected internally each month. [Ref: 40 CFR 70.6 & PTO 5840]

Table 9.3 Equipment Exhaust Flow Limits and Operating Limits

Device Name	Imerys ID	District Device No	Baghouse Subject to Table 9.4 Limits?	Pressure Drop (in. of H ₂ O)	Daily Pressure Drop Monitoring	Flow (scfm)	Annual Hours of Operation	Federal Enforceability
Crushing Plant Vent. BH	CRVBH	100	YES	0.5 - 8	√	35,700	--	ATC 9192 Mod-01
345 Baghouse	345BH	108	YES	--		20,000	8520	ATC 13544
378 Baghouse	378BH	109	YES	2.5 - 7.5	√	45,150	--	ATC 9696 Mod-01
578 Baghouse	578BH	119	YES	1 - 7	√	31,500	--	ATC 9696 Mod-01
Recirculating System Ventilation Baghouse	RSVBH	135	YES	1 - 6	√	16,714	8520	ATC 10858
Preseparator Waste Baghouse	PSWBH	136	YES	1 - 10	√	20,000	8520	ATC 10783
General Waste Baghouse	GWBH	137	YES	1 - 6	√	24,150	8760	ATC 10023
Silicate Plant Ventilation Baghouse (Pack)	SPVBH	142	YES	1 - 7	√	42,000	--	ATC 9696 Mod-01
Pellet Plant Ventilation Baghouse - Hot	PPHBH	148	YES	5 - 10	√	10,500	8322	ATC 10257
3 Bulk Bin Baghouse	3BBVBH	151	YES	Less than 10	√	3,360	--	ATC 9193 Mod-01
3 Air Sifter Ventilation Baghouse	3ASBH	6471	YES	2 - 10	√	473	--	ATC 9551 Mod-01
5 Air Sifter Ventilation Baghouse	5ASBH	6472	YES	2 - 10	√	473	--	ATC 9551 Mod-01
4 Bulk Bin Baghouse	4BBVBH	103514	YES	Less than 10	√	3,360	--	ATC 9193 Mod-01
Feed Bin Baghouse (BH901)	BH901	108935	YES	Less than 6	√	2,550	8760	ATC 12091
Baghouse (BH916)	BH916	108940	YES	Less than 6	√	13,243	8760	ATC 12091
Soda Ash Baghouse	SABH	109452	YES	1 - 10	√	800	1,460 (annual)	ATC 11083
Soda Ash Baghouse	SABH	109452	YES	--		--	16 (daily)	ATC 11083
7 Kiln Bypass BH717	BH717	109846	YES	0.0 - 10	√	12,290	2920	PTO 12105
Baghouse BH101	BH101	110191	YES	Less than 6	√	2,411	8760	ATC 12208-02
Baghouse BH102	BH102	110192	YES	Less than 6	√	2,411	8760	ATC 12208-02
Baghouse BH103	BH103	110193	YES	Less than 6	√	2,411	8760	ATC 12208-02
Baghouse BH104	BH104	110194	YES	Less than 6	√	2,411	8760	ATC 12208-02
Baghouse BH105	BH105	110195	YES	Less than 6	√	2,411	8760	ATC 12208-02
Baghouse BH106	BH106	110196	YES	Less than 6	√	2,411	8760	ATC 12208-02
Baghouse BH107	BH107	110197	YES	Less than 6	√	2,411	8760	ATC 12208-02
Baghouse BH108	BH108	110198	YES	Less than 6	√	2,411	8760	ATC 12208-02
Process Baghouse (BH912)	BH912	110203	YES	Less than 6	√	13,000	8760	ATC 12091-03
Packing Sta BH125	BH125	110525	YES	0.1 - 6	√	14,259	8760	ATC 12398-01
Bin Vent BH131A1	BH131A1	110532	YES	0.1 - 6	√	1,031	8760	ATC 12398
Bin Vent BH131A2	BH131A2	110533	YES	0.1 - 6	√	1,031	8760	ATC 12398
Bin Vent BH131B1	BH131B1	110534	YES	0.1 - 6	√	1,031	8760	ATC 12398
Bin Vent BH131B2	BH131B2	110535	YES	0.1 - 6	√	1,031	8760	ATC 12398
Baghouse BH925A	BH925A	110641	YES	Less than 6	√	720	8760	ATC 12208-02
Baghouse BH925B	BH925B	110642	YES	Less than 6	√	720	8760	ATC 12208-02
Baghouse BH109A	BH109A	110649	YES	Less than 6	√	1,500	8760	ATC 12208-02
Baghouse BH109B	BH109B	110650	YES	Less than 6	√	1,500	8760	ATC 12208-02
Baghouse BH110A	BH110A	110651	YES	Less than 6	√	1,500	8760	ATC 12208-02
Baghouse BH110B	BH110B	110652	YES	Less than 6	√	1,500	8760	ATC 12208-02
7 Dry End Baghouse BH775	BH775	110720	YES	0.0 - 10	√	3,813	8760	PTO 12105
7 Dry End Baghouse BH777	BH777	110721	YES	0.0 - 10	√	31,520	8760	PTO 12105
7 Dry End Baghouse BH788	BH788	110722	YES	0.0 - 6	√	11,404	8760	PTO 12105
7 Dry End Baghouse BH789	BH789	110723	YES	0.0 - 6	√	14,037	8760	PTO 12105
7 Wet End Baghouse BH721	BH721	110724	YES	0.0 - 6	√	687	8760	PTO 12105
Baghouse 5DC-01	5DC-01	114326	YES	0.0 - 10	√	2,000	8760	ATC 13570
6PS Packing Station		103352		--	--	--	8520	ATC 9696-01
6AS Packing Station		103354		--	--	--	8520	ATC 9696-01
Silicates Packing Station		103402		--	--	--	8760	ATC 9696-01
7P Packing Station		106135		--	--	--	8520	ATC 9696-01
Jolter Bin		108175		--	--	--	8760	ATC 9696-01

- (iii) *Maintenance Practices for Open-Sock Baghouses* - Imerys shall have a maintenance mechanic inspect baghouses daily when operational. On any day a baghouse is not operating, Imerys shall have a responsible person make a written entry in the applicable baghouse operation log noting that the baghouse was not in operation. The responsible person shall certify the entry by initialing or signing their name next to the entry. The mechanic shall tie off or field repair any leak found and note them on the inspection sheet, indicating whether the size of the hole in the sock was small (1/4 inch or smaller) or large (greater than 1/4 inch). Sock leaks reported by other personnel shall be tied off or field repaired whenever they occur. During a regularly scheduled overhaul day, the tied-off sock shall be replaced as indicated on the Wet End and Dry End Scheduled Overhaul sheets. Powder Mill system overhauls occur every 550 to 660 hours of operation. If an open baghouse has hoppers with five or more socks tied off, the failed socks shall be replaced during the overhaul.
- (iv) *Visual Emissions Observations* - Imerys shall observe all baghouses daily when operational. If visible emissions are observed during the daily inspection, corrective action shall be immediately implemented. If visible emissions are not eliminated within 24 hours, Imerys shall shut down the equipment controlled by the baghouse until corrective action that eliminates visible emissions is completed or obtain a variance from the District Hearing Board. On any day a baghouse is not operating, Imerys shall have a responsible person make a written entry in the applicable baghouse operation log noting that the baghouse was not in operation. The responsible person shall certify the entry by initialing or signing their name next to the entry. Imerys shall perform a visual inspection of each baghouse and baghouse exhaust once per day.
- (v) *Visual Emissions Inspections for Baghouses Subject to 7% or 20% Opacity Limits (Method 9)* - Once each quarter, Imerys shall use EPA Method 9 performed by a certified observer to obtain a reading of visible emissions from the stack of each baghouse that is subject to the 7% or 20% opacity standards. The Method 9 readings shall be taken when the baghouse is operating due to operation of some or all of the equipment it serves [Ref: ATC 8202 -01, ATC 9156 -01, ATC 9192 -01, ATC 9193 -01, ATC 9551-01, ATC 9696-01, ATC 10023, ATC 10257; ATC 10783; ATC 10858; ATC 11083; ATC 12091, ATC 12208; ATC 12398; ATC 13570 and 40 CFR 70.6]
- (vi) *Visible Emission Inspections for Baghouses Subject to No Visible Emission Limits.* Once each quarter Imerys shall perform a Method 22 fugitive visible emission inspection on the baghouses listed in Table 9.1 as “No VE” in the NSPS Subpart OOO Emission Limit Column of Table 9.1 for a 30 minute period.
- (vii) *Visual Emissions Inspections (Method 22)* - Once each calendar quarter, Imerys shall use EPA Method 22 to obtain a reading of visible emissions from all open sock baghouses. The Method 22 readings shall be a minimum of six minutes and taken in calendar quarters during which the baghouse operated. These inspections shall be taken when the equipment is operating due to operation of some or all of the equipment it serves
- (viii) *Pressure Drop Monitoring.* The pressure drop across the baghouses checked in the “Daily Pressure Drop Monitoring” column in Table 9.3 shall be observed

daily when operational. Pressure drop monitoring shall be done using District-approved pressure monitoring instrumentation to monitor the pressure drop across the baghouse in inches H₂O. [PTO 12105]. If the pressure drop falls outside the range listed in Condition 9.C.6.b(ii), immediate corrective action shall be taken return the pressure drop to the range stated in Condition 9.C.6.b(ii). [Ref: ATC 9193; ATC 9551; ATC 9192; ATC 10023; ATC 9696-01; ATC 10257; ATC 10783; ATC 10858, ATC 11083; ATC 12091; ATC 12208; ATC 12398; ATC 13570]

Table 9.4 Baghouses Subject to an Inspection and Maintenance Plan

Device Name	Imerys ID	District Device No	Federal Enforceability
<i>Capture System</i>			
378 Baghouse	378BH	109	ATC 9696 Mod-01
578 Baghouse	578BH	119	ATC 9696 Mod-01
Recirculating System Ventilation Baghouse	RSVBH	135	ATC 10858
Preseparator Waste Baghouse	PSVBH	136	ATC 10783
General Waste Baghouse	GWVBH	137	ATC 10023
Silicate Plant Ventilation Baghouse (Pack)	SPVBH	142	ATC 9696 Mod-01
Pellet Plant Ventilation Baghouse - Hot	PPHVBH	148	ATC 10257
3 Bulk Bin Baghouse	3BBVBH	151	ATC 9193 Mod-01
6 Automatic Packing Station Baghouse (678)	678BH	103363	ATC 9696-01
4 Bulk Bin Baghouse	4BBVBH	103514	ATC 9193 Mod-01
Feed Bin Baghouse (BH901)	BH901	108935	ATC 12091
Baghouse (BH916)	BH916	108940	ATC 12091
Soda Ash Baghouse	SABH	109452	ATC 11083
7 Kiln Bypass BH717	BH717	109846	PTO 12105
Baghouse BH101	BH101	110191	ATC 12208-02
Baghouse BH102	BH102	110192	ATC 12208-02
Baghouse BH103	BH103	110193	ATC 12208-02
Baghouse BH104	BH104	110194	ATC 12208-02
Baghouse BH105	BH105	110195	ATC 12208-02
Baghouse BH106	BH106	110196	ATC 12208-02
Baghouse BH107	BH107	110197	ATC 12208-02
Baghouse BH108	BH108	110198	ATC 12208-02
Process Baghouse (BH912)	BH912	110203	ATC 12091-03
Packing Sta BH125	BH125	110525	ATC 12398-01
Bin Vent BH131A1	BH131A1	110532	ATC 12398
Bin Vent BH131A2	BH131A2	110533	ATC 12398
Bin Vent BH131B1	BH131B1	110534	ATC 12398
Bin Vent BH131B2	BH131B2	110535	ATC 12398
Baghouse BH925A	BH925A	110641	ATC 12208-02
Baghouse BH925B	BH925B	110642	ATC 12208-02
Baghouse BH109A	BH109A	110649	ATC 12208-02
Baghouse BH109B	BH109B	110650	ATC 12208-02
Baghouse BH110A	BH110A	110651	ATC 12208-02
Baghouse BH110B	BH110B	110652	ATC 12208-02
7 Dry End Baghouse BH775	BH775	110720	PTO 12105
7 Dry End Baghouse BH777	BH777	110721	PTO 12105
7 Dry End Baghouse BH788	BH788	110722	PTO 12105
7 Dry End Baghouse BH789	BH789	110723	PTO 12105
7 Wet End Baghouse BH721	BH721	110724	PTO 12105
Baghouse 5DC-01	5DC-01	114326	ATC 13570

Table 9.5 Baghouses Requiring Sock Replacement During Scheduled Overhauls

Device Name	Imerys ID	District Device No	Type
978 Baghouse	978BH	110	Enclosed
4 Dry End Baghouse	4DBH	112	Open
6 Dry End Ventilation Baghouse	6DVBH	125	Open
6 Super Fine Super Floss Baghouse	6SFSF	126	Open
616 Ventilation Baghouse	616VBH	128	Enclosed
Snow Floss Plant Baghouse	SFPBH	133	Open
Recirculating System Ventilation Baghouse	RSVBH	135	Enclosed
Preseparator Waste Baghouse	PSWBH	136	Enclosed
Silicate Plant Feed Mix Baghouse	SPFMBH	138	Enclosed
Silicate Plant Lime Baghouse	SPLTBH	139	Enclosed
Silicate Plant Production Baghouse	SPPBH	141	Enclosed
Mortar Plant Ventilation Baghouse	MPVBH	146	Enclosed
Pellet Plant Ventilation Baghouse - Cold	PPCVBH	147	Enclosed
Pellet Plant Ventilation Baghouse - Hot	PPHVBH	148	Enclosed
Chromosorb Ventilation Baghouse - South	CPVBHS	149	Enclosed
Celite Analytical Filter Aid Baghouse	CAFABH	152	Open
Sackroom Baghouse	SRBH	153	Open
Experimental Plant Ventilation Baghouse	XBBH	5935	Open
6 Automatic Packing Station Baghouse (678)	678BH	103363	Enclosed
Silicate Plant Flash Dryer Baghouse	SPFDBH	103474	Enclosed

- (ix) *Source Testing* - Imerys shall perform source testing of air emissions and process parameters listed in Table 9.12 (*Source Test Requirements for Baghouses and Rotoclones*) for the baghouses. Imerys shall adhere to the Source Testing permit condition 9.C.12. The frequency shall be as specified in condition 9.C.12(a). [Ref: 40 CFR 70.6, ATC 8202-01; ATC 9192, ATC 12091, ATC 12208, ATC 12398; ATC 13570]
- (x) *Air Flow Rate*. Imerys shall monitor the air flow rate of baghouse 345BH in accordance with the *Process Monitor Plan for PTO Mod 5840-07, including 345BH and 773BH* (approved 5/27/2010). [Ref: ATC 13544]
- (xi) *Triboelectric Monitor*. Baghouse BH788 (Dev No. 110722) shall be equipped with a District-approved in-stack triboelectric monitor as a fabric filter bag leak monitor. [PTO 12105]
 - (1) Imerys shall obtain a daily reading of the triboelectric monitor output from Dev No. 110722 baghouse when operational. If the monitor output reaches 500 pA, a plant control room alarm shall be actuated and Imerys shall take immediate corrective action to reduce particulate. The District shall be notified by the start of the next business day of any reading triggering corrective action, and the corrective actions (e.g., bag repair or replacement) implemented. Monitor operation and alarming procedures shall be described in the *System 7 Baghouse Inspection and Maintenance Plan*. District may require a source test if monitor outputs show

potential excursions above the permitted 0.005 grain loading emission limit. [PTO 12105]

(d) Recordkeeping. Imerys shall keep the following records to demonstrate compliance with emission limits, operation limits and monitoring requirements above.

(i) *Baghouse Maintenance Records* - Imerys shall maintain Baghouse Maintenance records that include baghouse malfunction, maintenance, pressure drop and visible emission correction activities for all baghouses. The records shall include a malfunction summary specifying:

- (1) Date of malfunction, preventive maintenance activity or pressure drop correction activity.
- (2) Description of activity.
- (3) Date and time taken to remedy the malfunction or perform maintenance.
- (4) If equipment is shut down because the visible emissions could not be eliminated within 24 hours, the date and time of shutdown of the equipment the affected baghouse serves, and the date and time of startup of the equipment served.

Recording this information does not fulfill breakdown reporting required by Rule 505 or 1305. [Ref: ATC 8202-01, ATC 9193, ATC 9156, ATC 9551, ATC 9192; ATC 9696-01, ATC 10023, ATC 12091, ATC 12208, ATC 12398; ATC 13570 and 40 CFR 70.6, PTO 12105]

(ii) *Visible Emission Observations* - Imerys shall record whether or not daily visible emissions are present for all baghouses or the date and initials of a responsible person when the baghouse is non-operational. If visible emission were detected Imerys shall record the corrective actions taken and the duration visible emissions occurred.

(iii) *Visible Emission Inspections (Method 9)* - Imerys shall record the following for the readings obtained by the use of USEPA Method 9 inspections: the date and time of reading, name of reader, most recent Method 9 certification date of reader, baghouse name, individual interval readings required by Method 9, and the final reading. [Ref: ATC11083; ATC 9551, ATC 9616; ATC 9192; ATC 9193; ATC 10023; ATC 9696-01; ATC 10257; ATC 10783; ATC 10858; ATC 12091; ATC 12208; ATC 12398; ATC 13570 PTO 12105 and 40 CFR 70.6]

(iv) *Visible Emission Inspections (Method 22)* - Imerys shall record the following readings obtained by the USEPA Method 22 inspections Imerys completed for open sock baghouses: the date and time of reading, duration of the inspection, name of reader, equipment item and whether fugitive emissions were observed. [Ref: ATC 9696-01, ATC 12091; ATC 12208; ATC 12398; ATC 13570 PTO 12105 and 40 CFR 70.6]

(v) *Pressure Drop For Baghouses* - On a daily basis when the equipment is in use, Imerys shall record whether baghouse pressure drop is within the operating range specified in Table 9.3, to the nearest half inch of water column or equivalent gauge. The range shall be specified on the form. If the pressure drop is outside the range, the actual readings shall be recorded and all corrective actions

implemented as required by Condition 9.C.6(c)(vii). [Ref: ATC 9193, ATC 9551, ATC 9192, ATC 9616, ATC 10023, ATC 9696-01, ATC 10257, ATC 10783, ATC 10858, ATC 11083, ATC 12091, ATC 12208, ATC 12398 ATC 13570]

- (vi) *Baghouse Hours of Operation* - On a monthly basis Imerys shall record the hours of operation of each baghouse. In addition, Imerys shall record the following:
 - (1) Start time of all Pellet Plant Ventilation Baghouse (PPVBH) startup operations
- (vii) *Air Flow Rate* - Imerys shall continuously record the air flow rate of baghouse 345BH. [Ref: ATC 13544]
- (viii) *System #7 Triboelectric Monitor BH 788*. Imerys shall record the following records for the triboelectric monitor:
 - (1) Daily reading of the triboelectric monitor output from baghouse BH788 (Dev No. 110722) when operational.
 - (2) Date the monitor output exceeds 500 pA.
 - (3) Description of what corrective action to return the monitor readings to baseline levels including when bag repair or replacement was undertaken and completed. (PTO 12105)
- (e) Reporting On a semi-annual basis, a report detailing the previous six month's activities shall be provided to the District. The report must list all the data required by condition 9.C.15 of this permit (*Semi-Annual Monitoring/Compliance Verification Reports*) [Ref: District Rules 304, 311.C, and 1303, ATC 8202-02, ATC 9193, ATC 9156, ATC 9327, ATC 9551, ATC 12091, ATC 12208, ATC 12398, ATC 13544, 40 CFR 70.6]
- (f) Baghouse Bag Alternate Materials and Different Manufacturers. Imerys may install baghouse bags comprised of materials or from manufacturers other than those listed on the applicable permit(s) after first obtaining District approval. Imerys shall obtain District approval prior to installing an alternate bag material or using a different manufacturer each time an alternate material or material from a different manufacturer will be installed. To obtain District approval Imerys shall submit a request, in writing, that includes all of the following [Ref: ATC/PTO 13432]:
 - (i) *Baghouse Material*. A description of the current baghouse bag material and the proposed alternate baghouse bag material or material from the proposed different manufacturer. This description should focus on the differences between the bag materials, and explain the reason(s) for the change in material or manufacturer.
 - (ii) *Specification Sheet*. Baghouse bag manufacturer's product specification data sheet, or if not available, specifics on the bag material composition, permeability and temperature operating range. Also specify if the total fabric area or air to cloth ratio will change from the current baghouse configuration.
 - (iii) *Guarantee*. Baghouse bag manufacturer's emissions statement and/or guarantee.

The District will review all information submitted and issue a written approval or denial of each alternate material baghouse bag request. Imerys may not install any alternate material baghouse bags until first receiving a written approval from the District. Imerys shall adhere to any conditions of approval for alternate material baghouse bags, including source testing if required.

C.7 Material Handling Equipment. The requirements in this condition applies only to equipment subject to NSPS Subpart OOO including crushers, powder mills, screening operations, bucket elevators, belt conveyors, bagging operations, storage bins and enclosed truck or rail car loading stations constructed, reconstructed or modified after August 31, 1983. This condition does not apply to the Mobile Plant which is subject to a separate condition (9.C.9). This subpart does not apply to wet material processing including screening operations which removes unwanted material or which separates marketable fines from the product by a washing process which is designed and operated at all times such that the product is saturated with water. These operations and subsequent screening operations, bucket elevators and belt conveyors in the production line that process saturated materials up to the first crusher, grinding mill or storage bin in the production line are considered wet material processing and are exempt from Subpart OOO

(a) Operational Limits. Imerys shall maintain the following fugitive emission limits.

- (i) *Equipment Subject to 10% Opacity* If the following equipment is located outside a building visible emissions shall not exceed 10% opacity.
- Line 3 automatic bag packing operation: Packer Station 545 East, Packer Station 545 West, Packer Station 560, Packer Station 281, and Bagwash (PTO 8202).
 - 6P semibulk packing station (PTO 9616).
 - Pellet plant bucket elevator,
 - Powder mill 3AS and 5AS lines consisting of the 3AS and 5AS feed bins, 3AS and 5AS coarse pumps, air sifters #101 through #104, AS blowers #101 through #104, cyclones #101 through #104 and the following shared by the 2 lines: the AS packing station pump, the two 3&5AS packers, coarse screw and AS screw. (replacement) (PTO 9551).
 - Number five and number six automatic packing stations (5AP and 6AP).
 - Ventilation system of the #3 and #4 bulk bins (PTO 9193).
 - Milling circuit mill, classifiers, cyclone, conveyors, and bins (PTO 12091)
 - Product storage silos, powder pumps, and bins (PTO 12208)
 - Powder mill bagging and packing semi bulk bag fillers, blowers, and bins (PTO 12398)
- (ii) *Equipment Subject to 7% Opacity.* If the following equipment is located outside a building visible emissions shall not exceed 7% opacity
- System 7 processing equipment (PTO 12105)
 - Silicates Packers #1 and #2 (Device IDs 113830 and 113831) (PTO 13570)
 - Bulk Bins 9 and 10 (Device ID 103493) (PTO 14039)
 - Blending Plant Semi Bulk Packing Station (District Device ID 389137) (PTO 14860)

- (iii) *Visible Emissions from Buildings.* There shall be no visible emissions from a building opening enclosing any of the equipment listed in Condition 9.C.7.(a)(i) or (ii) above excluding vents controlled by a control device.
 - (iv) *Pellet Plant Elevator Visible Emissions.* Imerys shall observe the Pellet Plant Bucket Elevator (Device ID 103437) daily when operational. If visible emissions are observed during the daily inspection, corrective action shall be immediately implemented. If visible emissions are not eliminated within 24 hours, Imerys shall shut down the elevator until corrective action that eliminates visible emissions is completed or obtain a variance from the District Hearing Board [PTO 10257].
 - (v) *Enclosed Equipment.* The equipment subject to this condition shall be enclosed and vented to a baghouse.
- (b) Monitoring.
- (i) *Visual Emissions Inspections (Method 9) 7% and 10% Opacity-* Once each calendar quarter, Imerys shall use EPA Method 9 performed by a certified observer to obtain a reading of visible emissions from equipment listed under Sections a.(i) and a(ii) of this Condition that are located outside a building. The inspection shall be conducted while the equipment is in operation. [PTO 5840-R5 C.7.(a)(iii),and C.13.(f), PTO 13570, PTO 14860]
 - (ii) *Visible Emission Inspections (Method 22) -* Once each calendar quarter, Imerys shall use EPA Method 22 to obtain a reading of visible emissions from the building opening containing any of the equipment listed in Sections a.i and a.ii of this condition. The Method 22 readings shall be a minimum of six minutes and taken when the equipment inside the building is operating.
 - (iii) *Pellet Plant Bucket Elevator Visible Emission Inspection -* Imerys shall observe the Pellet Plant Bucket Elevator daily when operational. On any day when it is not operating, Imerys shall have a responsible person make a written entry in the an operation log noting that the elevator was not in operation. The responsible person shall certify the entry by initialing or signing their name next to the entry. Imerys shall perform a visual inspection of the elevator once per day. [PTO 10257]
- (c) Recordkeeping.
- (i) *Visible Emission Inspections (Method 9) -* Imerys shall record the following for the readings obtained by the use of USEPA Method 9: a record of the date and time of reading, name of reader, most recent Method 9 certification date of reader, equipment name and device ID, individual interval readings required by Method 9, and the final reading.
 - (ii) *Visible Emission Inspections (Method 22) -* Imerys shall record the following readings obtained by the USEPA Method 22 inspections: a record of the date and time of reading, name of reader, building identification and equipment it contains, and whether fugitive emissions were observed.

- (d) **Reporting.** On a semi-annual basis, a report detailing the previous six month's activities shall be provided to the District. The report must list all the data required by condition 9.C.15 of this permit (*Semi-Annual Monitoring/Compliance Verification Reports*. [Ref: District Rule 304, Rule 1303, 40 CFR 70.6])

C.8 **Rotoclones.** The following equipment is included in this emissions unit category:

Device Name	Imerys ID	District DeviceNo
<i>Rotoclones</i>		
Chromosorb Rotoclone	CROTO	150

- (a) **Emission Limits:** Mass emissions from the rotoclone listed above shall not exceed the limits listed in Table 5.3 and Table 5.4. [Ref: Rule 304]
- (b) **Operational Limits:** The rotoclone shall operate at all times that the equipment served by the rotoclone is operated. [Ref: 40 CFR 70.6]
- (c) **Monitoring:**
- (i) **Visible Emissions Observation** - When operating, Imerys shall perform a visual inspection of the rotoclone and rotoclone exhaust once per day. If any visible emissions are observed, corrective action shall be immediately implemented. If visible emissions are not eliminated within 24 hours, Imerys shall shut down the equipment controlled by the rotoclone until corrective action that eliminates visible emissions is completed or obtain a variance. [Ref: 40 CFR 70.6]
- (ii) **Routine Source Testing** - Imerys shall perform source testing of air emissions and process parameters listed in Table 9.12 (*Source Test Requirements for Baghouses and Rotoclones*). Imerys shall have a contractor source test the rotoclone every six years. Imerys shall test each unit in the group, thereby completing a full test cycle, before any unit within that group is source tested a second time, and test each unit a second time before any unit is tested a third time, except in cases where a unit cannot be tested due to non-operational status. Once operation has resumed of any untested unit, this unit shall be tested during the next scheduled source test for the group. All requirements of permit condition 9.C.12 (Source Testing) shall be adhered to. [Ref: 40 CFR 70.6]
- (d) **Recordkeeping:** Imerys shall log malfunctions of the rotoclone and indicate the nature, date of, and duration of repair activity required to eliminate visible emissions.
- (e) **Reporting:** On a semi-annual basis, a report detailing the previous six month's activities shall be provided to the District. The report must list all the data required by condition 9.C.15 of this permit (*Semi-Annual Monitoring/Compliance Verification Reports*. [Ref: District Rule 304, Rule 1303, 40 CFR 70.6])

C.9 **Mobile Plant.** The following equipment is included in this emissions unit category:

Device Name	Imerys ID	District DeviceNo
<i>Mobile Plant</i>		
Hinged Grizzly	SC010	110481
Crusher Feed Hopper	FH010	110482
Crusher Apron Feeder	FB011	110483
Raw Ore Transfer Belt Conveyor to Crusher	CB012	110484
DE Ore Crusher	CR013	110486
Crude Ore Transfer Belt Conveyor to Screen	CB014	110487
Feed Belt Scale	BS014	110488
Vibratory Screen Deck	VS015	110489
Undersize Collection Conveyor Belt	FB016	110490
First Oversize Collection Conveyor Belt	CB020	110491
Second Oversize Conveyor Belt	CB021	110492
Oversize Stacker	ST022	110493
First Undersize Transfer Conveyor Belt	CB030	110495
Second Undersize Transfer Conveyor	CB031	110497
Third Undersize Transfer Conveyor	CB032	110498
Fourth Undersize Transfer Conveyor	CB033	110499
Storage Pile Radial Stacking	ST034	110500
Product Storage Pile - Large		110501
Product Storage Pile - Small		110502
Reject Storage Pile		110503
7 Grizzly Feeder/Primary Screen		109777
7 Conveyor Transfer Points (5)		various
7 Bucket Elevator		109781

- (a) Emission Limits: Mass emissions from the mobile plant equipment listed above shall not exceed the limits listed in Table 5.3 and Table 5.4. [Ref: ATC 12315]
- (b) Operational Limits: The following operational limits shall apply:
- (i) Visible Emissions: Fugitive particulate emissions from equipment permitted herein shall not exceed 10% opacity. Compliance with this condition shall be based on the monitoring conditions of this permit.
 - (ii) Feedrate: Crude ore crushing and screening plant feed-rate as measured at belt scale BS014 (Dev No 110488) shall not exceed 322 wet short tons per hour (293 wet metric tons per hour).
 - (iii) Crude Ore Moisture Content: The moisture content of crude ore handled and stored by this crushing and screening plant shall be greater than 34 % by weight and shall be maintained such that visible emissions are not observed, as specified in Condition 9.C.9.(b)(i) and 9.C.9.(b)(vii). If crude ore moisture content is equal to or less than 34 %, Imerys shall perform a visible inspection of the entire process employing EPA Method 22. If any visible emissions are detected, Imerys shall implement corrective actions as defined in the *Crude Ore Fugitive Emission*

Dust Monitoring Plan. Imerys shall notify the District by the end of the next business day of the results of the EPA Method 22 visible inspection that detects visible emissions from the plant and of any corrective action taken as required by this permit condition.

- (iv) Operating Hours: Operation of mobile plant equipment including grizzly, crusher, vibrating screen, and all conveyor belts shall not exceed 4,380 hours per calendar year.
- (v) Wet Suppression of Fugitive PM Emissions from Transfer Points (BACT): Fugitive PM/PM₁₀ from conveyor and hopper material handling transfer points, crusher, and vibrating screen shall be controlled with wet suppression at all times crude ore processing equipment is operated as described in the *Crude Ore Fugitive Emission Dust Monitoring Plan*. Specified mobile plant transfer points and wet suppression equipment are described in Table 9.6 below. Pumps, flow lines and nozzles shall be maintained in good operating order free of mineral buildup obstructions to proper water flow and effective spray pattern.
- (vi) Control of Fugitive PM Emissions Through Enclosed Crude Material Handling and Transfer Equipment (BACT): Fugitive PM/PM₁₀ from conveyors, crusher, and vibrating screen, and hoppers shall be controlled as described in the *Crude Ore Fugitive Emission Dust Monitoring Plan*. Specified mobile plant equipment is described in Table 9.7 below. Enclosures shall be maintained in good operating order free of tears, gaps, or other openings to the atmosphere.
- (vii) Visible Emissions from Storage Piles: Fugitive particulate emissions from the surface of any crude ore product or reject storage pile permitted herein shall not exceed 10% opacity. Compliance with this condition shall be based on the monitoring conditions of this permit and as described in the *Crude Ore Fugitive Emission Dust Monitoring Plan*.
- (viii) Storage Pile Height: The height of each crude product storage pile (Dev. No.s 110561 and 110562) shall not exceed 40 feet from ground level. The height of the reject storage pile (Dev. No. 110563) shall not exceed 15 feet from ground level.
- (ix) Wet Suppression Water Flow: Water pressure in all flow lines serving foggers and spray nozzles shall operate at a minimum pressure of 800 psig. Flow in the water supply lines to nozzles controlling the particulate emissions from each plant transfer point shall not be less than the sum of all spray bar water flows (as shown in Table 9.6) for the equipment in concurrent operation.

Table 9.6 Mobile Plant BACT Wet Suppression Fugitive Dust Control

District Device No.	Imerys ID	Transfer Point Description	Fugitive Dust Control	Spray bar water flow, gpm
110482	FH011	Grizzly Feed to Crusher Hopper	Four sided enclosed hopper controlled by a spray bar with sixteen (16) spray nozzles located around the top of the feeder hopper	7.2
110483	FB011	Feeder Belt - Impact point after FH011	One (1) spray bar with 10 fog nozzles at impact point after FH101 hopper outlet	0.22
		Feeder Belt - Head Pulley	One (1) spray bar with 10 fog nozzles located at head pulley	0.22
110484	CB012	Conveyor Belt - Impact point after FB011	One (1) spray bar with 8 fog nozzles at impact point after FH101 hopper outlet	0.18
		Conveyor Belt - Head Pulley	Two (2) spray bars each with 8 fog nozzles located at head pulley	0.36
110487	CB014	Conveyor Belt - Impact point after Impact Crusher CR013	One (1) spray bar with 8 fog nozzles at impact point after FH101 hopper outlet	0.18
		Conveyor Belt - Head Pulley	Two (2) spray bars each with 8 fog nozzles located at head pulley	0.36
110490	FB016	Feeder Belt - Impact point after Double Vibratory Screen VS015 Discharge Hopper	One (1) spray bar with 10 fog nozzles at impact point after VS015 hopper outlet	0.22
		Feeder Belt - Head Pulley	One (1) spray bar with 10 fog nozzles located at head pulley	0.22
		Feeder Belt - Discharge	One (1) spray ring with 20 fog nozzles located at conveyor head pulley discharge	0.44
110491	CB020	Reject Conveyor Belt - Impact point after Double Vibratory Screen VS015 Deck	One (1) spray bar with 8 fog nozzles at impact point after VS015 deck	0.18
		Reject Conveyor Belt - Head Pulley	Two (2) spray bars each with 8 fog nozzles located at head pulley	0.36
110492	CB021	Reject Conveyor Belt - Impact point after Reject Conveyor CB020	One (1) spray bar with 8 fog nozzles at impact point after Reject Conveyor CB020	0.18
		Reject Conveyor Belt - Head Pulley	Two (2) spray bars each with 8 fog nozzles located at head pulley	0.36
110493	ST022	Reject Stacker Belt - Impact point after Reject Conveyor CB021	One (1) spray bar with 8 fog nozzles at impact point after CB021	0.18
		Reject Stacker Belt - Head Pulley	Two (2) spray bars each with 8 fog nozzles located at head pulley	0.36
		Reject Stacker Belt - Discharge	One (1) spray ring with 20 fog nozzles located at conveyor head pulley discharge	0.44
110495	CB030	Conveyor Belt - Impact point after Feeder Belt FB016	One (1) spray bar with 8 fog nozzles at impact point after FB016	0.18
		Conveyor Belt - Head Pulley	Two (2) spray bars each with 8 fog nozzles located at head pulley	0.36
		Conveyor Belt - Discharge	One (1) spray ring with 20 fog nozzles located at conveyor head pulley discharge	0.44
110497	CB031	Conveyor Belt - Impact point after Conveyor Belt CB030	One (1) spray bar with 8 fog nozzles at impact point after CB030	0.18
		Conveyor Belt - Head Pulley	Two (2) spray bars each with 8 fog nozzles located at head pulley	0.36
		Conveyor Belt - Discharge	One (1) spray ring with 20 fog nozzles located at conveyor head pulley discharge	0.44
110498	CB032	Conveyor Belt - Impact point after Conveyor Belt CB031	One (1) spray bar with 8 fog nozzles at impact point after CB031	0.18
		Conveyor Belt - Head Pulley	Two (2) spray bars each with 8 fog nozzles located at head pulley	0.36
		Conveyor Belt - Discharge	One (1) spray ring with 20 fog nozzles located at conveyor head pulley discharge	0.44
110499	CB033	Conveyor Belt - Impact point after Conveyor Belt CB032	One (1) spray bar with 8 fog nozzles at impact point after CB032	0.18
		Conveyor Belt - Head Pulley	Two (2) spray bars each with 8 fog nozzles located at head pulley	0.36
		Conveyor Belt - Discharge	One (1) spray ring with 20 fog nozzles located at conveyor head pulley discharge	0.44
110500	ST034	Telescoping Radial Stacker Belt - Impact point after Conveyor Belt CB033	One (1) spray bar with 8 fog nozzles at impact point after CB033	0.18
		Conveyor Belt - Head Pulley	Two (2) spray bars each with 8 fog nozzles located at head pulley	0.36
		Conveyor Belt - Discharge	One (1) spray ring with 20 fog nozzles located at conveyor head pulley discharge	0.44

Note that water flow monitoring is required for the sum of all spray bar water flows from each plant transfer point and not for individual spray bars. (PTO Mod 5840-09)

Table 9.7 Mobile Plant BACT Enclosed Crude Material Handling and Transfer

Emission Source	Pollutant	BACT Technology	BACT Performance Standard
Grizzly/ Crusher Feed Hopper	PM/PM ₁₀	Loading hopper to grid enclosed by four sides, totally enclosed chute to feeder belt with adjustable belt skirting to keep skirt edge in continuous contact with moving belt surface, dust curtain to prevent dust emission from exiting from outlet opening and wet suppression per Table 5A.	Visible emissions less than 10% opacity
All Conveyor Transfer Points - Head Pulley Area (see below for conveyor transfer point from ST034 to storage piles)	PM/PM ₁₀	Fully enclosed head box with inlet and outlet dust curtains to prevent dust emissions exiting openings, adjustable belt skirting to keep skirt edge in continuous contact with belt surface. belt scraper to minimize carry back and wet suppression per Table 5A. Drop distances from head pulley to receiving hopper of the following conveyor shall be equal to or less than three feet.	Visible emissions less than 10% opacity
All Conveyor Transfer Points - Tail Box Receiver Area	PM/PM ₁₀	"Rock box" design with muckshelves to direct product to center portion of belt impact area, at least a 30 degree belt troughing, adjustable belt skirting to keep skirt edge in continuous contact with belt surface. covered area extending back behind the chute for approximately one belt width, fully enclosed skirtboard enclosure extending at least three beltwidths downstream of impact area, dust curtain over exit to prevent dust from escaping through opening, complete covering of interface between head box of previous conveyor and receiving hopper, and wet suppression per Table 5A.	Visible emissions less than 10% opacity
CB012 Conveyor Head Pulley Transfer to Crusher Inlet	PM/PM ₁₀	Fully enclosed crusher inlet chute with inlet dust curtain to prevent dust emissions from escaping through opening, adjustable belt skirting to keep skirt edge in continuous contact with belt surface, enclosed inlet chute made from heavy rubber strips backed by free hanging metal chains for additional support, belt scraper to minimize carry back and wet suppression per Table 5A.	Visible emissions less than 10% opacity
Crusher Discharge Chute to Conveyor CB014	PM/PM ₁₀	Fully enclosed crusher outlet chute, fully enclosed skirtboard enclosure extending at least three beltwidths downstream of impact area, adjustable belt skirting to keep skirt edge in continuous contact with belt surface, dust curtain over exit to prevent dust from escaping through opening, and wet suppression per Table 5A.	Visible emissions less than 10% opacity
Conveyor Transfer Point from CB014 to Storage Piles	PM/PM ₁₀	Fully enclosed head box with inlet dust curtain to prevent dust emissions exiting openings, adjustable belt skirting to keep skirt edge in continuous contact with belt surface. belt scraper to minimize carry back and wet suppression per Table 5A. Drop distances from head pulley to storage pile surface shall be equal to or less than three feet.	Visible emissions less than 10% opacity

(x) Transfer of Crude Ore to System #7: Crude transfers from mobile equipment to the Dump Hopper with Grizzly Feeder (Dev. No. 109777) shall be conducted in an enclosure. Fugitive PM emissions from the Grizzly Feeder, Feeder Belt FB001 and Transfer Belts CB001, CB002, CB003, and CB004 (District Device No. 109778) and Vibrating Screen (District Device No. 109780) shall be controlled with BACT approved water spray/foggers and covered transfer points as required in the System 7 *Crude Ore Fugitive Emission Control Plan*. [PTO 12105]

(c) Monitoring: The following source testing and periodic monitoring conditions shall apply:

(i) Imerys shall monitor wet short tons per hour feed-rate to the crude ore crushing and screening plant at belt scale BS014 (District Dev No 110488) measuring total Mobile Plant throughput. Imerys shall operate District-approved product feed rate monitoring equipment and procedures.

- (ii) Once each operating day, Imerys shall perform a fugitive emission inspection for a one-minute period on the crude ore crushing and screening plant equipment when operating. If visible emissions are detected during any inspection, then a USEPA Method 9 visible emission evaluation (VEE) shall immediately be performed for a six-minute period. Imerys staff certified in VEE shall perform the VEE and maintain logs in accordance with EPA Method 9. The Method 9 shall be performed in response to visible emissions and is not meant to apply to transient occurrences such as dumping crude into the grizzly hopper.
- (iii) Water line pressure and water flow to each wet suppression control location shall be measured and displayed by a flow meter approved by the District in the *Crude Ore Fugitive Emission Control Plan*.
- (iv) Moisture content of crude ore processed by the mobile plant shall be monitored continuously at the crude belt after the crude bins. Moisture content readings used for compliance with this permit shall be recorded and reported on a fifteen (15) minute clock average. Each crushed ore storage pile shall be evaluated weekly to ensure that an adequate crust exists over the surface. If there is not an adequate crust, additional water will be applied to the pile. Compliance with moisture content of the crude shall also be based on an ad hoc sampling of ore from the process line and from the crushed ore storage piles. The frequency and location of such ad hoc sampling shall be specified by the District.
- (v) Imerys shall conduct offsite fugitive dust monitoring as required in permit condition 9.C.9.(g).
- (vi) Imerys shall conduct a daily inspection of the plant when operating to verify that pumps, flow lines and nozzles are maintained in good operating order free of mineral buildup obstructions to proper water flow and effective spray pattern and that all enclosures are maintained in good operating order free of tears, gaps, or other openings to the atmosphere.
- (vii) Within 24 hours of startup of each one of the following transfer conveyors (Dev. No.s 110497, 110498 and 110499), Imerys shall notify the District of startup and arrange for witnessing of the initial Method 9 inspection by the District. Within 7 days of startup, Imerys shall complete the initial Method 9 opacity inspection.
- (d) Recordkeeping. Imerys shall keep the following records to demonstrate compliance with emission limits, operation limits and monitoring requirements above.
 - (i) Crude ore crushing and screening plant maximum feed-rate on a daily basis in wet short tons per hour as measured by belt scale BS014 (District Dev. No. 110488).
 - (ii) Imerys shall maintain records of crude ore moisture content from all samples in percent by weight. The continuous moisture samples will be recorded as part of the pi server. Imerys shall maintain records of any EPA Method 22 triggered by moisture content below permitted limits in permit condition 9.C.9.(b)(iii) and any corrective action taken as a result of recording the presence of visible emissions.

- (iii) Imerys shall record the date, time, and initials of responsible person conducting the mobile plant fugitive emissions inspections and whether or not daily visible emissions are present or the date and initials of a responsible person attesting that the plant equipment is non-operational and no storage pile activity occurred for the entire day.
- (iv) Each Method 9 opacity reading report shall contain the name and most recent Method 9 certification date of the reader, the name and District Device Number of the equipment observed, the date and time of the reading, and the reading.
- (v) Imerys shall maintain written records of wind speed and direction monitor calibrations, maintenance work and breakdowns. Records shall include dates, times, descriptions of events and the initials of the responsible personnel.
- (vi) Imerys personnel shall maintain electronic records of the wind speed and direction monitored daily to confirm verification of the monitor's operation and this data shall be stored in the Imerys pi server or local data logger.
- (vii) Imerys shall maintain records of alarm events, except during scheduled Imerys Holidays if no control person is on duty. During scheduled Imerys Holidays, if no control person is on duty, the front gate security personnel shall initiate and record corrective actions if necessary. Records shall include date and time of alarm, initials of response personnel, and description of conditions. When corrective action is required Imerys shall record the start and end times of corrective action and the type(s) of corrective action taken.
- (viii) Documentation of daily offsite fugitive dust visual surveys.
- (e) Reporting On a semi-annual basis, a report detailing the previous six month's activities shall be provided to the District. The report must list all the data required by condition 9.C.15 of this permit (*Semi-Annual Monitoring/Compliance Verification Reports*) [Ref: *District Rules 304, 311.C, and 1303, ATC 12315; 40 CFR 70.6*]
- (f) Best Available Control Technology (BACT). The permittee shall apply emission control technology and plant design measures that represent Best Available Control Technology ("BACT") to the operation of the equipment/facilities as described in permit condition 9.C.9. Table 9.6 and Table 9.7 and the Emissions, Operational, Monitoring, Recordkeeping and Reporting Conditions of this permit define the specific control technology and performance standard emission limits for BACT. The BACT shall be in place, and shall be operational at all times, for the life of the project. BACT related monitoring, recordkeeping and reporting requirements are defined in those specific permit conditions.

The need for additional controls shall be evaluated by the District and shall be implemented by Imerys if controls listed in Tables 9.7 and 9.8 are determined to be ineffective.

- (g) Offsite Fugitive Dust Monitoring. Imerys shall conduct offsite fugitive dust monitoring for the Mobile Plant as required by Condition 9.C.13 of this permit.

- (h) **Public Nuisance Abatement.** If any operations of the crude ore crushing and screening plant permitted herein causes or attributes to a public nuisance as defined by District Rule 303, Imerys shall cease all operations of the mobile plant and submit an application for a modification to the mobile plant equipment that will permanently eliminate the cause of the public nuisance. Plant modifications may include but not be limited to additional wet or chemical suppression controls, erecting wind breaks, covering all exposed product on conveyor belt and vibrating screen surfaces, installation of fabric filter controls, enclosing or covering storage piles, paving of vehicle access roads and mobile plant work areas and reducing mobile vehicle speeds within the plant area. Mobile plant operations shall not continue without District approval.
- (i) **Modifications.** Prior to making any modifications to the crude ore crushing and screening plant, including tie-ins to any other processing equipment or processing lines at the facility, Imerys shall obtain an Authority to Construct (ATC) permit or modification.

C.10 **Solvent Cleaning and Degreasing.** The following equipment is included in this emissions unit category:

Device Name	Imerys ID	District Device No
Solvent Cleaning/Degreasing		8043

- (a) **Emission Limits:** Mass emissions from the solvent usage shall not exceed the limits listed in Table 5.3 and Table 5.4.
- (b) **Operational Limits:** Use of solvents for cleaning, degreasing, thinning and reducing shall conform to the requirements of District Rules 317 and 324. Compliance with these rules shall be assessed through compliance with the monitoring, recordkeeping and reporting conditions in this permit and facility inspections. In addition, Imerys shall comply with the following:
 - (i) *Containers* - Vessels or containers used for storing materials containing organic solvents shall be kept closed unless adding to or removing material from the vessel or container.
 - (ii) *Materials* - All materials that have been soaked with cleanup solvents shall be stored, when not in use, in closed containers that are equipped with tight seals.
 - (iii) *Solvent Leaks* - Solvent leaks shall be minimized to the maximum extent feasible or the solvent shall be removed to a sealed container and the equipment taken out of service until repaired. A solvent leak is defined as either the flow of three liquid drops per minute or a discernable continuous flow of solvent.
 - (iv) *Reclamation Plan* - Imerys may submit a Solvent Reclamation Plan that describes the proper disposal of any reclaimed solvent for District review and approval within 90 days after the final issuance of this Part 70 permit. All solvent disposed of pursuant to the District approved Plan will not be assumed to

have evaporated as emissions into the air and, therefore, will not be counted as emissions from the source. The Plan shall detail all procedures used for collecting, storing and transporting the reclaimed solvent. Further, the ultimate fate of these reclaimed solvents must be stated in the Plan.

- (c) Monitoring: The monitoring shall meet the requirements of Rule 202.U.3 and be adequate to demonstrate compliance with the ten ton emissions per calendar year Rule 202.N threshold.
- (d) Recordkeeping: Imerys shall record in a log the following on a monthly basis for each solvent used: amount used; the percentage of ROC by weight (as applied); the solvent density; amount of solvent sent to a state or federal hazardous waste treatment, storage or disposal facility as documented by state or federal hazardous waste manifest; whether the solvent is photochemically reactive; and the resulting emissions to the atmosphere in units of pounds per month and pounds per day. Product sheets (SDS or equivalent) detailing the constituents of all solvents shall be maintained at the facility in a readily accessible location.
- (e) Reporting: On a semi-annual basis, a report detailing the previous six month's activities shall be provided to the District. The report must list all the data required by condition 9.C.15 of this permit (*Semi-Annual Monitoring/Compliance Verification Reports.*[Ref: District Rules 317, 322, 323, 324 and 1303, 40 CFR 70.6])

C.11 **Equipment Throughput Limitations.** Imerys shall comply with the following equipment throughput limits.

Table 9.8 Imerys Throughput Limits (Dry unless otherwise indicated)

Equipment Limited	ATC	lb/hr	Tons/hr	Tons/ quarter	Ton/Day ¹	Ton/Year ¹
#3 and #4 bulk bins semi-bulk stations	9193		8.5		204	74,460
#5 Bulk Bin Packing Ctr Filling Stations ²	10241		12.5		300	109,500
#6 Bulk Bin Packing Ctr Filling Stations ²	10241		12.5		300	109,500
6P semi-bulk packing station on Line 6	9616-01		4.75		--	--
6AS Packing Unit	9696-01		2.8		68	17,550
6PS Packing Unit	9696-01		3.3		78	20,280
7P Packing Unit	9696-01		2.7		64	16,536
Automatic Line 3 packing	PT05840		14.5		348	127,020
Jolter Bin	9696-01		3		72	18,720
#7 System wet end feed rate	PTO 12105		45			--
2AP Packing Station	PTO 5840		14.5		348	127,020
Silicates Packing unit (semi-bulk)	9696-01		2		38	12,000
Silicates Packer #1 and #2 Combined	13570		3.3		79.2	28,908
Soda ash receiving & bin loading	9156		15		--	21,900
Pellet Plant Feedrate		2,000	--		--	--
Milling Circuit ³	12091		10		--	--
Bag Packers 4AP-122A and 4AP-122B	12398		23		--	--
Semi-bulk Packers 5BB-132A and 5BB-132B	12398		13.2		--	--

Notes:

¹Dashes indicate no federally enforceable limits

²There are two filling stations associated with each bin (1 and 2). The stated limits apply to each filling station.

³Milling circuit throughput as measured at the weigh bin (DeviceNo 108942)

(a) **Operational Limits:** The following operational limits shall apply:

- (i) Imerys shall not exceed the equipment throughput limits shown in Table 9.8. The hourly throughput for the 6P, 5 Bulk Bin, 6 Bulk Bin, and Silicates Plant packing unit will be determined by multiplying the highest number of bags packed per 2 hour period by the corresponding tons per bag and dividing by 2 hours.
- (ii) The Silicates stations shall not operate more than 24 hrs/day and 8760 hrs/yr. The 6P, packing stations shall not operate more than 24 hrs/day and 8520 hrs/yr.
- (iii) The 7 System shall not process crude blends with greater than 43% D-Family crude types by weight. (PTO 12105)

(b) **Monitoring:** Imerys shall monitor the following:

- (i) The feed rate of wet DE crude ore in short tons per hour to the System 7. All wet DE crude ore feed processed by System 7 shall be measured at the WB702A, B and C weigh belts (Device Number 103383).
- (ii) The crude type being processed on each weigh belt WB 702A, WB 702B and WB 702C at all times.
- (c) Recordkeeping: Imerys shall record the following:
 - (i) The tons of product bagged per day by the 3AP packing station and the 3 and 4 bulk bin stations. *[Ref: ATC 8202-01, ATC 9193]*
 - (ii) Whenever soda ash is delivered, Imerys shall record the amount delivered, in pounds and the start and stop times of each unloading event. *[Ref: ATC 11083]*.
 - (iii) On a daily basis, when the *5APVBH, 378BH, PPVBH, PSWBH or Silicates Plant Ventilation BH* are in use:
 - (1) The daily throughput (tons) for each equipment item listed Table 9.8.
 - (2) Record the peak hourly wet feed rate (lb/hr) for each day the pellet plant operates for the Pellet Plant Ventilation Baghouse (PPVBH).
 - (iv) On a monthly basis, the total throughput in tons of packing stations 6P, 6PS, 7P, jolter bin and silicates.
 - (v) *Packing Station Hours of Operation* - On a daily basis, when the equipment is in use, Imerys shall record the hours of operation of the 6P, 6PS, 6AS, 7P, Jolter Bin and Silicates bagging stations.
 - (vi) Milling Circuit product throughput in tons per hour.
 - (vii) The bagging/semi-bulk packing rate in dry short tons per hour of 4AP-122A and 4AP-122B (DeviceNos 109822 and 109823) and of semi-bulk bag packers 5BB-132A and 5BB-132B (DeviceNos 110526 and 110527).
 - (viii) The packing rate for Silicates Packer #1 (Device ID 11830) and Silicates Packer #2 (Device ID 11831) in dry short tons per day. *(PTO 13570)*.
 - (ix) System 7 wet DE crude ore feed rate in short tons per hour, for each weigh belt WB 702A, WB 702B and WB 702C. *(PTO 12105)*
 - (x) Crude type being processed on each weigh belt WB 702A, WB 702B and WB 702C. This data shall be used in conjunction with the data required in Condition 9.C.11(c)(ix) to calculate and record the maximum hourly D-Family crude usage in weight percent. *(PTO 12105)*
- (d) Reporting:
 - (i) On a semi-annual basis, a report detailing the previous six month's activities shall be provided to the District. The report must list all the data required by

condition 9.C.15 of this permit (*Semi-Annual Monitoring/Compliance Verification Reports.*[Ref: District Rules 317, 322, 323, 324 and 1303, 40 CFR 70.6])

C.12 **Source Testing.** In addition to the source test requirements specified in Condition 9.C.1(c)(vi), 9.C.2(c)(i), 9.C.3(c)(ii), 9.C.6(c)(viii), and 9.C.8(c)(ii). the following source testing provisions shall apply:

- (a) **Frequency** - Imerys shall perform third party source testing of air emissions and process parameters listed in Table 9.10 (*Source Test Requirements for Internal Combustion Engines*), Table 9.11 (*Source Test Requirements for External Combustion Units*), Table 9.12 (*Source Test Requirements for Baghouses and Rotoclones*), and Table 9.13 (*Source Test Requirements for 7 System Venturi Scrubber/Packed Bed Tower*).
 - (i) **Engine Test Schedule** - If required by Condition 9.C.1(c)(vi) the Prime Diesel Pump engine shall be source tested within 60 days of the initial over-the-threshold reading.
 - (ii) **Boiler Test Schedule** – Boiler #1 (if required by Condition 9.C.2(c)(i)(1)) and Boiler #2 shall be source tested biennially with April 1st as the anniversary date. The specified month of testing for the above noted equipment units may be modified if approved in advance by the District. In addition, any unit that was unable to be tested due to non-operation in the previous cycle shall be tested within 90 days of startup.
 - (iii) **Baghouse Test Schedule** - The baghouses shall be source tested consistent with the frequency stated in Table 9.9, with April 1st as the anniversary date. The specified month of testing for the above noted equipment units may be modified if approved in advance by the District. If an equipment item in Table 9.9 cannot be tested due to non-operational status, and all operational equipment units have been tested in the group, (i.e. a cycle completed) Imerys shall commence the next cycle of testing. In addition, any unit that was unable to be tested due to non-operation in the previous cycle, shall be tested within 90 days of startup. [Ref: ATC 8202, ATC 12091, ATC 12208, ATC 12398; ATC 13570]

Source testing of the 7 System Baghouses shall be conducted annually (except baghouse BH717, which shall be tested at least once every 6 years) and in accordance with Table 9.9 of this permit. [Ref PTO 12105]

 - (iv) **Rotoclone Test Schedule** – The Chromosorb Rotoclone shall be tested every six years.
 - (v) **Coverage** - Except in the case of non-operational equipment, Imerys shall test each unit in the group listed in Table 9.9, thereby completing a full test cycle, before any unit within that group is source tested a second time, and test each unit a second time before any unit is tested a third time.
 - (vi) **System # 7 Test Schedule.** The 7 System Venturi Scrubber/Packed Bed Tower shall be tested quarterly.

Table 9.9 Baghouse Equipment Source Test Grouping and Frequency

Group	Device Name(s)	Imerys ID	District DeviceNo	Source Test Frequency
1	Silicate Plant Flash Dryer Baghouse	SPFDBH	103474	At least one baghouse shall be tested every two years
	Pellet Plant Ventilation Baghouse - Hot	PPHVBH	148	
	Recirculating System Ventilation Baghouse ¹	RBH	135	
	978 Baghouse	978BH	110	
	Silicate Plant Production Baghouse	SPPBH	141	
2	6 Automatic Packing Station Baghouse (678)	678BH	103363	At least one baghouse shall be tested every two years
	Silicate Plant Ventilation Baghouse (Pack)	SPVBH	142	
	General Waste Baghouse ¹	GWBH	137	
	Chromosorb Ventilation Baghouse - South ¹	CPVBHS	149	
	Mill Ventilation Baghouse (1178)	11VBH	102	
3	378 Baghouse/ 3 Dry End	378BH	109	At least one baghouse shall be tested every two years
	5 Automatic Packing Station Baghouse (578)	578BH	119	
	Mortar Plant Ventilation Baghouse	MPVBH	146	
	Silicate Plant Lime Baghouse	SPLBH	139	
	Baghouse 5DC-01	5DC-01	114326	
4	616 Ventilation Baghouse	616VBH	128	At least one baghouse shall be tested every two years
	Preseparator Waste Baghouse ¹	PSWBH	136	
	Silicate Plant Feed Mix Baghouse	SPFMBH	138	
	Pellet Plant Ventilation Baghouse-Cold	PPCVBH	147	
	Soda Ash Baghouse	SABH	109452	
System 7 Baghouses	7 Wet End Baghouse BH721	BH721	110724	Annual
	7 Dry End Baghouse BH775	BH775	110720	
	7 Dry End Baghouse BH777	BH777	110721	
	7 Dry End Baghouse BH788	BH788	110722	
	7 Dry End Baghouse BH789	BH789	110723	
System 7 Kiln Bypass	7 Kiln Bypass BH717	BH717	109846	Every six years
Silo Area Group 1	Product Storage Silo Baghouses	BH101, BH102, BH103, BH104, BH105, BH106, BH107, BH108	110191, 110192, 110193, 110194, 110195, 110196, 110197, 110198	At least two baghouses shall be tested every year, and each baghouse must be tested every three years
Silo Area Group 2	Disposition Bin Baghouses	BH109A, BH109B, BH110A, BH110B	110649, 110650, 110651, 110652	At least one baghouse shall be tested every year, and each baghouse must be tested every three years
Silo Area Group 3	Holding Bin Baghouses	BH925A, BH925B, 3 & 4 Bulk Bin Baghouse	110641, 110642, 151, 103514	At least one baghouse shall be tested per year, and each baghouse must be tested every three years
3 Automatic Packing Station	3 Automatic Packing Station Baghouse	345BH	108	Annual
Packing Station	Packing Station Baghouse	BH125	110525	Annual
Milling Circuit	Milling Circuit baghouses	BH901	108935	Annual
		BH916	108940	
		BH912	110203	
Crushing Plant Ventilation Baghouse	Crushing Plant Ventilation Baghouse	CRVBH	100	Every three years
Bagging and Packing	Bagging and Packing passive vent baghouses	BH131A1, BH131A2, BH131B1, BH131B2	110532, 110533, 110534, 110535	At least two baghouses shall be tested every three years

Notes:

¹Baghouses which are production rate independent. See Condition 9.C.12.b.

Table 9.10 Source Testing Requirements for Internal Combustion Engines

Emission & Limit Test Points	Pollutants ^(e)	Parameters ^(b)	Test Methods ^{(a)(c)}	Limit		
				Concentration (ppmvd @ 15% O ₂)	Emission Standard (g/bhp-hr)	Mass Emissions (lb/hr)
IC Engine Exhaust ^(d) Prime Diesel Water Pump Engine (ID 391449)	Diesel PM	g/bhp-hr, lb/hr	ARB Method 5, per §93115.14 of Stationary Diesel IC Engine ATCM	--	0.01	0.004
	NO _x	ppmv, lb/hr	EPA Method 7E, ARB 1-100	35	--	0.17
	ROC	ppmv, lb/hr	EPA Method 18	48	--	0.08
	CO	ppmv, lb/hr	EPA Method 10, ARB 1-100	721	--	2.11
	Sampling Point Det. Stack Gas Flow Rate O ₂ Moisture Content	Dry, Mol. Wt	EPA Method 1 EPA Method 2 or 19 EPA Method 3 EPA Method 4			

Notes:

^(a) Alternative methods may be acceptable on a case-by-case basis.

^(b) The emission rates shall be based on EPA Methods 2 and 4, or Method 19 along with the heat input rate.

^(c) For NO_x, ROC, CO and O₂ a minimum of three 40-minute runs shall be obtained during each test.

^(d) Source testing shall be performed for the IC engine in an "as found" condition operating at a representative, District-approved, IC engine load (gal/hr).

^(e) PM testing may be required by the District upon written notification to determine compliance with the ATCM.

Table 9.11 Source Testing Requirements for External Combustion Units Excluding 7 System (See Table 9.13)

External Combustion Units			
Source Testing Requirements			
Emission & Limit Test Points^(g)	Pollutants	Parameters^(b)	Test Methods^{(a),(c)}
Boiler #1; Boiler #2, Silicates Plant Conveyor Dryer, Silicate Plant Flash Dryer	NO _x	ppmv, lb/hr	EPA Method 7E, and 2 & 4, or 19
	ROC	ppmv, lb/hr	EPA Method 18
	CO	ppmv, lb/hr	EPA Method 10
	SO _x	ppmv, lb/hr	EPA Method 6
	PM	ppmv, lb/hr	EPA Method 5
	Sampling Point Det. Stack Gas Flow Rate O ₂ Moisture Content	Dry, Mol. Wt	EPA Method 1 EPA Method 2 or 19 EPA Method 3 EPA Method 4
Fuel Gas	Fuel Gas Flow Rate		Fuel Gas Meter ^(f)
	Higher Heating Value	BTU/scf	ASTM D 1826-88
	Total Sulfur Content ^(d)		ASTM D 1072
Crude Material	Wet Ore Feed Rate	tons/hr	District-approved method
	DE Sulfur Content	% by weight	Sample at crude bin discharge

Notes:

^(a) Alternative methods may be acceptable on a case-by-case basis.

^(b) USEPA Methods 1 -4 to be used to determine sampling traverses and points, stack temperature and flow rate, O₂, dry MW, CO₂, and moisture content. Alternatively, USEPA Method 19 may be used to determine stack flow rate.

^(c) For NO_x, CO and O₂ a minimum of three 40-minute runs shall be obtained during each test. An ROC sample shall be taken for each run over a minimum of 5 minutes.

^(d) SO_x emissions from the boilers and Silicates Plant Conveyor Dryer BH may be determined by mass balance calculation rather than stack sampling.

^(e) Source testing shall be performed for the external combustion equipment in an "as found" condition operating at a representative, District-approved, load (MMBtu/hr)

^(f) Fuel meter shall be calibrated within 60 days prior to the source test.

^(g) Boiler #1 shall be tested for NO_x only; Boiler #2 shall be tested for NO_x and CO; the Silicates Plant Conveyor Dryer shall be tested for NO_x and SO_x; and the Silicates Plant Flash Dryer shall be tested for PM only.

Table 9.12 Source Testing Requirements for Baghouses and Rotoclones

Baghouses and Rotoclone Source Testing Requirements			
Emission & Limit Test Points^(c)	Pollutants^{(d), (e)}	Parameters	Test Methods^{(a), (b)}
Baghouses and Rotoclone	PM ROC Hydrochloric Acid Sulfuric Acid	ppmv, lb/hr ppmv, lb/hr ppmv, lb/hr ppmv, lb/hr	EPA Method 5 EPA Method 18 EPA Method 26 EPA Method 8
	Sampling Point Det. Stack Gas Flow Rate O ₂ Moisture Content	Dry, Mol. Wt	EPA Method 1 EPA Method 2 or 19 EPA Method 3 EPA Method 4
Baghouses	Pressure Drop across Baghouse Compressed air manifold pressure ^(f)	inches of H ₂ O lb/in ²	Calibrated gauge or manometer Pressure Gauge
Silicates Plant Baghouse 5DC-01 (ID 114326), BH717, BH777, BH788, BH789, and BH721 (IDs 110719, 110720, 110721, 110722, 110723, and 110724, respectively) in addition to above.	PM/PM ₁₀	lb/hr; grains/dscf	EPA Method 5 or 17
Chromosorb Rotoclone	Styrene and Toluene Usage	gallons/batch	District-approved method

Notes:

^(a) Alternative methods may be acceptable on a case-by-case basis.

^(b) USEPA Methods 1 -4 to be used to determine sampling traverses and points, stack temperature and flow rate, O₂, dry MW, CO₂, and moisture content. Alternatively, USEPA Method 19 may be used to determine stack flow rate.

^(c) Rotoclone Test Frequency: The rotoclone shall be tested every six years in accordance with condition 9.C.7(c)

^(d) PM is total suspended particulates; and use of PM:PM₁₀ ratio = 1 allows testing for PM only.

^(e) The Chromosorb Rotoclone shall be tested for ROC and Hydrochloric Acid only.

^(f) Compressed air pressure at a compressed air manifold for pulse-cleaned baghouses only.

^(g) Source testing shall be performed for the baghouses and rotoclones in an "as found" condition at loads as defined in condition 9.C.11.b

^(h) Baghouse BH717 shall be tested at least once every 6 years during operations in kiln bypass mode.

Table 9.13 Source Testing Requirements for 7 System Venturi Scrubber/Packed Bed Tower

Dev No	Equipment	Emission Points	Pollutants/Parameters	Test Method
109866	Venturi/Packed Bed Tower	Outlet	NO _x - ppmv & lb/MMBtu, lb/hr	EPA Method 7E
			CO - ppmv & lb/MMBtu, lb/hr	
			ROC – ppmv, lb/MMBtu, lb/hr	EPA Method 10
			Sampling Point Determination	EPA Method 18
			Stack Gas Flow Rate	EPA Method 1
			O ₂ , CO ₂ , Dry Mol Wt	EPA Method 2
			Moisture Content	EPA Method 3
				EPA Method 4
		Gas Line	Fuel Gas Flow	Device Gas Meter
			Higher Heating Value	ASTM D-1826-88
			Total Sulfur Content	ASTM D-1072
109866	Venturi/Packed Bed Tower	Inlet & outlet	PM/PM ₁₀ - lb/hr, grains/dscf	EPA Method 5/17
		Op Parameter	% removal eff	
		(venturi)	Scrubber liquid flow	gpm
			Pressure drop across throat	In H ₂ O
			Scrubber liquid line pressure	psig
109866	Venturi/Packed Bed Tower	Inlet & outlet	SO _x & H ₂ SO ₄ – ppmv, lb/hr	EPA Method 8
			% removal eff	
		Op Parameter	Scrubber liquid flow	gpm
		(packed bed)	Scrubber liquid pH	pH
			Scrubber liquid line pressure	psig

Site Specific Requirements

- Alternative methods may be acceptable on a case-by-case basis.
- For NO_x, CO and O₂, a minimum of three 40-minute runs shall be obtained during each test. An ROC sample for each run shall be taken over a minimum of 20 minutes.
- PM is total suspended particulates; and use of PM:PM₁₀ ratio = 1 allows testing for PM only.
- The first quarter (January-March) and third quarter (July-September) 7 System Venturi Scrubber and Packed Bed Tower source test shall be conducted while the 7 System is processing a “worst-case” crude blend as defined in the District approved *Source Test Plan Addendum* (September 7, 2011). The second quarter (April-June) and fourth quarter (October-December) 7 System Venturi Scrubber/Packed Bed Tower source tests may be conducted while the 7 System is processing a “worst-case” crude blend.
- At least one “worst-case” 7 System Venturi Scrubber/Packed Bed Tower source test per year must include simultaneous inlet and outlet PM/PM₁₀ and SO_x testing. All other testing may, at Imerys’s discretion, be outlet only testing.

Table Notes

ROC = Reactive Organic Compounds per District Rule 102

(b) Load for Source Testing:

- (i) *Baghouses Subject to Source Testing* - Imerys may test the baghouses identified in Table 9.9 as production rate independent, at loads less than full capacity operation of the equipment served by the baghouse, as long as some of the equipment served by the baghouse is operating.
- (ii) *Boiler #2* - The source test shall be performed at the maximum attainable firing rate allowed by this permit or Boiler #2 shall not be operated in excess of 110% of the hourly heat input rate at which it was source tested and found to be in compliance.
- (iii) *System #7* - The first quarter (January-March) and third quarter (July-September) 7 System Venturi Scrubber/Packed Bed Tower source test shall be conducted while the 7 System is processing a “worst-case” crude blend as defined in the District approved *Source Test Plan Addendum*, while the second quarter (April-June) and fourth quarter (October-December) source tests may be conducted while the 7 System is processing an “as-found” crude blend. At least one “worst-case” 7 System Venturi Scrubber/Packed Bed Tower source test per year must include simultaneous inlet and outlet testing for SO_x and PM/PM₁₀, while the remaining quarterly source tests may, at Imerys’ discretion, be outlet only testing, in which case compliance will be based solely on the outlet mass emission rates. The testing shall adhere to the procedures in this Condition, the District approved *Source Test Plan* January 27, 2014 revision or any subsequent revisions), and the District approved *Source Test Plan Addendum* (August 11, 2011 revision or any subsequent revisions).

(c) Source Test Plan: Imerys shall submit a written source test plan to the District for approval at least thirty (30) calendar days prior to initiation of each source test. The source test plan shall be prepared consistent with the District's *Source Test Procedures Manual* (revised November 2, 2009 and any subsequent revisions).. Imerys shall obtain written District approval of the source test plan prior to commencement of source testing. Alternative or equivalent test methods to those specified in Tables 9.11 through 9.13 may be proposed in the test plan for District consideration and approval. All District costs associated with the review and approval of all plans and reports and the witnessing of tests shall be paid by the permittee as provided for by Rule 210.

(d) Source Test Notice: The District shall be notified at least ten (10) calendar days prior to the start of source testing activity to arrange for a mutually agreeable source test date when District personnel may observe the test. A source test for an item of equipment shall be performed on the scheduled day of testing (the test day mutually agreed to) unless circumstances beyond the control of the operator prevent completion of the test on the scheduled day. Such circumstances include mechanical malfunction of the equipment to be tested, malfunction of the source test equipment, delays in source test contractor arrival and/or set-up, or unsafe conditions on site. Except in cases of an emergency, the operator shall seek and obtain District approval before deferring or discontinuing a scheduled test, or performing maintenance on the equipment item on the scheduled test day. If the test cannot be completed on the scheduled day, then the test shall be rescheduled for another time with prior authorization by the District. Once the sample probe has been inserted into the exhaust stream of the equipment unit to be tested (or extraction of the sample has begun), the test shall proceed in accordance with the

approved source test plan. In no case shall a test run be aborted except in the case of an emergency or unless approval is first obtained from the District. Failing to perform the source test of an equipment item on the scheduled test day without a valid reason and without District's prior authorization, except in the case of an emergency, shall constitute a violation of this permit. If a test is postponed due to an emergency, written documentation of the emergency event shall be submitted to the District by the close of the business day following the scheduled test day.

- (e) Source Test Results: Source test results shall be submitted to the District within forty-five (45) calendar days following the date of source test completion and shall be consistent with the requirements approved within the source test plan.
- (i) Source test results should be presented along with the applicable emission limits for each equipment item tested and the results in the same units as the emission standard.
 - (ii) *Load Information*: The source test report shall document the operational status of all equipment vented to each baghouse tested, the corresponding obtainable average throughput rates of all equipment that in any way impacts emission rates of the unit being tested or any equipment the tested unit services and the amount of soda ash added during each test run.
 - (iii) *PM Extrapolation for Units Tested Below Maximum Capacity* (i.e. Baghouses not production rate independent as identified in Table 9.9, 345BH, and Rotocloner): Compliance with the hourly maximum mass PM emission rate limits shall be determined by linear extrapolation (multiplying the average source test PM lb/day result by the ratio of maximum total throughput (tons/hr from Table 9.8) to the average tons/hour throughput obtained during the test). If the extrapolated PM lb/hr value does not show compliance with the PM lb/hr limits in Table 5.3, the throughput limit shall be reduced, also via linear extrapolation, to the highest level that shows compliance. This extrapolation and corresponding reduced production rate limit shall be developed and listed in the source test report and shall remain in effect until a subsequent test demonstrates compliance at a higher rate. Compliance with the reduced throughput rate shall be documented by recording and reporting of the hourly throughput of the affected equipment. In no event shall the production limit be raised to a level above that which is listed in Table 9.8.
- The PM emissions limits in Rule 306 (a function of the wet feed rate as measured during the test) apply independently of the extrapolation procedure specified in this condition. The extrapolation does not apply to any test that fails to meet the Rule 306 limit.
- (f) Deadlines: Source test completion and source test results (report) submittal deadlines may be extended at the discretion of the District upon written request of Imerys. The written request must contain the rationale for the extension and must be submitted to the District at least fourteen days prior to the applicable deadline.
- (i) The timelines for the System #7 tests may be extended for good cause provided a written request is submitted to the District at least three (3) days in advance of

the deadline, and approval for the extension is granted by the District. (*PTO 12105*)

- (g) Testing Facilities. The permittee shall provide testing facilities at each baghouse in accordance with Rule 205.E and as specified below:
 - (i) Sampling ports adequate for test methods applicable to the equipment being tested. This includes (1) constructing the air pollution control system such that volumetric flow rates and pollutant emission rates can be accurately determined by applicable test methods and procedures and (2) providing a stack or duct free of cyclonic flow as demonstrated by applicable EPA, CARB and District test methods and procedures.
 - (ii) Safe sampling platform(s).
 - (iii) Safe access to sampling platform(s).
 - (iv) Utilities for sampling and testing equipment.

C.13 **Offsite Fugitive Dust Monitoring.** “Offsite Fugitive Emissions” shall be defined as visible fugitive emissions from Imerys’s operations that cross or have the imminent potential to cross Imerys property boundaries and enter adjacent lands not owned or operated by Imerys.

- (a) Visual Survey: Imerys shall conduct a visual survey of the mobile plant processing area and the product storage piles for a minimum of 20 minutes each day to identify any Offsite Fugitive Emissions. During mining operations, Imerys shall conduct a visual survey of the mining area for a minimum of 20 minutes each day to identify any Offsite Fugitive Emissions. During daylight hours, when wind speeds measured by Imerys’s on site monitor exceed 20 miles per hour, Imerys shall conduct a visual survey once every two hours until two consecutive hours of wind alarm data show no occurrences of wind speeds over the 20 mph threshold. Visual surveys shall not be required on days which receive (or on the day immediately following any day which receives) at least 1/4 inch of precipitation. Imerys shall document rainfall totals and the source of precipitation data for any day a visual survey is not conducted.
- (b) Wind Speed and Direction Monitor: Imerys shall operate a wind speed and direction monitor at the location approved in the *Offsite Fugitive Dust Monitoring Plan*. Imerys shall maintain the wind speed and direction monitor and recorder in continuous operation, except while the monitor is being calibrated. The monitor shall be calibrated at least every six months in accordance with manufacturers recommended procedures. A malfunctioning/inoperable monitor shall be repaired or replaced as soon as practicable, but no later than 7 calendar days from the malfunction. During any period that the monitor is inoperable, Imerys shall conduct a 20-minute visual survey twice per shift each day until the monitor is back in service.
- (c) Daily Monitor Operation Check: Imerys shall check the wind speed and direction monitor daily to verify its operating condition. Imerys shall notify the District (via fax or E-mail) of any monitor malfunction before the end of the next business day after the malfunction. No monitor or recorder failure shall constitute a permit violation provided that Imerys maintains a record of the failure (description, time and date), notifies the District as specified above and repairs or replaces the monitor no later than 7 calendar days from the malfunction.

- (d) Alarm System: Imerys shall operate and maintain a visual and/or audio alarm system designed to instantaneously notify the control person when wind conditions in the quarry and storage pile area exceed 20 mph (averaged over 15 seconds). During scheduled Imerys Holidays (when a control person is not on duty), the front gate security personnel will perform a five-minute visual survey twice per shift during daylight hours.
- (e) Corrective Action: Corrective action shall be promptly taken if Offsite Fugitive Emissions are identified by Imerys visual surveys, or by District inspectors. If Offsite Fugitive Emissions are identified and reported by a member of the public directly to Imerys (or to Imerys via the District), the incident will be investigated. If Offsite Fugitive Emissions are verified, corrective actions will be initiated. Corrective action shall at a minimum consist of a cessation of those mining operations and/or crude crushing, screening and handling operations determined by Imerys to be causing the Offsite Fugitive Emissions until water has been applied in sufficient amounts by the Mobile Plant wet suppression system and/or Imerys water trucks (or other similar watering equipment) to road, quarry and Mobile Plant surfaces to mitigate to the maximum extent feasible Offsite Fugitive Emissions. Watering and other corrective actions initiated by Imerys may be discontinued upon Imerys presenting evidence to the District that conditions that initiated Offsite Fugitive Emissions have ceased. In no case shall the plant operate when wind speed gusts are greater than 30 mph without District approval. When Offsite Fugitive Emissions are obviously transient in nature (i.e., generated by mobile equipment not engaged in mining activities) and have ceased within ten minutes, no corrective action is required. The Plant Manager shall be responsible for overall implementation, including corrective action, and shall review applicable portions of this procedure with individual staff members that have a role in the implementation.
- (f) Recordkeeping: The following records shall be maintained.
 - (i) Each day during mining operations, Imerys shall record the total hours that any water application occurred.
 - (ii) Imerys shall maintain written records of wind speed and direction monitor calibrations, maintenance work and breakdowns. Records shall include dates, times, descriptions of events and the initials of the responsible personnel.
 - (iii) Imerys personnel shall maintain electronic records of the wind speed and direction monitored daily to confirm verification of the monitor's operation and this data shall be stored in the Imerys pi server or local data logger.
 - (iv) Imerys shall maintain records of alarm events, except during scheduled Imerys Holidays if no control person is on duty. During scheduled Imerys Holidays, if no control person is on duty, the front gate security personnel shall initiate and record corrective actions if necessary. Records shall include date and time of alarm, initials of response personnel, and description of conditions. When corrective action is required Imerys shall record the start and end times of corrective action and the type(s) of corrective action taken.
 - (v) Documentation of daily visual surveys

- C.14 **40 CFR Part 64 - Compliance Assurance Monitoring (CAM).** The emission units identified in section 4.11.3 are subject to enhanced compliance monitoring for PM/PM₁₀ as required by 40 Part 64 (CAM). Imerys shall comply with the monitoring requirements specified in section 4.11.3 for each unit listed. Baghouse visible emissions observations and inspections shall be conducted in accordance with permit conditions 9.C.6.c.(iv) and (v).
- (a) Imerys shall implement all requirements of the District-approved *General Plant Compliance Assurance Monitoring (CAM) Plan*. This plan is hereby incorporated by reference as an enforceable part of this permit. Recordkeeping and reporting shall be maintained consistent with the CAM Plan requirements as summarized below.
 - (b) Quality Improvement Plan: Imerys shall submit for District-approval a Quality Improvement Plan (QIP) consistent with 40 CFR 64 section 64.8(b) within 30-days of notification by the District that a QIP threshold has been exceeded. A QIP threshold is defined as a number of exceedances or “excursions” (within a continuous 12-month period) of a monitoring parameter limit, per emission unit, above which triggers submittal and implementation of a QIP for the affected unit. The QIP threshold for all CAM monitoring parameters is five (5), e.g., after a specific baghouse, or CHEAF fails five visible emissions observations and/or inspections, submittal of a QIP is required.
 - (i) Imerys shall implement the procedures described in the Quality Improvement Plan for the 378 Baghouse approved February 13, 2007.
 - (c) Recordkeeping: The following records shall be maintained:
 - (i) results of daily visible emissions observations for which visible emissions were detected.
 - (ii) results of quarterly Method 9 and Method 22 visible emissions inspections.
- C.15 **Semi-Annual Monitoring/Compliance Verification Reports.** Imerys shall submit a report to the District every six months to verify compliance with the emission limits and other requirements of section C. The reporting periods shall be each half of the calendar year, e.g., January through June for the first half of the year. These reports shall be submitted by September 1 and March 1, respectively, each year, and shall be submitted in hard copy and in an electronic (e.g., PDF) and computer searchable format approved by the District. All records and other supporting information not included in the report shall be available to the District upon request. “Supporting information” includes all calibration and maintenance records and all original strip-chart recordings for continuous monitoring instrumentation, and copies of all logs and reports required by the permit. The second report shall include a summary of quarterly values for the half year being reported along with the yearly total for any reporting item below that requires a value or a sum over a year. The report shall include the following information:
- (a) *Internal Combustion Engine*
 - (i) The annual hours of operation for the IC engine (DeviceNo 8069).
 - (ii) Results of quarterly Method 9 visible emissions inspections.
 - (b) *Combustion Equipment – Silicates Boilers*

- (i) *Fuel Volumes* - The monthly and annual usage of each fuel type used by each boiler including the date that a change of fuel is made and the fuel types prior to the change and after the change.
 - (ii) *Fuel Oil Operating Hours* - A record of the hours of operation of Boiler #2 while burning fuel oil #2 or #6 under the exemption in Rule 342 (natural gas curtailment) and equipment testing.
 - (iii) *Fuel Oil Data* - A record of the higher heating value and total sulfur content of the fuel oil used shall be provided on an annual basis.
 - (iv) *Fuel Gas Data* - A record of the higher heating value and total sulfur content of the fuel gas shall be provided on an annual basis.
 - (v) *Tune-ups* - Imerys shall maintain documentation that verifies that the tune-ups for Boiler #1 which are required by Condition 9.C.2.(b) were performed.
- (c) *Combustion Equipment – Silicates Dryer External Combustion Unit*
- (i) *Burner Maintenance* - Imerys shall record the dates that burners are cleaned and/or adjusted.
 - (ii) *Fuel Sulfur Content* - Imerys shall maintain the documentation required by 9.B.7 for fuel oil.
 - (iii) *Silicate Conveyor Dryer Exhaust Stream Re-Routing* - Imerys shall record the following readings obtained by the USEPA Method 22 inspections: the date and time of reading, name of reader, equipment item and whether fugitive emissions were observed, and if visible emissions were observed the corrective actions taken.
- (d) *Combustion Equipment – Pellet Plant Dryer, and Pellet Plant Kiln*
- (i) *Fuel Use*. The volume of fuel gas used by each unit each year (in units of standard cubic feet) as determined by the fuel use monitoring condition.
- (e) *Combustion Equipment - Line 7 Kiln and Furnace*
- (i) The volume (in units of standard cubic feet) of PUC quality natural gas burned in the furnace and kiln burners daily and summarized monthly and annually.
 - (ii) The volume (in units of gallons) of diesel fuel burned in the furnace and kiln burners daily and summarized monthly and annually.
 - (iii) The number of days and hours the furnace and kiln burners were fired on PUC quality natural gas monthly and annually.
 - (iv) The number of days and hours the furnace, and kiln burners were fired on diesel fuel monthly and annually

- (v) Diesel fuel vendor analysis or other documentation to demonstrate compliance with permit Condition 9.C.5(b)(v) of this permit.
 - (vi) The daily 2-hour average of the venturi scrubber liquid recirculating flow rate and the gas stream pressure drop. Each instance in which the venturi operated outside of any of the parameter limits in permit Condition 9.C.5(b)(vii) shall be flagged. The reason for operating outside of the limits, how long the operation persisted, and the corrective actions taken to resume operations within the limits shall be explained. The number of hours of downtime for each monitor each quarter and documentation of the nature and duration of each monitor malfunction, maintenance, or repair action.
 - (vii) The daily 2-hour average of the packed bed scrubber liquid recirculating flow rate and the gas stream pressure drop. The daily scrubbing liquid pH. Each instance in which the packed bed tower operated outside of any of the parameter limits in permit Conditions 9.C.5(b)(viii) and 9.C.5(b)(ix) shall be flagged. The reason for operating outside of the limits, how long the operation persisted, and the corrective actions taken to resume operations within the limits shall be explained. The number of hours of downtime for each monitor each quarter and documentation of the nature and duration of each monitor malfunction, maintenance, or repair action.
 - (viii) Dates and daily number of hours System 7 operated in kiln bypass mode.
 - (ix) On a monthly basis, a comparison of the operating hours for baghouse BH717 and the number of hours System 7 operated in kiln bypass mode.
 - (x) Imerys shall report the results of the measurements of the sulfur content on a percent by weight basis of the DE crude ore throughput.
 - (xi) Results of the daily 7 System Venturi Scrubber/Packed Bed Tower portable analyzer monitoring required by Condition 9.C.5(c)(xiii) of this permit. These results should be submitted in accordance with the requirements of the District approved *System 7 Portable Analyzer Monitoring Plan*.
- (f) *Baghouses.*
- (i) *Visible Emission Observations.* Results of daily visible emission observation for which visible emissions were detected for all baghouses, both enclosed and open sock. The log should specify whether the baghouse is subject to the requirements of the CAM Plan per condition C.14.
 - (ii) *Visible Emission Inspections (Method 9).* For all enclosed baghouses, the results of each visible emission inspections obtained by the use of USEPA Method 9, which include the date and time of reading, name of reader, most recent Method 9 certification date of reader, baghouse name, individual interval readings required by Method 9, and the final reading. A copy of the Method 9 certification card for each reader that conducted Method 9 readings shall be included with this report. *(last sentence PTO 12105)*

- (iii) *Visible Emission Inspections (Method 22).* For all open sock baghouses, the results of the quarterly USEPA Method 22 inspections which include the date and time of reading, name of reader, equipment item and whether fugitive emissions were observed.
- (iv) *Pressure Drop For Baghouses Checked in Table 9.3.*
 - (1) The days the pressure drop is outside the range, the range, the actual readings and all corrective actions implemented as required by Condition 9.C.6(c)(vii).
- (v) *Hours of Operation.*
 - (1) On a monthly basis, the operating hours for each non Celpure plant baghouse;
 - (2) On a monthly basis, the highest daily hours of operation of the Soda Ash Baghouse (Dev No. 109452)
- (vi) *Air Flow Rate.* The peak (second-by-second) air flow rate of baghouse 345BH, reported on a weekly basis.
- (vii) *Triboelectric Monitor.* Date the triboelectric monitor output from Classifier CL788 BH788 baghouse (Dev No. 110722) stack exceeds 500 pA and the corrective action undertaken to return the monitor readings to baseline levels. [PTO 12105]
- (viii) *System #7 Time in Bypass Mode.* Dates and daily number of hours System 7 operated in kiln bypass mode. [PTO 12105]
- (g) *Material Handling Equipment.*
 - (i) *Visible Emission Inspections (Method 9)* – For Method 9 inspections required to demonstrate compliance with visible emission limits for equipment listed in conditions 9.C.7(a)(i) and ii) Imerys shall report the following for the readings obtained by the use of USEPA Method 9: a record of the date and time of reading, name of reader, most recent Method 9 certification date of reader, equipment name and device ID, individual interval readings required by Method 9, and the final reading.
 - (ii) *Visible Emission Inspections (Method 22)* – For the Method 22 inspections required to demonstrate compliance with visible emission limits for the building openings specified in condition 9.C.7(a)(iii) and the Pellet Plant Elevator as stated in condition 9.C.7(a)(iv) Imerys shall report the following readings obtained by the USEPA Method 22 inspections: a record of the date and time of reading, name of reader, building identification and equipment it contains, and whether fugitive emissions were observed.
- (h) *Mobile Plant*
 - (i) *Feed Rate.* Summaries of the daily and monthly throughputs of the crude ore crushing and screening plant in units of wet short tons/hour.

- (ii) *Moisture Content.* Minimum daily readings of the fifteen minute averages from the continuous moisture content monitor and results from all ad hoc sampling shall be reported. Imerys shall also report any EPA Method 22 triggered by moisture content below permitted limits in permit condition 9.C.9.(b) and any corrective action taken as a result of recording the presence of visible emissions.
- (iii) *Visible Emission Observations.* Results of daily visible emission observation for which visible emissions were detected for all permitted equipment.
- (iv) *Visible Emission Inspections (Method 9).* For all equipment and storage piles, the results of the visible emission inspections obtained by the use of USEPA Method 9, which include the date and time of reading, name of reader, most recent Method 9 certification date of reader, equipment name and District Device Number, individual interval readings required by Method 9, and the final reading.
- (v) *Hours of Operation.* On a daily and monthly basis, the Mobile Plant operating hours.
- (i) *Solvent Usage:* Imerys shall report in a log the following on a quarterly basis for each solvent used: amount used; the percentage of ROC by weight (as applied); the solvent density; amount of solvent sent to a state or federal hazardous waste treatment, storage or disposal facility as documented by state or federal hazardous waste manifest; whether the solvent is photochemically reactive; and the resulting emissions to the atmosphere in units of pounds per month and pounds per day.
- (j) *Facility Throughputs:*
 - (i) Monthly summaries of the peak throughputs of the equipment listed in Table 9.8, in units of tons/day. If no tons/day limit exists, the report in tons/hour.
 - (ii) The monthly amount of soda ash delivered, in tons.
 - (iii) On a monthly basis the total throughput in tons of each packing station (6P, 6PS, 6AS, 7P, Jolter Bin and silicate plant semi-bulk)
 - (iv) Monthly summaries of the peak bagging/semi-bulk packing rate in dry short tons per hour of PK122A and PK122B (DeviceNo.s 109822 and 109823) and of semi-bulk bag packers SB132A and SB132B (DeviceNo.s 110526 and 110527).
 - (v) The packing rate for Silicates Packer #1 (Device ID 113830) and Silicates Packer #2 (Device ID 113831) in dry short tons per day and totaled for the year (*PTO 13570*).
 - (vi) Daily wet crude feed rate of the 7 System in units of short tons/day, with the peak daily feed rate flagged for each month. In addition, include monthly summaries of the peak hourly wet crude feed rate of the 7 System in units of short tons/hour.
 - (vii) Daily D-Family crude feed rate of the 7 System in units of weight percent, with the highest daily rate each month flagged.

(k) *Fugitive Dust Monitoring.*

- (i) Records of alarm events, except during scheduled Imerys holidays if no control person is on duty. Records shall include date and time of alarm, initials of response personnel, and description of conditions. When corrective action is required, the start and end times of corrective action and the type(s) of corrective action taken.
- (ii) For System 7 equipment and Silicates plant wet processing equipment, and two packers (IDs 113830 and 11831), the results of the required visible emission inspections obtained by the use of USEPA Method 9, which include the date and time of reading, name of reader, most recent Method 9 certification date of reader, equipment name and District Device Number, individual interval readings required by Method 9, and the final reading

(l) *System 7 SO_x Compliance Monitoring Protocol [PTO 12105]*

- (i) Daily summaries of hourly peak SO_x as SO₂ emissions as calculated by this protocol;
- (ii) Daily sulfur concentration, on a percent by dry weight basis, per bin;
- (iii) Exceedances of hourly emission limits as calculated by this protocol;
- (iv) The date, time, duration of all alarm events and identification of the crude and rate adjustments;
- (v) Hourly emissions data recovery efficiency (DRE);
- (vi) Imerys lab downtime and sulfur concentration(s) used during downtime;
- (vii) Dates and results of all split samples sent to an outside lab (i.e. comparison of results of both sample analyses);
- (viii) The date and time of all periods in which hourly data was not transmitted to the world wide web;
- (ix) Date, period, and number of hours per quarter the website was taken offline for planned maintenance;
- (x) Annual and quarterly SO₂ emissions from the equipment addressed in this protocol shall be calculated using the mass balance methodology in the protocol.

(m) *Compliance Assurance Monitoring (CAM)*

- (i) results of daily visible emission observations for which visible emissions were detected;
- (ii) results of quarterly Method 9 and Method 22 visible emission inspections.

C.16 Documents Incorporated by Reference. The documents listed below, including any District approved updates thereof, are incorporated herein by reference and shall have the full force and

effect of a permit condition for this permit. These documents shall be implemented for the life of the Project and shall be made available to District inspection staff upon request.

- (a) General Plant Compliance Assurance Monitoring (CAM) Plan Incorporating ATC 15077 Emission Unit Changes (approved February xx, 2019)
- (b)
- (c) Mobile Plant Offsite Fugitive Dust Monitoring Plan (approved August 18, 2008)
- (d) Mobile Plant Crude Ore Fugitive Emission Control Plan (approved August 4, 2008)
- (e) Mobile Plant Hardware and Software Plan (approved November 4, 2008)xxx
- (f) Milling Circuit Baghouse Inspection and Maintenance Plan (approved October 28, 2008)
- (g) Silos Baghouse Inspection and Maintenance Plan (approved March 11, 2008)
- (h) Silos Source test Protocol Document for Emission Testing at Imerys Filtration Minerals, Inc. (approved April 11, 2008)
- (i) Bagging and Packing Baghouse Inspection and Maintenance Plan (approved March 5, 2008)
- (j) Process Monitor Plan for PTO 5840-07, including 345BH and 773BH (approved May 27, 2010 and updated on October 10, 2012 for limited use baghouses)
- (k) Diesel and Gasoline Engine NOx and Particulate Matter Maintenance Plan (approved March 22, 2001)
- (l) Rule 333 Fuel Use Monitoring Plan (approved July 20, 1993)
- (m) Emergency Episode Plan (approved October 31, 2000)
- (n) Fugitive Dust Monitoring Plan (approved August 8, 2000)
- (o) Baghouse Inspection and Maintenance Plan (approve March 11, 2008)
- (p) Baghouse 5DC-01 Inspection and Maintenance Plan (Approved 4/5/2012). [PTO 13570]
- (q) *System 7 Process Monitor Calibration and Maintenance Plan* (Approved 8/22/2008). (PTO 12105)
- (r) *System 7 Baghouse Monitoring, Inspection and Maintenance Plan* (Approved 3/4/2008) [PTO 12105]
- (s) *Crude Ore Fugitive Emission Control Plan* (Approved 2/25/2008) [PTO 12105]
- (t) *System 7 Portable Analyzer Monitoring Plan* Approved January 8, 2015. [PTO 12105]

9.D District-Only Conditions

The following section lists permit conditions that are not enforceable by the USEPA or the public. However, these conditions are enforceable by the District and the State of California. These conditions are issued pursuant to District Rule 206 (*Conditional Approval of Authority to Construct or Permit to Operate*), which states that the Control Officer may issue an operating permit subject to specified conditions. Permit conditions have been determined as being necessary for this permit to ensure that operation of the facility complies with all applicable local and state air quality rules, regulations and laws. Failure to comply with any condition specified pursuant to the provisions of Rule 206 shall be a violation of that rule, this permit, as well as any applicable section of the California Health & Safety Code.

D.1 **Combustion Equipment - Boilers.** The following equipment is included in this emissions unit category:

Device Name	Imerys ID	District DeviceNo
<i>Combustion Equipment</i>		
Silicate Plant Boiler #1	SPB1	81
Silicate Plant Boiler #2	SPB2	82

- (a) Emission Limits: Mass emissions from the boilers listed above shall not exceed the District only enforceable limits listed in Table 5.3 and Table 5.4.
- (b) Operational Limits: The following operational limits apply. [Ref: PTO 9240 and PTO 9240-02]
 - (i) *PUC Natural Gas Curtailment* - Imerys shall use PUC-quality natural gas at all times in Boiler #1 when it is in operation except during periods of natural gas curtailment as imposed by the gas utility. In such a case, fuel oil #6 may be used so long as the total annual time for each boiler operating on fuel oil is less than 168 hours per year, excluding equipment testing time not exceeding 24 hours per year.
 - (ii) *Ban on Simultaneous Operation* - There shall be no simultaneous operation of Boilers #1 and #2 except during start-up, source testing, tune-ups and maintenance.
 - (iii) *Heat Input Limits* - Imerys shall not operate the boilers at heat inputs exceeding the values listed in Table 9.14.

Table 9.14 Silicates Plant Boiler Heat Input Limits

Device Name	Fuel	Hourly Heat	Annual Heat
		Input Limit	Input Limit
		(MMBtu/hr)	(MMBtu/yr)
<i>Combustion Equipment</i>			
Silicate Plant Boiler #1	PUC Natural Gas	15.5	8,999 - D _{btu}
Silicate Plant Boiler #2	PUC Natural Gas	23	195,960 - D _{btu}
Silicate Plant Boiler #1	Fuel oil #6	15.5	2,976
Silicate Plant Boiler #2	Fuel oil #6	23	4,416

Notes:

D_{btu} means the annual amount of heat input due to the combustion of fuel oil #6
 Fuel heat contents are as follows: 1,050 Btu/scf for PUC quality natural gas, and
 150,000 Btu/gal for fuel oil #6 unless otherwise designated by the District.

- (iv) *Fuel Gas Sulfur and Hydrogen Sulfide Limits* - For Boiler #1, the total sulfur and hydrogen sulfide contents of the natural gas combusted shall not exceed 80 ppmv and 4 ppmv, respectively, calculated as hydrogen sulfide at standard conditions. Imerys shall demonstrate compliance with gas analyses provided by the natural gas utility.
- (v) *Liquid Fuel Metering* - Imerys shall operate dedicated fuel use totalizers capable of recording gallons of liquid fuel used during each two hour period for Boiler #1 subject to this permit.
- (c) Recordkeeping: Imerys shall maintain the following records for the boilers:
 - (i) *Maintenance Logs*- Imerys shall maintain maintenance logs for Boiler #1 and the Boiler #1 fuel flow meter. [Ref: PTO 9240 PC 13.d]

D.2 **Combustion Equipment –Diesel Internal Combustion Engines.** The following equipment is included in this emissions unit category: [Ref: ATC 14156, PTO 14370, ATC 14984]

Device Name	Imerys ID	District DeviceNo
<i>Combustion Equipment</i>		
Prime Diesel Water Pump Engine		391449
Emergency Standby Lake Pump Engine		8919
Admin Building Emergency Standby Engine		387654

- (a) Emission Limitations.
 - (i) *Emergency Generator Mass Emissions.* The mass emissions from the emergency generators listed above shall not exceed the values listed in Table 5.3 and 5.4. The mass emissions for the Prime Diesel Water Pump Engine were given in Condition 9.C.1. Compliance shall be based on the operational, monitoring, recordkeeping and reporting conditions of this permit

- (ii) *Prime Engine PM Standard.* The Prime Diesel Water Pump Engine shall emit diesel PM at a rate that is less than or equal to 0.01 grams diesel PM per brake-horsepower-hour (g/bhp-hr) as specified in the State’s Airborne Toxics Control Measure for Stationary Compression Ignition Engines (ATCM, CCR Section 93115, Title 17).
- (b) Operational Restrictions. The equipment permitted herein is subject to the following operational restrictions listed below. Emergency use operations, as defined in Section (d)(25) of the ATCM⁹, have no operational hours limitations.
- (i) *Maintenance & Testing Use Limit:* The Admin Building emergency standby diesel-fueled CI engine(s) subject to this permit shall not be operated for more than 20 hours per year for maintenance and testing¹⁰ purposes. The Lake Pump emergency standby diesel-fueled CI engine(s) subject to this permit shall not be operated for more than 50 hours per year for maintenance and testing¹¹ purposes.
- (ii) *Impending Rotating Outage Use:* The stationary emergency standby diesel-fueled CI engines subject to this permit may be operated in response to the notification of an impending rotating outage if all the conditions cited in the ATCM are met, as applicable.
- (iii) *Fuel and Fuel Additive Requirements:* The permittee may only add fuel and/or fuel additives to the engine or any fuel tank directly attached to the engine that comply with the ATCM, as applicable.
- (iv) *NESHAP Maintenance Requirements:* The permittee must conduct the following maintenance on the in-use emergency standby diesel-fueled engine:
- (1) Change the oil and filter every 500 hours of operation or annually, whichever comes first.
 - (2) Inspect the air cleaner every 1,000 hours of operation or annually, whichever comes first.
 - (3) Inspect all hoses and belts every 500 hours of operation or annually, whichever comes first.
- In lieu of changing the oil and filter, the permittee may analyze the oil of each engine every 500 hours of operation or annually, whichever occurs first. The analysis shall measure the Total Base Number, the oil viscosity, and the percent water content. The oil and filter shall be changed if any of the following limits are exceeded:
- The tested Total Base Number is less than 30 percent of the Total Base Number of the oil when new.

⁹ As used in the permit, “ATCM” means Section 93115, Title 17, California Code of Regulations. Airborne Toxic Control Measure for Stationary Compression Ignition (CI) Engines

¹⁰ “maintenance and testing” as defined in the ATCM

¹¹ “maintenance and testing” as defined in the ATCM

- The tested oil viscosity has changed by more than 20 percent from the oil viscosity when new.
 - The tested percent water content (by volume) is greater than 0.5 percent.
- (v) *Temporary Engine Replacements - DICE ATCM.* Any reciprocating internal combustion engine subject to this permit and the stationary diesel ATCM may be replaced temporarily only if the requirements (1 – 6) listed herein are satisfied.
- (1) The permitted engine is in need of routine repair or maintenance.
 - (2) The permitted engine that is undergoing routine repair or maintenance is returned to its original service within 180 days of installation of the temporary engine.
 - (3) The temporary replacement engine has the same or lower manufacturer rated horsepower and same or lower potential to emit of each pollutant as the permitted engine that is being temporarily replaced. At the written request of the permittee, the District may approve a replacement engine with a larger rated horsepower than the permitted engine if the proposed temporary engine has manufacturer guaranteed emissions (for a brand new engine) or source test data (for a previously used engine) less than or equal to the permitted engine.
 - (4) The temporary replacement engine shall comply with all rules and permit requirements that apply to the permitted engine that is undergoing routine repair or maintenance.
 - (5) For each permitted engine to be temporarily replaced, the permittee shall submit a completed *Temporary IC Engine Replacement Notification* form (Form ENF-94) within 14 days of the temporary engine being installed. This form shall be sent electronically to: temp-engine@sbcapcd.org.
 - (6) Within 14 days upon return of the original permitted engine to service, the permittee shall submit a completed *Temporary IC Engine Replacement Report* form (Form ENF-95). This form may be sent hardcopy to the District (Attn: Engineering Supervisor), or can be sent electronically to: temp-engine@sbcapcd.org.

Any engine in temporary replacement service shall be immediately shut down if the District determines that the requirements of this condition have not been met. This condition does not apply to engines that have experienced a cracked block (unless under manufacturer's warranty), to engines for which replacement parts are no longer available, or new engine replacements {including "reconstructed" engines as defined in the ATCM}. Such engines are subject to the provisions of New Source Review and the new engine requirements of the ATCM.

- (vi) *Permanent Engine Replacements.* Any E/S engine, firewater pump engine or engine used for an essential public service that breaks down and cannot be

repaired may install a new replacement engine without first obtaining an ATC permit only if the requirements (1 – 5) listed herein are satisfied.

- (1) The permitted stationary diesel IC engine is an E/S engine, a fire water pump engine or an engine used for an essential public service (as defined by the District).
- (2) The engine breaks down, cannot be repaired and needs to be replaced by a new engine.
- (3) The facility provides “good cause” (in writing) for the immediate need to install a permanent replacement engine prior to the time period before an ATC permit can be obtained for a new engine. The new engine must comply with the requirements of the ATCM for new engines. If a new engine is not immediately available, a temporary engine may be used while the new replacement engine is being procured. During this time period, the temporary replacement engine must meet the same guidelines and procedures as defined in the permit condition above (*Temporary Engine Replacements - DICE ATCM*).
- (4) An Authority to Construct application for the new permanent engine is submitted to the District within 15 days of the existing engine being replaced and the District permit for the new engine is obtained no later than 180 days from the date of engine replacement (these timelines include the use of a temporary engine).
- (5) For each permitted engine to be permanently replaced pursuant to the condition, the permittee shall submit a completed *Permanent IC Engine Replacement Notification* form (Form ENF-96) within 14 days of either the permanent or temporary engine being installed. This form may be sent hardcopy to the District (Attn: Engineering Supervisor), or can be sent electronically to: temp-engine@sbcapcd.org.

Any engine installed (either temporally or permanently) pursuant to this permit condition shall be immediately shut down if the District determines that the requirements of this condition have not been met.

- (vii) *Notification of Non-Compliance.* Owners or operators who have determined that they are operating their stationary diesel-fueled engine(s) in violation of the ATCM shall notify the District immediately upon detection of the violation and shall be subject to District enforcement action.
- (viii) *Notification of Loss of Exemption.* Owners or operators of in-use stationary diesel-fueled CI engines, who are subject to an exemption specified in the ATCM shall notify the District immediately after they become aware that the exemption no longer applies and shall demonstrate compliance within 180 days after notifying the District.
- (ix) *Enrollment in a DRP/ISC - January 1, 2005.* Any stationary diesel IC engine rated over 50 bhp that enrolls for the first time in a Demand Response Program/Interruptible Service Contract (as defined in the ATCM) on or after

January 1, 2005, shall first obtain an District Authority to Construct permit to ensure compliance with the emission control requirements and hour limitations governing ISC engines.

- (c) Monitoring. The equipment permitted herein is subject to the following monitoring requirements:
- (i) *Non-Resettable Hour Meter:* Each stationary emergency standby diesel-fueled CI engine(s) subject to this permit shall have installed a non-resettable hour meter with a minimum display capability of 9,999 hours, unless the District has determined (in writing) that a non-resettable hour meter with a different minimum display capability is appropriate in consideration of the historical use of the engine and the owner or operator's compliance history.
- (d) Recordkeeping. The permittee shall record and maintain the information listed below. Log entries shall be retained for a minimum of 36 months from the date of entry. Log entries made within 24 months of the most recent entry shall be retained on-site, either at a central location or at the engine's location, and made immediately available to the District staff upon request. Log entries made from 25 to 36 months from most recent entry shall be made available to District staff within 5 working days from request. Use of District Form ENF-92 (*Diesel-Fired Emergency Standby Engine Recordkeeping Form*) can be used for this requirement.
- (i) emergency use hours of operation;
 - (ii) maintenance and testing hours of operation;
 - (iii) hours of operation for emission testing to show compliance with the ATCM {if specifically allowed for under this permit}
 - (iv) hours of operation for all uses other than those specified in three items immediately above along with a description of what those hours were for.
 - (v) The owner or operator shall document fuel use through the retention of fuel purchase records that account for all fuel used in the engine and all fuel purchased for use in the engine or engines, meets the requirements of the ATCM.
 - (vi) A log of the quarterly visible emission inspections and Method 9 inspections (if required) conducted on the emergency generator per condition 9.B.2. The start-time and end-time of each visible emissions inspection shall be recorded in a log, along with a notation identifying whether visible emissions were detected. Records of all Method 9 inspections shall be maintained in accordance with USEPA Method 9.
- (e) Reporting. On a semi-annual basis, a report detailing the previous six month's activities shall be provided to the District. The report must list all the data required by condition 9.C.15 (*Semi-Annual Monitoring/Compliance Verification Reports*). In addition, this report shall include the information required in the Recordkeeping Condition above. All logs and other basic source data not included in the report shall be made available to the District upon request.

- D.3 **Abrasive Blasting Equipment.** All abrasive blasting activities performed on the Lompoc Plant shall comply with the requirements of the California Administrative Code Title 17, Sub-Chapter 6, Sections 92000 through 92530.
- D.4 **Process Monitoring Systems - Operation and Maintenance.** All Lompoc Plant process monitoring devices listed in Section 4.11.2 of this permit shall be properly operated and maintained according to the District-Approved (March 22, 2001) *Process Monitor and Calibration Maintenance Plan*.
- D.5 **Annual Compliance Verification Reports.** Imerys shall submit a report to the District every six months to verify compliance with the emission limits and other requirements of this permit. The reporting periods shall be each half of the calendar year, e.g., January through June for the first half of the year. These reports shall be submitted by September 1 and March 1, respectively, each year, and shall be in a format approved by the District. All logs and other basic source data not included in the report shall be available to the District upon request. The second report shall also include an annual report for the prior four quarters. The report shall include the following information:
- (a) Maximum (peak) production rate (in lbs/hour or tons/hour) achieved for the following [Ref: PTO 5840]:
 - (i) the primary crushers
 - (ii) the central natural products system
 - (iii) the synthetic silicates production system
 - (iv) the mortar production system
 - (v) the pellet production system
 - (vi) the Chromosorb production system
 - (vii) the Celite Analytical Filter Aid (CAFA) system
 - (b) For each open baghouse in which a sock was repaired or replaced, the number of socks repaired or replaced in the baghouses, the approximate size of any hole, the name of the baghouse, and the date and shift during which the bag failure was observed and the repair work or replacement occurred. [Ref: PTO 5840]
 - (c) For each fuel burned in the synthetic silicates dryers, the type, amount (monthly and annually) [Ref: PTO 5840, PTO 9240-02]:
 - (d) Breakdowns and variances reported/obtained per Regulation V along with the excess emissions that accompanied each occurrence.
 - (e) Tons per year totals (permitted equipment) of all criteria pollutants (by each emission unit). SO_x emissions shall be calculated per the SO_x Compliance Monitoring Protocol.
 - (f) Exempt Emissions: On an annual basis, the ROC and NO_x emissions from all permit exempt activities (excluding on-road vehicles), including mining activities (i.e., mining vehicles and equipment). Equipment categories shall include but not be limited to internal combustion engines, external combustion equipment, mining equipment, small miscellaneous equipment, etc.
- D.6 **Reimbursement of Costs.** All reasonable expenses, as defined in District Rule 210, incurred by the District, District contractors, and legal counsel for the activities listed below that follow the issuance of this permit, including but not limited to permit condition implementation, compliance

DRAFT

verification and emergency response, directly and necessarily related to enforcement of the permit shall be reimbursed by the permittee as required by Rule 210. Reimbursable activities include work involving: permitting, compliance, CEMS, modeling/AQIA, ambient air monitoring and air toxics. [Ref: PTO 5840, District Rule 210]

Attachments:

- 10.1 - Emission Calculation Documentation
- 10.2 – Further Calculations for Section 5
- 10.4 – Equipment List
- 10.5 – Exempt/Insignificant Equipment List

Notes:

Reevaluation Due Date: March 2022

Semi-Annual reports are due by March 1st and September 1st of each year

This permit supersedes PTO 5840-R5 Part I, PTO Mod 5840-10, PTO 14743, ATC 14860, PTO 14582, PTO 15060, ATC 14908, ATC 14984

.

10.0 Attachments

10.1 Emission Calculation Documentation

This attachment contains all relevant emission calculation documentation used for the emission tables in Section 5. Refer to Section 4 for the general equations. The letter A refers to Tables 5.1 and 5.2.

Reference A - Combustion Engines

1. The maximum operating schedule is in units of hours.
2. Default values for diesel fuel:
 - a. Density = 7.4 lb/gal (36° API)
 - b. LHV = 18,410 Btu/lb (129,700 Btu/gal)
 - c. HHV = 18,919 Btu/lb (140,000 Btu/gal)
 - d. BSFC = 7500 Btu/bhp-hr
3. Default values for #6 fuel oil:
 - a. Density = 7.95 lb/gal (36° API)
 - b. HHV = 19,036 Btu/lb (150,000 Btu/gal)
4. Default values for gasoline:
 - a. Density = 6.5 lb/gal (36° API)
 - b. HHV = 21,070 Btu/lb (125,000 Btu/gal)
 - c. BSFC = 11,000 Btu/bhp-hr
5. Emission factors units (lb/MMBtu) are based on HHV.
6. Engine operational limits: General Equation

$$Q = \frac{(BSFC) * (bhp) * (LCF) * (hours/timeperiod)}{HHV}$$

7. LCF (LHV to HHV) value of 6 percent used.

8. SO_x emissions based on mass balance (Fuel Oil):

$$SO_x (asSO_2) = \frac{[(\%S) * (\rho_{oil}) * 20,000]}{HHV}$$

9. SO_x emissions based on mass balance (Natural Gas):

$$SO_x (asSO_2) = (0.169) * (ppmvS) * (HHV)$$

See spreadsheet for calculation results.

Reference B – Greenhouse Gases

For natural gas combustion the emission factor is:

$$(53.02 \text{ kg CO}_2/\text{MMBtu}) (2.2046 \text{ lb/kg}) = 116.89 \text{ lb CO}_2/\text{MMBtu}$$

$$(0.001 \text{ kg CH}_4/\text{MMBtu}) (2.2046 \text{ lb/kg})(21 \text{ lb CO}_2\text{e/lb CH}_4) = 0.046 \text{ lb CO}_2\text{e/MMBtu}$$

$$(0.0001 \text{ kg N}_2\text{O/MMBtu}) (2.2046 \text{ lb/kg})(310 \text{ lb CO}_2\text{e/lb N}_2\text{O}) = 0.068 \text{ lb CO}_2\text{e/MMBtu}$$

$$\text{Total CO}_2\text{e/MMBtu} = 116.89 + 0.046 + 0.068 = \underline{117.00 \text{ lb CO}_2\text{e/MMBtu}}$$

For diesel fuel combustion the emission factor is:

$$(73.96 \text{ kg CO}_2/\text{MMBtu}) (2.2046 \text{ lb/kg}) = 163.05 \text{ lb CO}_2/\text{MMBtu}$$

$$(0.003 \text{ kg CH}_4/\text{MMBtu}) (2.2046 \text{ lb/kg})(21 \text{ lb CO}_2\text{e/lb CH}_4) = 0.139 \text{ lb CO}_2\text{e/MMBtu}$$

$$(0.0006 \text{ kg N}_2\text{O/MMBtu}) (2.2046 \text{ lb/kg})(310 \text{ lb CO}_2\text{e/lb N}_2\text{O}) = 0.410 \text{ lb CO}_2\text{e/MMBtu}$$

$$\text{Total CO}_2\text{e/MMBtu} = 163.05 + 0.139 + 0.410 = \underline{163.60 \text{ lb CO}_2\text{e/MMBtu}}$$

10.2. Emission Calculation Documentation

This attachment contains emission calculation spreadsheets and other supporting calculations used for the emission tables in Section 5 and permit conditions in Section 9. Refer to Section 4 for the general equations, assumptions and emission factor basis used.

Table 10.1 Variables Used in Emissions Calculations– Appendix 10.2

Item	Variable Symbol	Value	Variable Name	Unit	Reference
1	ConF1	453.59	Grams to Pound Conversion	g/lb	
2	ConF2	2000	Pounds to Tons Conversion	lb/ton	
3	ConF3	7000	Grains to Pounds Conversion	gr/lb	
4	MW _s	32	Molecular Weight Sulfur	g/g-mole	
5	MW _{so2}	64	Molecular Weight Sulfur Dioxide	g/g-mole	
6	MW _{NOx}	46.01	Molecular Weight Nitrous Oxides	g/g-mole	
7	MW _{co}	28	Molecular Weight Carbon Monoxide	g/g-mole	
8	MW _{voc}	16	Molecular Weight VOCs	g/g-mole	
9	mv	379	Molar Volume	std ft ³ /lb-mol	
10	Den	7.05	Diesel Fuel #2 Density	lb/gal	
11	HHVD2	140000	Diesel Fuel #2 Higher Heating Value	Btu/gal	

Table 10.2 Exempt Equipment Emission Calculations - Appendix 10.2

A. Exempt IC Engine Calcs

District DeviceNo	Equipment Category	Exemption Claimed	bhp	hrs/yr	NOx	ROC	CO	SOx	PM	PM10	PM2.5	GHG
Tons Per Year (TPY)												
	Diesel Fired Mobile Quarry Flood Light ICE	202.F.1.e	84	8,760	12.17	0.99	2.62	1.39	0.81	0.81	0.81	451.44
	Gasoline Fired Air Compressor ICE	202.F.1.e	16	8,760	0.77	1.51	30.77	0.01	0.05	0.05	0.05	0.00
	Gasoline Fired Concrete Mixer ICE	202.F.1.e	9	8,760	0.43	0.85	17.31	0.01	0.03	0.03	0.03	0.00
	Gasoline Fired Striper ICE	202.F.1.e	3.5	8,760	0.17	0.33	6.73	0.00	0.01	0.01	0.01	0.00
	Natural Gas Air Blower ICE	202.F.1.e	43	8,760	3.75	0.20	3.15	0.27	0.02	0.02	0.02	230.27
	Natural Gas Air Compressor ICE	202.F.1.e	30	8,760	2.62	0.14	2.20	0.19	0.01	0.01	0.01	160.66
	Natural Gas Emergency Generator ICE	202.F.1.d	200	200	0.40	0.02	0.33	0.03	0.00	0.00	0.00	24.45
	Propane Fired Vacuum System ICE	202.F.1.e	18	8,760	1.25	0.27	1.16	0.01	0.05	0.04	0.04	112.08
Sum of engines with 20 < bhp < 100			404									

AP-42 EF Table 3.3-1			
	Diesel	Gasoline	Natural Gas Propane
	lb/bhp-hr	lb/bhp-hr	lb/MMBtu lb/MMBtu
NOx	0.0331	0.011	1.905 1.52
ROC	0.0027	0.022	0.103 0.33
CO	0.0071	0.439	1.600 1.41
SOx	0.0038	0.0002	0.136 0.0113
PM	0.0022	0.000721	0.010 0.055
PM10	0.0022	0.000721	0.010 0.054
PM2.5	0.0022	0.000721	0.010 0.054
GHG	1.2270		117.000 136.045
(SOx EF based on 0.50 wt % diesel fuel, 0.03 wt % gasoline)			

B. Exempt External Combustion Calcs

District DeviceNo	Equipment Category	Exemption Claimed	MMBtu/hr	MMSCF/yr	NOx	ROC	CO	SOx	PM	PM10	PM2.5	GHG
Tons Per Year (TPY)												
	CAFA Rotary Kiln	202.G.1.a	0.11	0.92	0.05	0.00	0.04	0.01	0.00	0.00	0.00	56.37
	2 Shrink Wrap Units	202.G.1.a	1.60	13.35	0.69	0.04	0.58	0.09	0.05	0.05	0.05	819.94
	Shrink Wrap Gun	202.G.1.a	0.20	1.67	0.09	0.00	0.07	0.01	0.01	0.01	0.01	102.49
	Experimental Plant Dryer	202.G.1.a	0.30	2.50	0.13	0.01	0.11	0.02	0.01	0.01	0.01	153.74
	Main Kiln	202.G.1.a	1.50	12.51	0.64	0.04	0.54	0.08	0.05	0.05	0.05	768.69
	6" Kiln	202.G.1.a	0.20	1.67	0.09	0.00	0.07	0.01	0.01	0.01	0.01	102.49
	Acid Washed Filter Aid Kiln	202.G.1.a	0.60	5.01	0.26	0.01	0.22	0.03	0.02	0.02	0.02	307.48
	Acid Washed Filter Aid Furnace	202.G.1.a	0.60	5.01	0.26	0.01	0.22	0.03	0.02	0.02	0.02	307.48

AP-42 EF	
Table 1.4-1, 1.4-2	
	lb/MMBtu
NOx	0.0980
ROC	0.0054
CO	0.0824
SOx	0.0129
PM	0.0075
PM10	0.0075
PM2.5	0.0075
GHG	117.00
(SOx EF based on 80 ppmv and 1050 Btu/scf)	

Table 10.3 Alternate Equipment Operating Scenario - Appendix 10.2

Equipment Description			Equipment Specification		Operating Limitations						Fuel Properties			
					On-line			Fuel Use (MMBtu)						
Equipment Item	Fuel	District Device	Size	Units	(hr/day)	(hr/qtr)	(hr/yr)	(per day)	(per qtr)	(per yr)	HHV ⁽⁵⁾		Total Sulfur	
Silicates Boiler #1	Fuel Oil # 6	81	15.5	MMBtu/hr	24	48	192	372	744	2,976	140,000	Btu/gal	0.50	wt % S
Silicates Boiler #1	Fuel Oil # 2	81	15.5	MMBtu/hr	24	48	192	372	744	2,976	140,000	Btu/gal	0.05	wt % S
Silicates Boiler #2	Fuel Oil # 6	82	23	MMBtu/hr	24	48	192	552	1,104	4,416	140,000	Btu/gal	0.50	wt % S
Silicates Boiler #2	Fuel Oil # 2	82	23	MMBtu/hr	24	48	192	552	1,104	4,416	140,000	Btu/gal	0.05	wt % S

Table 10.4 Alternate Emission Factors - Appendix 10.2

Equipment Description			Emission Factors							References
Equipment Item	Fuel	District DeviceNo	NOx	ROC	CO	SOx	PM	PM10	Units	
Silicates Boiler #1	Fuel Oil # 6	81	0.143	0.0014	0.034	0.5300	0.0071		lb/MMBtu	AP-42, Ch.14, and Rule 311
Silicates Boiler #1	Fuel Oil # 2	81	0.143	0.0014	0.034	0.0540	0.0071		lb/MMBtu	AP-42, Ch.14, and Rule 311
Silicates Boiler #2	Fuel Oil # 6	82	0.800	0.002	0.034	0.5300	0.0870		lb/MMBtu	Federally Enforceable Limits, ATC 9240-02
Silicates Boiler #2	Fuel Oil # 2	82	0.143	0.0014	0.034	0.0540	0.0071		lb/MMBtu	AP-42, Ch.14, and Rule 311

Table 10.5 - Alternate Short-Term Emission Limits -Appendix 10.2

Equipment Description			NOx		ROC		CO		SOx		PM		PM10		Federal Enforceability
Equipment Item	Fuel Type	District Device No	lb/hr	lb/day	lb/hr	lb/day	lb/hr	lb/day	lb/hr	lb/day	lb/hr	lb/day	lb/hr	lb/day	
Silicates Boiler #1	Fuel Oil # 6	81	2.22	53.20	0.02	0.52	0.53	12.65	8.22	197.16	0.11	2.64	--	--	AE
Silicates Boiler #1	Fuel Oil # 2	81	2.22	53.20	0.02	0.52	0.53	12.65	0.84	20.09	0.11	2.64	--	--	AE
Silicates Boiler #2	Fuel Oil # 6	82	18.40	441.60	0.05	1.10	0.78	18.77	12.19	292.56	2.00	48.02	--	--	AE
Silicates Boiler #2	Fuel Oil # 2	82	3.29	78.94	0.03	0.77	0.78	18.77	1.24	29.81	0.16	3.92	--	--	AE

Table 10.6 Alternate Long-Term Emission Limits- Appendix 10.2

Equipment Description			NOx		ROC		CO		SOx		PM		PM10		Federal Enforceability
Equipment Item	Fuel Type	District Device No	TPQ	TPY	TPQ	TPY	TPQ	TPY	TPQ	TPY	TPQ	TPY	TPQ	TPY	
Silicates Boiler #1	Fuel Oil # 6	81	0.05	0.21	0.00	0.00	0.01	0.05	0.20	0.79	0.00	0.01	--	--	AE
Silicates Boiler #1	Fuel Oil # 2	81	0.05	0.21	0.00	0.00	0.01	0.05	0.02	0.08	0.00	0.01	--	--	AE
Silicates Boiler #2	Fuel Oil # 6	82	0.44	1.77	0.00	0.00	0.02	0.08	0.29	1.17	0.05	0.19	--	--	AE
Silicates Boiler #2	Fuel Oil # 2	82	0.08	0.32	0.00	0.00	0.02	0.08	0.03	0.12	0.00	0.02	--	--	AE

10.3. Equipment List

See Attachment 10.4 of PTO 5840-R6 Part II (Celpure Plant) for Main Plant and Celpure Plant Equipment List

Table 10.7 Lompoc Baghouse Specifications – Appendix 10.4

Device Name	Imerys ID	District Device No	General Process Description	Bag Specifications									
				Manufacturer	Pos./ Neg	No. of Socks	Diam.	Length	Total Cloth Area	Air Flow	Air/ Cloth	Fabric	Cleaning
							(in)	(ft)	(ft ²)	(cfm)	Ratio	Material	Method
Crushing Plant Vent. BH	CRVBH	100	Ventilation crushers, # 1,2,3,4,5,6 crude bins, belts, 6 crude bin discharge	JM / Mikro-Pulsaire	N	672	4.50	8.00	6,334	35,700	0.00	16 oz polyprop	pulse jet
Mill Ventilation Baghouse	11VBH	102	Preseparators, packing. XP plant	Mikro-Pulsaire	N	960	4.50	8.00	9,048	36,000	5.40	16 oz polyprop	pulse jet
345 Baghouse	345BH	108	Ventilation 3 A/P Packing equipment	Fabric Filters Northwest	N	552	5.00	12.00	8,671	20,000	4.95	16oz polyprop	pulse jet
378 Baghouse	378BH	109	Ventilation line 3 pack. equip., dry end & truck & railcar load station, 978 supplement, 3A packers, Jolter bin bulk packing unit	Amer. Air Filter	N	408	5.50	11.71	6,878	45,150	6.10	gortex/polyester	pulse jet
978 Baghouse	978BH	110	Ventilation truck & railcar load station, Line 3 packing equip., dry end, powder pumps, refeed vent, 10# packing, No. 4 packer vent, 1&2 BB packers, 378 supplement	Sly	N	306	envelope	43x36 in	6,579	32,900	4.90	polyester felt	3-sect. blow-back
4 Dry End Baghouse	4DBH	112	SC production collection	JM Open	P	330	9.00	57.00	44,320	44,320	1.00	orlon	reverse air
578 Baghouse	578BH	119	Ventilation 5 AP equipment and 5 PS bulk packing unit	Mikro-Pulsaire	N	476	4.50	12.00	6,729	31,500	4.50	polyprop	pulse jet
6 Dry End Ventilation Baghouse	6DVBH	125	Ventilation line 6 dry end packing equip., bagwash, 6 AS, 6P SB, blowoff booth, 6P1 and 6AS bulk packing units	JM Open	P	165	9.00	48.00	18,661	18,661	1.00	polyester	reverse air
6 Super Fine Super Floss Baghouse	6SFSF	126	Super fine product collection	JM Open	P	168	9.00	48.00	19,000	19,000	1.00	orlon	reverse air
616 Ventilation Baghouse	616VBH	128	Ventilation 6 AP packer chamber, spouts, and bin	Mikro-Pulsaire	N	72	4.50	10.00	848	3,000	3.50	polyprop	pulse jet
Snow Floss Plant Baghouse	SFPBH	133	Snow Floss Plant product collection	JM Open	P	102	9.00	54.00	12,978	12,978	1.00	orlon	reverse air
Recirculating System Ventilation Baghouse	RSVBH	135	Ventilation dry end waste recovery	Indust. Cln. Air	N	320	6.00	12.00	6,032	16,714	3.50	singed polyprop	pulse jet
Preseparator Waste Baghouse	PSWBH	136	Ventilation mill wet end waste collection	Mikropul	N	520	4.63	10.00	6,468	20,000	3.09	PTFE Membrane, polyester	reverse air-blower
General Waste Baghouse	GWBH	137	Ventilation mill dry end and 7 wet end waste collection	Sly	N	200	plain env.	43x36 in	4,300	24,150	5.00	polyester	reverse air-blower
Silicate Plant Feed Mix Baghouse	SPFMBH	138	Vents crushing area, conveyor and re-feed areas	Sly	N	78	env.	43x36 in	1,677	35,984	blank	polyester	blow back
Silicate Plant Lime Baghouse	SPLTBH	139	Bin ventilation	Fuller Bulk Handling	N	60	6.00	8.00	754	3,000	blank	Nylon	shaker

Table 10.7 Lompoc Baghouse Specifications Continued

Device Name	Imerys ID	District Device No	General Process Description	Bag Specifications									Cleaning
				Manufacturer	Pos./ Neg	No. of Socks	Diam.	Length	Total Cloth Area	Air Flow	Air/ Cloth	Fabric	
Silicate Plant Production Baghouse	SPPBH	141	Product collection	Mikro Collector	N	16	18.00	11.83	892	3,300	2.50	18 oz dralon felt or Polyester Felt/MikroTex with ePTFE Membrane (per APCD 10-24-13 approval)	Hersey type blow ring
Silicate Plant Ventilation Baghouse (Pack)	SPVBH	142	Ventilation packer and spillage, blow off booth, belt dryer, conveyors, AW packer, bulk packing unit	Mikro-Pulsaire	N	729	4.50	10.00	8,588	42,000	blank	polypropylene	pulse jet
Mortar Plant Ventilation Baghouse	MPVBH	146	Ventilation to refeed and packaging areas of mortar plant	Sly	N	324	3-sec env.	43x36 in	6,966	38,465	0.00	polyester	shaker
Pellet Plant Ventilation Baghouse - Cold	PPCVBH	147	Ventilation conveyor dryer, refeed area, surge bin, sweco, conveyors	Mikro-Pulsaire	N	270	4.50	10.42	3,313	18,549	0.00	polyester felt	pulse jet
Pellet Plant Ventilation Baghouse - Hot	PPHVBH	148	Ventilation sweco, bucket elevator, pellet kilns, packers, vibrating feeder, screen. CAFA kiln, cyclone & vent hood	Mikro-Pulsaire	N	168	4.50	10.42	2,062	10,500	0.00	16 oz Nomex	pulse jet
Chromosorb Ventilation Baghouse - South	CPVBH	149	Ventilation chromosorb processes	Flex-Kleen	N	176	5.75	8.50	2,252	7,800	0.00	16 oz Dacron polyester felt	pulse jet
3 Bulk Bin Baghouse	3BBVBH	151	Ventilation bulk bin, 3 semi-bulk station	DCE - Sintamatic	N	10	cartridge	5' 1.25"	850	3,360	0.00	polyethylene, PTFE coating	pulse jet
Celite Analytical Filter Aid Baghouse	CAFABH	152	Ventilation CAFA equipment	JM Open	P	5	9.00	11.00	130	138	1.00	orlon	manual
Sackroom Baghouse	SRBH	153	Sack room area & so. 1148 warehouse ventilation	JM Open	P	88	9.00	24.00	4,976	4,976	1.00	cotton	manual
Soda Ash Baghouse	SABH	109452	Ventilation soda Ash conveying and bin	DCE	N	0	0.00	3.00	245	800	3.26	sintered Polyethylene	pulse jet
Soda Ash Baghouse	SABH	109452	0	0	0	0	0.00	0.00	0	0	0.00	0	0
Experimental Plant Ventilation Baghouse	XBBH	5935	Ventilates xp plant	JM Open	P	15	9.00	28.00	990	1,000	1.00	polyester	manual
3 Air Sifter Ventilation Baghouse	3ASBH	6471	Ventilates the 3 System air sifter	DCE	N	6	cartridge	4' x 17"	168	473	2.70	PTFE	pulse jet
5 Air Sifter Ventilation Baghouse	5ASBH	6472	Ventilates the 5 System air sifter	DCE	N	6	cartridge	4' x 17"	168	473	2.70	PTFE	pulse jet
6 Automatic Packing Station Baghouse (678)	678BH	103363	Ventilation 6AP equipment	Mikro-Pulsaire	N	476	4.50	12.00	6,729	30,000	4.50	polyprop	pulse jet
Silicate Plant Flash Dryer Baghouse	SPFDBH	103474	Product collection	Mikro-Pulsaire	N	384	4.50	8.33	3,770	14,700	3.90	gortex/polyester or P-84; fiberglass woven media with PTFE membrane (APCD 5-5-10 approval letter)	pulse jet
4 Bulk Bin Baghouse	4BBVBH	103514	Ventilation bulk bin, vents 4 semi-bulk station	DCE - Sintamatic	N	10	cartridge	5' 1.25"	850	3,360	0.00	polyethylene, PTFE coating	pulse jet
Feed Bin Baghouse (BH901)	BH901	108935	Milling Circuit feed bin BN901	Airjet SA	N	81	5.00	6.00	1,272	2,550	2.00	polyester felt	pulse jet
Baghouse (BH916)	BH916	108940	Milling Circuit cyclone CY914	Airjet SA	N	280	5.00	10.00	7,330	13,243	1.80	polyester felt	pulse jet
7 Kiln Bypass BH717	BH717	109846	7 Kiln Bypass Ventilation	0	N	256	6.00	10.00	256	12,290	3.10	Polyester Micro-Denier, P-84; fiberglass woven media with PTFE membrane, Polyox/Basalt, Aramid filter fabric	Pulse jet

Table 10.7 Lompoc Baghouse Specifications Continued

Device Name	Imerys ID	District Device No	General Process Description	Bag Specifications									
				Manufacturer	Pos./ Neg	No. of Socks	Diam.	Length	Total Cloth Area	Air Flow	Air/ Cloth	Fabric	Cleaning
Baghouse BH101	BH101	110191	Storage Silo BN101	Donaldson	P	81	6.00	8.00	1,039	2,411	2.32	Tetratex polyester felt	pulse jet
Baghouse BH102	BH102	110192	Storage Silo BN102	Donaldson	P	81	6.00	8.00	1,039	2,411	2.32	Tetratex polyester felt	pulse jet
Baghouse BH103	BH103	110193	Storage Silo BN103	Donaldson	P	81	6.00	8.00	1,039	2,411	2.32	Tetratex polyester felt	pulse jet
Baghouse BH104	BH104	110194	Storage Silo BN104	Donaldson	P	81	6.00	8.00	1,039	2,411	2.32	Tetratex polyester felt	pulse jet
Baghouse BH105	BH105	110195	Storage Silo BN105	Donaldson	P	81	6.00	8.00	1,039	2,411	2.32	Tetratex polyester felt	pulse jet
Baghouse BH106	BH106	110196	Storage Silo BN106	Donaldson	P	81	6.00	8.00	1,039	2,411	2.32	Tetratex polyester felt	pulse jet
Baghouse BH107	BH107	110197	Storage Silo BN107	Donaldson	P	81	6.00	8.00	1,039	2,411	2.32	Tetratex polyester felt	pulse jet
Baghouse BH108	BH108	110198	Storage Silo BN108	Donaldson	P	81	6.00	8.00	1,039	2,411	2.32	Tetratex polyester felt	pulse jet
Process Baghouse (BH12)	BH12	110203	Milling Circuit classifier	Mikropul	N	320	4.63	10.00	7,749	13,000	1.68	PTFE coated polyester	pulse jet
Packing Sta BH125	BH125	110525	Packing Station	Donaldson	N	200	20.00	5.00	3,230	14,259	4.41	Tetratex polyester felt	pulse jet
Bin Vent BH131A1	BH131A1	110532	Packer Bin BN131A	Donaldson	P	20	20.00	5.00	3,230	1,031	3.19	Tetratex polyester felt	pulse jet
Bin Vent BH131A2	BH131A2	110533	Packer Bin BN131A	Donaldson	P	20	20.00	5.00	3,230	1,031	3.19	Tetratex polyester felt	pulse jet
Bin Vent BH131B1	BH131B1	110534	Packer Bin BN131B	Donaldson	P	20	20.00	5.00	3,230	1,031	3.19	Tetratex polyester felt	pulse jet
Bin Vent BH131B2	BH131B2	110535	Packer Bin BN131B	Donaldson	P	20	20.00	5.00	3,230	1,031	3.19	Tetratex polyester felt	pulse jet
Baghouse BH925A	BH925A	110641	Silos Holding Bin BN925A	Donaldson	P	36	6.00	6.00	345	720	2.09	Tetratex polyester felt	pulse jet
Baghouse BH925B	BH925B	110642	Silos Holding Bin BN925B	Donaldson	P	36	6.00	6.00	345	720	2.09	Tetratex polyester felt	pulse jet
Baghouse BH109A	BH109A	110649	Silos Disposition Bin BN109A	Donaldson	N	54	6.00	6.00	518	1,500	2.90	Tetratex polyester felt	pulse jet
Baghouse BH109B	BH109B	110650	Silos Disposition Bin BN109B	Donaldson	N	54	6.00	6.00	518	1,500	2.90	Tetratex polyester felt	pulse jet
Baghouse BH110A	BH110A	110651	Silos Disposition Bin BN110A	Donaldson	N	54	6.00	6.00	518	1,500	2.90	Tetratex polyester felt	pulse jet
Baghouse BH110B	BH110B	110652	Silos Disposition Bin BN110B	Donaldson	N	54	6.00	6.00	518	1,500	2.90	Tetratex polyester felt	pulse jet
7 Dry End Baghouse BH775	BH775	110720	7 Dry End Ventilation		0 N	159	5.00	8.00	159	3,813	2.50	MicroTex 16oz Polyester with PTFE membrane	Reverse air
7 Dry End Baghouse BH777	BH777	110721	7 Dry End Ventilation		0 N	702	6.00	10.00	702	31,520	2.90	Aramid filter fabric, P-84; fiberglass woven media with PTFE membrane; or Polyox/Basalt (per APCD 1-18-13 approval)	Pulse jet
7 Dry End Baghouse BH788	BH788	110722	7 Dry End Ventilation		0 N	460	5.00	8.00	460	11,404	2.60	MicroTex 16oz Polyester with PTFE membrane	Reverse air
7 Dry End Baghouse BH789	BH789	110723	7 Dry End Ventilation		0 N	460	5.00	8.00	460	14,037	2.60	MicroTex 16oz Polyester with PTFE membrane	Reverse air
7 Wet End Baghouse BH721	BH721	110724	7 Wet End Ventilation		0 N	16	5.00	6.00	16	687	5.90	Polyester with PTFE membrane	Pulse jet
Baghouse 5DC-01	5DC-01	114326	New wet processing equipment including 50 k gal stirred tank	Mikro-Pulsaire	N	36	0.00	0.00	3,398	2,000	2.36	polyester with PTFE	pulse jet

Table 10.8 Depermitted Equipment – Appendix 10.4

The following equipment has been removed from permit as requested by Imerys, and is no longer permitted to operate unless Imerys submits an ATC application for the equipment.

PTO 5840-10 DOI 106	
Device ID	Name
47	6 Furnace
103345	6 Kiln
103364	601 Dry End Baghouse
103365	602 Dry End Baghouse
122	6 Natural Baghouse
123	6 Natural VenilationBaghouse
121	6CHEAF

PTO 14582	
Device ID	Name
110528	BH 121A1
110529	BH 121A2
110530	BH 121B1
110531	BH 121B2

10.4. Equipment List (Exempt/Insignificant Equipment)

The list below designates District Rule 202 permit exempt list of emissions units at Imerys Lompoc Plant. This list also serves to designate those emission units as Insignificant under Part 70.

- one natural gas fired 200 bhp stationary emergency electrical power generator used exclusively for emergency electrical power generation that operate no more than 200 hrs/year
- One gasoline fired 16 bhp ICE used to drive a portable air compressor;
- One 18 bhp propane-fired ICE used to drive a vacuum system;
- One 9 bhp gasoline-fired ICE used to drive a portable concrete mixer
- Eight 10.5 bhp diesel-fired ICEs used to power mobile quarry flood lights as ICEs rated at less than 20 bhp;
- One 43 bhp ICE used to drive air blower;
- One 30 bhp ICE used to drive an air compressor.
- Ten gasoline-fired and 4 diesel-fired ICEs used for miscellaneous plant operations. Registered as PERP.
- One natural gas fired 4.4 MMBtu/hr pellet plant rotary kiln,
- One natural gas fired 4.5 MMBtu/hr pellet plant dryer,
- One natural gas fired 0.11 MMBtu/hr CAFA rotary kiln,
- One experimental plant drier (0.3 MMBtu/hr), main kiln (1.5 MMBtu/hr), 6" kiln (0.2 MMBtu/hr), one 0.6 MMBtu/hr acid wash kiln, one 0.6 MMBtu/hr acid wash furnace, one 0.2 MMBtu/hr LPG-fired shrink wrap gun
- #3 fuel Oil Tank, Silicates Day tank, Powder Mill Tank and the Heavy Duty Garage (Diesel) Tank for storage of <40° API gravity fuel oil.
- Oil tanks of unused and waste oil as storage of lubricating oils.
- Propane tank as storage of liquefied gases which do not exceed the Gas Processors Association specifications for maximum volatile sulfur content of commercial grade liquefied petroleum gas.
- Four 93% sulfuric acid tanks and pumping equipment as tanks used exclusively for storage and dispensing of commercial grades of sulfuric acid

DRAFT

- One 5,000 gas sulfuric acid tank (commercial grade of sulfuric acid of strength less than 99% by weight).
- Three gasoline storage tanks each with a capacity of less than 250 gallons.

DRAFT

DRAFT

Part II

**IMERYS FILTRATION MINERALS. INC.
CELPURE PLANT**

2500 Miguelito Road, Lompoc, California

DRAFT

-- This Page Left Blank Intentionally --

PART II– CELPURE PLANT

Table of Contents

<u>SECTION</u>	<u>PAGE</u>
1.0 INTRODUCTION.....	1
1.1. PURPOSE	1
1.2. FACILITY OVERVIEW.....	2
1.3. EMISSION SOURCES.....	2
1.4. EMISSION CONTROL OVERVIEW.....	2
1.5. OFFSETS/EMISSION REDUCTION CREDIT OVERVIEW.....	2
1.6. PART 70 OPERATING PERMIT OVERVIEW	2
2.0 DESCRIPTION OF PROJECT AND PROCESS DESCRIPTION	5
2.1. PROJECT AND PROCESS DESCRIPTION	5
3.0 REGULATORY REVIEW	7
3.1. RULE EXEMPTIONS CLAIMED.....	7
3.2. COMPLIANCE WITH APPLICABLE FEDERAL RULES AND REGULATIONS	7
3.3. COMPLIANCE WITH APPLICABLE STATE RULES AND REGULATIONS	9
3.4. COMPLIANCE WITH APPLICABLE LOCAL RULES AND REGULATIONS.....	10
3.5. COMPLIANCE HISTORY	13
4.0 ENGINEERING ANALYSIS	19
4.1. GENERAL.....	19
4.2. STATIONARY COMBUSTION SOURCES.....	19
4.3. BAGHOUSE PM/PM ₁₀ /PM _{2.5} EMISSIONS	19
4.4. SCRUBBERS	22
4.5. BAG PACKING STATION.....	22
4.6. SOX EMISSIONS FROM EQUIPMENT SUBJECT TO DISTRICT PERMIT.....	22
4.7. BEST AVAILABLE CONTROL TECHNOLOGY (BACT)	26
4.8. EMISSIONS MONITORING/PROCESS MONITORING/CAM.....	27
4.9. SOURCE TESTING/SAMPLING	28
4.10. PART 70 ENGINEERING REVIEW: HAZARDOUS AIR POLLUTANT EMISSIONS	28
5.0 EMISSIONS	31
5.1. GENERAL.....	31
5.2. PERMITTED EMISSION LIMITS.....	31
5.3. PERMITTED EMISSION LIMITS – FACILITY TOTALS.....	31
5.4. PART 70: FEDERAL POTENTIAL TO EMIT FOR THE FACILITY	32
5.5. PART 70: HAZARDOUS AIR POLLUTANT EMISSIONS FOR THE FACILITY	32
5.6. EXEMPT EMISSION SOURCES/PART 70 INSIGNIFICANT EMISSIONS.....	32
6.0 AIR QUALITY IMPACT ANALYSIS.....	43
6.1. MODELING.....	43
6.2. INCREMENTS.....	43
6.3. MONITORING	43
6.4. HEALTH RISK ASSESSMENT	43

DRAFT

7.0	CAP CONSISTENCY, OFFSET REQUIREMENTS AND ERCS	43
7.1.	GENERAL	43
7.2.	CLEAN AIR PLAN	43
7.3.	OFFSET REQUIREMENTS	44
7.4.	EMISSION REDUCTION CREDITS	44
8.0	LEAD AGENCY PERMIT CONSISTENCY	44
9.0	REQUIREMENTS AND EQUIPMENT SPECIFIC CONDITIONS	45
9.A	STANDARD ADMINISTRATIVE CONDITIONS	47
9.B	GENERIC CONDITIONS	50
9.C	REQUIREMENTS AND EQUIPMENT SPECIFIC CONDITIONS	53
9.D	DISTRICT-ONLY CONDITIONS	71
10.0	ATTACHMENTS	
10.1.	EMISSION CALCULATION DOCUMENTATION	
10.2.	FURTHER CALCULATIONS FOR SECTION 5	
10.3.	EQUIPMENT LIST – MAIN PLANT AND CELPURE PLANT	
10.4.	TRACK LIST OF DEVICE NAMES AND NUMBERS USED FOR CELPURE EQUIPMENT	
10.5.	DISTRICT RESPONSE TO COMMENTS	

LIST OF FIGURE, TABLES, and EQUATIONS

<u>Table/Figure</u>	<u>Page</u>
TABLE 3.1 GENERIC FEDERALLY ENFORCEABLE DISTRICT RULES	15
TABLE 3.2 UNIT-SPECIFIC FEDERALLY ENFORCEABLE DISTRICT RULES	17
TABLE 3.3 NON-FEDERALLY ENFORCEABLE DISTRICT RULES	17
TABLE 4.1 BAGHOUSE INFORMATION.....	20
TABLE 4.2 BAGHOUSE EMISSION PARAMETER BASIS	21
TABLE 4.3 SO ₂ SCRUBBER EMISSION EQUATION VARIABLES	24
TABLE 4.4 HAZARDOUS PROJECT SUBSTANCES (CONDITIONERS).....	25
TABLE 4.5 BACT CONTROL TECHNOLOGY AND PERFORMANCE STANDARDS.....	27
TABLE 4.6 CELPURE BAGHOUSES SUBJECT TO CAM	28
TABLE 5.1 OPERATING EQUIPMENT DESCRIPTION	33
TABLE 5.2 EQUIPMENT EMISSION FACTORS	34
TABLE 5.3 SHORT TERM EMISSION LIMITS	35
TABLE 5.4 LONG TERM EMISSION LIMITS	36
TABLE 5.5 CELPURE PLANT POTENTIAL TO EMIT	37
TABLE 5.6 FEDERAL POTENTIAL TO EMIT	38
TABLE 5.7 ESTIMATED PERMIT EXEMPT EMISSIONS	39
TABLE 5.8 HAP EMISSION FACTORS	40
TABLE 5.9 FACILITY HAP POTENTIAL TO EMIT (TPY) ESTIMATE.....	41
TABLE 5.10 STATIONARY SOURCE HAP POTENTIAL TO EMIT (TPY) ESTIMATE	42
TABLE 9.1 EQUIPMENT EXHAUST FLOW LIMITS AND OPERATING LIMITS.....	54
TABLE 9.2 BAGHOUSE PRESSURE RANGES.....	54
TABLE 9.3 SCRUBBER OPERATIONAL LIMITS	58
TABLE 9.4 SO _x GAS ABSORPTION TOWER BACT,	58
TABLE 9.5 BAGHOUSE SOURCE TESTING REQUIREMENTS.....	69
TABLE 9.6 SCRUBBER SOURCE TESTING REQUIREMENTS	70
TABLE 10.1 VARIABLES USED IN EMISSION CALCULATIONS	
TABLE 10.2 CALCULATIONS FOR ESTIMATED EXEMPT EMISSIONS – CELPURE PLANT	
TABLE 10.3 LIST OF CELPURE EQUIPMENT WITH EXISTING AND REVISED EQUIPMENT NAMES	1
 EQUATION 4.1 UNCONTROLLED SOX EMISSIONS – LB/DAY	 23
EQUATION 4.2 UNCONTROLLED SOX EMISSIONS- TON/YEAR.....	23
EQUATION 4.3 CONTROLLED SOX EMISSIONS – DAILY AND ANNUAL EQUATION	24

ABBREVIATIONS/ACRONYMS

AP-42	USEPA's <i>Compilation of Emission Factors</i>
API	American Petroleum Institute
ASTM	American Society for Testing Materials
BACT	Best Available Control Technology
Bhp	brake horsepower
BSFC	brake specific fuel consumption
CAAA	Clean Air Act Amendments of 1990 (federal)
CAC	California Administrative Code
CAM	compliance assurance monitoring
CEMS	continuous emissions monitoring system
District	Santa Barbara County Air Pollution Control District
Dscf(m)	dry standard cubic foot (per minute)
E/S Engine	Emergency/Standby Engine
EU	emission unit
°F	degree Fahrenheit
gal	gallon
gr	grain
H ₂ S	hydrogen sulfide
HAP	hazardous air pollutant (as defined by CAAA, Section 112(b))
HHV	high heating value
I&M	inspection & maintenance
IC	internal combustion
k	kilo (thousand)
l	liter
lb	pound
lbs/hr	pounds per hour
LPG	liquid petroleum gas
M	mega (million)
MACT	Maximum Achievable Control Technology
MM	million
MW	molecular weight
NAR	Non-attainment Review
NG	natural gas
NSPS	New Source Performance Standards
O ₂	oxygen
ppm(vd or w)	parts per million (volume dry or weight)
psia	pounds per square inch absolute
psig	pounds per square inch gauge
PTO	Permit to Operate
RACT	Reasonably Available Control Technology
ROC	reactive organic compounds, same as "VOC" as used in this permit
scfd (or scfm)	standard cubic feet per day (or per minute)
SIP	State Implementation Plan
SSID	Stationary Source ID
STP	standard temperature (60°F) and pressure (29.92 inches of mercury)
THC	total hydrocarbons
tpy, TPY	tons per year
USEPA	United States Environmental Protection Agency
UTM	Universal Transverse Mercator
VE	visible emissions
VRS	vapor recovery system

1.0 Introduction

1.1. Purpose

General. The Santa Barbara County Air Pollution Control District (“District”) is responsible for implementing all applicable federal, state and local air pollution requirements which affect any stationary source of air pollution in Santa Barbara County. The federal requirements include regulations listed in the Code of Federal Regulations: 40 CFR Parts 50, 51, 52, 55, 60, 61, 63, 68, 70 and 82. The State regulations may be found in the California Health & Safety Code, Division 26, Section 39000 et seq. The applicable local regulations can be found in the District’s Rules and Regulations.

The County is designated as a nonattainment area for the state ozone ambient air quality standard. The County is also designated a nonattainment area for the state PM₁₀ ambient air quality standard.

Part 70 Permitting.

The Celpure Plant is a specialty plant within the Lompoc facility. Due to the size of this plant and complexity of the original permit for this facility (PTO 9757), permit conditions specific to Celpure are given in this part (Part II) of this Part 70 Permit to Operate No. 5840.

The initial Part 70 permit for the Celpure Plant facility was issued April 14, 2001 (PTO 9757) in accordance with the requirements of the District’s Part 70 operating permit program. Part 70 Minor Mod/PTO 9757 was incorporated into the main Part 70 permit for Imerys on June 24, 2003 (Part 70/PTO 5840 R2). This permit is the fifth renewal of the Part 70 permit, and may include additional applicable requirements. The District triennial permit reevaluation has been combined with this Part 70 Permit renewal, and this permit incorporates previous Part 70 revision (ATC/PTO) permits.

The Celpure Plant is part of the *Lompoc-Imerys* stationary source (SSID = 1735), which is a major source for VOC¹, NO_x, SO_x, CO, PM, and PM₁₀. Conditions listed in this permit are based on federal, state or local rules and requirements. Sections 9.A, 9.B and 9.C of this permit are enforceable by the District, the USEPA and the public since these sections are federally enforceable under Part 70. Where any reference contained in Sections 9.A, 9.B or 9.C (Parts I and II) refers to any other part of this permit, that part of the permit referred to is federally enforceable. Conditions listed in Section 9.D are “District-only” enforceable.

Pursuant to the stated aims of Title V of the CAAA of 1990 (i.e., the Part 70 operating permit program), this permit has been designed to meet two objectives. First, compliance with all conditions in this permit would ensure compliance with all federally-enforceable requirements for the facility. Second, the permit would be a comprehensive document to be used as a reference by the permittee, the regulatory agencies and the public to assess compliance.

¹ VOC as defined in Regulation XIII has the same meaning as reactive organic compounds as defined in Rule 102. The term VOC shall be used throughout the remainder of this document, but where used in the context of the Part 70 regulation, the reader shall interpret the term as VOC.

1.2. Facility Overview

- 1.2.1 Facility Overview: The Celpure Plant is a plant within the Lompoc facility designed to produce specialized product from diatomaceous earth. It is also used as a research and development facility for the development of new product. The raw feedstock, DE, is the same as that used in the primary plant operations. Similar to the main facility, air pollution emissions from the Celpure Plant consist primarily of particulate matter and sulfur dioxide emissions as a result of non-metallic mineral drying and processing.

The primary difference in the operations conducted at the Celpure Plant is the use of a flotation process. This involves several equipment items not utilized in the dry-processing of DE, including flotation cells and leaching tanks. Four external combustion units are utilized in this process for calcining, drying, and process heat purposes. Ten baghouses control particulate matter. Two scrubbers control SO_x emissions from calcining, leaching and 1st stage drying. The first of the two scrubbers also controls sulfuric acid mist emitted by the leaching process.

Facility New Source Review Summary. Since the issuance of the last operating permit PTO 5840-R5 in February 2016, the following NSR permitting actions have been issued for the Celpure Plant:

PTO 14743	1/28/2016	Increase in PM/PM10 emission rate for 370 scrubber
ATC 15060	12/20/2017	Increase Celpure process rate and baghouse hours
PTO 15060	At final issuance of this permit	Increase Celpure process rate and baghouse hours

1.3. Emission Sources

Air pollution emissions from the Celpure Plant are primarily the result of combustion sources and non-metallic mineral drying and processing. Section 4 of the permit provides the District's engineering analysis of these emission sources. Section 5 of the permit describes the emissions from the Lompoc Plant, and also lists the potential emissions from non-permitted emission units.

1.4. Emission Control Overview

Air quality emission controls are utilized at the Celpure Plant for a number of emission units to reduce air pollution emissions. The emission controls employed at the plant include:

- Use of baghouses of many types and sizes for particulate matter control
- Scrubbers for SO_x control

1.5. Offsets/Emission Reduction Credit Overview

See the discussion of offsets in Part 1.

1.6. Part 70 Operating Permit Overview

- 1.6.1 Permit Life and Federally enforceable Requirements: All federally enforceable requirements are listed in 40 CFR Part 70.2 (*Definitions*) under “applicable requirements.” These include all

SIP-approved District Rules, all conditions in the District-issued Authority to Construct permits, and all conditions applicable to major sources under federally promulgated rules and regulations. All these requirements are enforceable by the public under CAAA. (See Tables 3.1 and 3.2 for a list of federally enforceable requirements).

- 1.6.2 Insignificant Emissions Units: Insignificant emission units are defined under District Rule 1301 as any regulated air pollutant emitted from the unit, excluding HAPs, that are less than 2 tons per year based on the unit's potential to emit and any HAP regulated under section 112(g) of the Clean Air Act that does not exceed 0.5 ton per year based on the unit's potential to emit. Insignificant activities must be listed in the Part 70 application with supporting calculations.
- 1.6.3 Federal Potential to Emit: The Imerys facility qualifies as a "Part 70 Source" because the source has a federal potential to emit (PTE) more than 100 tons per year of regulated air pollutants. Since the facility's emissions exceeded the Part 70 "major source" permit threshold exclusive of fugitive emissions, fugitive emissions have not been quantified.
- 1.6.4 Permit Shield: The operator of a major source may be granted a shield specifically stipulating any federally-enforceable conditions that are no longer applicable to the source and stating the reasons for such non-applicability. The permit shield must be based on a request from the source and its detailed review by the District. Permit shields cannot be indiscriminately granted with respect to all federal requirements. Imerys did not request a permit shield for the Celpure Plant.
- 1.6.5 Alternate Operating Scenarios: A major source may be permitted to operate under different operating scenarios, if appropriate descriptions of such scenarios are included in its Part 70 permit application and if such operations are allowed under federally-enforceable rules. Imerys requested alternate operating scenarios involving the Celpure Plant. These are related to research and development activity and involves raw materials other than DE such as perlite, silica gel, fiberglass, zeolite, alumina, fumed silica, and bentonite clay. Perlite use will not exceed 140 tons per year and the use of the other listed substances is not expected to exceed 14 tons/year. Process feed rates are expected to be approximately 1000 lbs/hr using alternative materials due to the heavier weight per unit volume compared to DE. Substances (e.g., boric acid) not used in Celpure processing will be introduced during use of the plant as a test bed. These alternate operating scenarios were approved by the District.
- 1.6.6 Compliance Certification: Part 70 permit holders must certify compliance with all applicable federally-enforceable requirements including permit conditions. Such certification must accompany each Part 70 permit application and be re-submitted annually on or before March 1st or on a more frequent schedule specified in the permit. Each certification must be signed by the "responsible official" of the owner/operator company whose name and address is listed prominently in the Part 70 permit. (see Section 1.6.9 below)
- 1.6.7 Permit Reopening: Part 70 permits are re-opened and revised if the source becomes subject to a new rule or new permit conditions are necessary to ensure compliance with existing rules. The permits are also re-opened if they contain a material mistake or the emission limitations or other conditions are based on inaccurate permit application data.
- 1.6.8 Hazardous Air Pollutants (HAPs): Part 70 permits also regulate emissions of HAPs from major sources through the imposition of maximum achievable control technology (MACT), where

applicable. The federal PTE for HAP emissions from a source is estimated to determine MACT or any other rule applicability.

1.6.9 Responsible Official: The designated responsible official and their mailing address is:

Mr. Jim Murberger
Vice President and General Manager
Filtration & Additives North American Division
Imerys Filtration Minerals, Inc.
1732 North First Street, Suite 450
San Jose, CA 95112

2.0 Description of Project and Process Description

2.1. *Project and Process Description*

- 2.1.1 Main Process. The equipment identification numbers utilized in this section are provided in the equipment list in Attachment 10.5. Raw DE is delivered adjacent to the Celpure Plant. A dedicated crude loading station (CP1) is used to transport the DE into the processing building area. The crude bin (CP3) stores sized DE for the plant and is ventilated by the crude bin baghouse (CP6). The hammermill (CP2) beside the loading station sizes the raw ore and is ventilated to the crude bin baghouse (CP6). Sized ore flows from the bin to the detritors, where it is mixed with water. At this point, processing becomes wet, is free of dust, and therefore not ventilated to baghouses. Detritor discharge is pumped to a wet screen (CP9) to separate coarse DE. The coarse material is directed in slurry form to a crude tailings tank and then to the Silicate Plant's existing waste water system. The screen undersize material is pumped to the hydroclone station (CP10) for further separation, the waste from which is also directed to the crude tailings tank.

Hydroclone product is directed to one of two flotation conditioning tanks (CP11) where it is mixed with sulfuric acid, organic-based conditioners and frothers. Unwanted DE fractions are floated in the east or west flotation cells (CP12) for disposal via the flotation tailings pump to the existing Silicates Plant wastewater system. Product passes as a slurry to the dewatering filter (CP13) system at which soda ash and flocculant solutions may be added. The cake from the dewatering filter (CP13) is conveyed to the 3.200 MMBtu/hr 1st stage (flotation) dryer (CP14). The 1st stage dryer is ventilated by the 1st stage (flotation) dryer baghouse (CP15). The 1st stage dryer baghouse, in turn, vents to the 350 scrubber (CP22).

The product passes from the 1st stage dryer (CP14) through a dispersion screen (CP16) and is then air conveyed to the kiln feed cyclone (CP17). Soda ash is added to the air stream prior to the kiln feed cyclone (CP17), which feeds into the kiln feed bin (CP19), all of which is ventilated by the kiln feed (calciner surge) bin baghouse (CP18). From the kiln feed bin screw, material passes to the kiln rotary feed screw into the 2.640 MMBtu/hr kiln (calciner) (CP20) fired exclusively on natural gas. The kiln exhaust is ventilated first to the kiln exhaust (calciner) baghouse (CP21) for particulate removal and then to the 370 scrubber (CP56) for SO_x removal. Dried DE is flash cooled in an air line with the dedicated flash cooling cyclone (CP24) and flash cooler baghouse (CP25). Cooled calcined and flux-calcined material is directed to a product mix tank (CP26) where it is slurried with water. (Alternatively, the product can be packed in bags). The mix tank is ventilated to the flash cooler baghouse (CP25).

The slurry is directed to a leach tank (CP27) where it is mixed with sulfuric acid and heated with steam from a 3.780 MMBtu/hr package boiler (CP44) fired exclusively on natural gas. The leach tank (CP27) and downstream leach slurry storage tank (CP28) are ventilated to the 370 scrubber (CP56) already treating the kiln (calciner) emissions. After leaching, the reacted slurry is pumped to the leach slurry storage tank where it is dilute. The product is dewatered and rinsed by the rinsing filter (CP30) and then dried in a 3.200 MMBtu/hr 2nd stage dryer (CP31) fired exclusively on natural gas. Particulates of drying loop emissions are controlled by the 2nd stage dryer exhaust baghouse (CP32). Product from the 2nd stage dryer (CP31) is

conveyed via the packaging station cyclone (CP33) to a rotary product dispersing screen (CP34) and discharged into the packer bin (CP35). The manual bag packing station (CP36) is able to pack bags and drums and is ventilated to the packing station baghouse (CP37).

A 50 horsepower diesel-fired ICE (CP46)-driven generator provides power during electrical failures. The operations of this engine are limited to less than 20 hours per year for maintenance and testing, and unlimited for emergency use.

- 2.1.2 Process Options. Soda ash is added to the system in two locations: the dewatering filter feed tank and the kiln feed cyclone (CP17). The soda ash handling system consists of a semitruck loading area where a truck attaches to a loading line and blows the material into a soda ash storage bin. The soda ash is blown into the bin by a blower integral to the vehicle which pressurizes the semitruck tank. From the soda ash bin, soda ash is metered into either the soda ash mix tank (CP40) or to a soda ash mill (CP41). The soda ash bin is ventilated to the soda ash bin baghouse (CP42). The soda ash is discharged from the mill into the dispersing screen discharge line which flows into the kiln feed cyclone (CP17). Alternatively, the soda ash is mixed with water at the soda ash mix tank (CP40) and then discharged to the dewatering filter feed tank. A bag breaking (refeed) station (CP23) allows the addition of bagged material at three locations in the system. The station consists of a feed hopper and an empty bag compactor and is ventilated to the dedicated refeed station baghouse (CP38). The refeed station feeds the refeed pump packer (CP55).
- 2.1.2 Research and Development. Use of the Celpure equipment as a pilot plant may involve raw materials other than DE such as perlite, silica gel, fiberglass, zeolite, alumina, fumed silica, and bentonite clay. Perlite use will not exceed 140 tons per year, and the use of the other listed substances is not expected to exceed 14 tons/year. Process feed rates are expected to be approximately 1,000 lbs/hr using alternative materials due to the heavier weight per unit volume compared to DE. Substances (e.g., boric acid) not used in Celpure processing may be introduced during use of the plant as a test bed.

3.0 Regulatory Review

3.1. Rule Exemptions Claimed

3.1.1 District Rule 202 (*Exemptions to Rule 201*): Imerys has requested a number of District permit exemptions under this rule. An exemption from permit, however, does not necessarily grant relief from any applicable prohibitory rule. The following exemptions were reviewed by the District and determined to be applicable:

- Section 202.V.9.a for one 5000 gas sulfuric acid tank (commercial grade of sulfuric acid of strength less than 99% by weight).
- Section 202.V for 55 gallon drums of additives.
- Section 202.L.9 and 202.D.12 for the Vacuum Baghouse

3.2. Compliance with Applicable Federal Rules and Regulations

3.2.1 40 CFR Parts 51/52{New Source Review (Non-attainment Area Review and Prevention of Significant Deterioration)}: The Lompoc Facility was constructed and permitted prior to the applicability of these regulations. However, all permit modifications as of 1971 are subject to District NSR requirements. Compliance with District Regulation VIII (*New Source Review*) ensures that future modifications to the facility will comply with these regulations.

3.2.2 40 CFR Part 60 {New Source Performance Standards}: Subpart OOO establishes particulate matter standards for Nonmetallic Mineral Processing Plants such as the Imerys facilities. The subpart is applicable to crushers, grinding mills, screening operations, bucket elevators, belt conveyors, bagging operations, storage bins and enclosed truck or rail car loading stations; and control devices used to capture particulate matter emissions from such equipment as applicable. The subpart applies to facilities that commenced construction, reconstruction, or modification after August 31, 1983. More stringent requirements apply to affected facilities that commenced construction, reconstruction, or modification, after April 22, 2008. The chart below summarizes these requirements:

Emission Limits for Control Devices

Requirement	Time Frame	Limit	Test Method
Emission limit for control device that commenced construction, reconstruction, or modification	Sep 1, 1983 to Apr 22, 2008	0.022 gr/dscf	Method 5 or 17
	After Apr 22, 2008	0.014 gr/dscf	Method 5 or 17
Opacity limit for control device commenced construction, reconstruction, or modification	Sep 1, 1983 to Apr 22, 2008	7% opacity	Method 9
	After Apr 22, 2008	No Visible	Method 22

Note: See Section 4.10.3 and Table 9.1 for equipment subject to NSPS Subpart OOO at the Main Plant.

Emission Limits for Fugitives

Requirement	Time Frame	Limit	Test Method
Opacity limits for affected handling and processing equipment that is not wet material processing ² and not located inside a building that commenced construction, reconstruction, or modification	Sep 1, 1983 to Apr 22, 2008	10% opacity	Method 9
	After Apr 22, 2008	7% opacity	Method 9
Emission limits for affected handling and processing equipment located and enclosed inside a building that commenced construction, reconstruction, or modification	On and after Sep 1, 1983	7% opacity building opening(s) excluding vents ³	Method 9

- 3.2.3. 40 CFR 60 Subpart UUU, {Standards of Performance for Calciner and Dryers in Mineral Industries}: This subpart applies only to the calciner particulate emissions (controlled by the kiln (calciner) exhaust baghouse). It does not apply to the 1st Stage Dryer because this unit is an apron dryer (exempt under §60.730). (BACT is also required by District Nonattainment Review Rule 802 for the SO_x emissions; see the Rule 802 Section below). The chart below summarizes the requirements applicable to the kiln (calciner) PM emissions:

NSPS Subpart UUU Summary

Requirement	Limit/Specific	40 CFR Citation
Emission limit for control device	0.04 gr/dscf	60.732(a)
Opacity limit without wet scrubber	10% (NA)	60.732(b)
Source Test for gr/dscf & opacity	timing, sampling, etc	60.732 to 60.8
Test method for emission limit	Method 5 +	60.736(b)(1)
Test method for stack opacity	Method 9	60.736(b)(2)
Reporting Requirements	NA	60.735(c-f)

- 3.2.4 40 CFR Part 61 {NESHAP}: Any demolition or renovation affecting asbestos containing materials must meet the requirements of 40 CFR 61 Subpart M (National Emission Standard for Asbestos)
- 3.2.5 40 CFR Part 63 {MACT}: This facility is subject to MACT standards Subpart ZZZZ. The revised National Emission Standard for Hazardous Air Pollutants (NESHAP) for reciprocating internal combustion engines (RICE) was published in the Federal Register on January 18, 2008

² Wet material processing includes screening operations which removes unwanted material or which separates marketable fines from the product by a washing process which is designed and operated at all times such that the product is saturated with water. These operations and subsequent screening operations, bucket elevators and belt conveyors in the production line that process saturated materials up to the first crusher, grinding mill or storage bin in the production line are considered wet material processing and are exempt from Subpart OOO

³ Vents must meet control device limits.

with amendments in 2010 and 2013.. An affected source under the NESHAP is any existing, new, or reconstructed stationary RICE located at a major source or area source.

Existing Emergency Compression Ignition RICE. One engine, the diesel fired 50 bhp standby emergency generator (ID 103521) is subject to the following requirements:

- (1) Change the oil and filter every 500 hours of operation or annually, whichever comes first; and
- (2) Inspect the air cleaner every 1,000 hours of operation or annually, whichever comes first; and
- (3) Inspect all hoses and belts every 500 hours of operation or annually, whichever comes first.

3.2.6 40 CFR Part 64 {Compliance Assurance Monitoring}: This rule became effective on April 22, 1998. The Celpure Plant contains several emission units that are subject to the provisions of Part 64. These units are identified in section 4.8.2. Imerys submitted a CAM Plan that was approved by the District on December 19, 2002 and was updated December 13, 2007. This plan provides the details of how the applicability determination for these units was made and the monitoring parameters that have been implemented. See Section 4.8.2 and permit condition 9.C.11 for additional details.

3.2.7 40 CFR Part 70 {Operating Permits}: This Subpart is applicable to the Celpure Plant. Table 3.1 lists the federally-enforceable District promulgated rules that are “generic” and apply to the Celpure Plant. Table 3.2 lists the federally-enforceable District promulgated rules that are “unit-specific”. These tables are based on data available from the District’s administrative files and from Imerys’s Part 70 Operating Permit application.

3.3. Compliance with Applicable State Rules and Regulations

3.3.1 Division 26. Air Resources {California Health & Safety Code}: The administrative provisions of the Health & Safety Code apply to this facility and will be enforced by the District. These provisions are District-only enforceable.

3.3.2 California Administrative Code Title 17: These sections specify the standards by which abrasive blasting activities are governed throughout the State. All abrasive blasting activities at the Celpure Plant facility are required to conform to these standards. Compliance is typically assessed through onsite inspections. However, CAC Title 17 does not preempt enforcement of any SIP-approved rule that may be applicable to abrasive blasting activities.

3.3.3 California Administrative Code Title 17 {Sections 93115}: These sections specify emission, operational, monitoring, and recordkeeping requirements for stationary diesel-fired compression ignition engines rated over 49 bhp. The emergency/standby generator at the Celpure Plant is required to conform to these standards. Compliance will be assessed through onsite inspections.

3.4. Compliance with Applicable Local Rules and Regulations

- 3.4.1 Applicability Tables: In addition to Tables 3.1 and 3.2, Table 3.3 lists the non-federally enforceable District promulgated rules that apply to the Celpure Plant.
- 3.4.2 Rules Requiring Further Discussion: This section provides a more detailed discussion regarding the applicability and compliance of certain rules.

Rule 301 - Circumvention: This rule prohibits the concealment of any activity that would otherwise constitute a violation of Division 26 (Air Resources) of the California H&SC and the SBCAPCD rules and regulations. To the best of the District's knowledge, Imerys is operating this plant in compliance with this rule.

Rule 302 - Visible Emissions: This rule prohibits the discharge from any single source any air contaminants for which a period or periods aggregating more than three minutes in any one hour which is as dark or darker in shade than a reading of 1 on the Ringlemann Chart or of such opacity to obscure an observer's view to a degree equal to or greater than a reading of 1 on the Ringlemann Chart. Sources subject to this rule include: the baghouses, scrubbers, boiler and the emergency generator ICE. Improperly maintained units have the potential to violate this rule. See permit condition 9.B.2 for the requirements to be implemented to ensure compliance with this rule.

Rule 303 - Nuisance: Rule 303 prohibits any source from discharging air contaminants in such quantities which cause a nuisance to any considerable number of persons. District policy requires 5 verifiable complaints in 24 hours from different households or 10 verifiable complaints over a two week period to conclude that a public nuisance condition exists. The District has not received any complaints directly attributable to the Celpure Plant.

From April 2000 up to March 2007, the District received forty-four (44) citizen complaints regarding emissions from the Imerys facility. From March 2007 until January 2015, the District received fifteen (15) citizen complaints regarding emissions from the Imerys facility. Fourteen (14) of those complaints concerned dust emissions and one (1) of the complaints concerned sulfur odors. The District has not received sufficient complaints in reference to any one incident to find Imerys in violation of Rule 303.

Rule 304 - Particulate Matter, Northern Zone: The Celpure Plant is considered a Northern Zone source. This rule prohibits the discharge to atmosphere, any particulate matter in excess of 0.3 grains per cubic feet of gas at standard conditions. Sources subject to this rule include the baghouses, boiler and the emergency generator ICE. Improperly maintained units have the potential to violate this rule. Compliance will be ensured through the use of source testing, work practices, the facility IC Engine Particulate Operation and Maintenance Plan, and visible emissions monitoring and records.

Rule 306 - Dust and Fumes, Northern Zone: The Celpure Plant is considered a Northern Zone source. This rule prohibits the discharge to atmosphere from any source particulate matter in excess of specified mass emission rates in pounds per hour. The maximum emission rates are determined as a function of process weight rate, measured in pounds per hour, and are listed in Table 306(a) of the rule. Sources subject to this rule include: the baghouses, boiler and the emergency generator ICE. Improperly maintained units have the potential to violate this rule. Compliance will be ensured through the use of source testing, work practices, the facility IC

Engine Particulate Operation and Maintenance Plan, and visible emissions monitoring and records.

Rule 309 - Specific Contaminants: Under Section "A", no single source may discharge sulfur compounds and combustion contaminants in excess of 0.2 percent as SO₂ (by volume) and 0.3 gr/scf (at 12% CO₂) respectively. In addition, no source may construct or operate equipment that emits over 200 lb/hr of sulfur compounds or over 140 lb/hr of NO_x. Equipment subject to this rule include the baghouses, scrubbers, boiler and the emergency generator ICE. The baghouses have the potential to violate the PM standard (see discussion on Rule 304 above for compliance). Compliance will be ensured through the use of source testing, work practices, visible emissions observations and records.

Rule 310 - Odorous Organic Compounds: This rule prohibits the discharge of H₂S and organic sulfides that result in a ground level impact beyond the property boundary in excess of either 0.06 ppmv averaged over 3 minutes and 0.03 ppmv averaged over 1 hour. No measured data exists to confirm compliance with this rule. However, since Imerys processes primarily involve combustion of elemental sulfur to SO_x, emissions of odorous organic sulfur compounds are not expected to occur at the plant.

Rule 311 - Sulfur Content of Fuels: This rule limits the sulfur content of fuels combusted to 0.5 percent (by weight) for liquids fuels and 50 gr/100 scf (calculated as H₂S) or 796 ppmvd for gaseous fuels. Compliance will be verified through documentation from fuel suppliers or periodic analysis.

Rule 315 - Gasoline Specifications: This rule prohibits persons from supplying as a motor vehicle fuel gasoline with a degree of unsaturation greater than that indicated by a Bromine number of 30. Imerys supplies gasoline for use by its motor vehicles. Use of gasoline meeting retail standards set by the State of California will result in compliance with this rule.

Rule 317 - Organic Solvents: This rule sets specific prohibitions against the discharge of emissions of both photochemically and non-photochemically reactive organic solvents (40 lb/day and 3,000 lb/day respectively). Solvents may be used at the plant during normal operations for degreasing by wipe cleaning and for use in paints and coatings in maintenance operations. There is the potential to exceed the limits under Section B.2 during significant surface coating activities. Imerys will be required to maintain records to ensure compliance with this rule.

Rule 321 - Solvent Cleaning Operations: This rule sets equipment and operational standards for degreasers using organic solvents. Imerys has stated that their solvent cleaning operations fall under the exemptions of this rule.

Rule 322 - Metal Surface Coating Thinner and Reducer: This rule prohibits the use of photochemically reactive solvents for use as thinners or reducers in metal surface coatings. Imerys is required to maintain records during maintenance operations to ensure compliance with this rule.

Rule 323 - Architectural Coatings: This rule sets standards for the application of surface coatings. Standards for many types of architectural coatings. The primary coating standard that will apply to the plant is for Industrial Maintenance Coatings which has a limit of 250 gram

ROC per liter of coating, as applied. Imerys is required to comply with the Administrative requirements under Section F.

Rule 324 - Disposal and Evaporation of Solvents: This rule prohibits any source from disposing of more than one and a half gallons of any photochemically reactive solvent per day by means that will allow the evaporation of the solvent into the atmosphere. Imerys is required to maintain records to ensure compliance with this rule.

Rule 326 - Storage of Reactive Organic Liquids: This rule applies to equipment used to store reactive organic compound liquids with a vapor pressure greater than 0.5 psia. The plant has several tanks of organic liquid, but they are all exempt from this rule.

Rule 329 - Cutback and Emulsified Asphalt Paving Materials: This rule details the applicability and standards for the application of cutback emulsified asphalt paving materials. Imerys occasionally uses this material for road and parking lot maintenance.

Rule 330 - Surface Coating of Metal Parts and Products: This rule sets standards for the use of surface coatings on metal parts and products. However, all Imerys coating operations fall within Rule 323 or Rule 339. Accordingly, no coating operations are expected to be subject to this rule.

Rule 333 - Control of Emissions from Reciprocating IC Engines: This rule applies to all engines with a rated brake horsepower of 50 or greater that are fueled by liquid or gaseous fuels. The emergency standby IC engines at the facility include one generator that is no longer exempt from permit and are therefore, subject to District Rule 333. Pursuant to Section B.1 of the rule, diesel-fired IC engines subject to the state ATCM are exempt from the requirements of this rule.

Rule 353 - Adhesives and Sealants: This rule limits the use of adhesives, adhesive bonding primers, adhesive primers, sealants and sealant primers. Imerys's use of these materials is very limited, and as such, they are expected to operate within the limits of the rule.

Rule 361 – Small Boilers, Steam Generators and Process Heaters: This rule sets emission standards for external combustion units with a rated heat input greater than 2.0 MMBtu/hr and less than 5.0 MMBtu/hr. The Celpure Plant has one boiler that is subject to this rule. This existing boiler must comply with the emission standards of Rule 361 by January 1, 2020. Section B.1a of Rule 361 exempts combustion equipment where the products of combustion come into direct contact with the materials to be heated. Three additional external combustion units at the Celpure Plant meet this exemption criteria, and are not subject to Rule 361 requirements.

Rule 505 - Breakdown Conditions: This rule describes the procedures that Imerys must follow in order to seek regulatory relief when a breakdown condition occurs to any emissions unit associated with the plant. A breakdown condition is defined as an unforeseeable failure or malfunction of (1) any air pollution control equipment or related operating equipment which causes a violation of an emission limitation or restriction prescribed in the District Rules and Regulations, or by State law, or (2) any in-stack continuous monitoring equipment, provided such failure or malfunction:

- a. Is not the result of neglect or disregard of any air pollution control law or rule or regulation;
- b. Is not the result of an intentional or negligent act or omission on the part of the owner or operator;
- c. Is not the result of improper maintenance;
- d. Does not constitute a nuisance as defined in Section 41700 of the Health and Safety Code;
- e. Is not a recurrent breakdown of the same equipment.

Rule 603 - Emergency Episode Plans: Section "A" of this rule requires the submittal of *Stationary Source Curtailment Plan* for all stationary sources that can be expected to emit more than 100 tons per year of hydrocarbons, nitrogen oxides, carbon monoxide or particulate matter. A revised plan for the Lompoc facility was submitted on October 11, 2000 and approved October 16, 2000.

Rule 802 - Nonattainment Review (NAR): The NAR provisions apply to non-attainment pollutants and their precursor pollutants. The County is non-attainment for the State and Federal ozone and State PM₁₀ ambient air quality standards. The precursor pollutants of ozone are oxides of nitrogen (NO_x) and reactive organic compound (ROCs). The precursor pollutants of PM₁₀ are NO_x, ROCs and oxides of sulfur (SO_x).

The emission increases in the original ATC 9757 from Celpure plant projects are now included as a "P1" term in the NEI calculation in Attachment 10.3. Future projects will be evaluated for compliance with Rule 802.

Rule 803 - Prevention of Significant Deterioration (PSD): The PSD provisions apply to attainment pollutants and their precursor pollutants. This rule also applies to total suspended particulates (PM). Santa Barbara County is attainment for the federal PM₁₀ ambient air quality standards. The precursor pollutants of PM₁₀ are NO_x, ROCs and oxides of sulfur (SO_x).

In conjunction with ATC 9757, Celpure plant projects were reviewed for PSD requirements and it was determined that BACT, offsets, and modeling thresholds were not triggered.

Rule 810 – Federal Prevention of Significant Deterioration: This rule was adopted January 20, 2011 to incorporate the federal Prevention of Significant Deterioration rule requirements into the District's Rules and Regulations by reference. Future projects at the facility will be evaluated to determine whether they constitute a new major stationary source or a major modification.

3.5. Compliance History

This section contains a summary of the compliance history for this facility and was obtained from documentation contained in the District's Administrative file.

- 3.5.1 Variances: Since the last Part 70 renewal permit was issued in 2016 Imerys has not sought variance relief per Regulation V for the Celpure facility.
- 3.5.2 Violations: The last facility inspection occurred November 15, 2018 The inspector reported that no violations of District rules or permit conditions were found. See Part I of this permit for a complete list of documented violations for this source since the last Part 70 permit renewal in 2016.
- 3.5.3 Significant Historical Hearing Board Actions/NOVs: There have been no significant historical Hearing Board actions for the Celpure Plant since the plant was incorporated into the Lompoc Facility Part 70 permit (Part 70/PTO 5840).

Table 3.1 Generic Federally Enforceable District Rules

Generic Requirements	Affected Emission Units	Basis for Applicability	Adoption Date
<u>RULE 101</u> : Compliance by Existing Installations	All emission units	Emission of pollutants	June 1981
<u>RULE 102</u> : Definitions	All emission units	Emission of pollutants	June 21, 2012
<u>RULE 103</u> : Severability	All emission units	Emission of pollutants	October 23, 1978
<u>RULE 201</u> : Permits Required	All emission units	Emission of pollutants	June 19, 2008
<u>RULE 202</u> : Exemptions to Rule 201	Applicable emission units	Insignificant activities/emissions, per size/rating/function	June 21, 2012
<u>RULE 203</u> : Transfer	All emission units	Change of ownership	April 17, 1997
<u>RULE 204</u> : Applications	All emission units	Addition of new equipment of modification to existing equipment.	April 17, 1997
<u>RULE 205</u> : Standards for Granting Permits	All emission units	Emission of pollutants	April 17, 1997
<u>RULE 206</u> : Conditional Approval of Authority to Construct or Permit to Operate	All emission units	Applicability of relevant rules	October 15, 1991
<u>RULE 207</u> : Denial of Applications	All emission units	Applicability of relevant rules	October 23, 1978
<u>RULE 208</u> : Action on Applications – Time Limits	All emission units. Not applicable to Part 70 permit applications.	Addition of new equipment of modification to existing equipment.	April 17, 1997
<u>RULE 212</u> : Emission Statements	All emission units	Administrative	October 20, 1992
<u>RULE 301</u> : Circumvention	All emission units	Any pollutant emission	October 23, 1978
<u>RULE 302</u> : Visible Emissions	All emission units	Particulate matter emissions	June 1981
<u>RULE 303</u> : Nuisance	All emission units	Emissions that can injure, damage or offend.	October 23, 1978
<u>RULE 304</u> : PM Concentration – North Zone	Each PM source	Emission of PM in effluent gas	October 23, 1978
<u>RULE 306</u> : Dust and Fumes – North Zone	All emission units	Emissions of particulate matter	August 1989
<u>RULE 309</u> : Specific Contaminants	All emission units	Combustion contaminants	October 23, 1978

Generic Requirements	Affected Emission Units	Basis for Applicability	Adoption Date
<u>RULE 311</u> : Sulfur Content of Fuel	All combustion units	Use of fuel containing sulfur	October 23, 1978
<u>RULE 317</u> : Organic Solvents	Emission units using solvents	Solvent used in process operations.	October 23, 1978
<u>RULE 321</u> : Solvent Cleaning Operations	Emission units using solvents	Solvent used in process operations.	June 21, 2012
<u>RULE 322</u> : Metal Surface Coating Thinner and Reducer	Emission units using solvents	Solvent used in process operations.	October 23, 1978
<u>RULE 323</u> : Architectural Coatings	Paints used in maintenance and surface coating activities for paints made before Jan 1, 2015.	Application of architectural coatings.	November 15, 2001
<u>RULE 323.1</u> : Architectural Coatings	Paints used in maintenance and surface coating activities for paints made on or after Jan 1, 2015.	Application of architectural coatings.	June 19, 2014
<u>RULE 324</u> : Disposal and Evaporation of Solvents	Emission units using solvents	Solvent used in process operations.	October 23, 1978
<u>RULE 353</u> : Adhesives and Sealants	Emission units using adhesives and sealants	Adhesives and sealants use.	June 21, 2012.
<u>RULE 505 SECTIONS A, B1, D</u> : Breakdown Conditions	All emission units	Breakdowns where permit limits are exceeded or rule requirements are not complied with.	October 23, 1978
<u>RULE 603</u> : Emergency Episode Plans	Stationary sources with PTE greater than 100 tpy	Imerys Lompoc is greater than 100 tpy.	June 15, 1981
<u>REGULATION VIII</u> : New Source Review	All emission units	Addition of new equipment of modification to existing equipment. Applications to generate ERC Certificates.	August 25, 2016
<u>RULE 810</u> : Federal Prevention of Significant Deterioration	All emission units.	Sources subject to any requirement under 40 Code of Federal Regulations, Part 52, Section 52.21.	June 20, 2013
<u>REGULATION XIII (RULE 1301)</u> : General Information for Part 70 Operating Permits	All emission units		August 25, 2016
<u>REGULATION XIII (RULES 1302 - 1305)</u> : Part 70 Operating Permits	All emission units		Rule 1302 and 1305 November 9, 1993; Rules 1303 and 1304 Jan 18, 2001

Table 3.2 Unit-Specific Federally Enforceable District Rules

Unit-Specific Requirements	Affected Emission Units	Basis for Applicability	Adoption Date
<u>RULE 326</u> : Storage of Reactive Organic Compounds	Misc tanks including fuel oil and propane tanks	Stores ROCs with vapor pressure greater than 0.5 psia	Jan 18, 2001
<u>RULE 329</u> : Cutback Asphalt Paving Materials	Maintenance and paving of roads the facility	Use of cutback asphalt for paving	Feb 25, 1992
<u>RULE 360</u> : Emissions of Oxides of Nitrogen from Large Water Heaters and Small Boilers	Facility hot water heaters.	Rated greater than or equal to 75,000 MMBtu/hr and up to less than or equal to 2 MMBtu/hr	October 17, 2002
<u>RULE 361</u> : Small Boilers, Steam Generators, and Process Heaters	Shrink wrap boiler	Rated greater than 2 MMBtu/hr and less than 5 MMBtu/hr	January 17, 2008
<u>RULE 901</u> : New Source Performance Standards (NSPS)	Subpart OOO: Crushers, screening operations, bucket elevators, belt conveyors, bagging operations, storage bins and enclosed truck or rail car loading stations and associated baghouses. Subpart UUU kiln/calciner and associated baghouses.	Subpart OOO, UUU	Sept 20, 2010

Table 3.3 Non-Federally Enforceable District Rules

Requirement	Affected Emission Units	Basis for Applicability	Adoption Date
<u>RULE 210</u> : Fees	All emission units	Administrative	March 17, 2005
<u>RULE 310</u> : Organic Sulfides	All emission units.	Odorous sulfide emissions	January 12, 1976
<u>RULE 352</u> : Natural Gas-Fired Fan-Type Central Furnaces and Small Water Heaters	All emission units,	Rated less than 75,000 Btu/hr	October 20, 2011
<u>RULES 501-504</u> : Variance Rules	All emission units	Administrative	October 18, 1971
<u>RULE 505 SECTIONS B2, B3, C, E, F, G</u> : Breakdown Conditions	All emission units	Breakdowns where permit limits are exceeded or rule requirements are not complied with.	October 23, 1978
<u>RULES 506-519</u> : Variance Rules	All emission units	Administrative	August 14, 1978

DRAFT

-- This Page Left Blank Intentionally --

4.0 Engineering Analysis

4.1. General

The engineering analyses performed for this permit were limited to the review of:

- facility process flow diagram
- emission factors and calculation methods for each emissions unit
- emission control equipment (including RACT, BACT, NSPS, NESHAP)
- emission source testing
- process monitors needed to ensure compliance.

4.2. Stationary Combustion Sources

- 4.2.1 General: The stationary combustion sources associated with the Celpure Plant consist of boilers, dryers, a kiln and an internal combustion engine. Primary power to the plant is currently supplied by Pacific Gas and Electric (PG&E). Natural gas is currently supplied by the Southern California Gas Company

External Combustion Equipment - The Celpure Plant is permitted to operate one kiln (calciner) rated at 2.64 MMBtu/hr, two dryers rated at 3.2 MMBtu/hr each, and one package boiler rated at 3.78 MMBtu/hr.

Internal Combustion Equipment - The Celpure Plant is permitted to operate one 50 hp diesel fired emergency/standby generator. The operations of this engine are limited to less than 20 hours per year for maintenance and testing, and unlimited for emergency use.

- 4.2.2 Emission Factors:

External Combustion Equipment- The federally enforceable NO_x, CO, ROC, and PM emission factors for the kiln, 1st and 2nd stage dryers and package boiler, shown in Table 5.2, come from USEPA AP-42 Tables 1.4-1 and 1.4-2 for external combustion equipment fired on natural gas. The SO_x emission factor is based on mass balance.

Internal Combustion Equipment – Emission factors for the exempt IC engines are based on Table 3.3-1 of USEPA AP-42. The SO_x emission factor is based on mass balance. Mass emission estimates are based on the maximum of 20 hours/year. Emission estimates are determined by the following equations:

$$E1, \text{ lb/day} = \text{Engine Rating (bhp)} * \text{EF (g/bhp-hr)} * \text{Daily Hours (hr/day)} * (\text{lb}/453.6 \text{ g})$$

$$E2, \text{ tpy} = \text{Engine Rating (bhp)} * \text{EF (g/bhp-hr)} * \text{Annual Hours (hr/yr)} * (\text{lb}/453.6 \text{ g}) * (\text{ton}/2000 \text{ lb})$$

4.3. Baghouse PM/PM₁₀/PM_{2.5} Emissions

- 4.3.1 General: The bins, mills, screens, belt conveyor, bagging operation, and loading station are subject to NSPS Subpart OOO and ventilated to nine baghouses which are also subject to

Subpart 000. In addition, the baghouse treating calcining kiln emissions is subject to NSPS Subpart UUU. The Subpart 000 particulate emission standards that apply are 0.022 gr/dscf for facility modifications between August 31, 1983 and before April 22, 2008 and 0.014 for modifications on or after April 22, 2008. The Subpart UUU standard is 0.040 gr/dscf.. However, Imerys has committed to more restrictive limits as indicated below.

Baghouse parameters used to determine whether the baghouse is appropriate to the application are described in Table 4.1. The parameters used directly in emission calculations are provided in Table 4.2.

Table 4.1 Baghouse Information

Equipment Description		Equipment Specification			
Equipment Item	District DeviceNo	Self-Cleaning Pulse-Jet?	Pressure	Temperature	Fabric
				(°F)	
Crude Bin Ventilation Baghouse	8073	yes	Neg	70°	PTFE-coated polyethylene
Soda Ash Bin Baghouse	8074	yes	Neg	70°	PTFE-coated polyethylene
Kiln Feed (Calciner Surge) Bin Bahouse	8075	yes	Neg	85°	PTFE-surfaced polyester
Flash Cooler Baghouse	8076	yes	Neg	150°	PTFE-surfaced Nomex
Second Stage Dryer Baghouse	8077	yes	Neg	350°	PTFE-surfaced Nomex
Packing Station Baghouse	8078	yes	Neg	88°	Mikro-tex surfaced polyester
Refeed Station Baghouse	8079	yes	Neg	70°	PTFE-coated polyethylene
1st Stage (Flotation) Dryer Baghouse	8082	yes	Neg	350°	PTFE-surfaced Nomex
Kiln (Calciner) Exhaust Baghouse	8083	yes	Neg	250°	PTFE-coated PPS Ryton

4.3.2 Calculation Methods: Emissions from the subject equipment are based on the maximum parameters listed below in Tables 4.2 and 4.3. The general equation is:

$$E_{(lb/day)} = EF_{(gr/scf)} \times Q_{(scf/min)} \times 1440_{(min/day)} \div 7000_{(gr/lb)}$$

$$E_{(tons/yr)} = (lb/day) \div 24_{(hrs/day)} \times (T) \div 2000_{(lbs/ton)}$$

where:

- E = mass emission rate
- EF = emission factor
- Q = exhaust flow rate
- T = operating hours per year

The blower exhaust rating for the Flash Cooler Baghouse and the Second Stage Dryer Baghouse have been adjusted from acfm to scfm based on temperature as shown in Table 4.2 below.

During SCDP source testing, all baghouses, with the exception of those listed and discussed below, met the original permitted emission limits.

Baghouses Exceeding Flow Rate and Grain Loading Limit. Since issuance of ATC No. 9757 Imerys has experienced difficulties in successfully meeting the PM/PM₁₀ emission limits for

several of the Celpure plant baghouses. Source test data have periodically have shown minor excursions above the permitted PM/PM₁₀ emission limits as a result of baghouse grain loading concentrations and/or exhaust flow rates exceeding those assumed in the permit. In each case, Imerys requested, and was granted, increased PM/PM₁₀ emission limits through increased concentration limits and/or baghouse exhaust flow rates. In most cases, the source tested grain loading concentrations and/or exhaust rates, plus a 15% buffer was used to establish the new emission limits. The District approved the increases based on Imerys's assertion that the grain loading guarantees for these baghouses were unachievable and that the existing emission factors and limits were significantly lower than similar baghouses. Additionally, the total emissions resulting from the increased concentration and exhaust flow rate was minimal.

The District granted Imerys's request for an increase to grain loading limit to 0.005 gr/dscf, and the resulting PM/PM₁₀ PTE increase in ATC/PTO 11224. ATC/PTO 11224 – 01 allowed for a twenty percent (20%) increase in the exhaust flow rate for the flash cooler baghouse due to the August 2005 source test exceeding the exhaust flow rate limit. Table 4.2 below identifies the baghouses with the corresponding grain loading and exhaust flow rate values that have been used to establish the revised emission limits per ATC/PTO 11224 and ATC/PTO 11224 - 01. This table also includes the source test results on the Kiln Feed Bin Baghouse conducted on September 27, 2013 which showed a violation of the flow rate limit for that baghouse (2,765 scfm versus permitted limit of 2,621 scfm). The limit was increased via ATC 14331 to 2,800 scfm. The resulting emission limits are provided in Table 5.3 and Table 5.4.

Table 4.2 below identifies these units and the grain loading and flow rate values that have been used to establish the revised emission limits. The resulting emission limits are provided in Table 5.3 and 5.4.

Table 4.2 Baghouse Emission Parameter Basis

Equipment Description		Equipment Specification			
Equipment Item	District DeviceNo	Source Tested Flow Rate	Percent Flowrate Increase	Source Tested Flow Rate + Increase	Grain Loading Limit
		(scfm)		(scfm)	(gr/dscf)
Crude Bin Ventilation Baghouse	8073	2,444	15%	2,811	0.005
Soda Ash Bin Baghouse	8074	--	--	--	0.005
Kiln Feed (Calcliner Surge) Bin Bahouse	8075	2,765	1.2%	2,800	0.005
Flash Cooler Baghouse	8076	2,327	20%	2,793	0.005
Packing Station Baghouse	8078	1,253	15%	1,441	0.005
Refeed Station Baghouse	8079	2,084	15%	2,397	0.005
Equipment Item	District DeviceNo	Blower Flowrate	T Ratio	Flowrate*T Ratio	Grain Loading Limit
		(acfm)		(scfm)	(gr/dscf)
Second Stage Dryer Baghouse	8077	11,360	0.716	8,134	0.005

- 4.3.3 Potential to Emit (PTE) for Particulate Emissions from Baghouses: The pounds per day and tons per year potential to emit emissions scenarios are defined by the exhaust flow rates and

grain loading as specified in Tables 4.2 above. The baghouses collect all dust from the equipment it serves. The potential to emit calculations assume no fugitive emissions. All baghouses operate 24 hours per day, except the Crude Bin Ventilation Baghouse (4 hours per day) and the Soda Ash Bin Baghouse (12 hours per day). The PM₁₀ to PM ratio is 1.0 and the PM_{2.5} to PM ratio is 1.0.

4.4. Scrubbers

- 4.4.1 General: Imerys operates two sulfur dioxide scrubbers, the 350 (1st stage dryer) scrubber and the 370 (calcining and leaching) scrubber. These units are SO_x emission control devices however, operations are such that particulate matter is emitted to the atmosphere from these units.

The PM/PM₁₀ emission limits for 350 (1st stage dryer) scrubber are based on the source tested inlet mass emission rate (0.694 lb/day) for this unit plus a 20% buffer. The PM/PM₁₀ emission limits for 370 (calcining and leaching) scrubber are based on the source tested outlet mass emission rate (0.252 lb/day) for this unit plus a 20% buffer. The tpy limit for each unit is based on an 8,322 hr/yr operating schedule and the above formula. The emission limit for the 370 (calcining and leaching) scrubber could not be based on the inlet test rate since it exceeded the original emission limits for the kiln (calciner) exhaust baghouse. These emission limits are provided in Table 5.3 and Table 5.4

4.5. Bag Packing Station

Celpure product is packaged at the Celpure Plant bag packing station. This station packs product in ten to fifty pound bags. To meet specific customer demand, packaging product in larger quantities (five hundred to one-thousand pound bags) is required. This is accomplished by the semi-bulk bag packing station.

The semi-bulk packing station was installed under ATC 11007 (issued June 2003) and is adjacent to the bag packing station. Emissions from this station are vented to the packing station baghouse. There have been no alterations to the existing ventilation system (i.e., baghouse, blower size, ventilation air capacity, etc.) or any existing equipment other than connecting the product screw to the semi-bulk packer. There has been no change to the current permitted packing rates from PTO 9757, therefore, system throughput and packing rates will not increase. The pre-existing packing station and the semi-bulk packing system are prohibited from simultaneous operation.

4.6. SO_x Emissions from Equipment Subject to District Permit

Equipment producing oxides of sulfur or sulfuric acid mist is ventilated to one of two packed tower scrubbers. The kiln (calciner) processes DE containing sulfur from two sources: the ore as mined and sulfuric acid process additive. A third source of sulfur to the kiln is fuel sulfur (minor in comparison). To determine the sulfur content of the DE feed to the kiln (calciner), Imerys took samples from the product leaving pilot plant flotation cells. The flotation cells are upstream of the kiln (calciner), and pre-kiln (calciner) sulfuric acid conditioner is upstream of the flotation cells, so the samples should be representative of the material routed to the kiln (calciner). Imerys used the highest test result plus a buffer and assumed that all sulfur will be oxidized during

calcining. Imerys subsequently experienced higher DE sulfur content which resulted in an increase in the permitted DE sulfur content (ATC 14161).

Sulfuric acid is added upstream of the 1st stage dryer (aka flotation dryer), which heats the feed. The 1st stage dryer is ventilated first by a baghouse and then the exhaust stream is treated by a scrubber to remove sulfur. Exhaust from the 2nd stage dryer is treated only by a baghouse, but the dryer feed is rinsed.

- 4.6.1 **Calculation Methods:** The pounds per day and tons per year potential to emit emissions scenarios are defined by the maximum hourly and annual feed rate and DE sulfur content as specified in Table 4.3. Samples of DE from which sulfur content was determined are representative, e.g. they contain sulfur from process conditioners such as sulfuric acid as well as from DE ore. Margin added to sample sulfur test results includes maximum possible sulfur content. All sulfur emissions are routed to the scrubber. Scrubber control efficiency is 99% (mass basis). Operations are assumed to occur 24 hours per day. SO_x emissions are calculated using the following equations for uncontrolled and controlled emissions:

$$U_{1stStage} \left(\frac{lb}{day} \right) = F_{hr} * \frac{24hr}{day} * (C_{drierfeed} - C_{kilnfeed}) * \left(\frac{1}{MW_S} \right) * M_R * MW_{SO2}$$

$$U_{kiln} \left(\frac{lb}{day} \right) = F_{hr} * \frac{24hr}{day} * C_{kilnfeed} * \left(\frac{1}{MW_S} \right) * M_R * MW_{SO2}$$

Equation 4.1 Uncontrolled SO_x emissions – lb/day

$$U_{1stStage} \left(\frac{ton}{year} \right) = F_{yr} * (C_{drierfeed} - C_{kilnfeed}) * \left(\frac{1}{MW_S} \right) * M_R * MW_{SO2}$$

$$U_{kiln} \left(\frac{ton}{year} \right) = F_{yr} * C_{kilnfeed} * \left(\frac{1}{MW_S} \right) * M_R * MW_{SO2}$$

Equation 4.2 Uncontrolled SO_x emissions- ton/year

Where:

$U_{1st\ stage}$	= maximum uncontrolled emission rate of 1 st Stage Drier
U_{kiln}	= maximum uncontrolled emission rate of kiln (calciner)
F_{hr}	= maximum DE feed rate per hour to the kiln (calciner) (lbs of DE per hour)
$C_{drier\ feed}$	= maximum sulfur content of DE (lbs elemental sulfur per lb DE) to Drier
$C_{kiln\ feed}$	= maximum sulfur content of DE (lbs elemental sulfur per lb DE) to Kiln
MW_s	= mole molecular weight of sulfur (32 lb _s per lb-mol _s)
M_R	= molar ratio (1.0 lb-mol _{SO2} /lb-mol _s)
MW_{SO2}	= mole molecular weight of sulfur dioxide (64 lb _{SO2} per lb-mol _{SO2})
F_y	= maximum DE feed rate per year to the kiln (calciner), (tons of DE per year)

Where: F_{hr} , C , F_{yr} , and E are:

Table 4.3 SO₂ Scrubber Emission Equation Variables

Variable	Value	Units	Reference
F _{hr}	1500	lb DE/hr	Imerys 6-17-98 letter, pg 1.
F _{yr}	2268	tons DE/year	9-15-97 revised application, Table 6, Note 2
C _{drier feed}	0.00765	lb S/lb of dry DE	ATC 14161
C _{kiln}	0.00600	lb S/lb of dry DE	ATC 14161
E	99	%	Scrubber efficiency committed to by Imerys. Note: BACT standard is 98%.

$$\frac{lb}{day} = U * (1 - E)$$

$$\frac{ton}{year} = U * (1 - E)$$

Equation 4.3 Controlled SO_x Emissions – Daily and Annual Equation

Where:

- E_{daily} = maximum emission rate in pounds per day
 E_{annual} = maximum emission rate in tons per year
 E = scrubber control efficiency (99% on a mass basis for limit)
 U = uncontrolled emission rate of 1st Stage Drier or Kiln

- 4.6.2 **Potential to Emit (PTE) for SO₂ Emissions:** For a discussion of how PTE is calculated see discussion at 4.6.1 “Calculation Methods.” Imerys has historically had problems with SO₂ emission limits and has exceeded the permitted sulfur content limits for both the Celpure 1st Stage Dryer and Kiln. In response to these violations, Imerys applied for an increase to the permitted Celpure crude sulfur limits on April 25, 2013 (ATC 14161). This permit authorized an increase in the 1st Stage Dryer sulfur limit from 0.00500 lbS/lbDE to 0.00765 lbS/lbDE, and an increase in the Kiln sulfur limit from 0.00335 lbS/lbDE to 0.00600 lbS/lbDE. These increases result in associated increases in short term and long term permitted SO_x emissions from the 350 and 370 scrubbers, which are used to control the 1st Stage Dryer and Kiln.
- 4.6.3 **Sulfuric Acid Mist and Other Toxics:** Sulfuric acid is a Prevention of Significant Deterioration (PSD) 40 CFR 51.166(b)(23)-listed pollutant which is produced during the leaching process. Nonattainment BACT for the SO_x emissions requires that the sulfuric acid leach tanks are enclosed and vented to the calcining and leaching scrubber that represents Nonattainment BACT for SO_x emissions from the separate calcining process. Since BACT for Nonattainment is more restrictive than PSD BACT for the sulfuric acid mist, there is no need to determine PSD BACT.

Controlled sulfuric acid emissions are roughly estimated by Imerys at 1 ton per year and 5.5 lb/day as follows. The ventilation rate is about 900 cfm at 212°F and about 70% of it is either process steam or clean air. The remainder will be acid mist vaporizing. The partial pressure of the acid in the vapor is about 0.5 mmHg. The scrubber is expected to remove at least 90% of

the acid mist.

$$UE = 900cfm * \left(\frac{460 + 32}{460 + 212} \right) * (1 - 0.7) * \left(\frac{0.5}{649} \right) * \left(\frac{1}{359ft^3/lbmole} \right) * (98lb/lbmole) * (60min/hr) * (24hr/day)$$

$$UE = 60lbH_2SO_4/day$$

$$UE = \left(60lbH_2SO_4/day \right) * \left(365days/year \right) * \left(1ton/2000lb \right) = 11tonH_2SO_4/year$$

Where: UE = Uncontrolled Emissions

Assuming the scrubber removes 90% of the acid mist, the controlled emissions will be about 6.0 lb/day & 1 TPY.

Hazardous substances are processed in the Celpure Plant. Based on the Safety Data Sheets (SDS), some of the non-DE substances are described in Table 4.4.

Table 4.4 Hazardous Project Substances (Conditioners)⁴

Substance	CAS #	NESHAPS or AB2588?	Vapor Pressure at standard conditions
Sulfuric Acid (5000 gallon tank)	7664-93-9	AB2588 ⁵	0.0012 mm Hg
Sodium Hydroxide (6500 gallon tank)	1310-73-2	AB2588 ⁵	NA
Amorphous alumina silicate (perlite)	93763-70-3	no	NA
Hydrated alumina, alumina trihydrate, aluminum trihydroxide		no	NA
Boric acid	10043-35-3	no	2.6 mm Hg
Acetic acid, glacial	64-19-7	no	11 mm Hg
Propylene oxide methanol adduct	037286-64-9	no	
Cocodiamine	61791-63-7	no	<1 mm Hg
Flocculant containing petroleum distillates and alcohols	64742-47-8 & 84133-50-6	no	18 mm Hg

⁴ Based on the toxics information provided to date, it appears that public health effects off site would not be significant. The potential for such effects will be more comprehensively addressed through the AB2588 (Air Toxics Hot Spots) process. The District has not addressed the use of toxic substances not on the above list. Use in this project of other toxic substances will be subject to applicable rules at the time of use. It is not necessary to modify this permit solely to change the toxic substances list

⁵ AB2588 identifies this substance as one for which emissions must be quantified.

4.7. Best Available Control Technology (BACT)

- 4.7.1 BACT: Best Available Control Technology is required for SO_x, PM and PM₁₀. The applicable BACT control technologies and the corresponding performance standards are listed in Table 4.5.

Pursuant to District Policy and Procedure 6100.064, once an emission unit is subject to BACT requirements, then any subsequent modifications to that emissions unit or process is subject to BACT. This applies to both *de minimis* changes and equivalent replacements, regardless of whether or not such changes or replacements require a permit.

SO_x emissions in the original PTO 9757 permit application (36 lb/day) exceeded the non-attainment review BACT threshold of 25 pounds per day (Rule 802). SO_x is a precursor to PM₁₀, a non-attainment pollutant (See Rule 102 (Definitions)). The BACT analysis provided in PTO 9757 required a 99.0% SO_x Destruction Rate Efficiency (DRE) on a mass basis for the Kiln/Leach Scrubber and First Stage Dryer Scrubber.

Results of source testing conducted on the First Stage Drying Scrubber (CP22) during the week of August 15, 2001 indicated that the unit failed to meet the required 99.0% SO_x Destruction Rate Efficiency (DRE). The test results also indicated extremely low inlet flows for CP22 such that 99.0% DRE was not practicably achievable, even though the outlet mass emission rate was two orders of magnitude less than the permitted SO_x emission rate. For this reason, BACT for CP22, as well as the Kiln/Leaching Scrubber (CP56), was modified to include, as an alternative compliance mechanism, a SO_x concentration limit of 0.15 ppm SO_x to account for those operational scenarios in which low inlet rates preclude the use of a DRE control standard. This revision was authorized under ATC/PTO 10745.

Annual source testing of these units, conducted in January 2003, indicated that CP22 and CP56 failed to meet both the 99% DRE, as well as, the 0.15 ppm SO_x emission limit concentration. However, the source tested mass emission rate for CP22 (0.03 lb/hr SO_x) was significantly less than the permitted rate (0.10 lb/hr SO_x) as was the tested rate for CP56 (0.01 lb/hr SO_x) versus the permitted rate of 0.05 lb/hr. Additionally, the source test results indicate that the CP22 source tested mass emission rate of 0.03 lb/hr is based on a 0.90 ppm SO_x concentration and the CP56 source tested mass emission rate of 0.01 is based on a 0.30 ppm SO_x concentration. Thus, considering the magnitude of the difference between the permitted and source tested mass emission rates for each unit, the source tested SO_x concentrations for each unit and the corresponding mass emission rate, the BACT SO_x concentration limit for each unit is being increased from 0.15 ppm SO_x to 1.0 ppm SO_x. The 1.0 ppm limit results in lb/hr rates that approach the mass emission rate limits so no further ppmv increases will be allowed. Any future tests that fail to meet the above BACT limits will require long term corrective action.

Table 4.5 BACT Control Technology and Performance Standards

Source	Control Technology	Performance Standard	Reference
Kiln (Calciner)	Gas Absorption Tower - 370 (Calcining/Leaching) Scrubber	99 percent destruction rate efficiency (mass basis) based on manufacturer's guarantee or 1.00 ppmv SO _x exhaust outlet concentration.	ATC 9757, ATC/PTO 10745-01
Leach/Slurry Tanks	Gas Absorption Tower - 370 (Calcining/Leaching) Scrubber	Based on the maximum flow rate for this unit of 6700 scfm, a maximum concentration of 1.00 ppm SO _x results in a maximum mass emission rate of 0.10 lb/hr SO _x .	ATC 9757, ATC/PTO 10745-01
1st Stage Dryer	Gas Absorption Tower - 350 (1st Stage Drying) Scrubber	99 percent destruction rate efficiency (mass basis) based on manufacturer's guarantee or 1.00 ppmv SO _x exhaust outlet concentration.	ATC 9757, ATC/PTO 10745-01
Product Processing	Fabric Filter	Stack outlet concentration shall be equal to or less than 0.005 grains/dscf	ATC 14848
Product transfer, handling, and conveyance	Fully enclosed and vented to a particulate control device	All product bucket elevators, transport lines, screw conveyors, and transfer points shall be fully enclosed and vented to a baghouse.	ATC 14848

4.8. Emissions Monitoring/Process Monitoring/CAM

4.8.1. **Process Monitoring:** In many instances, ongoing compliance beyond a single (snap shot) source test is assessed by the use of process monitoring systems. Examples of these monitors include: engine hour meters and fuel usage meters. Once these process monitors are in place, it is important that they be well maintained and calibrated to ensure that the required accuracy and precision of the devices are within specifications. At a minimum, the following process monitors will be required to be calibrated and maintained in good working order:

- Hour Meters, non-resettable (Emergency/Standby Diesel Engine, 1st stage dryer, 2nd stage dryer, kiln (calciner), package boiler)
- Manometers, magnahelic gauges or equivalent for pressure drop across baghouses

Calibration and maintenance requirements are provided in the *Process Monitor Calibration and Maintenance Plan*. This Plan takes into consideration manufacturer recommended maintenance and calibration schedules. Where manufacturer guidance is not available, the recommendations of comparable equipment manufacturers, when available, and good engineering judgment is utilized.

4.8.2. **CAM:** The Imerys Lompoc Facility is a major source that is subject to the USEPA's Compliance Assurance Monitoring (CAM) rule (40 CFR 64). As detailed in Imerys's CAM Plan (approved on December 17, 2007) it was determined that the units listed below in Table 4.6 satisfy the criterion established by 40 CFR Part 64 that subject these units to additional compliance monitoring, i.e., (1) these units have precontrol emissions of at least 100% of the major source amount (PM/PM₁₀); (2) are subject to a federally enforceable emissions standard and, (3) use a control device to achieve compliance with this standard.

The compliance monitoring parameter selected for the baghouses is a daily visible emission observation (VEE) as well as a quarterly Method 9 visible emissions inspection.

The CAM Plan provides additional description of and justification for the selection of these monitoring parameters. The Plan also provides additional detail regarding the applicability determination of the units included in the plan and recordkeeping and reporting requirements. See permit condition 9.C.11.

Table 4.6 Celpure Baghouses Subject to CAM

Equipment Description	
Device Name	District DeviceNo
Crude Bin Ventilation Baghouse	8073
Kiln Feed (Calcliner Surge) Bin	
Bahouse	8075
Flash Cooler Baghouse	8076
Second Stage Dryer Baghouse	8077
Packing Station Baghouse	8078
Refeed Station Baghouse	8079

4.9. Source Testing/Sampling

Source testing and sampling are required in order to ensure compliance with permitted emission limits, prohibitory rules, control measures and the assumptions that form the basis of this operating permit. Permit condition 9.C.8 and Table 9.5 and Table 9.6 detail the pollutants and test methods required for testing. Imerys is required to follow the District's *Source Test Procedures Manual* (May 24, 1990 and all updates).

Soda Ash Bin Ventilation Baghouse. Source testing of this unit was attempted during SCDP source testing of the Celpure equipment. Source testing was required to be performed during a loading event since the major emissions from this unit occur during the loading of this product into the soda ash bin. However, due to loading difficulties involved during a loading event, as well as during normal operations, it was determined that PM source testing is not feasible. Additionally, (1) loading events typically occur only on a quarterly basis and, (2) this equipment is permitted to operate only 416 hours per year. Compliance with the permitted limits will be determined by visual emission inspections as detailed in permit condition 9.C.1. Sampling of DE for sulfur content is detailed in permit condition 9.C.3.

4.10. Part 70 Engineering Review: Hazardous Air Pollutant Emissions

Hazardous air pollutant (HAP) emissions for the Celpure Plant are based on various HAP emission factors and the permitted operational limits and maximum facility design throughputs of this permit. HAP emission factors are shown in Table 5.8. Facility potential annual HAP emissions, based on the worst-case scenario listed in Section 5.3 below, are shown in Table

5.9. Stationary Source potential annual HAP emissions are summarized in Table 5.10. These emissions are estimates only. They are not limitations.

4.10.1. Emission Factors for HAP Potential Emissions:

Natural Gas fired external combustion units: The HAP emission factors for external combustion equipment (boilers, dryers/heaters, and kiln) were obtained from the Ventura County Air Pollution Control District *AB2588 Combustion Emission Factors for Natural Gas Fired External Combustion Equipment* (May, 2001) for reactive organics, and USEPA AP-42 Table 1.4-4, *Emission Factors for Metals from Natural Gas Combustion* (July, 1998) for metals.

Diesel-fired IC engines with no control: The HAP emission factors for diesel fired IC engines were obtained from the Ventura County Air Pollution Control District *AB2588 Combustion Emission Factors for Diesel Combustion* (May, 2001). These emissions estimate is based on a diesel IC engine total brake horsepower of 50 bhp and a brake specific fuel consumption of 7500 Btu/bhp-hr.

Diatomite emissions: The HAP emission for the processed diatomite emissions from the the baghouses, rotoclones and the mobile plant were obtained from USEPA AP-42 Table 11.22-1, *Trace Element Content of Finished Diatomite* (November, 1995). The factors for the metal HAPs are fractions, in parts per million by weight, of the *emitted* tonnage of PM.

DRAFT

-- This Page Left Blank Intentionally --

5.0 Emissions

5.1. General

Emissions calculations are divided into "permitted" and "exempt" categories. Permit exempt equipment is determined by District Rule 202. The permitted emissions for each emissions unit is based on the equipment's potential-to-emit (as defined by Rule 102). Section 5.2 details the permitted emission from each emissions unit. Section 5.3 details the overall permitted emissions for the facility based on reasonable worst-case scenarios using the potential-to-emit for each emissions unit. Section 5.4 provides the federal potential to emit calculation using the definition of potential to emit according to Rule 1301. Section 5.5 provides the estimated HAP emissions from the Celpure Plant. Section 5.6 provides the estimated emissions from permit exempt equipment. In order to accurately track the emissions from a facility, the District uses a computer database.

5.2. Permitted Emission Limits

Each emissions unit associated with the facility was analyzed to determine the potential-to-emit for the following pollutants:

- ⇒ Nitrogen Oxides (NO_x) ⁶
- ⇒ Reactive Organic Compounds (ROC)
- ⇒ Carbon Monoxide (CO)
- ⇒ Sulfur Oxides (SO_x) ⁷
- ⇒ Particulate Matter (PM)
- ⇒ Particulate Matter smaller than 10 microns (PM₁₀) ⁸
- ⇒ Particulate Matter smaller than 2.5 microns (PM_{2.5}) ⁹
- ⇒ Greenhouse Gases (as CO₂)

Permitted emissions are calculated for both short term (hourly and daily) and long term (quarterly and annual) time periods. Section 4.0 (Engineering Analysis) provides a general discussion of the basic calculation methodologies and emission factors used as well as the basic operating characteristics, the specific emission factors. Table 5.1 provides the basic operating characteristics. Table 5.2 provides the specific emission factors. The permitted short-term and permitted long-term emissions for the subject equipment is listed in Tables 5.3 and 5.4.

5.3. Permitted Emission Limits – Facility Totals

The total potential-to-emit for all emission units associated with the Celpure Plant part of the facility was analyzed. This analysis looked at the reasonable worst-case operating scenarios for each operating period. The equipment operating in each of the scenarios are presented below. Unless otherwise specified, the operating characteristics defined in Table 5.1 for each emission

⁶ Calculated and reported as nitrogen dioxide (NO₂)

⁷ Calculated and reported as sulfur dioxide (SO₂)

⁸ Calculated and reported as all particulate matter smaller than 10 µm

⁹ Calculated and reported as all particulate matter smaller than 2.5 µm

unit are assumed. Table 5.5 shows the total permitted emissions for the Celpure Plant part of the facility.

Hourly/Daily Scenario:

- Baghouses
- Scrubbers
- Kiln (Calciner)
- 1st and 2nd Stage Dryers
- Package Boiler

Quarterly and Annual Scenario:

- Baghouses
- Scrubbers
- Kiln (Calciner)
- 1st and 2nd Stage Dryers
- Package Boiler
- Emergency Standby Generator

5.4. Part 70: Federal Potential to Emit for the Facility

Table 5.6 lists the federal Part 70 potential to emit. Being a NSR source, all project emissions, except fugitive emissions that are not subject to any applicable NSPS or NESHAP requirement, are counted in the federal definition of potential to emit.

5.5. Part 70: Hazardous Air Pollutant Emissions for the Facility

Total emissions of hazardous air pollutants (HAP) are computed for informational purposes only. HAP emission factors are shown in Table 5.8. Facility potential annual HAP emissions, based on the worst-case scenario listed in Section 5.3 above, are shown in Table 5.9. Stationary Source potential annual HAP emissions are summarized in Table 5.10.

5.6. Exempt Emission Sources/Part 70 Insignificant Emissions

Equipment/activities exempt pursuant to Rule 202 include maintenance operations involving surface coating and various combustion devices. Insignificant emission units are defined under District Rule 1301 as any regulated air pollutant emitted from the unit, excluding HAPs, that are less than 2 tons per year based on the unit's potential to emit and any HAP regulated under section 112(g) of the Clean Air Act that does not exceed 0.5 ton per year based on the unit's potential to emit.

Table 5.7 presents the estimated annual emissions from these exempt equipment items, including those exempt items not considered insignificant. The basis for these calculations is presented in Table 10.2. This permit includes the Solvents/Surface coating activities during maintenance operations.

Table 5.1 Operating Equipment Description

Equipment Description			Equipment Specification					Operating Limitations					
Equipment Item	Fabric	District DeviceNo	Size	Units	Pressure Drop (in of H ₂ O)		Efficiency	On-line			Fuel Sulfur (% wt)	Material Throughput	
					Minimum	Maximum		(hr/day)	(hr/qtr)	(hr/yr)		lb DE/hr	tons DE/year
Crude Bin Ventilation Baghouse	PTFE-Coated Polyethylene	8073	2,811	scf/minute	1	10		24	2,190	8,760	--	--	--
Soda Ash Bin Baghouse	PTFE-Coated Polyethylene	8074	600	scf/minute	1	10		24	2,190	8,760	--	--	--
Kiln Feed (Calciner Surge) Bin Baghouse	PTFE-Surfaced Polyester	8075	2,800	scf/minute	1	6		24	2,190	8,760	--	--	--
Flash Cooler Baghouse	PTFE-Surfaced Nomex	8076	2,793	scf/minute	1	6		24	2,190	8,760	--	--	--
Second Stage Dryer Baghouse	PTFE-Surfaced Nomex	8077	8,134	scf/minute	1	6		24	2,190	8,760	--	--	--
Packing Station Baghouse	Mikro-tex Surfaced Polyester	8078	1,441	scf/minute	1	6		24	2,190	8,760	--	--	--
Refeed Station Baghouse	PTFE-Coated Polyethylene	8079	2,397	scf/minute	1	10		24	2,190	8,760	--	--	--
1st Stage (Flotation) Dryer Baghouse	PTFE-Surfaced Nomex	8082	6,150	scf/minute	1	6		24	2,190	8,760	--	1,500	4,023
350 (1st Stage Dryer) Scrubber		106243	6,150	scf/minute	--	--	0.99	24	2,190	8,760	--	1,500	4,023
Kiln (Calciner) Exhaust Baghouse	PTFE-coated PPS Ryton	8083	6,700	scf/minute	1	6		24	2,190	8,760	--	1,500	4,023
370 (Calcining and Leaching) Scrubber		106242	6,700	scf/minute	--	--	0.99	24	2,190	8,760	--	1,500	4,023
1st Stage Dryer		8920	3.20	MMBtu/hr	--	--		24	2,190	8,760	0.008	--	--
2nd Stage Dryer		8922	3.20	MMBtu/hr	--	--		24	2,190	8,760	0.008	--	--
Kiln (Calciner)		8921	2.64	MMBtu/hr	--	--		24	2,190	8,760	0.008	--	--
Package Boiler		8923	3.78	MMBtu/hr	--	--		24	2,190	8,760	0.008	--	--
Emergency Power Generator		103521	50	bhp	--	--		2	20	20	0.05	--	--

Notes:

- (1) The Equipment size is the blower exhaust rate based on the manufacturer's rating or source test. The Flash Cooler BH and the Second Stage Dryer Baghouse size have been adjusted from acfm to scfm based on operating temperature ratios.
- (2) Exhaust from the 1st Stage (Flotation) Dryer Baghouse is routed to the 350 (1st Stage Dryer) Scrubber
- (3) Exhaust from the Kiln (Calciner) Exhaust Baghouse is routed to the 370 (Calcining and Leaching) Scrubber
- (4) The DE material throughput listed for the 350 and 370 scrubbers, is actually processed through the Kiln and 1st Stage Drier, but for purposes of calculating emissions, the throughput has also been listed with the scrubbers.
- (5) There was an error in PTO 5840-R4: should have included ATC 13544 change: deletion of 8080 and 8081 baghouses, and change in 8073 and 8074 hours. Data are correct above.
- (6) There was an error in PTO 5840-R5. Hours/day for BH 8074 should be 12 and not 24. Data are correct above.

Table 5.2 Equipment Emission Factors

Equipment Description	District	Emission Factors									References
Equipment Item	Device No	NOx	ROC	CO	SOx	PM	PM10	PM2.5	GHG	Units	
Crude Bin Ventilation Baghouse	8073					0.0050	0.0050	0.0050		gr/dscf	ATC/PTO 11107
Soda Ash Bin Baghouse	8074					0.0050	0.0050	0.0050		gr/dscf	
Kiln Feed (Calcliner Surge) Bin Baghouse	8075					0.0050	0.0050	0.0050		gr/dscf	
Flash Cooler Baghouse	8076					0.0050	0.0050	0.0050		gr/dscf	
Second Stage Dryer Baghouse	8077					0.0050	0.0050	0.0050		gr/dscf	
Packing Station Baghouse	8078					0.0050	0.0050	0.0050		gr/dscf	
Refeed Station Baghouse	8079					0.0050	0.0050	0.0050		gr/dscf	
1st Stage (Flotation) Dryer Baghouse	8082					0.8328	0.8328	0.8328		lb/day	Based on January 2000 Source Test Report ATC 14161
350 (1st Stage Dryer) Scrubber	106243				0.00765					lb S/lb dDE	
Kiln (Calcliner) Exhaust Baghouse	8083					0.636	0.6360	0.6360		lb/day	ATC 14743
370 (Calcining and Leaching) Scrubber	106242				0.006					lb S/lb dDE	ATC 14161
1st Stage Dryer	8920	0.098	0.0054	0.0824	0.0129	0.0075	0.0075	0.0075	117.00	lb/MMBtu	AP-42 Section 1.4
2nd Stage Dryer	8922	0.098	0.0054	0.0824	0.0129	0.0075	0.0075	0.0075	117.00	lb/MMBtu	AP-42 Section 1.4
Kiln (Calcliner)	8921	0.098	0.0054	0.0824	0.0129	0.0075	0.0075	0.0075	117.00	lb/MMBtu	AP-42 Section 1.4
Package Boiler	8923	0.098	0.0054	0.0824	0.0129	0.0075	0.0075	0.0075	117.00	lb/MMBtu	AP-42 Section 1.4
Emergency Power Generator	103521	14.06	1.12	3.03	0.184	1.00	1.00	1.00	556.58	g/bhp-hr	AP-42 Section 3.3

Notes:

(1) Density of diesel fuel = 7.05 lb/gal. (ref: APC-42, Appendix A)

Table 5.3 Short Term Emission Limits

Equipment Description Equipment Item	District Device No	NOx		ROC		CO		SOx		H ₂ SO ₄		PM		PM10		PM2.5		GHG		Federal Enforceability
		lb/hr	lb/day	lb/hr	lb/day	lb/hr	lb/day	lb/hr	lb/day	lb/hr	lb/day	lb/hr	lb/day	lb/hr	lb/day	lb/hr	lb/day	lb/hr	lb/day	
Crude Bin Ventilation Baghouse	8073											0.12	2.89	0.12	2.89	0.12	2.89			FE
Soda Ash Bin Baghouse	8074											0.03	0.62	0.03	0.62	0.03	0.62			FE
Kiln Feed (Calcliner Surge) Bin Baghouse	8075											0.12	2.88	0.12	2.88	0.12	2.88			FE
Flash Cooker Baghouse	8076											0.12	2.87	0.12	2.87	0.12	2.87			FE
Second Stage Dryer Baghouse	8077											0.35	8.37	0.35	8.37	0.35	8.37			FE
Packing Station Baghouse	8078											0.06	1.48	0.06	1.48	0.06	1.48			FE
Refeed Station Baghouse	8079											0.10	2.47	0.10	2.47	0.10	2.47			FE
1st Stage (Flotation) Dryer Baghouse	8082											0.03	0.83	0.03	0.83	0.03	0.83			FE
350 (1st Stage Dryer) Scrubber	106243							0.05	1.19	0.24	5.67									FE
Kiln (Calcliner) Exhaust Baghouse	8083											0.03	0.64	0.03	0.64	0.03	0.64			FE
370 (Calclining and Leaching) Scrubber	106242							0.18	4.32											FE
1st Stage Dryer	8920	0.31	7.53	0.02	0.41	0.26	6.33	0.04	0.99			0.02	0.58	0.02	0.58	0.02	0.58	374.40	8985.60	FE
2nd Stage Dryer	8922	0.31	7.53	0.02	0.41	0.26	6.33	0.04	0.99			0.02	0.58	0.02	0.58	0.02	0.58	374.40	8985.60	FE
Kiln (Calcliner)	8921	0.26	6.21	0.01	0.34	0.22	5.22	0.03	0.82			0.02	0.48	0.02	0.48	0.02	0.48	308.88	7413.12	FE
Package Boiler	8923	0.37	8.89	0.02	0.49	0.31	7.48	0.05	1.17			0.03	0.68	0.03	0.68	0.03	0.68	442.26	10614.24	FE
Emergency Power Generator	103521	1.55	3.10	0.12	0.25	0.33	0.67	0.02	0.04			0.11	0.22	0.11	0.22	0.11	0.22	61.35	122.71	AE

Notes

(1) Per ATC 15060 the Acid Demisting Scrubber H₂SO₄ emissions were calculated at 3.51 x 10⁻⁹ lbs/day and 6.41 x 10⁻¹⁰ tons/year.

lbs/hr calculated using: 3000 cfm x ((460+32)/(460+212)) x (2.92x10⁻¹¹mmHg/718 mmHg) x (1/359 ft³/lbmole) x 98 lb/lbmole x 60 min/hr x (1-0.9)

The 350 Scrubber H₂SO₄ emissions are reported here to flag a correction that needs to made to the 350 Scrubber H₂SO₄ estimates during the next reveal. That estimate (350 Scrubber) was made using a sulfuric acid partial pressure of 0.5 mmHg. A reassessment per ATC15060 for a similar process has that pressure at 2.92 x 10⁻¹¹.

(2) Flash Dryer Product Heater exhaust is vented through the Flash Dryer Baghouse. PM emission are therefore accounted for in the Flash Dryer Baghouse emission estimates.

Table 5.4 Long Term Emission Limits

Equipment Description	District Device No	NOx		ROC		CO		SOx		H ₂ SO ₄		PM		PM10		PM2.5		GHG		Federal Enforceability
		TPQ	TPY	TPQ	TPY	TPQ	TPY	TPQ	TPY	TPQ	TPY	TPQ	TPY	TPQ	TPY	TPQ	TPY	TPQ	TPY	
Crude Bin Ventilation Baghouse	8073											0.13	0.53	0.13	0.53	0.13	0.53			FE
Soda Ash Bin Baghouse	8074											0.03	0.11	0.03	0.11	0.03	0.11			FE
Kiln Feed (Calciner Surge) Bin Baghouse	8075											0.13	0.53	0.13	0.53	0.13	0.53			FE
Flash Cooler Baghouse	8076											0.13	0.52	0.13	0.52	0.13	0.52			FE
Second Stage Dryer Baghouse	8077											0.38	1.53	0.38	1.53	0.38	1.53			FE
Packing Station Baghouse	8078											0.07	0.27	0.07	0.27	0.07	0.27			FE
Refeed Station Baghouse	8079											0.11	0.45	0.11	0.45	0.11	0.45			FE
1st Stage (Flotation) Dryer Baghouse	8082											0.04	0.15	0.04	0.15	0.04	0.15			FE
350 (1st Stage Dryer) Scrubber	106243							0.03	0.13	0.26	1.03									FE
Kiln (Calciner) Exhaust Baghouse	8083											0.03	0.12	0.03	0.12	0.03	0.12			FE
370 (Calcining and Leaching) Scrubber	106242							0.12	0.48											FE
1st Stage Dryer	8920	0.34	1.37	0.02	0.08	0.29	1.15	0.05	0.18			0.03	0.11	0.03	0.11	0.03	0.11	409.97	1639.87	FE
2nd Stage Dryer	8922	0.34	1.37	0.02	0.08	0.29	1.15	0.05	0.18			0.03	0.11	0.03	0.11	0.03	0.11	409.97	1639.87	FE
Kiln (Calciner)	8921	0.28	1.13	0.02	0.06	0.24	0.95	0.04	0.15			0.02	0.09	0.02	0.09	0.02	0.09	338.22	1352.89	FE
Package Boiler	8923	0.41	1.62	0.02	0.09	0.34	1.36	0.05	0.21			0.03	0.12	0.03	0.12	0.03	0.12	484.27	1937.10	FE
Emergency Power Generator	103521	0.02	0.02	0.00	0.00	0.00	0.00	0.00	0.00			0.00	0.00	0.00	0.00	0.00	0.00	0.61	0.61	AE

Table 5.5 Celpure Plant Potential to Emit

A. Hourly

Equipment Category	NOx	ROC	CO	SOx	H ₂ SO ₄	PM	PM10	PM2.5	GHG
Baghouses	--	--	--	--	--	0.96	0.96	0.96	--
Scrubbers	--	--	--	0.23	0.24	--	--	--	--
External Combustion Equipment	1.26	0.07	1.06	0.17	--	0.10	0.10	0.10	1,499.94
Internal Combustion Engines	1.55	0.12	0.33	0.02	--	0.11	0.11	0.11	61.35
Totals (lb/hr)	2.81	0.19	1.39	0.42	0.24	1.17	1.17	1.17	1,561.29

B. Daily

Equipment Category	NOx	ROC	CO	SOx	H ₂ SO ₄	PM	PM10	PM2.5	GHG
Baghouses	--	--	--	--	--	23.04	23.04	23.04	--
Scrubbers	--	--	--	5.51	5.67	--	--	--	--
External Combustion Equipment	30.15	1.66	25.35	3.97	--	2.31	2.31	2.31	35,998.56
Internal Combustion Engines	3.10	0.25	0.67	0.04	--	0.22	0.22	0.22	122.71
Totals (lb/day)	33.25	1.91	26.02	9.52	5.67	25.57	25.57	25.57	36,121.27

C. Quarterly

Equipment Category	NOx	ROC	CO	SOx	H ₂ SO ₄	PM	PM10	PM2.5	GHG
Baghouses	--	--	--	--	--	1.05	1.05	1.05	--
Scrubbers	--	--	--	0.15	0.26	--	--	--	--
External Combustion Equipment	1.38	0.08	1.16	0.18	--	0.11	0.11	0.11	1,642.43
Internal Combustion Engines	0.02	0.00	0.00	0.00	--	0.00	0.00	0.00	0.61
Totals (TPQ)	1.39	0.077	1.160	0.34	0.26	1.16	1.16	1.16	1,643.05

D. Annual

Equipment Category	NOx	ROC	CO	SOx	H ₂ SO ₄	PM	PM10	PM2.5	GHG
Baghouses	--	--	--	--	--	4.21	4.21	4.21	--
Scrubbers	--	--	--	0.62	1.03	--	--	--	--
External Combustion Equipment	5.50	0.30	4.63	0.72	--	0.42	0.42	0.42	6,569.74
Internal Combustion Engines	0.02	0.00	0.00	0.00	--	0.00	0.00	0.00	0.61
Totals (TPY)	5.52	0.30	4.63	1.34	1.03	4.63	4.63	4.63	6,570.35

Table 5.6 Federal Potential to Emit

A. Hourly

Equipment Category	NOx	ROC	CO	SOx	PM	PM10	PM2.5	GHG
Baghouses	--	--	--	--	0.96	0.96	0.96	--
Scrubbers	--	--	--	0.23	--	--	--	--
External Combustion Equipment	1.26	0.07	1.06	0.17	0.10	0.10	0.10	1,499.94
Internal Combustion Engines	1.55	0.12	0.33	0.02	0.11	0.11	0.11	61.35
Exempt Emissions	0.00	0.00	0.00	0.00	0.02	0.02	0.02	--
Totals (lb/hr)	2.81	0.19	1.39	0.42	1.19	1.19	1.19	1,561.29

B. Daily

Equipment Category	NOx	ROC	CO	SOx	PM	PM10	PM2.5	GHG
Baghouses	--	--	--	--	23.04	23.04	23.04	--
Scrubbers	--	--	--	5.51	--	--	--	--
External Combustion Equipment	30.15	1.66	25.35	3.97	2.31	2.31	2.31	35,998.56
Internal Combustion Engines	3.10	0.25	0.67	0.04	0.22	0.22	0.22	122.71
Exempt Emissions	0.00	0.00	0.00	0.00	0.56	0.56	0.56	--
Totals (lb/day)	33.25	1.91	26.02	9.52	26.13	26.13	26.13	36,121.27

C. Quarterly

Equipment Category	NOx	ROC	CO	SOx	PM	PM10	PM2.5	GHG
Baghouses	--	--	--	--	1.05	1.05	1.05	--
Scrubbers	--	--	--	0.15	--	--	--	--
External Combustion Equipment	1.38	0.08	1.16	0.18	0.11	0.11	0.11	1,642.43
Internal Combustion Engines	0.02	0.001	0.003	0.000	0.001	0.001	0.001	0.614
Exempt Emissions	0.00	0.00	0.00	0.00	0.03	0.03	0.03	--
Totals (TPQ)	1.39	0.08	1.16	0.34	1.18	1.18	1.18	1,643.05

D. Annual

Equipment Category	NOx	ROC	CO	SOx	PM	PM10	PM2.5	GHG
Baghouses	--	--	--	--	4.21	4.21	4.21	--
Scrubbers	--	--	--	0.62	--	--	--	--
External Combustion Equipment	5.50	0.30	4.63	0.72	0.42	0.42	0.42	6,569.74
Internal Combustion Engines	0.02	0.001	0.003	0.000	0.001	0.001	0.001	0.614
Exempt Emissions	0.00	0.00	0.00	0.00	0.10	0.10	0.10	--
Totals (TPY)	5.52	0.30	4.63	1.34	4.73	4.73	4.73	6,570.35

Table 5.7 Estimated Permit Exempt Emissions

Annual

Item	Equipment Category	NOx	ROC	CO	SOx	PM	PM10	PM2.5	GHG
	Vacuum Station Baghouse	--	--	--	--	0.10	0.10	0.10	--
	Totals (TPY)	0.00	0.00	0.00	0.00	0.10	0.10	0.10	0.00

Table 5.8 HAP Emission Factors

Equipment Category	Description	Benzene	Dichlorobenzene	Naphthalene	Antimony	Arsenic	Beryllium	Cadmium	Chromium	Cobalt	Lead	Manganese	Mercury	Nickel	Selenium	Acetaldehyde	Acrolein	1,3-butadiene	Chlorobenzene	Ethylbenzene	HCL	Toluene	Xylene	Formaldehyde	PAH	Hexane	Units
Baghouses	Crude Bin Ventilation Baghouse	--	--	--	2	5	1	2	100	5	2	60	0.3	120	10	--	--	--	--	--	--	--	--	--	--	--	ppm
	Soda Ash Bin Baghouse	--	--	--	2	5	1	2	100	5	2	60	0.3	120	10	--	--	--	--	--	--	--	--	--	--	--	ppm
	Kiln Feed (Calcliner Surge) Bin Bahouse	--	--	--	2	5	1	2	100	5	2	60	0.3	120	10	--	--	--	--	--	--	--	--	--	--	--	ppm
	Flash Cooler Baghouse	--	--	--	2	5	1	2	100	5	2	60	0.3	120	10	--	--	--	--	--	--	--	--	--	--	--	ppm
	Second Stage Dryer Baghouse	--	--	--	2	5	1	2	100	5	2	60	0.3	120	10	--	--	--	--	--	--	--	--	--	--	--	ppm
	Packing Station Baghouse	--	--	--	2	5	1	2	100	5	2	60	0.3	120	10	--	--	--	--	--	--	--	--	--	--	--	ppm
	Refeed Station Baghouse	--	--	--	2	5	1	2	100	5	2	60	0.3	120	10	--	--	--	--	--	--	--	--	--	--	--	ppm
	DE Bin Baghouse	--	--	--	2	5	1	2	100	5	2	60	0.3	120	10	--	--	--	--	--	--	--	--	--	--	--	ppm
	Alternate Materials Bin Baghouse	--	--	--	2	5	1	2	100	5	2	60	0.3	120	10	--	--	--	--	--	--	--	--	--	--	--	ppm
	1st Stage (Flotation) Dryer Baghouse	--	--	--	2	5	1	2	100	5	2	60	0.3	120	10	--	--	--	--	--	--	--	--	--	--	--	ppm
Kiln (Calcliner) Exhaust Baghouse	--	--	--	2	5	1	2	100	5	2	60	0.3	120	10	--	--	--	--	--	--	--	--	--	--	--	ppm	
External Combustion	1st Stage Dryer	7.84E-06	--	2.94E-07	--	1.96E-07	1.18E-08	1.08E-06	1.37E-06	8.24E-08	--	3.73E-07	2.55E-07	2.06E-06	2.35E-08	4.22E-06	2.65E-06	--	--	9.31E-06	--	3.59E-05	2.67E-05	1.67E-05	3.92E-07	6.18E-06	lb/MMBtu
	2nd Stage Dryer	7.84E-06	--	2.94E-07	--	1.96E-07	1.18E-08	1.08E-06	1.37E-06	8.24E-08	--	3.73E-07	2.55E-07	2.06E-06	2.35E-08	4.22E-06	2.65E-06	--	--	9.31E-06	--	3.59E-05	2.67E-05	1.67E-05	3.92E-07	6.18E-06	lb/MMBtu
	Kiln (Calcliner)	7.84E-06	--	2.94E-07	--	1.96E-07	1.18E-08	1.08E-06	1.37E-06	8.24E-08	--	3.73E-07	2.55E-07	2.06E-06	2.35E-08	4.22E-06	2.65E-06	--	--	9.31E-06	--	3.59E-05	2.67E-05	1.67E-05	3.92E-07	6.18E-06	lb/MMBtu
	Package Boiler	7.84E-06	--	2.94E-07	--	1.96E-07	1.18E-08	1.08E-06	1.37E-06	8.24E-08	--	3.73E-07	2.55E-07	2.06E-06	2.35E-08	4.22E-06	2.65E-06	--	--	9.31E-06	--	3.59E-05	2.67E-05	1.67E-05	3.92E-07	6.18E-06	lb/MMBtu
IC Engines	Emergency Power Generator	1.86E-01	--	1.97E-02	--	1.60E-03	--	1.50E-03	6.00E-04	--	8.30E-03	3.10E-03	2.00E-03	3.90E-03	2.20E-03	7.83E-01	3.39E-02	2.17E-01	2.00E-04	1.09E-02	1.86E-01	1.05E-01	4.24E-02	1.73E+00	5.59E-02	2.69E-02	lb/1000 gal
Exempt Equipment	Vacuum Station Baghouse	--	--	--	2	5	1	2	100	5	2	60	0.3	120	10	--	--	--	--	--	--	--	--	--	--	--	ppm

Table 5.9 Facility HAP Potential to Emit (tpy) Estimate

Equipment Category	Description	Benzene	Dichlorobenzene	Naphthalene	Antimony	Arsenic	Beryllium	Cadmium	Chromium	Cobalt	Lead	Manganese	Mercury	Nickel	Selenium	Acetaldehyde	Acrolein	1,3-butadiene	Chlorobenzene	Ethylbenzene	HCL	Toluene	Xylene	Formaldehyde	PAH	Hexane	Total HAPs
Baghouses	Crude Bin Ventilation Baghouse	--	--	--	1.1E-06	2.6E-06	5.3E-07	1.1E-06	5.3E-05	2.6E-06	1.1E-06	3.2E-05	1.6E-07	6.3E-05	5.3E-06	--	--	--	--	--	--	--	--	--	--	--	1.6E-04
	Soda Ash Bin Baghouse	--	--	--	2.3E-07	5.6E-07	1.1E-07	2.3E-07	1.1E-05	5.6E-07	2.3E-07	6.8E-06	3.4E-08	1.4E-05	1.1E-06	--	--	--	--	--	--	--	--	--	--	--	3.5E-05
	Kiln Feed (Calcliner Surge) Bin Baghouse	--	--	--	1.1E-06	2.6E-06	5.3E-07	1.1E-06	5.3E-05	2.6E-06	1.1E-06	3.2E-05	1.6E-07	6.3E-05	5.3E-06	--	--	--	--	--	--	--	--	--	--	--	1.6E-04
	Flash Cooler Baghouse	--	--	--	1.0E-06	2.6E-06	5.2E-07	1.0E-06	5.2E-05	2.6E-06	1.0E-06	3.1E-05	1.6E-07	6.3E-05	5.2E-06	--	--	--	--	--	--	--	--	--	--	--	1.6E-04
	Second Stage Dryer Baghouse	--	--	--	3.1E-06	7.6E-06	1.5E-06	3.1E-06	1.5E-04	7.6E-06	3.1E-06	9.2E-05	4.6E-07	1.8E-04	1.5E-05	--	--	--	--	--	--	--	--	--	--	--	4.7E-04
	Packing Station Baghouse	--	--	--	5.4E-07	1.4E-06	2.7E-07	5.4E-07	2.7E-05	1.4E-06	5.4E-07	1.6E-05	8.1E-08	3.2E-05	2.7E-06	--	--	--	--	--	--	--	--	--	--	--	8.3E-05
	Refeed Station Baghouse	--	--	--	9.0E-07	2.2E-06	4.5E-07	9.0E-07	4.5E-05	2.2E-06	9.0E-07	2.7E-05	1.3E-07	5.4E-05	4.5E-06	--	--	--	--	--	--	--	--	--	--	--	1.4E-04
	1st Stage (Flotation) Dryer Baghouse	--	--	--	3.0E-07	7.6E-07	1.5E-07	3.0E-07	1.5E-05	7.6E-07	3.0E-07	9.1E-06	4.6E-08	1.8E-05	1.5E-06	--	--	--	--	--	--	--	--	--	--	--	4.7E-05
	Kiln (Calcliner) Exhaust Baghouse	--	--	--	2.3E-07	5.8E-07	1.2E-07	2.3E-07	1.2E-05	5.8E-07	2.3E-07	7.0E-06	3.5E-08	1.4E-05	1.2E-06	--	--	--	--	--	--	--	--	--	--	--	3.6E-05
External Combustion	1st Stage Dryer	1.1E-04	--	4.1E-06	--	2.7E-06	1.6E-07	1.5E-05	1.9E-05	1.2E-06	--	5.2E-06	3.6E-06	2.9E-05	3.3E-07	--	--	--	--	--	--	5.0E-04	--	2.3E-04	5.5E-06	8.7E-05	1.0E-03
	2nd Stage Dryer	1.1E-04	--	4.1E-06	--	2.7E-06	1.6E-07	1.5E-05	1.9E-05	1.2E-06	--	5.2E-06	3.6E-06	2.9E-05	3.3E-07	--	--	--	--	--	--	5.0E-04	--	2.3E-04	5.5E-06	8.7E-05	1.0E-03
	Kiln (Calcliner)	9.1E-05	--	3.4E-06	--	2.3E-06	1.4E-07	1.2E-05	1.6E-05	9.5E-07	--	4.3E-06	2.9E-06	2.4E-05	2.7E-07	--	--	--	--	--	--	4.1E-04	--	1.9E-04	4.5E-06	7.1E-05	8.4E-04
	Package Boiler	1.3E-04	--	4.9E-06	--	3.2E-06	1.9E-07	1.8E-05	2.3E-05	1.4E-06	--	6.2E-06	4.2E-06	3.4E-05	3.9E-07	--	--	--	--	--	--	5.9E-04	--	2.8E-04	6.5E-06	1.0E-04	1.2E-03
IC Engines	Emergency Power Generator	5.1E-06	--	5.4E-07	--	4.4E-08	--	4.1E-08	1.6E-08	--	2.3E-07	8.5E-08	5.5E-08	1.1E-07	6.0E-08	2.1E-05	9.3E-07	6.0E-06	5.5E-09	3.0E-07	5.1E-06	2.9E-06	1.2E-06	4.7E-05	1.5E-06	7.4E-07	9.4E-05
Exempt Equipment	Vacuum Station Baghouse	--	--	--	2.0E-07	5.1E-07	1.0E-07	2.0E-07	1.0E-05	5.1E-07	2.0E-07	6.1E-06	3.1E-08	1.2E-05	1.0E-06	--	--	--	--	--	--	--	--	--	--	--	3.1E-05
SUB-TOTAL HAPS (tpy) =		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	
TOTAL HAPS (tpy) =		0.01																									

1. These are estimates only, and are not intended to represent emission limits.

Table 5.10 Stationary Source HAP Potential to Emit (tpy) Estimate

Facility	Benzene	Dichlorobenzene	Naphthalene	Antimony	Arsenic	Beryllium	Cadmium	Chromium	Cobalt	Lead	Manganese	Mercury	Nickel	Selenium	Acetaldehyde	Acrolein	1,3-butadiene	Chlorobenzene	Ethylbenzene	HCL	Toluene	Xylene	Formaldehyde	PAH	Hexane	Total HAPs
Main Plant	29.73	0.00	0.00	0.00	0.01	0.00	0.01	0.23	0.01	0.01	0.14	0.00	0.27	0.02	1.07	0.00	0.01	0.00	0.38	0.01	33.86	29.61	1.67	0.00	2.36	99.42
Celpure	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	

Stationary Source Total HAPs (tpy) = 29.73 0.00 0.00 0.00 0.01 0.00 0.01 0.23 0.01 0.01 0.14 0.00 0.28 0.02 1.07 0.00 0.01 0.00 0.38 0.01 33.86 29.61 1.67 0.00 2.36 99.43

1. These are estimates only, and are not intended to represent emission limits.

6.0 Air Quality Impact Analysis

6.1. *Modeling*

Air quality modeling, Increments, Vegetation Analysis, and Visibility Analysis were not performed for the Celpure Plant project.

6.2. *Increments*

An air quality increment analysis was not required for the Celpure Plant project.

6.3. *Monitoring*

Air quality monitoring is not required for the Celpure Plant project.

6.4. *Health Risk Assessment*

Imerys is in the process of completing an updated Air Toxics Emission Inventory Plan (ATEIP) and Air Toxics Emission Inventory Report (ATEIR) under the AB2588 “Hot Spots” program. These documents will reflect the entire Imerys Filtration Minerals, Inc. Stationary Source, including the the Celpure Plant project. Once approved, a health risk assessment for the entire facility will be performed in accordance with Air Toxic "Hot Spots" risk procedures.

7.0 CAP Consistency, Offset Requirements and ERCs

7.1. *General*

The *Imerys Lompoc* stationary source is located in an ozone nonattainment area. Santa Barbara County has not attained the state ozone ambient air quality standards. The County also does not meet the state PM₁₀ ambient air quality standards. Therefore, emissions from all emission units at the stationary source and its constituent facilities must be consistent with the provisions of the USEPA- and State- approved Clean Air Plans (CAP) and must not interfere with progress towards attainment of federal and state ambient air quality standards. Under District regulations, any modifications at Celpure Plant (or the Imerys Lompoc stationary source) that result in an emissions increase of any nonattainment pollutant exceeding 25 lbs/day must apply BACT (NAR). Increases above offset thresholds will trigger offsets at the source or elsewhere so that there is a net air quality benefit for Santa Barbara County. These offset threshold levels are 25 tons per year for nonattainment pollutants or precursors, 150 lbs per day for carbon monoxide if a nonattainment pollutant, and 240 lbs per day for attainment pollutants and precursors. .

7.2. *Clean Air Plan*

The 2007 Clean Air Plan, adopted by the District Board on August 16, 2007, addressed both federal and state requirements, serving as the maintenance plan for the federal eight-hour ozone standard and as the state triennial update required by the Health and Safety Code to demonstrate how the District will expedite attainment of the state eight-hour ozone standard. The plan was developed for Santa Barbara County as required by both the 1998 California Clean Air Act and the 1990 Federal Clean Air Act Amendments.

In August 2017 the District Board adopted the 2016 Clean Air Plan. The 2016 Plan provides a three-year update to the 2010 Clean Air Plan. As Santa Barbara County has yet to attain the state eight-hour ozone standard, the 2016 Clean Air Plan demonstrates how the District plans to attain that standard. The 2016 Clean Air Plan therefore satisfies all state triennial planning requirements.

7.3. *Offset Requirements*

The Imerys stationary source potential to emit exceeds the Rule 802 emission offset threshold for ROC, NO_x, SO_x, PM and PM₁₀. Imerys must therefore offset emission increases in these pollutants/precursors consistent with Rule 802.

7.4. *Emission Reduction Credits*

Please refer to Section 7.4 of main facility permit.

8.0 Lead Agency Permit Consistency

To the best of the District's knowledge, no other governmental agency's permit requires air quality mitigation.

9.0 Requirements and Equipment Specific Conditions

This section includes non-generic federally enforceable conditions including emissions and operation limits, monitoring and recordkeeping and reporting for each specific equipment group. This section may also contain other non-generic requirements.

Section 9.A lists the standard administrative conditions. Section 9.B lists ‘generic’ permit conditions, including emission standards, for all equipment in this permit. Section 9.C lists conditions affecting specific equipment. Section 9.D lists non-federally enforceable (i.e., District only) permit conditions. Conditions listed in Sections A, B and C are enforceable by the USEPA, the District, the State of California and the public. Conditions listed in Section D are enforceable only by the District and the State of California. Where any reference contained in Sections 9.A, 9.B or 9.C refers to any other part of this permit, that part of the permit referred to is federally enforceable.

Links to the permit conditions in each section are provided below.

9.A [Standard Administrative Conditions](#)

- A.1 [Compliance with Permit Conditions.](#)
- A.2 [Emergency Provisions](#)
- A.3 [Risk Management Plan](#)
- A.4 [Right of Entry](#)
- A.5 [Permit Life](#)
- A.6 [Payment of Fees](#)
- A.7 [Prompt Reporting of Deviations](#)
- A.8 [Permit Shield](#)
- A.9 [Reporting Requirements/Compliance Certification](#)
- A.10 [Federally Enforceable Conditions](#)
- A.11 [Recordkeeping Requirements](#)
- A.12 [Conditions for Permit Reopening](#)
- A.13 [Compliance](#)
- A.14 [Conflict Between Permits](#)
- A.15 [Access to Records and Facilities](#)
- A.16 [Equipment Identification](#)
- A.17 [Emission Factor Revisions](#)
- A.18 [Grounds for Revocation](#)
- A.19 [Transfer of Owner/Operator](#)
- A.20 [Reimbursement of Costs](#)

9.B [Generic Conditions](#)

- B.1 [Circumvention \(Rule 301\)](#)
- B.2 [Visible Emissions \(Rule 302\)](#)
- B.3 [Nuisance \(Rule 303\)](#)
- B.4 [PM Concentration – Northern Zone \(Rule 304\)](#)
- B.5 [Dust and Fumes - North Zone \(Rule 306\)](#)
- B.6 [Specific Contaminants \(Rule 309\)](#)
- B.7 [Sulfur Content of Fuels \(Rule 311\)](#)
- B.8 [Organic Solvents \(Rule 317\)](#)
- B.9 [Solvent Cleaning Operations \(Rule 321\)](#)

- B.11 [Architectural Coatings \(Rule 323\)](#)
- B.12 [Disposal and Evaporation of Solvents \(Rule 324\)](#)
- B.13 [Motor Vehicle and Mobile Equipment Coating Operations \(Rule 339\)](#)
- B.14 [CARB Registered Portable Equipment](#)
- B.15 [Rule 360 Compliance.](#)
- 9.C [Requirements and Equipment Specific Conditions](#)
 - C.1 [Baghouses](#)
 - C.2 [SOx Gas Absorption Tower \(Scrubber\)](#)
 - C.3 [Combustion Equipment](#)
 - C.4 [Material Handling and Processing Equipment](#)
 - C.5 [Packing Stations](#)
 - C.6 [Research and Development Activity](#)
 - C.7 [Semi-Annual Monitoring/Compliance Verification Reports](#)
 - C.8 [Source Testing](#)
 - C.9 [Equipment Operation and Maintenance](#)
 - C.10 [Diesel and Gasoline Engine NOx and Particulate Matter Maintenance Plan](#)
 - C.11 [40 CFR Part 64 - Compliance Assurance Monitoring \(CAM\)](#)
- 9.D [District-Only Conditions](#)
 - D.1 [Diesel Internal Combustion Engines](#)

9.A Standard Administrative Conditions

A.1 Compliance with Permit Conditions.

- (a) The permittee shall comply with all permit conditions in Sections 9.A, 9.B and 9.C.
- (b) This permit does not convey property rights or exclusive privilege of any sort.
- (c) Any permit noncompliance with sections 9.A, 9.B, or 9.C constitutes a violation of the Clean Air Act and is grounds for enforcement action; for permit termination, revocation and re-issuance, or modification; or for denial of a permit renewal application.
- (d) It shall not be a defense for the permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.
- (e) A pending permit action or notification of anticipated noncompliance does not stay any permit condition.
- (f) Within a reasonable time period, the permittee shall furnish any information requested by the Control Officer, in writing, for the purpose of determining:
 - (1) compliance with the permit, or
 - (2) whether or not cause exists to modify, revoke and reissue, or terminate a permit or for an enforcement action.
- (g) In the event that any condition herein is determined to be in conflict with any other condition contained herein, then, if principles of law do not provide to the contrary, the condition most protective of air quality and public health and safety shall prevail to the extent feasible. *[Re: 40 CFR Part 70.6.(a)(6), District Rules 1303.D.1]*

A.2 Emergency Provisions. The permittee shall comply with the requirements of the District, Rule 505 (Upset/Breakdown rule) and/or District Rule 1303.F, whichever is applicable to the emergency situation. In order to maintain an affirmative defense under Rule 1303.F, the permittee shall provide the District, in writing, a “notice of emergency” within two (2) working days of the emergency. The “notice of emergency” shall contain the information/documentation listed in Sections (1) through (5) of Rule 1303.F. *[Re: 40 CFR 70.6(g), District Rule 1303.F]*

A.3 Risk Management Plan. Should the Imerys facility, as defined in 40 CFR 68.3, become subject to part 68, then the owner or operator shall submit a risk management plan (RMP) by the date specified in 40 CFR 68.10. The facility shall certify compliance as part of the annual certification as required by 40 CFR part 70. *[40 CFR 68.10]*

A.4 Right of Entry. The Regional Administrator of USEPA, the Control Officer, or their authorized representatives, upon the presentation of credentials, shall be permitted to enter upon the premises where a Part 70 Source is located or where records must be kept:

- (a) To inspect the stationary source, including monitoring and control equipment, work practices, operations, and emission-related activity;
 - (b) To inspect and duplicate, at reasonable times, records required by this Permit to Operate;
 - (c) To sample substances or monitor emissions from the source or assess other parameters to assure compliance with the permit or applicable requirements, at reasonable times. Monitoring of emissions can include source testing. *[Re: District Rule 1303.D.2]*
- A.5 **Permit Life.** The Part 70 permit shall become invalid three years from the date of issuance unless a timely and complete renewal application is submitted to the District. Any operation of the source to which this Part 70 permit is issued beyond the expiration date of this Part 70 permit and without a valid Part 70 operating permit (or a complete Part 70 permit renewal application) shall be a violation of the CAAA, § 502(a) and 503(d) and of the District rules. *[Re: District Rule 13012]*
- A.6 **Payment of Fees.** The permittee shall reimburse the District for all its Part 70 permit processing and compliance expenses for the stationary source on a timely basis. Failure to reimburse on a timely basis shall be a violation of this permit and of applicable requirements and can result in forfeiture of the Part 70 permit. Operation without a Part 70 permit subjects the source to potential enforcement action by the District and the USEPA pursuant to section 502(a) of the Clean Air Act. *[Re: District Rules 1303.D.1 and 1304.D.11, 40 CFR 70.6(a)(7)]*
- A.7 **Prompt Reporting of Deviations.** The permittee shall submit a written report to the District documenting each and every deviation from the requirements of this permit or any applicable federal requirements within seven (7) days after discovery of the violation, but not later than 6 months after the date of occurrence. The report shall clearly document 1) the probable cause and extent of the deviation 2) equipment involved, 3) the quantity of excess pollutant emissions, if any, and 4) actions taken to correct the deviation. The requirements of this condition shall not apply to deviations reported to District in accordance with Rule 505. Breakdown Conditions, or Rule 1303.F Emergency Provisions. *[District Rule 1303.D.1, 40 CFR 70.6(a) (3)]*
- A.8 **Permit Shield.** As indicated by section 1.6.4 of this permit Imerys did not request a permit shield for the Celpure Plant. *[District Rule 1303]*
- A.9 **Reporting Requirements/Compliance Certification.** The permittee shall submit compliance certification reports to the USEPA and the Control Officer every six months. These reports shall be submitted on District approved forms and shall identify each applicable requirement/condition of the permit, the compliance status with each requirement/condition, the monitoring methods used to determine compliance, whether the compliance was continuous or intermittent, and include detailed information on the occurrence and correction of any deviations from permit requirement. The reporting periods shall be each half of the calendar year, e.g., January through June for the first half of the year. These reports shall be submitted by September 1st and March 1st, respectively, each year. Supporting monitoring data shall be submitted in accordance with the “Semi-Annual Compliance Verification Report” condition in Section 9.C. The permittee shall include a written statement from the responsible official, which certifies the truth, accuracy, and completeness of the reports. *[Re: District Rules 1303.D.1, 1302.D.3, 1303.2.c]*

- A.10 **Federally Enforceable Conditions.** Each federally enforceable condition in this permit shall be enforceable by the USEPA and members of the public. None of the conditions in the District-only enforceable section of this permit are federally enforceable or subject to the public/USEPA review. [*Re: CAAA § 502(b)(6), 40 CFR 70.6(b)*]
- A.11 **Recordkeeping Requirements.** The permittee shall maintain records of required monitoring information that include the following:
- (a) The date, place as defined in the permit, and time of sampling or measurements;
 - (b) The date(s) analyses were performed;
 - (c) The company or entity that performed the analyses;
 - (d) The analytical techniques or methods used;
 - (e) The results of such analyses; and
 - (f) The operating conditions as existing at the time of sampling or measurement;
 - (g) The records (electronic or hard copy), as well as all supporting information including calibration and maintenance records, shall be maintained for a minimum of five (5) years from date of initial entry by the permittee and shall be made available to the District upon request. [*Re: District Rule 1303.D.1.f, 40 CFR 70.6(a)(3)*]
- A.12 **Conditions for Permit Reopening.** The permit shall be reopened and revised for cause under any of the following circumstances:
- (a) Additional Requirements: If additional applicable requirements (e.g., NSPS or MACT) become applicable to the source which has an unexpired permit term of three (3) or more years, the permit shall be reopened. Such a reopening shall be completed no later than 18 months after promulgation of the applicable requirement. However, no such reopening is required if the effective date of the requirement is later than the date on which the permit is due to expire, unless the original permit or any of its terms and conditions has been extended. All such re-openings shall be initiated only after a 30 day notice of intent to reopen the permit has been provided to the permittee, except that a shorter notice may be given in case of an emergency.
 - (b) Inaccurate Permit Provisions: If the District or the USEPA determines that the permit contains a material mistake or that inaccurate statements were made in establishing the emission standards or other terms or conditions of the permit, the permit shall be reopened. Such re-openings shall be made as soon as practicable.
 - (c) Applicable Requirement: If the District or the USEPA determines that the permit must be revised or revoked to assure compliance with any applicable requirement including a federally enforceable requirement, the permit shall be reopened. Such re-openings shall be made as soon as practicable.
 - (d) Administrative procedures to reopen a permit shall follow the same procedures as apply to initial permit issuance. Re-openings shall affect only those parts of the permit for which cause to reopen exists.
 - (e) If a permit is reopened, the expiration date does not change. Thus, if the permit is reopened, and revised, then it will be reissued with the expiration date applicable to the re-opened permit. [*Re: 40 CFR 70.7(f), 40 CFR 70.6(a)*]

- A.13 **Compliance.** Nothing contained within this permit shall be construed as allowing the violation of any local, state or federal rules, regulations, air quality standards or increments.
- A.14 **Conflict Between Permits.** The requirements or limits that are more protective of air quality shall apply if any conflict arises between the requirements and limits of this permit and any other permitting actions associated with the equipment permitted herein.
- A.15 **Access to Records and Facilities.** As to any condition that requires for its effective enforcement the inspection of records or facilities by the District or its agents, the permittee shall make such records available or provide access to such facilities upon notice from the District. Access shall mean access consistent with California Health and Safety Code Section 41510 and Clean Air Act Section 114A.
- A.16 **Equipment Identification.** Identifying tag(s) or name plate(s) shall be displayed on the equipment to show manufacturer, model number, and serial number. The tag(s) or plate(s) shall be issued by the manufacturer and shall be affixed to the equipment in a permanent and conspicuous position.
- A.17 **Emission Factor Revisions.** The District may update the emission factors for any calculation based on USEPA AP-42 or District emission factors at the next permit modification or permit reevaluation to account for USEPA and/or District revisions to the underlying emission factors.
- A.18 **Grounds for Revocation.** Failure to abide by and faithfully comply with this permit shall constitute grounds for the APCO to petition for permit revocation pursuant to Health and Safety Code section 42307 *et seq.* [Ref: Rule 1303]
- A.19 **Transfer of Owner/Operator.** This permit is only valid for the owner and operator listed on this permit unless a *Transfer of Owner/Operator* application has been applied for and received by the District. Any transfer of ownership or change in operator shall be done in a manner as specified in District Rule 203. District Form –01T and the appropriate filing fee shall be submitted to the District within 30 days of the transfer.
- A.20 **Reimbursement of Costs.** All reasonable expenses, as defined in District Rule 210, incurred by the District, District contractors, and legal counsel for the activities listed below that follow the issuance of this permit, including but not limited to permit condition implementation, compliance verification and emergency response, directly and necessarily related to enforcement of the permit shall be reimbursed by the permittee as required by Rule 210. Reimbursable activities include work involving: permitting, compliance, CEMS, modeling/AQIA, ambient air monitoring and air toxics.

9.B Generic Conditions

The generic conditions listed below apply to all emission units, regardless of their category or emission rates. These conditions are federally enforceable. These rules apply to the equipment and operations at the Celpure Plant part of the facility as they currently exist. Compliance with these requirements is discussed in Section 3.4.2. In the case of a discrepancy between the wording of a condition and the applicable District rule, the wording of the rule shall control.

- B.1 **Circumvention (Rule 301).** A person shall not build, erect, install, or use any article, machine, equipment or other contrivance, the use of which, without resulting in a reduction in

the total release of air contaminants to the atmosphere, reduces or conceals an emission which would otherwise constitute a violation of Division 26 (Air Resources) of the Health and Safety Code of the State of California or of these Rules and Regulations. This Rule shall not apply to cases in which the only violation involved is of Section 41700 of the Health and Safety Code of the State of California, or of District Rule 303. [*Re: District Rule 301*]

- B.2 Visible Emissions (Rule 302).** Imerys shall not discharge into the atmosphere from any single source of emission any air contaminants for a period or periods aggregating more than three minutes in any one hour which is:
- (a) As dark or darker in shade as that designated as No. 1 on the Ringelmann Chart, as published by the United States Bureau of Mines, or
 - (b) Of such opacity as to obscure an observer's view to a degree equal to or greater than does smoke described in subsection B.2.(a) above.
 - (c) Imerys shall determine compliance with this Rule for the emergency generator as specified below:
 - (i) Once per calendar quarter when operational, Imerys shall perform a visible emissions inspection for a one-minute period on the emergency generator. If visible emissions are detected during any inspection, then a USEPA Method 9 visible emission evaluations (VEE) shall immediately be performed for a six-minute period. Imerys staff certified in VEE shall perform the VEE and maintain logs in accordance with USEPA Method 9. The start-time and end-time of each visible emissions inspection shall be recorded in a log, along with a notation identifying whether visible emissions were detected.
 - (d) All VEE sheets and records shall be maintained consistent with the recordkeeping condition of this permit. [*Re: District Rule 302*].
- B.3 Nuisance (Rule 303).** No pollutant emissions from any source at Imerys shall create nuisance conditions. No operations shall endanger health, safety or comfort, nor shall they damage any property or business. [*Re: District Rule 303*]
- B.4 PM Concentration – Northern Zone (Rule 304).** Imerys shall not discharge into the atmosphere, from any source, particulate matter in excess of 0.3 grain per cubic foot of gas at standard conditions. [*Re: District Rule 304*]
- B.5 Dust and Fumes - North Zone (Rule 306).** Imerys shall not discharge into the atmosphere, from any source, particulate matter in excess of the concentrations listed in Table 306 (a) of Rule 306. [*Re: District Rule 306*]
- B.6 Specific Contaminants (Rule 309).** Imerys shall not discharge into the atmosphere from any single source, sulfur compounds or combustion contaminants in excess of the applicable standards listed in Sections A and E of Rule 309. [*Re: District Rule 309*].
- B.7 Sulfur Content of Fuels (Rule 311).** Imerys shall not burn fuels with a sulfur content in excess of 0.5% (by weight) for liquid fuels and 796 ppmvd or 50 gr/100scf (calculated as H₂S)

for gaseous fuel. *[Re: District Rule 311]* Imerys shall demonstrate compliance and maintain records for the different fuel types as follows:

- (a) Fuel oil #6; The permittee shall comply with (i) or (ii)
 - (i) For each calendar year in which #6 fuel oil was used, Imerys shall obtain the total sulfur content of the liquid fuel measured in accordance with ASTM D-2622, D-129, D-1552 or an equivalent reference method which has been previously approved, in writing, by the District.
 - (ii) Imerys shall maintain written documentation of the total sulfur content of the fuel on a per shipment or quarterly basis. Such documentation shall consist of at least one of the following: vendor certification, vendor bill of lading, vendor laboratory analysis, or equivalent reference testing results which have prior written District approval.
- (b) Diesel oil and gasoline; The permittee shall comply with (i) or (ii)
 - (i) Annually, Imerys shall obtain measurements of the total sulfur content of the liquid fuel in accordance with ASTM D-2622, D-129, D-1552 or an equivalent reference method which has been previously approved, in writing, by the District.
 - (ii) Imerys shall maintain written documentation of the total sulfur content of the fuel on a per shipment basis or quarterly basis. Such documentation shall consist of at least one of the following: vendor certification, vendor bill of lading, vendor laboratory analysis, or equivalent reference testing results which have prior written District approval.
- (c) Natural gas: Imerys shall maintain billing records or other data showing that the fuel gas is obtained from a natural gas utility. These records shall be obtained at least annually.. *[Re: District Rule 311]*

B.8 **Organic Solvents (Rule 317).** Imerys shall comply with the emission standards listed in Section B of Rule 317. *[Re: District Rule 317]*

B.9 **Solvent Cleaning Operations (Rule 321).** Imerys shall comply with the operating requirements of this rule when performing solvent cleaning operations unless relieved by rule exemption. *[Re: District Rule 321]*

B.10 **Metal Surface Coating Thinner and Reducer (Rule 322).** The use of photochemically reactive solvents as thinners or reducers in metal surface coatings is prohibited. *[Re: District Rule 322]*

B.11 **Architectural Coatings (Rule 323).** Imerys shall comply with the coating ROC content and handling standards listed in Section D of Rule 323 as well as the Administrative requirements listed in Section F of Rule 323. *[Re: District Rules 323]*

B.12 **Disposal and Evaporation of Solvents (Rule 324).** Imerys shall not dispose through atmospheric evaporation of more than one and a half gallons of any photochemically reactive solvent per day. *[Re: District Rule 324]*

B.13 **Motor Vehicle and Mobile Equipment Coating Operations (Rule 339).** Imerys shall comply with the requirements of this rule when performing coating operations unless relieved by rule exemption. *[Re: District Rule 339]*

- B.14 **CARB Registered Portable Equipment.** State registered portable equipment shall comply with State registration requirements. A copy of the State registration shall be readily available whenever the equipment is at the facility. *[Re: District Rule 202]*
- B.15 **Rule 360 Compliance.** Any boiler or hot water heater rated at or less than 2.000 MMBtu/hr and manufactured and/or installed after October 17, 2003 shall be certified per the provisions of Rule 360 (as revised on March 15, 2018). An ATC/PTO permit shall be obtained prior to installation of any grouping of Rule 360 applicable boilers or hot water heaters whose combined system design heat input rating exceeds 2.000 MMBtu/hr *[Ref: District Rule 360]*

9.C Requirements and Equipment Specific Conditions

- C.1 **Baghouses.** The following equipment are included in this emissions unit category:

Device Name	District DeviceNo
<i>Capture System</i>	
Crude Bin Ventilation Baghouse	8073
Soda Ash Bin Baghouse	8074
Kiln Feed (Calcliner Surge) Bin Bahouse	8075
Flash Cooler Baghouse	8076
Second Stage Dryer Baghouse	8077
Packing Station Baghouse	8078
Refeed Station Baghouse	8079
1st Stage (Flotation) Dryer Baghouse	8082
Kiln (Calcliner) Exhaust Baghouse	8083

- (a) Emission Limits: Except as noted below, mass emissions from the baghouses shall not exceed the limits listed in Tables 5.3 and 5.4. Compliance with this condition shall be based on the monitoring, recordkeeping, and reporting conditions in this permit.
- (i) Emissions from the Packing Station baghouse shall not exceed 1.48 lb/day and 0.257 tpy of PM/PM₁₀ emissions. *[Ref: ATC 11007]*.
- (b) Operational Limits: The baghouses shall not exceed the following operational limits:
- (i) The baghouses shall not exceed the opacity limits specified in Table 9.1.
- (ii) The baghouses shall not exceed the exhaust flow rate and hours of operation specified in Table 9.1.
- (iii) *Pressure Drop* - The baghouses shall operate at all times within the pressure drop range specified in Table 9.2.

Table 9.1 Equipment Exhaust Flow, Opacity, and Operating Limits

Equipment Item	District DeviceNo	NSPS	NSPS Opacity Limit	Exhaust Flowrate Limit	Schedule		
					(hr/day)	(hr/qtr)	(hr/yr)
Crude Bin Ventilation Baghouse	8073	OOO	7%	2,811	24	2,190	8,760
Soda Ash Bin Baghouse	8074	OOO	7%	600	12	104	416
Kiln Feed (Calcliner Surge) Bin Baghouse	8075	OOO	0%	2,800	24	2,081	8,322
Flash Cooler Baghouse	8076	OOO	0%	2,793	24	2,081	8,322
Second Stage Dryer Baghouse	8077	OOO	7%	8,134	24	2,081	8,322
Packing Station Baghouse	8078	OOO	0%	1,441	24	2,081	8,322
Refeed Station Baghouse	8079	OOO	7%	2,397	24	1,500	6,000
1st Stage (Flotation) Dryer Baghouse	8082	Exempt	None	6,150	24	2,081	8,322
Kiln (Calcliner) Exhaust Baghouse	8083	UUU	10%	6,700	24	2,081	8,322

Table 9.2 Baghouse Pressure Ranges

Device Name	District DeviceNo	Pressure Drop	
		(inches of H ₂ O)	
		(Minimum)	(Maximum)
Crude Bin Ventilation Baghouse	8073	1	10
Soda Ash Bin Baghouse	8074	1	10
Kiln Feed (Calcliner Surge) Bin Bahouse	8075	1	6
Flash Cooler Baghouse	8076	1	6
Second Stage Dryer Baghouse	8077	1	6
Packing Station Baghouse	8078	1	6
Refeed Station Baghouse	8079	1	10
1st Stage (Flotation) Dryer Baghouse	8082	1	6
Kiln (Calcliner) Exhaust Baghouse	8083	1	6

- (c) Monitoring: The equipment listed in this section are subject to the following monitoring requirements:

- (i) *Baghouse Maintenance and Inspection:* Imerys shall follow the Baghouse Maintenance Plan (approved 17, 1998) and any subsequent District-approved revisions. In addition, Imerys shall comply with the following:
- (ii) *Visible Emission Observations:* For all baghouses in Table 9.1, Imerys shall observe baghouses daily when operational. On any day a baghouse is not operating, Imerys shall have a responsible person make a written entry in the applicable baghouse operation log noting that the baghouse was not in operation. The responsible person shall certify the entry by initialing or signing their name next to the entry. Imerys shall perform a visual inspection of each baghouse and baghouse exhaust once per day. If visible emissions are observed during the daily observation, corrective action shall be immediately implemented. If visible emissions are not eliminated within 24 hours, Imerys shall shut down the equipment controlled by the baghouse until corrective action that eliminates visible emissions is completed or obtain a variance from the District Hearing Board.
- (iii) *Visible Emissions Inspections (Method 9:* Once each quarter Imerys shall use EPA Method 9 performed by a certified observer to obtain a reading of visible emissions from the stack of each baghouse listed in Table 9.1 with an opacity limit of 7% . The Method 9 readings when the baghouse is operating due to operation of some or all of the equipment it serves.
- (iv) *Visible Emissions Inspections (Method 22).* Once each calendar quarter Imerys shall perform a Method 22 fugitive visible emission inspection on the baghouses listed in Table 9.1 with an NSPS Opacity Limit of 0% (zero percent; no visible emissions). Each inspection shall be a 30 minute period while the equipment it services is in operation. The test is successful if no visible emissions are observed. If any visible emissions are observed, Imerys shall initiate corrective action within 24 hours to return the baghouse to normal operation.. [Ref ATC 14901, 14848, 14942, 15077]
- (v) *Pressure Drop:* When operating, Imerys shall perform daily observations of the pressure drop across the baghouses. Any time this differential pressure falls outside the ranges listed in Table 9.2 with the collector in operation, corrective action shall be taken.
- (vi) *Maintenance Plan:* The baghouses shall be maintained consistently with manufacturer recommended weekly, monthly and annual maintenance practices listed in the manufacturer literature submitted to the District (located in the project file) and any manufacturer's supplements. Such supplements shall be provided to the District upon implementation by Imerys, and shall be effective unless the District objects in writing within 14 days of receipt of the manufacturer's supplement. [Ref: ATC 9757-01; 40 CFR 70.6]
- (vii) *Hours of Operation:* The hours of operation for each baghouse shall be monitored using a nonresettable hour meter. In addition, Imerys shall monitor the daily hours of operation of the Soda Ash Baghouse and the Crude Bin Vent Baghouse in accordance with the *Process Monitor Plan for PTO Mod 5840-07, including 345BH and 773BH* (approved 5/27/2010). [Ref: ATC 13544]

- (d) Recordkeeping: For any condition that requires for its effective enforcement, inspection of facility records or equipment by the District or its agents, the permittee shall make such records available or provide access to such equipment upon notice from the District. Access to facilities shall mean access consistent with the California Health and Safety Code Section 41510 and Clean Air Act Section 114(a). At a minimum, the following records (electronic or manual) shall be maintained by the permittee and shall be made available to the District upon request:
- (i) On a daily basis, when the equipment is in use: Indication of whether the pressure drop across each baghouse is within the operating range set forth in Condition 9.C.1, to the nearest half inch of water column or equivalent gauge. The range shall be specified on the form. If the pressure drop is outside the range, the actual readings and all corrective actions required by Conditions 9.C.1(c)(v) shall be recorded.
 - (ii) *Visible Emission Observations* – For all baghouses, Imerys shall record whether or not daily visible emissions are present along with the corrective action taken, or the date and initials of a responsible person when the baghouse is not operational.
 - (iii) *Visible Emission Inspection (Method 9)* - For all baghouses readings obtained by the use of USEPA Method 9 and USEPA Method 22 maintain a record of the date and time of reading, name of reader, most recent Method 9 certification date of reader, baghouse name, individual interval readings required by Method 9 and Method 22, and the final reading.
 - (iv) *Hours of Operation*. The daily hours of operation of the Soda Ash Baghouse and the Crude Bin Vent Baghouse.
 - (v) *Malfunction/Maintenance*; For all baghouse malfunctions and maintenance activities: Date of breakdown, malfunction, or preventive maintenance activity; Description of activity; Date and time malfunction or maintenance is completed.
- (e) Reporting: On a semi-annual basis, a report detailing the previous six month's activities shall be provided to the District. The report must list all data required by the *Compliance Verification Reports* condition of this permit.
- (f) Baghouse Bag Alternate Materials. Imerys may install baghouse bags comprised of materials other than those listed on the applicable permit(s) after first obtaining District approval. Imerys shall obtain District approval prior to installing an alternate bag material each time an alternate material will be installed. To obtain District approval for alternate bag material(s), Imerys shall submit a request, in writing, that includes all of the following [Ref: ATC/PTO 13432]:
- (i) A description of the current baghouse bag material and the proposed alternate baghouse bag material. This description should focus on the differences between the bag materials, and explain the reason(s) for the change in material.
 - (ii) Baghouse bag manufacturer's product specification data sheet, or if not available, specifics on the bag material composition, permeability and temperature operating

range. Also specify if the total fabric area or air to cloth ratio will change from the current baghouse configuration.

- (iii) Baghouse bag manufacturer's emissions statement and/or guarantee.

The District will review all information submitted and issue a written approval or denial of each alternate material baghouse bag request. Imerys may not install any alternate material baghouse bags until first receiving a written approval from the District. Imerys shall adhere to any conditions of approval for alternate material baghouse bags, including source testing if required.

- (g) Baghouse Access Doors. Imerys may install baghouse access doors on the Flash Cooler Baghouse (DeviceNo 8076) and the Second Stage Dryer Baghouse (DeviceNo. 8077). The access doors permitted herein are subject to the following [Ref: ATC/PTO 13478]:

- (i) The baghouse access doors shall be installed and maintained such that when the door is in the closed position, it creates an air-tight seal with the body of the baghouse.
- (ii) The baghouse access doors shall remain in the closed position whenever the baghouse is in operation.

Imerys shall obtain additional District permits for the installation of access doors on any other baghouse at the Imerys stationary source.

C.2 SOx Gas Absorption Tower (Scrubber). The following equipment are included in this emissions unit category:

Device Name	District DeviceNo
<i>Scrubbers</i>	
350 (1st Stage Dryer) Scrubber	106243
370 (Calcining and Leaching) Scrubber	106242

- (a) Emission Limits: Mass emission limits from the scrubbers shall not exceed the limits listed in Table 5.3 and Table 5.4. Compliance with this condition shall be based on the monitoring, recordkeeping, and reporting conditions in this permit.
- (b) Operational Limits: The gas absorption tower and associated process monitors (e.g. pH meter, flow meters, manometers, and gauges) shall be operated, calibrated, and maintained according to manufacturer recommended procedures and schedules.
 - (i) The scrubbers serving the Celpure™ Plant shall be subject to the operating limits defined in Table 9.3.

Table 9.3 Scrubber Operational Limits¹⁰

Device Name	District DeviceNo	Parameter	Limit	Units
350 (1st Stage Dryer) Scrubber	106243			
		Solvent pH range (high/low)	9 to 11	pH
		Minimum Solvent Flow Rate	95	gallons/minute
		Maximum Pressure Drop	10.5	inches of H ₂ O
		Maximum pollutant gas inlet flow rate	6,150	ACFM @212°F
		Maximum annual operating schedule	8,322	hours/year
370 (Calcining and Leaching) Scrubber	106242			
		Solvent pH range (high/low)	9 to 11	pH
		Minimum Solvent Flow Rate	95	gallons/minute
		Maximum Pressure Drop	10	inches of H ₂ O
		Maximum pollutant gas inlet flow rate	6,700	ACFM @375°F
		Maximum annual operating schedule	8,322	hours/year

- (ii) The permittee shall comply with the District approved *SO_x Gas Absorption Tower and Process Monitor Calibration and Maintenance Plan* (last updated 5/12/1999).
- (iii) *BACT - SO_x Gas Absorption Tower.* The permittee shall apply emission control technology and plant design measures that represent Best Available Control Technology (“BACT”) to the operation of the equipment/facilities as described in this permit and the District’s *Engineering Evaluation* for this permit for the control of oxides of sulfur. Table 9.4 defines the specific control technology and performance standard emission limits for BACT. BACT shall be in place, and shall be operational at all times, for the life of the project. [Ref: ATC 9757-01; PTO 10745-01]

Table 9.4 SO_x Gas Absorption Tower BACT^{11, 12}

Source	Process Line	Control Technology	Pollutants	Emission Limit/Performance Standard
Kiln (Calciner)	Celpure™	Gas Absorption Tower - 370 (Calcining/Leaching) Scrubber	SO _x (as SO ₂)	99 percent destruction rate efficiency (mass basis) based on manufacturer’s guarantee or 1.00 ppmv SO _x exhaust outlet concentration.
Leach/Slurry Tanks	Celpure™	Gas Absorption Tower - 370 (Calcining/Leaching) Scrubber	SO _x (as SO ₂)	Based on the maximum flow rate for this unit of 6700 scfm, a maximum concentration of 1.00 ppm SO _x results in a maximum mass emission rate of 0.1 lb/hr SO _x .
1st Stage Dryer	Celpure™	Gas Absorption Tower - 350 (1st Stage Drying) Scrubber	SO _x (as SO ₂)	99 percent destruction rate efficiency (mass basis) based on manufacturer’s guarantee or 1.00 ppmv SO _x exhaust outlet concentration.

(c) Monitoring:

- (i) The hours of operation for the scrubbers and the floatation dryer shall be monitored using a nonresettable hour meter.

¹⁰ These pressure drops are consistent with manufacturer recommendations, as well as, source test data that show compliance at these limits. The District will consider increasing these limits upon demonstration of compliance with permitted efficiency requirements for the scrubbers at these increased limits via source testing.

¹¹ Each control system is subject to the maintenance schedule as identified in the *SO_x Gas Absorption Tower and Process Monitor Calibration and Maintenance Plan*

¹² Process monitoring required for: Solvent pH, solvent flow rate, and pressure drop across each control device.

- (ii) *SO_x Gas Absorption Towers (Scrubbers)*: The permittee shall continuously monitor the following Scrubber process parameters:
 - (1) solvent pH,
 - (2) solvent flow rate, and
 - (3) pressure drop.
- (iii) *Visible Emission Observations*: Imerys shall observe the 350 (1st stage drying) scrubber and the 370 (calcining/leaching) scrubber daily when operational. On any day a scrubber is not operating, Imerys shall have a responsible person make a written entry in the applicable scrubber operation log noting that the scrubber was not in operation. The responsible person shall certify the entry by initialing or signing their name next to the entry. Imerys shall perform a visual inspection of each scrubber and scrubber exhaust once per day. If visible emissions are observed during the daily observation, corrective action shall be immediately implemented. If visible emissions are not eliminated within 24 hours, Imerys shall shut down the equipment controlled by the scrubber until corrective action that eliminates visible emissions is completed or obtain a variance. [Ref: ATC 9757-01; CFR 40 70.6]
- (iv) *Visible Emissions Inspection (Method 9)*: Once each calendar quarter Imerys shall use EPA Method 9 performed by a certified observer to obtain a reading of visible emissions from the stack of each scrubber. The Method 9 readings shall be taken in calendar quarters during which the scrubber(s) operated and shall be taken when the scrubber(s) are operating due to operation of some or all of the equipment they serve. If visible emissions are observed during the quarterly Method 9 inspection, corrective action shall be immediately implemented. If visible emissions are not eliminated within 24 hours, Imerys shall shut down the equipment controlled by the scrubber until corrective action that eliminates visible emissions is completed or obtain a variance. [Ref: ATC 9757-01; CFR 40 70.6]
- (d) Recordkeeping: For any condition that requires for its effective enforcement, inspection of facility records or equipment by the District or its agents, the permittee shall make such records available or provide access to such equipment upon notice from the District. Access to facilities shall mean access consistent with the California Health and Safety Code Section 41510 and Clean Air Act Section 114(a). At a minimum, the following records (electronic or manual) shall be maintained by the permittee and shall be made available to the District upon request:
 - (i) *Hours of Operation*: On a daily basis, when the equipment is in use, Imerys shall record the hours of operation of the Celpure™ line based on the 1st stage dryer hour meter
 - (ii) *Visible Emissions Inspection (Method 9)*: For all scrubber readings obtained by the use of USEPA Method 9 as required in this condition, i.e., date and time of reading, name of reader, most recent Method 9 certification date of reader, scrubber name, individual interval readings required by Method 9, and the final reading.

- (iii) For all scrubber malfunctions and maintenance activities: Date of breakdown, malfunction, or preventive maintenance activity; Description of activity; and the date and time malfunction or maintenance is completed.
- (iv) For the scrubbers: BACT-related recordkeeping shall consist of continuous real time recording of pH, solvent circulation flow rate, and pressure drop.
- (v) *Visible Emission Observations* – For the scrubbers, Imerys shall record whether or not daily visible emissions are present along with the corrective action taken, or the date and initials of a responsible person when the equipment associated with the scrubber is not operational.
- (vi) *Visible Emission Inspection (Method 9)* - For all scrubber readings obtained by the use of USEPA Method 9 as required by this condition, maintain a record of the date and time of reading, name of reader, most recent Method 9 certification date of reader, the scrubber inspected, individual interval readings required by Method 9, and the final reading.
- (e) Reporting: On a semi-annual basis, a report detailing the previous six month's activities shall be provided to the District. The report must list all data required by the *Compliance Verification Reports* condition of this permit.

C.3 Combustion Equipment. The following equipment are included in this emissions unit category: [Ref: ATC 9757-01, ATC 11007, and PTO 12651]

Device Name	District DeviceNo
Kiln (Calcliner)	8921
1st Stage Dryer	8920
2nd Stage Dryer	8922
Package Boiler	8923

- (a) Emission Limits: Mass emission limits from the devices listed above c shall not exceed the limits listed in Table 5.3 and Table 5.4. Compliance with this condition shall be based on the monitoring, recordkeeping, and reporting conditions in this permit.
- (b) Operational Limits:
 - (i) The kiln feedrate shall not exceed any of the values in the table below. Compliance with this condition shall be verified through the recordkeeping requirements this condition.

Peak Kiln Feed Rate of DE	
Pounds per hour	1500
Pounds per day	36000
Tons per year	2268

- (ii) The sulfur content of the DE feed at the points identified below shall not exceed:

Process location	Sulfur content limit
1 st Stage Dryer Inlet	0.00765 lb _S /lb _{DE}
Kiln (calciner)	0.00600 lb _S /lb _{DE}

- (iii) *Heat Input Limits.* The hourly, daily and annual heat input limits to each unit shall not exceed the values listed in Table 5.1. These limits are based on the design rating of the unit and the annual heat input value as listed in the permit application. Unless otherwise designated by the District, the following fuel content shall be used for determining compliance: Natural Gas = 1,050 Btu/scf.
 - (iv) *Public Utility Natural Gas Fuel Sulfur Limit.* The total sulfur and hydrogen sulfide (H₂S) content (calculated as H₂S at standard conditions, 60°F and 14.7 psia) of the public utility natural gas fuel shall not exceed 80 ppmv and 4 ppmv respectively. Compliance with this condition shall be based on billing records or other data showing that the fuel gas is obtained from a public utility gas company.
 - (v) *Rule 361 Compliance – Package Boiler.* The Package Boiler (DeviceNo 8923) is subject to the existing unit requirements of District Rule 361.
- (c) Monitoring:
- (i) *Diatomaceous Earth Sulfur Content Analyses* - Once every calendar quarter, Imerys shall obtain measurements of the total sulfur content of the DE according to the following requirements:
 - (1) The sulfur content of the diatomaceous earth shall be analyzed in accordance with ASTM D-5016-89 or an equivalent reference method which has been previously approved for this purpose, in writing, by the District.
 - (2) Total sulfur results shall be reported as percent by weight.
 - (3) The DE sulfur content data shall specify the location and the amount of soda ash being added during the sampling, the sulfur content results, and difference between the inlet and outlet samples.
 - (4) Once every calendar quarter, Imerys shall obtain measurements of the total sulfur content of the DE at the following points: 1st stage dryer feed stream, Kiln (calciner) feed stream, and the Kiln (calciner) exit stream. [Ref: ATC 9757-01]
 - (ii) *1st Stage Dryer Hour Meter* – Monitor the hours of operation of the Celpure line based on the 1st stage dryer hour meter.
 - (iii) *Fuel Usage.* The volume of fuel gas used in the units shall be determined by hour meter method listed below. Except for changing to the Default Rating Method, written District approval is required to change to a different method.
 - (1) Fuel Use Meter. The volume of fuel gas (in units of standard cubic feet) used shall be measured through the use of a dedicated District-approved fuel meter.

The meter shall be temperature and pressure corrected. The fuel meter shall be accurate to within five percent (5%) of the full scale reading. The meter shall be calibrated according to manufacturer's specifications and the calibration records shall be made available to the District upon request.

- (2) Hour Meter. The volume of natural gas (in units of standard cubic feet) used in the units shall be determined through the use of a dedicated District approved hour meter or District-approved electronic management system that is capable of tracking and logging the unit's time on/off. Fuel usage shall be calculated based on the actual hours of operation (hours/year) times the heat input rating of the unit (Btu/hr) and divided by the District -approved heating value of the fuel (Btu/scf).
- (3) Default Rating Method. The volume of natural gas (in units of standard cubic feet) used shall be reported as permitted annual heat input limit for the unit (Btu/year) divided by the District-approved heating value of the fuel (Btu/scf).
- (d) Recordkeeping: For any condition that requires for its effective enforcement, inspection of facility records or equipment by the District or its agents, the permittee shall make such records available or provide access to such equipment upon notice from the District. Access to facilities shall mean access consistent with the California Health and Safety Code Section 41510 and Clean Air Act Section 114(a). At a minimum, the following records (electronic or manual) shall be maintained by the permittee and shall be made available to the District upon request:
 - (i) On a daily basis, when the equipment is in use: The total monthly DE feed (wet) to the 1st stage (flotation) dryer.
 - (ii) *Diatomaceous Earth Sulfur Content Analyses* - Results of quarterly DE sulfur sampling analysis including: sulfur content, amount and location of soda ash added and the difference in the sulfur concentration between inlet and outlet samples.
 - (iii) *Hours of Operation* – Total hours of operation of each unit summarized monthly and annually. In addition the hours of operation of the Celpure™ line shall be recorded based on the 1st stage dryer hour meter.
 - (iv) *Fuel Use*. The volume of fuel gas used by each unit each year (in units of standard cubic feet) as determined by the fuel use monitoring condition above.
 - (v) *Maintenance Logs*. Maintenance logs for the units and hour meters (as applicable).
- (e) Reporting: On a semi-annual basis, a report detailing the previous six month's activities shall be provided to the District. The report must list all data required by the *Compliance Verification Reports* condition of this permit.

C.4 **Material Handling and Processing Equipment.** The requirements in this section apply only to equipment installed in this permit subject to NSPS Subpart OOO, which include the following equipment:

Device Name	District DeviceNo
<i>Group 1</i>	
Hammermill	106226
Crude Bin	106227
Metering Belt Conveyor	106229
Detritor	108260
Transfer Belt Conveyor	106228
Soda Ash Bin	106237
Soda Ash Mill	106239
Kiln Feed (Calcliner Surge) Bin	106241
<i>Group 2</i>	
Celpure Storage Silo #1	387094
Celpure Storage Silo #2	387100
Semi Dense Phase Conveyor	387103
Belt Conveyor 1	387107
Belt Conveyor 2	387108
Detritor	387109
Elevator	387111
Gravity Diverter	387113
Celpure Discharge Silo #1	386354
Celpure Discharge Silo #2	386355
Celpure Discharge Silo #3	386356
Celpure Discharge Silo #4	386357

(a) Operational Limits:

(i) Group 1 - The permittee must maintain one of the following operational limits:

- (1) Fugitive emissions from the equipment shall not exceed 10% opacity, or
- (2) No visible fugitive emissions shall be emitted from the building enclosing these operations.

(ii) Group 2 - The permittee must maintain the following operational limits

- (1) The six silos shall be closed to the atmosphere and vented to the Celpure Flash Cooling Baghouse (device ID 8076), and
- (2) Fugitive emissions from equipment permitted herein shall not exceed 7% opacity. No visible fugitive emissions shall be emitted from any building or structure enclosing this permitted equipment. [ATC 14383 and ATC 14044]

(b) Monitoring:

- (i) *Visible Emissions Inspections (Method 22)* - Once each calendar quarter, Imerys shall use EPA Method 22 to obtain a reading of visible emissions from buildings subject to Conditions C.4.(a)(i)(2), and C.4.(a)(ii)(2). The Method 22 readings shall be a minimum of six minutes and taken when the equipment is operating due

to operation of some or all of the equipment it serves

- (ii) *Visible Emissions Inspections (Method 9)* - For equipment subject the 10% and 7% opacity limits per Conditions C.4.(a)(i)(1) and C.4.(a)(ii)(2), Imerys shall perform a quarterly fugitive visible emission inspection for a one minute period on such equipment. If visible emissions are detected, then a USEPA Method 9 visible emission evaluation (VEE) shall immediately be performed for a six-minute period. Imerys' staff certified in VEE shall perform the VEE and maintain logs in accordance with EPA Method 9 . [ATC 14383 and ATC 14044]
- (c) Recordkeeping:
 - (i) *Visible Emissions Inspections (Method 22)* -For all USEPA Method 22 inspections Imerys shall record the following: date and time of reading, name of reader, equipment item and whether fugitive emissions were observed.
 - (ii) *Visible Emissions Inspections (Method 9)* - For each quarterly fugitive opacity reading record: the date and time of the reading, and whether visible emissions were observed. If a Method 9 was performed, the name and most recent Method 9 certification date of the reader, the name of the silo, the date and time of the reading, and the reading. [ATC 14383 and ATC 14044]
- (d) Reporting: On a semi-annual basis, a report detailing the previous six month's activities shall be provided to the District. The report must list all data required by the *Compliance Verification Reports* condition of this permit.

C.5 **Packing Stations.** The following equipment are included in this emissions unit category:

Device Name	District DeviceNo
Manual Packing Station	106255
Semi-Bulk Packing Station	108405

- (a) Operational Limits:
 - (i) *NSPS Fugitive Emission Limits* – Imerys shall maintain the semi-bulk packing station in compliance with the requirements of NSPS Subpart OOO via one of the two following means:
 - (1) Fugitive emissions from the semi-bulk packing station shall not exceed 10% opacity, or;
 - (2) No visible fugitive emissions shall be emitted from the building enclosing these operations.

- (ii) The primary Celpure Plant packing station and the semi-bulk packing station shall not operate simultaneously. [Ref: ATC 11007]
- (iii) The packed production rate shall not exceed any of the values in the table below. Compliance with this condition shall be verified through the recordkeeping requirements this condition.

Packaged Celpure™ Production Rate	
Pounds per hour	4800
Pounds per day	34200
Tons per year	1930

(b) Monitoring:

- (i) *Visible Emissions Inspections (Method 22)* - Once each calendar quarter, Imerys shall use EPA Method 22 to obtain a reading of visible emissions from building enclosing the semi-bulk packing station. The Method 22 readings shall be a minimum of six minutes and taken in calendar quarters during which the equipment operated. These inspections shall be taken when the equipment is operating due to operation of some or all of the equipment it serves.
- (ii) *Visible Emissions Inspections (Method 9)* - Once each quarter, Imerys shall perform a fugitive visible emission inspection for a one minute period on each semi-bulk packing station. If visible emissions are detected during any inspection, then a USEPA Method 9 visible emission evaluation (VEE) shall immediately be performed for a six-minute period. Imerys' staff certified in VEE shall perform the VEE and maintain logs in accordance with EPA Method 9. [ATC 14383 and ATC 14044]

(c) Recordkeeping:

- (i) On a daily basis, when the equipment is in use: The total product weight packed that corresponds with the hours for the 1st stage (flotation) dryer.
- (ii) *Visible Emissions Inspections (Method 22)* - For all USEPA Method 22 inspections Imerys shall record the following: date and time of reading, name of reader, equipment item and whether fugitive emissions were observed.
- (iii) *Visible Emissions Inspections (Method 9)* - For each fugitive opacity reading record: the date and time of the reading, and whether visible emissions were observed. If a Method 9 was performed, the name and most recent Method 9 certification date of the reader, the name of the silo, the date and time of the reading, and the reading.

- (d) Reporting: On a semi-annual basis, a report detailing the previous six month's activities shall be provided to the District. The report must list all data required by the *Compliance Verification Reports* condition of this permit.

C.6 Research and Development Activity. Operation of the equipment subject to this permit, (a) utilizing any additive to the DE other than the sulfuric acid, organic conditioners and frothers,

soda ash, or (b) any material other than DE as the primary raw material source, will constitute research and development activity. The following information shall be monitored and recorded. [Ref: ATC 9757-01]

- (a) Recordkeeping:
 - (i) The type of primary raw material and additives used;
 - (ii) The number of hours during the calendar year that research and development is conducted.
- (b) Reporting: On a semi-annual basis, a report detailing the previous six month's activities shall be provided to the District. The report must list all data required by the *Compliance Verification Reports* condition of this permit.

C.7 Semi-Annual Monitoring/Compliance Verification Reports. Twice a year, Imerys shall submit a compliance verification report to the District. Each report shall document compliance with all permit, rule, or other statutory requirements during the prior two calendar quarters. The first report shall cover calendar quarters 1 and 2 (January through June) and the second report shall cover calendar quarters 3 and 4 (July through December). The reports shall be submitted by March 1st and September 1st each year. Each report shall contain information necessary to verify compliance with the emission limits and other requirements of this permit and shall document compliance separately for each calendar quarter. These reports shall be submitted in hard copy and in an electronic (e.g., PDF) and computer searchable format approved by the District. Compliance with all limitations shall be documented in the submittals. All records and other supporting information not included in the report shall be available to the District upon request. "Supporting information" includes all calibration and maintenance records and all original strip-chart recordings for continuous monitoring instrumentation, and copies of all logs and reports required by the permit. The second report shall include a summary of quarterly values for the half year being reported along with the yearly total for any reporting item below that requires a value or a sum over a year. Pursuant to Rule 212, a completed *District Annual Emissions Inventory* questionnaire should be included in the annual report or submitted electronically via the District website. Imerys may use the Compliance Verification Report in lieu of the Emissions Inventory questionnaire if the format of the CVR is acceptable to the District's Emissions Inventory Group and if Imerys submits a statement signed by a responsible official stating that the information and calculations of quantifies of emissions of air pollutants presented in the CVR are accurate and complete to best knowledge of the individual certifying the statement. The report shall include the following information:

- (a) *Baghouses*
 - (i) *Visible Emission Observations.* Results of daily visible emission observations for all baghouses when emissions were detected.
 - (ii) *Visible Emission Inspections (Method 9).* For all baghouses, the results of the quarterly readings obtained by the use of USEPA Method 9, which include the date and time of reading, name of reader, most recent Method 9 certification date of reader, baghouse name, individual interval readings required by Method 9, and the final reading;

- (iii) *Pressure Drop For Baghouses Listed in Table 9.2:* The days the pressure drop is outside the range, the range, the actual readings and all corrective actions implemented as required by Condition 9.C.1(c)(v);
 - (iv) *Hours of Operation.* The annual hours of operation for each baghouse and the peak hourly per month for the Soda Ash Bin Baghouse (Device ID 8074).
- (b) *SO_x Gas Absorption Tower*
 - (i) *Visible Emission Observations.* Results of the daily visible emission observations for each scrubber.
 - (ii) *Visible Emission Inspections (Method 9).* For each scrubber, the readings obtained by the use of USEPA Method 9, which include the date and time of reading, name of reader, most recent Method 9 certification date of reader, baghouse name, individual interval readings required by Method 9, and the final reading;
 - (iii) The hours of operation of the Celpure™line based on the 1st stage (flotation) dryer hour meter;
- (c) *Combustion Equipment*
 - (i) The total monthly and annual DE feed (wet) to the 1st stage (flotation) dryer.
 - (ii) *Diatomaceous Earth Sulfur Content Analyses.* Results of quarterly DE sulfur sampling analysis including: sulfur content, amount and location of soda ash added and the difference in the sulfur concentration between inlet and outlet samples.
 - (iii) *Hours of Operation.* Total monthly hours of operation of each unit summarized monthly and annually.
 - (iv) *Fuel Use.* The volume of fuel gas used by each unit each year (in units of standard cubic feet) as determined by the fuel use monitoring condition.
- (d) *Fugitive Emissions*
 - (i) *Visible Emission Inspections (Method 22).* The results of the quarterly Method 22 inspections required by condition 9.C.4(b)(i), including the date and time of reading, name of reader, equipment item and whether fugitive emissions were observed.
 - (ii) *Visible Emission Inspections (Method 9).* The results of the quarterly Method 9 inspections required by condition 9.C.4(b)(ii), including the date and time of reading, name of reader, most recent Method 9 certification date of reader, silo name, individual interval readings required by Method 9, and the final reading.
- (e) *Packing Stations*
 - (i) The total product weight packed that corresponds with the hours for the 1st stage (flotation) dryer.
 - (ii) *Visible Emission Inspections (Method 22).* For the semi-bulk packing station, the results of the quarterly USEPA Method 22 inspections which include the date and

time of reading, name of reader, equipment item and whether fugitive emissions were observed.

- (f) *Research and Development Activity*
 - (i) The type of primary raw material and additives used;
 - (ii) The number of hours during the calendar year that research and development is conducted.

C.8 Source Testing. Imerys shall conduct source testing of the equipment identified in Table 9.5 and Table 9.6. More frequent source testing may be required if the equipment does not comply with permitted limitations or if other compliance problems, as determined by the District, occur. Source testing shall be completed by August 1st of each year. Source test shall be performed at the maximum achievable production rate of all equipment venting to the control device being tested. The following specific conditions shall apply to the equipment required to be source tested:

- (a) 350 (1st StageDrying) and the 370 (Calcining/Leaching) scrubbers shall be tested annually for the SO_x mass emission rate and outlet concentration and/or control efficiency per Table 9.6.
- (b) One unit in Table 9.5 (including the scrubbers in Table 9.6) shall be tested biennially for PM/PM₁₀. Each unit shall be tested at least once before any unit is tested a second time. Testing shall be performed on a biennial schedule using August as the anniversary date.
- (c) The permittee shall submit a written source test plan to the District for approval at least thirty (30) days prior to initiation of each source test. The source test plan shall be prepared consistent with the District's Source Test Procedures Manual (revised May 1990 and any subsequent revisions). The permittee shall obtain written District approval of the source test plan prior to commencement of source testing. The District shall be notified at least ten (10) calendar days prior to the start of source testing activity to arrange for a mutually agreeable source test date when District personnel may observe the test.
- (d) Source test results shall be submitted to the District within forty-five (45) calendar days following the date of source test completion and shall be consistent with the requirements approved within the source test plan. Source test results shall document the permittee's compliance status with BACT requirements, mass emission rates and applicable permit conditions, rules and NSPS (if applicable). If the source test pounds per hour result for a pollutant exceeds the "pounds per hour equivalent limit", then the source is not in compliance with the pounds per day permitted limit for the applicable pollutant. All District costs associated with the review and approval of all plans and reports and the witnessing of tests shall be paid by the permittee as provided for by District Rule 210.
- (e) A source test for an item of equipment shall be performed on the scheduled day of testing (the test day mutually agreed to) unless circumstances beyond the control of the operator prevent completion of the test on the scheduled day. Such circumstances

include mechanical malfunction of the equipment to be tested, malfunction of the source test equipment, delays in source test contractor arrival and/or set-up, or unsafe conditions on site. Except in cases of an emergency, the operator shall seek and obtain District approval before deferring or discontinuing a scheduled test, or performing maintenance on the equipment item on the scheduled test day. If the test can not be completed on the scheduled day, then the test shall be rescheduled for another time with prior authorization by the District. Once the sample probe has been inserted into the exhaust stream of the equipment unit to be tested (or extraction of the sample has begun), the test shall proceed in accordance with the approved source test plan. In no case shall a test run be aborted except in the case of an emergency or unless approval is first obtained from the District. Failing to perform the source test of an equipment item on the scheduled test day without a valid reason and without District's authorization shall constitute a violation of this permit. If a test is postponed due to an emergency, written documentation of the emergency event shall be submitted to the District by the close of the business day following the scheduled test day.

- (f) The timelines listed above may be extended for good cause provided a written request is submitted to the District at least three (3) days in advance of the deadline, and approval for the extension is granted by the District.

Table 9.5 Baghouse Source Testing Requirements

Baghouses Source Testing Requirements			
Emission & Limit Test Points^(b)	Pollutants^{(d), (e)}	Parameters	Test Methods^(a)
Baghouses ^(f)	PM/PM ₁₀ PM/PM ₁₀ Stack Gas Flow Rate Blower Static Pressure	ppmv, lb/hr gr/dscf dscfm	EPA Method 5 EPA Method 5 & 17 EPA Method 2 or 19

Notes:

^(a) Alternative methods may be acceptable on a case-by-case basis.

^(b) Baghouse Test Frequency: All baghouses shall be tested according to the schedule identified in 9.C.9

^(c) Source testing shall be performed for the baghouses in an "as found" condition

^(d) PM is total suspended particulates, and use of PM:PM₁₀ ratio = 1 allows testing for PM only.

^(e) Blower static pressure shall be recorded for the Calciner Surge Bin BH and Packing Station BH during testing under permit condition 9.C.10 (b).

^(f) Baghouses included for source testing: Flash Cooler BH, Second Stage Dryer BH, Packing Station BH, Refeed Station BH, and Kiln Feed (Calciner Surge) Bin BH

Table 9.6 Scrubber Source Testing Requirements

Scrubbers Source Testing Requirements			
Test Location ^(b)	Pollutants ^{(d),(e)}	Parameters	Test Methods ^(a)
Outlet Concentration	PM/PM ₁₀	gr/dscf	EPA Method 5 & 17
Mass Emission Rate & Destruction Efficiency	SO _x	lb/hr	EPA Method 6 & 8
Scrubber Inlet Concentration	SO _x	ppmv	EPA Method 6 & 8
Outlet Concentration	SO _x	ppmv	EPA Method 6 & 8
	Process Feed Rate	tons/hour	EPA Method 2
	Solvent pH	pH	
	Solvent circulation rate	gal/min	
	Pressure drop	inches of H ₂ O	
	Pollutant gas inlet flow rate		
	Fuel flow rate	dscf/hr	
	Stack Gas temperature	°F	
	Moisture content	%	
	Sulfur content of feed.		USEPA 2 USEPA 4
		Total S Content	ASTM D-5016-89

Notes:

^(a) Alternative methods may be acceptable on a case-by-case basis.

^(b) Scrubber Test Frequency: The scrubbers shall be tested annually for SO_x mass emission rate and outlet concentration and/or control efficiency.

^(c) Source testing shall be performed for the scrubbers in an "as found" condition

^(d) PM is total suspended particulates, and use of PM:PM₁₀ ratio = 1 allows testing for PM only.

^(e) Scrubbers included for source testing: SO_x Gas Absorption Towers (350 and 370 Scrubbers)

C.9 Equipment Operation and Maintenance. Operation under this permit shall be conducted in compliance with all written data, specifications and assumptions included with the application (and supplements thereof) supplied by Imerys in writing as documented in the District's project file, and with the District's analyses contained within this permit (including any documents specifically referenced herein). [Ref: ATC 9757-01]

C.10 Diesel and Gasoline Engine NO_x and Particulate Matter Maintenance Plan. To ensure compliance with District Rules 302, 304, and 309, Imerys shall implement the District-approved *Diesel and Gasoline Engine NO_x and Particulate Matter Maintenance Plan*. All liquid fuel-fired stationary engines, regardless of exemption status, are subject to this plan. [Re: District Rules 205.A, 302, 304, 309, 40 CFR 70.6]

C.11 40 CFR Part 64 - Compliance Assurance Monitoring (CAM). The emission units identified in section 4.8.2 are subject to enhanced compliance monitoring for PM/PM₁₀ as required by 40 Part 64 (CAM). Imerys shall comply with the monitoring requirements specified in section 4.8.2 for each unit listed. Baghouse Visible Emissions Evaluations (VEEs) shall be conducted in accordance with permit conditions 9.C.1.(c). VEEs for the scrubbers shall be conducted in accordance with permit conditions 9.C.2.(c).

- (a) Imerys shall implement all requirements of the District-approved CAM Plan. This plan is hereby incorporated by reference as an enforceable part of this permit.

Recordkeeping and reporting shall be maintained consistent with the CAM Plan requirements as summarized below.

- (b) Quality Improvement Plan: Imerys shall submit for District-approval a Quality Improvement Plan (QIP) consistent with 40 CFR 64 section 64.8(b) within 30-days of notification by the District that a QIP threshold has been exceeded. A QIP threshold is defined as a number of exceedances or “excursions” (within a continuous 12-month period) of a monitoring parameter limit, per emission unit, above which triggers submittal and implementation of a QIP for the affected unit. The QIP threshold for all CAM monitoring parameters is five (5), e.g., after a specific baghouse or scrubber fails five VEE inspections, submittal of a QIP is required.
- (c) Recordkeeping: The following records shall be maintained:
 - (i) results of daily VEE evaluations for which visible emissions were detected.
 - (ii) results of quarterly Method 9 VEE and Method 22 VEE evaluations
 - (iii) results of the daily scrubber liquid line pressure observations which indicate an exceedance of the respective ranges (per CAM Plan)

9.D *District-Only Conditions*

The following section lists permit conditions that are not enforceable by the USEPA or the public. However, these conditions are enforceable by the District and the State of California. These conditions are issued pursuant to District Rule 206 (*Conditional Approval of Authority to Construct or Permit to Operate*), which states that the Control Officer may issue an operating permit subject to specified conditions. Permit conditions have been determined as being necessary for this permit to ensure that operation of the facility complies with all applicable local and state air quality rules, regulations and laws. Failure to comply with any condition specified pursuant to the provisions of Rule 206 shall be a violation of that rule, this permit, as well as any applicable section of the California Health & Safety Code.

- D.1 **Diesel Internal Combustion Engines.** The following equipment is included in this emissions category:

Device Name	District DeviceNo
<i>Combustion Equipment</i>	
Emergency Power Generator (Diesel)	103521

- (a) Emission Limitations. The mass emissions from the emergency generator (DeviceNo 103521) shall not exceed the values listed in Table 5.3 and 5.4. Compliance shall be based on the operational, monitoring, recordkeeping and reporting conditions of this permit

- (b) Operational Restrictions. The equipment permitted herein is subject to the following operational restrictions listed below. Emergency use operations, as defined in Section (d)(25) of the ATCM¹³, have no operational hours limitations.
- (i) *Maintenance & Testing Use Limit:* E the in-use stationary emergency standby diesel-fueled CI engine(s) subject to this permit shall not be operated for more than 20 hours per year for maintenance and testing¹⁴ purposes.
 - (ii) *Impending Rotating Outage Use:* The stationary emergency standby diesel-fueled CI engine(s) subject to this permit may be operated in response to the notification of an impending rotating outage if all the conditions cited in Section (e)(2)(A)(2) or Section (e)(2)(B)(1) of the ATCM are met, as applicable.
 - (iii) *Fuel and Fuel Additive Requirements:* Effective January 1, 2006, the permittee may only add fuel and/or fuel additives to the engine or any fuel tank directly attached to the engine that comply with Section (e)(1)(A) or Section (e)(1)(B) of the ATCM, as applicable. This provision may be delayed pursuant to the provisions of Section (c)(19) of the ATCM.
 - (iv) *NESHAP Maintenance Requirements:* The permittee must conduct the following maintenance on the in-use emergency standby diesel-fueled engine:
 - (1) Change the oil and filter every 500 hours of operation or annually, whichever comes first.
 - (2) Inspect the air cleaner every 1,000 hours of operation or annually, whichever comes first.
 - (3) Inspect all hoses and belts every 500 hours of operation or annually, whichever comes first.

In lieu of changing the oil and filter, the permittee may analyze the oil of each engine every 500 hours of operation or annually, whichever occurs first. The analysis shall measure the Total Base Number, the oil viscosity, and the percent water content. The oil and filter shall be changed if any of the following limits are exceeded:

- The tested Total Base Number is less than 30 percent of the Total Base Number of the oil when new.
- The tested oil viscosity has changed by more than 20 percent from the oil viscosity when new.
- The tested percent water content (by volume) is greater than 0.5 percent.

¹³ As used in the permit, “ATCM” means Section 93115, Title 17, California Code of Regulations. Airborne Toxic Control Measure for Stationary Compression Ignition (CI) Engines

¹⁴ “maintenance and testing” is defined in Section (d)(41) of the ATCM

- (v) *Temporary Engine Replacements - DICE ATCM.* Any reciprocating internal combustion engine subject to this permit and the stationary diesel ATCM may be replaced temporarily only if the requirements (1 – 7) listed herein are satisfied.
- (1) The permitted engine is in need of routine repair or maintenance.
 - (2) The permitted engine that is undergoing routine repair or maintenance is returned to its original service within 180 days of installation of the temporary engine.
 - (3) The temporary replacement engine has the same or lower manufacturer rated horsepower and same or lower potential to emit of each pollutant as the permitted engine that is being temporarily replaced. At the written request of the permittee, the District may approve a replacement engine with a larger rated horsepower than the permitted engine if the proposed temporary engine has manufacturer guaranteed emissions (for a brand new engine) or source test data (for a previously used engine) less than or equal to the permitted engine.
 - (4) The temporary replacement engine shall comply with all rules and permit requirements that apply to the permitted engine that is undergoing routine repair or maintenance.
 - (5) For each permitted engine to be temporarily replaced, the permittee shall submit a completed *Temporary IC Engine Replacement Notification* form (Form ENF-94) within 14 days of the temporary engine being installed. This form shall be sent electronically to: temp-engine@sbcapcd.org.
 - (6) Within 14 days upon return of the original permitted engine to service, the permittee shall submit a completed *Temporary IC Engine Replacement Report* form (Form ENF-95). This form may be sent hardcopy to the District (Attn: Engineering Supervisor), or can be sent electronically to: temp-engine@sbcapcd.org.
 - (7) Any engine in temporary replacement service shall be immediately shut down if the District determines that the requirements of this condition have not been met. This condition does not apply to engines that have experienced a cracked block (unless under manufacturer's warranty), to engines for which replacement parts are no longer available, or new engine replacements {including "reconstructed" engines as defined in Section (d)(44) of the ATCM}. Such engines are subject to the provisions of New Source Review and the new engine requirements of the ATCM.
- (vi) *Permanent Engine Replacements.* Any E/S engine, firewater pump engine or engine used for an essential public service that breaks down and can not be repaired may install a new replacement engine without first obtaining an ATC permit only if the requirements (1 – 6) listed herein are satisfied.
- (1) The permitted stationary diesel IC engine is an E/S engine, a fire water pump engine or an engine used for an essential public service (as defined by the District).

- (2) The engine breaks down, cannot be repaired and needs to be replaced by a new engine.
- (3) The facility provides “good cause” (in writing) for the immediate need to install a permanent replacement engine prior to the time period before an ATC permit can be obtained for a new engine. The new engine must comply with the requirements of the ATCM for new engines. If a new engine is not immediately available, a temporary engine may be used while the new replacement engine is being procured. During this time period, the temporary replacement engine must meet the same guidelines and procedures as defined in the permit condition above (*Temporary Engine Replacements - DICE ATCM*).
- (4) An Authority to Construct application for the new permanent engine is submitted to the District within 15 days of the existing engine being replaced and the District permit for the new engine is obtained no later than 180 days from the date of engine replacement (these timelines include the use of a temporary engine).
- (5) For each permitted engine to be permanently replaced pursuant to the condition, the permittee shall submit a completed *Permanent IC Engine Replacement Notification* form (Form ENF-96) within 14 days of either the permanent or temporary engine being installed. This form may be sent hardcopy to the District (Attn: Engineering Supervisor), or can be sent electronically to: temp-engine@sbcapcd.org.
- (6) Any engine installed (either temporally or permanently) pursuant to this permit condition shall be immediately shut down if the District determines that the requirements of this condition have not been met.
- (vii) *Notification of Non-Compliance.* Owners or operators who have determined that they are operating their stationary diesel-fueled engine(s) in violation of the requirements specified in Sections (e)(1) and (e)(2) of the ATCM shall notify the District immediately upon detection of the violation and shall be subject to District enforcement action.
- (viii) *Notification of Loss of Exemption.* Owners or operators of in-use stationary diesel-fueled CI engines, who are subject to an exemption specified in Section (c) from all or part of the requirements of Section (e)(2), shall notify the District immediately after they become aware that the exemption no longer applies and pursuant to Section (e)(4)(F)(1) of the ATCM shall demonstrate compliance within 180 days after notifying the District.
- (ix) *Enrollment in a DRP/ISC - January 1, 2005.* Any stationary diesel IC engine rated over 50 bhp that enrolls for the first time in a Demand Response Program/Interruptible Service Contract (as defined in the ATCM) on or after January 1, 2005, shall first obtain an District Authority to Construct permit to ensure compliance with the emission control requirements and hour limitations governing ISC engines.

- (c) Monitoring. The equipment permitted herein is subject to the following monitoring requirements:
- (i) *Non-Resettable Hour Meter:* Each stationary emergency standby diesel-fueled CI engine(s) subject to this permit shall have installed a non-resettable hour meter with a minimum display capability of 9,999 hours, unless the District has determined (in writing) that a non-resettable hour meter with a different minimum display capability is appropriate in consideration of the historical use of the engine and the owner or operator's compliance history
- (d) Recordkeeping. The permittee shall record and maintain the information listed below. Log entries shall be retained for a minimum of 36 months from the date of entry. Log entries made within 24 months of the most recent entry shall be retained on-site, either at a central location or at the engine's location, and made immediately available to the District staff upon request. Log entries made from 25 to 36 months from most recent entry shall be made available to District staff within 5 working days from request. Use of District Form ENF-92 (*Diesel-Fired Emergency Standby Engine Recordkeeping Form*) can be used for this requirement.
- (i) emergency use hours of operation;
 - (ii) maintenance and testing hours of operation;
 - (iii) hours of operation for emission testing to show compliance with Section (e)(2)(A)(3) or Section (e)(2)(B)(3) {if specifically allowed for under this permit}
 - (iv) hours of operation for all uses other than those specified in items (a) – (c) above along with a description of what those hours were for.
 - (v) The owner or operator shall document fuel use through the retention of fuel purchase records that account for all fuel used in the engine and all fuel purchased for use in the engine, and, at a minimum, contain the following information for each individual fuel purchase transaction:
 - (1) identification of the fuel purchased as either CARB Diesel, or an alternative diesel fuel that meets the requirements of the Verification Procedure, or an alternative fuel, or CARB Diesel fuel used with additives that meet the requirements of the Verification Procedure, or any combination of the above;
 - (2) amount of fuel purchased;
 - (3) date when the fuel was purchased;
 - (4) signature of owner or operator or representative of owner or operator who received the fuel;
 - (5) signature of fuel provider indicating fuel was delivered.
 - (vi) The date of each engine oil change, the number of hours of operation since the last oil change. If an oil analysis is performed, the records must include the date and results of each oil analysis and the Total Base Number and oil viscosity of the oil when new.

- (vii) The date of each engine air filter inspection and the number of hours of operation since the last air filter inspection. Indicate if the air filter was replaced as a result of the inspection.
 - (viii) the date of each engine's hose and belts inspection and the number of hours of operation since the last hose and belt inspection. Indicate if any hose or belt was replaced as a result of the inspection.
 - (ix) A log of the quarterly visible emission inspections and Method 9 inspections (if required) conducted on the emergency generator per condition 9.B.2. The start-time and end-time of each visible emissions inspection shall be recorded in a log, along with a notation identifying whether visible emissions were detected. Records of all Method 9 inspections shall be maintained in accordance with USEPA Method 9.
- (e) Reporting. By March 1 of each year, a written report documenting compliance with the terms and conditions of this permit and the ATCM for the previous calendar year shall be provided by the permittee to the District (Attn: *Annual Report Coordinator*). All logs and other basic source data not included in the report shall be made available to the District upon request. The report shall include the information required in the Recordkeeping Condition above.

AIR POLLUTION CONTROL OFFICER

Date

Attachments:

- 10.1 - Emission Calculation Documentation
- 10.2 – Further Calculations for Section 5
- 10.4 - Equipment List
- 10.5 – Track List of Device Names and Numbers used for Celpure Equipment
- 10.6 – District Response to Comments

Notes:

Reevaluation Due Date: March 2022
Semi-Annual reports are due by March 1st and September 1st of each year
This permit supersedes PTO 5840-R4 Part II, PTO 14743 and ATC and PTO 15060

DRAFT

RECOMMENDATION

It is recommended that this permit be granted with the conditions as specified in the permit.

David Harris
Engineering
Supervisor

Date

Engineering
Manager

Date

10.0 Attachments

10.1. Emission Calculation Documentation

This attachment contains all relevant emission calculation documentation used for the emission tables in Section 5. Refer to Section 4 for the general equations. The letters A-H refer to Tables 5.1 and 5.2.

Reference A - Combustion Engines

1. The maximum operating schedule is in units of hours.
2. Default values for diesel fuel:
 - a. Density = 7.4 lb/gal (36EAPI)
 - b. LHV = 18,410 Btu/lb (129,700 Btu/gal)
 - c. HHV = 18,919 Btu/lb (140,000 Btu/gal)
 - d. BSFC = 7500 Btu/bhp-hr
3. Default values for #6 fuel oil:
 - a. Density = 7.95 lb/gal (36EAPI)
 - b. HHV = 19,036 Btu/lb (150,000 Btu/gal)
4. Default values for gasoline:
 - a. Density = 6.5 lb/gal (36EAPI)
 - b. HHV = 21,070 Btu/lb (125,000 Btu/gal)
 - c. BSFC = 11,000 Btu/bhp-hr
5. Emission factors units (lb/MMBtu) are based on HHV.
6. Engine operational limits: General Equation

$$Q = \frac{(BSFC) * (bhp) * (LCF) * (hours/timeperiod)}{HHV}$$

7. LCF (LHV to HHV) value of 6 percent used.

8. SO_x emissions based on mass balance (Fuel Oil):

$$SO_x(asSO_2) = \frac{[(\%S) * (\rho_{oil}) * 20,000]}{HHV}$$

9. SO_x emissions based on mass balance (Natural Gas):

$$SO_x(asSO_2) = (0.169) * (ppmvS) * (HHV)$$

10. Allowable sulfur content of 0.05 wt. % consistent with the stationary diesel ATCM (CCR Title 17, section 93115)
11. Emergency production generator emission factors for NO_x, ROC, CO, and PM/PM₁₀/PM_{2.5} based on AP-42 section 3.3.

See spreadsheet for calculation results.

Reference B – Greenhouse Gases

For natural gas combustion the emission factor is:

$$(53.02 \text{ kg CO}_2/\text{MMBtu}) (2.2046 \text{ lb/kg}) = 116.89 \text{ lb CO}_2/\text{MMBtu}$$

$$(0.001 \text{ kg CH}_4/\text{MMBtu}) (2.2046 \text{ lb/kg})(21 \text{ lb CO}_2\text{e/lb CH}_4) = 0.046 \text{ lb CO}_2\text{e/MMBtu}$$

$$(0.0001 \text{ kg N}_2\text{O/MMBtu}) (2.2046 \text{ lb/kg})(310 \text{ lb CO}_2\text{e/lb N}_2\text{O}) = 0.068 \text{ lb CO}_2\text{e/MMBtu}$$

$$\text{Total CO}_2\text{e/MMBtu} = 116.89 + 0.046 + 0.068 = \underline{117.00 \text{ lb CO}_2\text{e/MMBtu}}$$

For diesel fuel combustion the emission factor is:

$$(73.96 \text{ kg CO}_2/\text{MMBtu}) (2.2046 \text{ lb/kg}) = 163.05 \text{ lb CO}_2/\text{MMBtu}$$

$$(0.003 \text{ kg CH}_4/\text{MMBtu}) (2.2046 \text{ lb/kg})(21 \text{ lb CO}_2\text{e/lb CH}_4) = 0.139 \text{ lb CO}_2\text{e/MMBtu}$$

$$(0.0006 \text{ kg N}_2\text{O/MMBtu}) (2.2046 \text{ lb/kg})(310 \text{ lb CO}_2\text{e/lb N}_2\text{O}) = 0.410 \text{ lb CO}_2\text{e/MMBtu}$$

$$\text{Total CO}_2\text{e/MMBtu} = 163.05 + 0.139 + 0.410 = \underline{163.60 \text{ lb CO}_2\text{e/MMBtu}}$$

10.2. Further Calculations for Section 5

This attachment contains emission calculation spreadsheets and other supporting calculations used for the emission tables in Section 5 and permit conditions section 9. Refer to Section 4 for the general equations, assumptions, and emission factors used.

Table 10.1 Variables Used in Emission Calculations

Item	Variable Symbol	Value	Variable Name	Unit	Reference
1	ConF1	453.59	Grams to Pound Conversion	g/lb	
2	ConF2	2000	Pounds to Tons Conversion	lb/ton	
3	ConF3	7000	Grains to Pounds Conversion	gr/lb	
4	MW _s	32	Molecular Weight Sulfur	g/g-mole	
5	MW _{so2}	64	Molecular Weight Sulfur Dioxide	g/g-mole	
6	MW _{NOx}	46.01	Molecular Weight Nitrous Oxides	g/g-mole	
7	MW _{CO}	28	Molecular Weight Carbon Monoxide	g/g-mole	
8	MW _{VOC}	16	Molecular Weight VOCs	g/g-mole	
9	MW _{H2SO4}	98	Molecular Weight Sulfuric Acid	lb/lb-mole	
10	mv	379	Molar Volume	std ft ³ /lb-mol	
11	Den	7.05	Diesel Fuel #2 Density	lb/gal	
12	HHVD2	140000	Diesel Fuel #2 Higher Heating Value	Btu/gal	

Table 10.2 Calculations for Estimated Exempt Emissions – Celpure Plant

Equipment Category	Exemption Claimed	gr/dscf	scfm	NOx	ROC	CO	SOx	PM	PM10	PM2.5	GHG
Tons Per Year (TPY)											
Vacuum Station Baghouse	202.L.9/202.D.12	0.022	260					0.10	0.10	0.10	

10.3. Equipment List – Main Plant and Celpure Plant

A PERMITTED EQUIPMENT

1 Acid Washed Filter Aid Production Line

1.1 Acid Wash Blowers

<i>Device ID #</i>	103417	<i>Device Name</i>	Acid Wash Blowers
<i>Rated Heat Input</i>		<i>Physical Size</i>	
<i>Manufacturer</i>		<i>Operator ID</i>	
<i>Model</i>		<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device</i>			
<i>Description</i>			

1.2 Acid Wash Cyclones

<i>Device ID #</i>	103416	<i>Device Name</i>	Acid Wash Cyclones
<i>Rated Heat Input</i>		<i>Physical Size</i>	
<i>Manufacturer</i>		<i>Operator ID</i>	
<i>Model</i>		<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device</i>			
<i>Description</i>			

1.3 Acid Wash Hoppers

<i>Device ID #</i>	103418	<i>Device Name</i>	Acid Wash Hoppers
<i>Rated Heat Input</i>		<i>Physical Size</i>	
<i>Manufacturer</i>		<i>Operator ID</i>	
<i>Model</i>		<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device</i>			
<i>Description</i>			

1.4 Acid Wash Packers

<i>Device ID #</i>	103419	<i>Device Name</i>	Acid Wash Packers
<i>Rated Heat Input</i>		<i>Physical Size</i>	1200.00 lb/Hour
<i>Manufacturer</i>		<i>Operator ID</i>	
<i>Model</i>		<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device</i>			
<i>Description</i>			

1.5 Acid Wash Pumps

<i>Device ID #</i>	103425	<i>Device Name</i>	Acid Wash Pumps
<i>Rated Heat Input</i>		<i>Physical Size</i>	
<i>Manufacturer</i>		<i>Operator ID</i>	
<i>Model</i>		<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device</i>	Filtrate pump, vacuum pump, and sump pump		
<i>Description</i>			

1.6 Holding Tanks

<i>Device ID #</i>	103423	<i>Device Name</i>	Holding Tanks
<i>Rated Heat Input</i>		<i>Physical Size</i>	
<i>Manufacturer</i>		<i>Operator ID</i>	
<i>Model</i>		<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device</i>			
<i>Description</i>			

1.7 Horizontal Belt Filter

<i>Device ID #</i>	103424	<i>Device Name</i>	Horizontal Belt Filter
<i>Rated Heat Input</i>		<i>Physical Size</i>	
<i>Manufacturer</i>		<i>Operator ID</i>	
<i>Model</i>		<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device</i>	includes a belt conveyor		

Description

1.8 Premix Tank

<i>Device ID #</i>	103421	<i>Device Name</i>	Premix Tank
<i>Rated Heat Input</i>		<i>Physical Size</i>	
<i>Manufacturer</i>		<i>Operator ID</i>	
<i>Model</i>		<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device</i>			
<i>Description</i>			

1.9 Reaction Tank

<i>Device ID #</i>	103422	<i>Device Name</i>	Reaction Tank
<i>Rated Heat Input</i>		<i>Physical Size</i>	
<i>Manufacturer</i>		<i>Operator ID</i>	
<i>Model</i>		<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device</i>			
<i>Description</i>			

1.10 Sulfuric Acid Tank

<i>Device ID #</i>	103420	<i>Device Name</i>	Sulfuric Acid Tank
<i>Rated Heat Input</i>		<i>Physical Size</i>	
<i>Manufacturer</i>		<i>Operator ID</i>	
<i>Model</i>		<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device</i>			
<i>Description</i>			

2 Admin Emergency Generator

<i>Device ID #</i>	387654	<i>Maximum Rated BHP</i>	250.00
<i>Device Name</i>	Admin Emergency Generator	<i>Serial Number</i>	WS4486N1200651
<i>Engine Use</i>	Electrical Power	<i>EPA Engine Family Name</i>	YNVXL0530ANC
<i>Manufacturer</i>	Caterpillar/Navistar	<i>Operator ID</i>	
<i>Model Year</i>	2000	<i>Fuel Type</i>	CARB Diesel - ULSD
<i>Model</i>	GC250		
<i>DRP/ISC?</i>	No	<i>Healthcare Facility?</i>	No
<i>Daily Hours</i>	2.00	<i>Annual Hours</i>	20
<i>Location</i>			
<i>Note</i>			
<i>Device Description</i>	Tier 1 USEPA engine family YNVXL0530ANC		

3 Ancillary Processing Systems (Tbl A-4)**3.1 Baghouses - Silicate Production Line****3.1.1 Silicate Plant Feed Mix Baghouse**

<i>Device ID #</i>	000138	<i>Device Name</i>	Silicate Plant Feed Mix Baghouse
<i>Rated Heat Input</i>		<i>Physical Size</i>	35984.00 scf/Minute
<i>Manufacturer</i>	Sly	<i>Operator ID</i>	SPFMBH
<i>Model</i>	Polyester	<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device Description</i>	Vents crushing area, conveyor and re-feed areas; Negative pressure; Bag Diam. (in): env; Bag Length (ft): 43x36 in; Total Cloth Area: 1677; enclosed		

3.1.2 Silicate Plant Flash Dryer Baghouse

<i>Device ID #</i>	103474	<i>Device Name</i>	Silicate Plant Flash Dryer Baghouse
<i>Rated Heat Input</i>		<i>Physical Size</i>	14700.00 scf/Minute
<i>Manufacturer</i>	Mikro-Pulsaire	<i>Operator ID</i>	SPFDBH
<i>Model</i>	Gortex/Polyester	<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device Description</i>	Product collection; Negative pressure; Bag Diam. (in): 4.5; Bag Length (ft): 8.33; Total Cloth Area: 3770; Est. A/C Ratio: 3.9; enclosed		

3.1.3 Silicate Plant Lime Baghouse

<i>Device ID #</i>	000139	<i>Device Name</i>	Silicate Plant Lime Baghouse
<i>Rated Heat Input</i>		<i>Physical Size</i>	3000.00 scf/Minute
<i>Manufacturer</i>	Fuller Bulk Handling	<i>Operator ID</i>	SPLBH
<i>Model</i>	Nylon	<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device Description</i>	Bin ventilation; Negative pressure; Bag Diam. (in): 6.0; Bag Length (ft): 8.0; Total Cloth Area: 754; enclosed		

3.1.4 Silicate Plant Production Baghouse

<i>Device ID #</i>	000141	<i>Device Name</i>	Silicate Plant Production Baghouse
<i>Rated Heat Input</i>		<i>Physical Size</i>	3300.00 scf/Minute
<i>Manufacturer</i>	Mikro Collector	<i>Operator ID</i>	SPPBH
<i>Model</i>	18 oz Dralon felt	<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device Description</i>	Product collection; Negative pressure; Bag Diam. (in): 18.0; Bag Length (ft): 11.83; Total Cloth Area: 892; Est. A/C Ratio: 2.5; enclosed		

3.1.5 Silicate Plant Ventilation Baghouse (Pack Area)

<i>Device ID #</i>	000142	<i>Device Name</i>	Silicate Plant Ventilation Baghouse (Pack Area)
<i>Rated Heat Input</i>		<i>Physical Size</i>	40000.00 scf/Minute
<i>Manufacturer</i>	Mikro-Pulsaire	<i>Operator ID</i>	SPVBH
<i>Model</i>	Polypropylene	<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device Description</i>	Ventilation packer and spillage, blow off booth, belt dryer, conveyors, AW packer, bulk packing unit; Negative pressure; Bag Diam. (in): 4.5; Bag Length (ft): 10.0; Total Cloth Area: 8588; enclosed		

3.2 Central Natural Production Line (Snow Floss Plant)

3.2.1 Bag air washer

<i>Device ID #</i>	103396	<i>Device Name</i>	Bag air washer
<i>Rated Heat Input</i>		<i>Physical Size</i>	
<i>Manufacturer</i>		<i>Operator ID</i>	
<i>Model</i>		<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device Description</i>	Number of devices is currently unknown.		

3.2.2 Baghouses - Cent. Nat Prod Line (Snow Floss Plant)

3.2.2.1 Snow Floss Plant Baghouse

<i>Device ID #</i>	000133	<i>Device Name</i>	Snow Floss Plant Baghouse
<i>Rated Heat Input</i>		<i>Physical Size</i>	12978.00 scf/Minute
<i>Manufacturer</i>	JM Open	<i>Operator ID</i>	SFPBH
<i>Model</i>	Orlon	<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device Description</i>	Snow Floss Plant product collection; Positive pressure; Bag Diam. (in): 9.0; Bag Length (ft): 54.0; Total Cloth Area: 12978; Est. A/C Ratio: 1.0; open		

3.2.3 Blowers

<i>Device ID #</i>	103391	<i>Device Name</i>	Blowers
<i>Rated Heat Input</i>		<i>Physical Size</i>	
<i>Manufacturer</i>		<i>Operator ID</i>	
<i>Model</i>		<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device</i>			
<i>Description</i>			

3.2.4 Central Nature Product (Packing)**3.2.4.1 Packers**

<i>Device ID #</i>	103393	<i>Device Name</i>	Packers
<i>Rated Heat Input</i>		<i>Physical Size</i>	9.00 Tons/Hour
<i>Manufacturer</i>		<i>Operator ID</i>	
<i>Model</i>		<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device</i>	#305, dark floss, #209, #310?		
<i>Description</i>			

3.2.5 Conveyors

<i>Device ID #</i>	103395	<i>Device Name</i>	Conveyors
<i>Rated Heat Input</i>		<i>Physical Size</i>	
<i>Manufacturer</i>		<i>Operator ID</i>	
<i>Model</i>		<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device</i>			
<i>Description</i>			

3.2.6 Cyclones

<i>Device ID #</i>	103390	<i>Device Name</i>	Cyclones
<i>Rated Heat Input</i>		<i>Physical Size</i>	
<i>Manufacturer</i>		<i>Operator ID</i>	
<i>Model</i>		<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device</i>	#1202, 1205, and 1206		
<i>Description</i>			

3.2.7 Hoppers

<i>Device ID #</i>	103392	<i>Device Name</i>	Hoppers
<i>Rated Heat Input</i>		<i>Physical Size</i>	
<i>Manufacturer</i>		<i>Operator ID</i>	
<i>Model</i>		<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device</i>	(4) hoppers on open baghouse #305, and (6) hoppers on the snow floss		
<i>Description</i>	product baghouse		

3.2.8 Snow/Dark Floss Separator

<i>Device ID #</i>	103394	<i>Device Name</i>	Snow/Dark Floss Separator
<i>Rated Heat Input</i>		<i>Physical Size</i>	
<i>Manufacturer</i>		<i>Operator ID</i>	
<i>Model</i>		<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device</i>	Should have 3 associated cyclones		
<i>Description</i>			

3.3 Experimental Plant

<i>Device ID #</i>	103266	<i>Device Name</i>	Experimental Plant
<i>Rated Heat Input</i>		<i>Physical Size</i>	500.00 lb/Hour
<i>Manufacturer</i>		<i>Operator ID</i>	
<i>Model</i>		<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device</i>			
<i>Description</i>			

3.3.1 Air Sifters

<i>Device ID #</i>	103463	<i>Device Name</i>	Air Sifters
<i>Rated Heat Input</i>		<i>Physical Size</i>	
<i>Manufacturer</i>		<i>Operator ID</i>	
<i>Model</i>		<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device</i>			
<i>Description</i>			

3.3.2 Belt Conveyor

<i>Device ID #</i>	103468	<i>Device Name</i>	Belt Conveyor
<i>Rated Heat Input</i>		<i>Physical Size</i>	
<i>Manufacturer</i>		<i>Operator ID</i>	
<i>Model</i>		<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device</i>	Number of devices is currently unknown.		
<i>Description</i>			

3.3.3 Bins

<i>Device ID #</i>	103460	<i>Device Name</i>	Bins
<i>Rated Heat Input</i>		<i>Physical Size</i>	
<i>Manufacturer</i>		<i>Operator ID</i>	
<i>Model</i>		<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device</i>			
<i>Description</i>			

3.3.4 Blowers

<i>Device ID #</i>	103459	<i>Device Name</i>	Blowers
<i>Rated Heat Input</i>		<i>Physical Size</i>	
<i>Manufacturer</i>		<i>Operator ID</i>	
<i>Model</i>		<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device</i>			
<i>Description</i>			

3.3.5 Cyclones

<i>Device ID #</i>	103458	<i>Device Name</i>	Cyclones
<i>Rated Heat Input</i>		<i>Physical Size</i>	
<i>Manufacturer</i>		<i>Operator ID</i>	
<i>Model</i>		<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device</i>			
<i>Description</i>			

3.3.6 Delumper

<i>Device ID #</i>	103465	<i>Device Name</i>	Delumper
<i>Rated Heat Input</i>		<i>Physical Size</i>	
<i>Manufacturer</i>		<i>Operator ID</i>	
<i>Model</i>		<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device</i>	Number of devices is currently unknown.		
<i>Description</i>			

3.3.7 Experimental Plant Ventilation Baghouse

<i>Device ID #</i>	005935	<i>Device Name</i>	Experimental Plant Ventilation Baghouse
<i>Rated Heat Input</i>		<i>Physical Size</i>	1000.00 scf/Minute
<i>Manufacturer</i>	JM Open	<i>Operator ID</i>	XPBH
<i>Model</i>	Polyester	<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device</i>	Ventilates Experimental plant; Positive pressure; Bag Diam. (in): 9.0; Bag		
<i>Description</i>	Length (ft): 28.0; Total Cloth Area: 990; Est. A/C Ratio: 1.0; open		

3.3.8 Feeders

<i>Device ID #</i>	103467	<i>Device Name</i>	Feeders
<i>Rated Heat Input</i>		<i>Physical Size</i>	
<i>Manufacturer</i>		<i>Operator ID</i>	
<i>Model</i>		<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device</i>			
<i>Description</i>			

3.3.9 Mill

<i>Device ID #</i>	103466	<i>Device Name</i>	Mill
<i>Rated Heat Input</i>		<i>Physical Size</i>	
<i>Manufacturer</i>		<i>Operator ID</i>	
<i>Model</i>		<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device</i>	Number of devices is currently unknown.		
<i>Description</i>			

3.3.10 Mixer

<i>Device ID #</i>	103462	<i>Device Name</i>	Mixer
<i>Rated Heat Input</i>		<i>Physical Size</i>	
<i>Manufacturer</i>		<i>Operator ID</i>	
<i>Model</i>		<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device</i>	Number of devices is currently unknown.		
<i>Description</i>			

3.3.11 Packer Columns

<i>Device ID #</i>	103469	<i>Device Name</i>	Packer Columns
<i>Rated Heat Input</i>		<i>Physical Size</i>	
<i>Manufacturer</i>		<i>Operator ID</i>	
<i>Model</i>		<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device</i>			
<i>Description</i>			

3.3.12 Packers

<i>Device ID #</i>	103461	<i>Device Name</i>	Packers
<i>Rated Heat Input</i>		<i>Physical Size</i>	1.75 Tons/Hour
<i>Manufacturer</i>		<i>Operator ID</i>	
<i>Model</i>		<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device</i>			
<i>Description</i>			

3.3.13 Separator

<i>Device ID #</i>	103464	<i>Device Name</i>	Separator
<i>Rated Heat Input</i>		<i>Physical Size</i>	
<i>Manufacturer</i>		<i>Operator ID</i>	
<i>Model</i>		<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device</i>	Number of devices is currently unknown.		
<i>Description</i>			

3.4 Synthetic Silicate (Packing)**3.4.1 Conveyors**

<i>Device ID #</i>	106210	<i>Device Name</i>	Conveyors
<i>Rated Heat Input</i>		<i>Physical Size</i>	
<i>Manufacturer</i>		<i>Operator ID</i>	
<i>Model</i>		<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device</i>			
<i>Description</i>			

3.4.2 Hoppers

<i>Device ID #</i>	106208	<i>Device Name</i>	Hoppers
<i>Rated Heat Input</i>		<i>Physical Size</i>	
<i>Manufacturer</i>		<i>Operator ID</i>	
<i>Model</i>		<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device</i>	(2) spillage hoppers		
<i>Description</i>			

3.4.3 Packer Bins

<i>Device ID #</i>	106209	<i>Device Name</i>	Packer Bins
<i>Rated Heat Input</i>		<i>Physical Size</i>	
<i>Manufacturer</i>		<i>Operator ID</i>	
<i>Model</i>		<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device</i>			
<i>Description</i>			

3.4.4 Pumps

<i>Device ID #</i>	103407	<i>Device Name</i>	Pumps
<i>Rated Heat Input</i>		<i>Physical Size</i>	
<i>Manufacturer</i>		<i>Operator ID</i>	
<i>Model</i>		<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device</i>	(1) press well pump		
<i>Description</i>			

3.4.5 Silicates Packer #1

<i>Device ID #</i>	113830	<i>Device Name</i>	Silicates Packer #1
<i>Rated Heat Input</i>		<i>Physical Size</i>	1.65 Tons/Hour
<i>Manufacturer</i>		<i>Operator ID</i>	
<i>Model</i>		<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device</i>			
<i>Description</i>			

3.4.6 Silicates Packer #2

<i>Device ID #</i>	113831	<i>Device Name</i>	Silicates Packer #2
<i>Rated Heat Input</i>		<i>Physical Size</i>	1.65 Tons/Hour
<i>Manufacturer</i>		<i>Operator ID</i>	
<i>Model</i>		<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device</i>			
<i>Description</i>			

3.4.7 Silicates Packing Station

<i>Device ID #</i>	103402	<i>Device Name</i>	Silicates Packing Station
<i>Rated Heat Input</i>		<i>Physical Size</i>	24.00 Tons/Hour
<i>Manufacturer</i>		<i>Operator ID</i>	
<i>Model</i>		<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device</i>	Packing System		
<i>Description</i>			

3.5 Sythethic Silicate (processing line)**3.5.1 Belt Conveyors**

<i>Device ID #</i>	103406	<i>Device Name</i>	Belt Conveyors
<i>Rated Heat Input</i>		<i>Physical Size</i>	
<i>Manufacturer</i>		<i>Operator ID</i>	
<i>Model</i>		<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device</i>	(2) inclined conveyors, (2) conveyors		
<i>Description</i>			

3.5.2 Bins

<i>Device ID #</i>	103399	<i>Device Name</i>	Bins
<i>Rated Heat Input</i>		<i>Physical Size</i>	
<i>Manufacturer</i>		<i>Operator ID</i>	
<i>Model</i>		<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device</i>	(2) surge bins, (1) lime storage bin		
<i>Description</i>			

3.5.3 Blowers

<i>Device ID #</i>	103398	<i>Device Name</i>	Blowers
<i>Rated Heat Input</i>		<i>Physical Size</i>	
<i>Manufacturer</i>		<i>Operator ID</i>	
<i>Model</i>		<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device</i>	(1) lime truck vent blower,		
<i>Description</i>			

3.5.4 Crushers

<i>Device ID #</i>	103403	<i>Device Name</i>	Crushers
<i>Rated Heat Input</i>		<i>Physical Size</i>	
<i>Manufacturer</i>		<i>Operator ID</i>	
<i>Model</i>		<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device</i>			
<i>Description</i>			

3.5.5 Cyclones

<i>Device ID #</i>	103397	<i>Device Name</i>	Cyclones
<i>Rated Heat Input</i>		<i>Physical Size</i>	
<i>Manufacturer</i>		<i>Operator ID</i>	
<i>Model</i>		<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device</i>	(1) cyclone,		
<i>Description</i>			

3.5.6 Lime Truck Unloading Hopper

<i>Device ID #</i>	103401	<i>Device Name</i>	Lime Truck Unloading Hopper
<i>Rated Heat Input</i>		<i>Physical Size</i>	
<i>Manufacturer</i>		<i>Operator ID</i>	
<i>Model</i>		<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device</i>			
<i>Description</i>			

3.5.7 Mills

<i>Device ID #</i>	103404	<i>Device Name</i>	Mills
<i>Rated Heat Input</i>		<i>Physical Size</i>	
<i>Manufacturer</i>		<i>Operator ID</i>	
<i>Model</i>		<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device</i>	(1) hammer mill, (1) ball mill,		
<i>Description</i>			

3.5.8 Refeed Station

<i>Device ID #</i>	103405	<i>Device Name</i>	Refeed Station
<i>Rated Heat Input</i>		<i>Physical Size</i>	
<i>Manufacturer</i>		<i>Operator ID</i>	
<i>Model</i>		<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device</i>			
<i>Description</i>			

3.5.9 Screens

<i>Device ID #</i>	103400	<i>Device Name</i>	Screens
<i>Rated Heat Input</i>		<i>Physical Size</i>	
<i>Manufacturer</i>		<i>Operator ID</i>	
<i>Model</i>		<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device</i>			
<i>Description</i>			

3.5.10 Screws

<i>Device ID #</i>	103408	<i>Device Name</i>	Screws
<i>Rated Heat Input</i>		<i>Physical Size</i>	
<i>Manufacturer</i>		<i>Operator ID</i>	
<i>Model</i>		<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device</i>	Number of devices is currently unknown.		
<i>Description</i>			

3.5.11 Silicate Plant Main Boiler

<i>Device ID #</i>	000082	<i>Device Name</i>	Silicate Plant Main Boiler
<i>Rated Heat Input</i>	23.000 MMBtu/Hour	<i>Physical Size</i>	195960.00 MMBtu/yr
<i>Manufacturer</i>	Nebraska	<i>Operator ID</i>	SPB2
<i>Model</i>	NS-B-32-ECON	<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device</i>	PUC gas or low sulfur fuel oil #2 or #6 , low-NOx burner.		
<i>Description</i>			

3.5.12 Silicate Plant Standby Boiler

<i>Device ID #</i>	000081	<i>Device Name</i>	Silicate Plant Standby Boiler
<i>Rated Heat Input</i>	15.500 MMBtu/Hour	<i>Physical Size</i>	8999.00 MMBtu/yr
<i>Manufacturer</i>	Combustion Engineering	<i>Operator ID</i>	SPB1
<i>Model</i>	VP	<i>Serial Number</i>	APCD ID 2-1
<i>Location Note</i>			
<i>Device Description</i>	PUC gas or low-sulfur fuel oil #2 or #6.		

3.5.13 Silicates Conveyor Dryer (SPCD)

<i>Device ID #</i>	000143	<i>Device Name</i>	Silicates Conveyor Dryer (SPCD)
<i>Rated Heat Input</i>	56.300 MMBtu/Hour	<i>Physical Size</i>	
<i>Manufacturer</i>		<i>Operator ID</i>	SPCD
<i>Model</i>		<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device Description</i>	PUC gas fired.		

3.5.14 Silicates Flash Dryer (SPFD)

<i>Device ID #</i>	000140	<i>Device Name</i>	Silicates Flash Dryer (SPFD)
<i>Rated Heat Input</i>	17.500 MMBtu/Hour	<i>Physical Size</i>	
<i>Manufacturer</i>		<i>Operator ID</i>	SPFD
<i>Model</i>		<i>Serial Number</i>	APCD ID 2-4
<i>Location Note</i>			
<i>Device Description</i>	PUC gas fired.		

3.5.15 Silicates Plant 10 kgal Stirred Tank #1

<i>Device ID #</i>	113828	<i>Device Name</i>	Silicates Plant 10 kgal Stirred Tank #1
<i>Rated Heat Input</i>		<i>Physical Size</i>	10000.00 Gallons
<i>Manufacturer</i>		<i>Operator ID</i>	
<i>Model</i>		<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device</i>	Used for proprietary wet processing of product.		
<i>Description</i>			

3.5.16 Silicates Plant 10 kgal Stirred Tank #2

<i>Device ID #</i>	113966	<i>Device Name</i>	Silicates Plant 10 kgal Stirred Tank #2
<i>Rated Heat Input</i>		<i>Physical Size</i>	10000.00 Gallons
<i>Manufacturer</i>		<i>Operator ID</i>	
<i>Model</i>		<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device</i>	Used for proprietary wet processing of product.		
<i>Description</i>			

3.5.17 Silicates Plant 10 kgal Storage Tank #1

<i>Device ID #</i>	113832	<i>Device Name</i>	Silicates Plant 10 kgal Storage Tank #1
<i>Rated Heat Input</i>		<i>Physical Size</i>	10000.00 Gallons
<i>Manufacturer</i>		<i>Operator ID</i>	
<i>Model</i>		<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device</i>			
<i>Description</i>			

3.5.18 Silicates Plant 10 kgal Storage Tank #2

<i>Device ID #</i>	113963	<i>Device Name</i>	Silicates Plant 10 kgal Storage Tank #2
<i>Rated Heat Input</i>		<i>Physical Size</i>	10000.00 Gallons
<i>Manufacturer</i>		<i>Operator ID</i>	
<i>Model</i>		<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device</i>			
<i>Description</i>			

3.5.19 Silicates Plant 40 kgal Stirred Tank #1

<i>Device ID #</i>	113824	<i>Device Name</i>	Silicates Plant 40 kgal Stirred Tank #1
<i>Rated Heat Input</i>		<i>Physical Size</i>	40000.00 Gallons
<i>Manufacturer</i>		<i>Operator ID</i>	
<i>Model</i>		<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device</i>	Used for proprietary wet processing of product.		
<i>Description</i>			

3.5.20 Silicates Plant 40 kgal Stirred Tank #2

<i>Device ID #</i>	113825	<i>Device Name</i>	Silicates Plant 40 kgal Stirred Tank #2
<i>Rated Heat Input</i>		<i>Physical Size</i>	40000.00 Gallons
<i>Manufacturer</i>		<i>Operator ID</i>	
<i>Model</i>		<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device</i>	Used for proprietary wet processing of product.		
<i>Description</i>			

3.5.21 Silicates Plant 40 kgal Stirred Tank #3

<i>Device ID #</i>	113826	<i>Device Name</i>	Silicates Plant 40 kgal Stirred Tank #3
<i>Rated Heat Input</i>		<i>Physical Size</i>	40000.00 Gallons
<i>Manufacturer</i>		<i>Operator ID</i>	
<i>Model</i>		<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device</i>	Used for proprietary wet processing of product.		
<i>Description</i>			

3.5.22 Silicates Plant Filter Press

<i>Device ID #</i>	113829	<i>Device Name</i>	Silicates Plant Filter Press
<i>Rated Heat Input</i>		<i>Physical Size</i>	800.00 Square Feet
<i>Manufacturer</i>		<i>Operator ID</i>	
<i>Model</i>		<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device</i>	Used to filter product.		
<i>Description</i>			

4 Bagging and Packing**4.1 Bag Packer**

<i>Device ID #</i>	109822	<i>Device Name</i>	Bag Packer
<i>Rated Heat Input</i>		<i>Physical Size</i>	
<i>Manufacturer</i>		<i>Operator ID</i>	4AP-122A
<i>Model</i>		<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device</i>	Bagging Capacity = 15 short tons/hr (13.6 mt/hr); packing units = 50		
<i>Description</i>	pound bags		

4.2 Bag Packer

<i>Device ID #</i>	109823	<i>Device Name</i>	Bag Packer
<i>Rated Heat Input</i>		<i>Physical Size</i>	
<i>Manufacturer</i>		<i>Operator ID</i>	4AP-122B
<i>Model</i>		<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device</i>	Bagging Capacity = 15 short tons/hr (13.6 mt/hr); packing units = 50		
<i>Description</i>	pound bags		

4.3 Baghouse BH125

<i>Device ID #</i>	110525	<i>Device Name</i>	Baghouse BH125
<i>Rated Heat Input</i>		<i>Physical Size</i>	14259.00 scf/Minute
<i>Manufacturer</i>	Donaldson	<i>Operator ID</i>	BH125
<i>Model</i>	DLMC 4/5/15	<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device</i>	BH125 contains 200 bags (each approx 20in D X 5ft L); del p = 0.1 - 6 in		
<i>Description</i>	WC; neg pressure; rating of blower (Celite ID BL125) = 30 HP; blower flow rate = 14,259 scfm; a/c ratio = 4.41; op temp = 60F		

4.4 Baghouse BH131A1

<i>Device ID #</i>	110532	<i>Device Name</i>	Baghouse BH131A1
<i>Rated Heat Input</i>		<i>Physical Size</i>	
<i>Manufacturer</i>	Donaldson	<i>Operator ID</i>	BH131A1
<i>Model</i>	DLMV 30/15	<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device</i>	BH131A1 contains 20 bags (each approx 20 in D X 5 ft L); del p = 0.1 - 6		
<i>Description</i>	in WC; positive pressure; air flow 1031 scfm, a/c ratio = 3.2; op temp = 60F.		

4.5 Baghouse BH131A2

<i>Device ID #</i>	110533	<i>Device Name</i>	Baghouse BH131A2
<i>Rated Heat Input</i>		<i>Physical Size</i>	
<i>Manufacturer</i>	Donaldson	<i>Operator ID</i>	BH131A2
<i>Model</i>	DLMV 30/15	<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device Description</i>	BH131A2 contains 20 bags (each approx 20 in D X 5 ft L); del p = 0.1 - 6 in WC; positive pressure; air flow 1031 scfm, a/c ratio = 3.2; op temp = 60F.		

4.6 Baghouse BH131B1

<i>Device ID #</i>	110534	<i>Device Name</i>	Baghouse BH131B1
<i>Rated Heat Input</i>		<i>Physical Size</i>	
<i>Manufacturer</i>	Donaldson	<i>Operator ID</i>	BH131B1
<i>Model</i>	DLMV 30/15	<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device Description</i>	BH131B1 contains 20 bags (each approx 20 in D X 5 ft L); del p = 0.1 - 6 in WC; positive pressure; air flow 1031 scfm, a/c ratio = 3.2; op temp = 60F.		

4.7 Baghouse BH131B2

<i>Device ID #</i>	110535	<i>Device Name</i>	Baghouse BH131B2
<i>Rated Heat Input</i>		<i>Physical Size</i>	
<i>Manufacturer</i>	Donaldson	<i>Operator ID</i>	BH131B2
<i>Model</i>	DLMV 30/15	<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device Description</i>	BH131B2 contains 20 bags (each approx 20 in D X 5 ft L); del p = 0.1 - 6 in WC; positive pressure; air flow 1031 scfm, a/c ratio = 3.2; op temp = 60F.		

4.8 Blower

<i>Device ID #</i>	110537	<i>Device Name</i>	Blower
<i>Rated Heat Input</i>		<i>Physical Size</i>	
<i>Manufacturer</i>		<i>Operator ID</i>	BL 132
<i>Model</i>		<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device</i>	Serving Semi Bulk Bag Fillers SB132A and B (Dev Nos 110526 & 110527); HP rating = 3 HP		
<i>Description</i>			

4.9 Blower

<i>Device ID #</i>	110536	<i>Device Name</i>	Blower
<i>Rated Heat Input</i>		<i>Physical Size</i>	
<i>Manufacturer</i>		<i>Operator ID</i>	BL125
<i>Model</i>		<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device</i>	Serving BH125 (Dev No 110525); HP rating = 30 HP		
<i>Description</i>			

4.10 Packer Bin

<i>Device ID #</i>	109824	<i>Device Name</i>	Packer Bin
<i>Rated Heat Input</i>		<i>Physical Size</i>	
<i>Manufacturer</i>		<i>Operator ID</i>	BN121A
<i>Model</i>		<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device</i>	Capacity = 4.4 short tons (4 mt) serving bag packer PK122A (Dev No 109822)		
<i>Description</i>			

4.11 Semi Bulk Bag Filler

<i>Device ID #</i>	110526	<i>Device Name</i>	Semi Bulk Bag Filler
<i>Rated Heat Input</i>		<i>Physical Size</i>	
<i>Manufacturer</i>	Stone Container Corp	<i>Operator ID</i>	5BB-132A
<i>Model</i>	MBS-1000	<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device</i>	Bagging rate = 13.2 short tons/hour (12 mt/hr)		
<i>Description</i>			

4.12 Semi Bulk Bag Filler

<i>Device ID #</i>	110527	<i>Device Name</i>	Semi Bulk Bag Filler
<i>Rated Heat Input</i>		<i>Physical Size</i>	
<i>Manufacturer</i>	Stone Container Corp	<i>Operator ID</i>	5BB-132B
<i>Model</i>	MBS-1000	<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device</i>	Bagging rate = 13.2 short tons/hour (12 mt/hr)		
<i>Description</i>			

4.13 Semi Bulk Packer Bin

<i>Device ID #</i>	109828	<i>Device Name</i>	Semi Bulk Packer Bin
<i>Rated Heat Input</i>		<i>Physical Size</i>	
<i>Manufacturer</i>		<i>Operator ID</i>	BN131A
<i>Model</i>		<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device</i>	Capacity = 4.4 short tons (4 mt) serving semi-bulk bag filler SB132A		
<i>Description</i>	(Dev No 110526)		

4.14 Semi Bulk Packer Bin

<i>Device ID #</i>	109829	<i>Device Name</i>	Semi Bulk Packer Bin
<i>Rated Heat Input</i>		<i>Physical Size</i>	
<i>Manufacturer</i>		<i>Operator ID</i>	BN131B
<i>Model</i>		<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device</i>	Capacity = 4.4 short tons (4 mt) serving semi-bulk bag filler SB132B (Dev		
<i>Description</i>	No 110527)		

5 Baghouses - Experimental Plant**6 Baghouses - Miscellaneous****6.1 4 Bulk Bin Baghouse**

<i>Device ID #</i>	103514	<i>Device Name</i>	4 Bulk Bin Baghouse
<i>Rated Heat Input</i>		<i>Physical Size</i>	
<i>Manufacturer</i>	DCE - Sintamatic	<i>Operator ID</i>	4BBBH
<i>Model</i>		<i>Serial Number</i>	APCD ID 3-17
<i>Location Note</i>			
<i>Device Description</i>	General Process Descrip: Ventilation bulk bin, vents 4 semi-bulk station		
	Pos./Neg: Neg.		
	Number of Socks: 10		
	Bag Diam. (in): cartridge		
	Bag Length (ft): 5' 1.25"		
	Total Cloth Area: 850		
	Est Air Flow: 3200		
	Est. A/C Ratio:		
	Fabric Material: polyethylene, PTFE coating		
	Cleaning Method: pulse jet.		

6.2 4 Dry End Baghouse

<i>Device ID #</i>	000112	<i>Device Name</i>	4 Dry End Baghouse
<i>Rated Heat Input</i>		<i>Physical Size</i>	
<i>Manufacturer</i>	JM Open	<i>Operator ID</i>	4DBH
<i>Model</i>		<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device Description</i>	General Process Descrip: SC production collection		
	Pos./Neg: Pos.		
	Number of Socks: 330		
	Bag Diam. (in): 9.0		
	Bag Length (ft): 57.0		
	Total Cloth Area: 44320		
	Est Air Flow: 44320		
	Est. A/C Ratio: 1.0		
	Fabric Material: orlon		
	Cleaning Method: reverse air.		

6.3 978 Baghouse

<i>Device ID #</i>	000110	<i>Device Name</i>	978 Baghouse
<i>Rated Heat Input</i>		<i>Physical Size</i>	scf/Day
<i>Manufacturer</i>	Sly	<i>Operator ID</i>	978BH
<i>Model</i>		<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device Description</i>	General Process Descrip: Ventilation truck & railcar load station, Line 3 packing equip., dry end, powder pumps, refeed vent, 10# packing, No. 4 packer vent, 1&2 BB packers, 378 supplement		
	Pos./Neg: Neg.		
	Number of Socks: 306		
	Bag Diam. (in): envelope		
	Bag Length (ft): 43x36 in		
	Total Cloth Area: 6579		
	Est Air Flow: 32900		
	Est. A/C Ratio: 4.9		
	Fabric Material: polyester felt		
	Cleaning Method: 3-sect. blow-back.		

6.4 Sackroom Baghouse

<i>Device ID #</i>	000153	<i>Device Name</i>	Sackroom Baghouse
<i>Rated Heat Input</i>		<i>Physical Size</i>	
<i>Manufacturer</i>	JM Open	<i>Operator ID</i>	SRBH
<i>Model</i>		<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device Description</i>	General Process Descrip: Sack room area & so. 1148 warehouse ventilation		
	Pos./Neg: Pos.		
	Number of Socks: 88		
	Bag Diam. (in): 9.0		
	Bag Length (ft): 24.0		
	Total Cloth Area: 4976		
	Est Air Flow: 4976		
	Est. A/C Ratio: 1.0		
	Fabric Material: cotton		
	Cleaning Method: manual.		

6.5 Soda Ash Baghouse

<i>Device ID #</i>	109452	<i>Device Name</i>	Soda Ash Baghouse
<i>Rated Heat Input</i>		<i>Physical Size</i>	
<i>Manufacturer</i>	DCE	<i>Operator ID</i>	SABH
<i>Model</i>	CSI 24K10, Type F	<i>Serial Number</i>	
<i>Location Note</i>	District baghouse Device ID 5656 should have been replaced with Device ID 109452 via ATC 11083 in 2003. This change was picked up in ATC 14897.		
<i>Device Description</i>	General Process Description: Ventilation soda ash BH Cleaning method: pulse jet Fabric material: Sintered polyethylene Pos/Neg Press: Neg Number of cartridges: 12 Cartridge dimensions: 3ft x 1.8ft Cartridge length: 3ft Total Fabric area: 245 sqft Air/cloth ratio: 3.26:1 Pressure drop: 1 - 10 in H2O Blower rating: 800 cfm Blower motor rating: 7.5 hp		

6.6 Ventilation Baghouse (1178)

<i>Device ID #</i>	000102	<i>Device Name</i>	Ventilation Baghouse (1178)
<i>Rated Heat Input</i>		<i>Physical Size</i>	36000.00 scf/Minute
<i>Manufacturer</i>	Mikro-Pulsaire	<i>Operator ID</i>	BH1178
<i>Model</i>	16 oz Polypropylene	<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device Description</i>	Ventilation system preseparators, packing, XP plant; Negative Pressure; Bag Diam. (in): 4.5; Bag Length (ft): 8.0; Total Cloth Area: 9048; Est. A/C Ratio: 5.4; enclosed		

7 Bulk Product and Waste Handling Systems (Tbl A-6)

7.1 General Waste Handling System

7.1.1 Baghouses - Central Waste System

7.1.1.1 General Waste Baghouse

<i>Device ID #</i>	000137	<i>Device Name</i>	General Waste Baghouse
<i>Rated Heat Input</i>		<i>Physical Size</i>	24150.00 scf/Minute
<i>Manufacturer</i>	Mikropul	<i>Operator ID</i>	GWBH
<i>Model</i>	611R-10-30-TR "C"	<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device Description</i>	Ventilation of Powder Mills dry end, 7 System wet end waste collection and 5 & 6 Semi-Bulk Packing Station; Negative pressure; Bag Diam. (in): 4.625; Bag Length (ft): 10.0; Total Cloth Area: 7398; Est. A/C Ratio: 3.0; enclosed		

7.1.1.2 Preseparator Waste Baghouse

<i>Device ID #</i>	000136	<i>Device Name</i>	Preseparator Waste Baghouse
<i>Rated Heat Input</i>		<i>Physical Size</i>	20000.00 Square Feet
<i>Manufacturer</i>	Mikropul	<i>Operator ID</i>	PSWBH
<i>Model</i>	520R-10-40-TC "C"	<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device Description</i>	Ventilation of Powder Mills wet end waste collection system; Negative pressure; Bag Diam. (in): 4.625; Bag Length (ft): 10.0; Total Cloth Area: 6296; Est. A/C Ratio: 5.0; enclosed		

7.1.2 General Waste Bins

<i>Device ID #</i>	103498	<i>Device Name</i>	General Waste Bins
<i>Rated Heat Input</i>		<i>Physical Size</i>	
<i>Manufacturer</i>		<i>Operator ID</i>	
<i>Model</i>		<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device Description</i>	Bin #1, Bin #4, Bin #10, Bin #8, Bin #9, and (1) waste bin		

7.1.3 General Waste Blowers

<i>Device ID #</i>	103500	<i>Device Name</i>	General Waste Blowers
<i>Rated Heat Input</i>		<i>Physical Size</i>	
<i>Manufacturer</i>		<i>Operator ID</i>	
<i>Model</i>		<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device</i>	(1) general waste blower, (1) booster blower		
<i>Description</i>			

7.1.4 General Waste Cyclones

<i>Device ID #</i>	103499	<i>Device Name</i>	General Waste Cyclones
<i>Rated Heat Input</i>		<i>Physical Size</i>	
<i>Manufacturer</i>		<i>Operator ID</i>	
<i>Model</i>		<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device</i>			
<i>Description</i>			

7.1.5 General Waste Hoppers

<i>Device ID #</i>	103501	<i>Device Name</i>	General Waste Hoppers
<i>Rated Heat Input</i>		<i>Physical Size</i>	
<i>Manufacturer</i>		<i>Operator ID</i>	
<i>Model</i>		<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device</i>	(2) hoppers on baghouse, (2) hoppers with general waste bin		
<i>Description</i>			

7.1.6 General Waste Screw Conveyors

<i>Device ID #</i>	103502	<i>Device Name</i>	General Waste Screw Conveyors
<i>Rated Heat Input</i>		<i>Physical Size</i>	
<i>Manufacturer</i>		<i>Operator ID</i>	
<i>Model</i>		<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device Description</i>	screw conveyors per line: #4 (5), #5 (3), #6 (2), #7 (1),		

7.2 Preseparator Waste System**7.2.1 Baghouses - Preseparator Waste System****7.2.2 Bins**

<i>Device ID #</i>	103494	<i>Device Name</i>	Bins
<i>Rated Heat Input</i>		<i>Physical Size</i>	
<i>Manufacturer</i>		<i>Operator ID</i>	
<i>Model</i>		<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device Description</i>	(1) preseparator waste bin		

7.2.3 Cyclones

<i>Device ID #</i>	103495	<i>Device Name</i>	Cyclones
<i>Rated Heat Input</i>		<i>Physical Size</i>	
<i>Manufacturer</i>		<i>Operator ID</i>	
<i>Model</i>		<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device Description</i>			

7.2.4 Hopper

<i>Device ID #</i>	103497	<i>Device Name</i>	Hopper
<i>Rated Heat Input</i>		<i>Physical Size</i>	
<i>Manufacturer</i>		<i>Operator ID</i>	
<i>Model</i>		<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device</i>			
<i>Description</i>			

7.2.5 Preseparator Waste Blower

<i>Device ID #</i>	103496	<i>Device Name</i>	Preseparator Waste Blower
<i>Rated Heat Input</i>		<i>Physical Size</i>	
<i>Manufacturer</i>		<i>Operator ID</i>	
<i>Model</i>		<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device</i>			
<i>Description</i>			

7.3 Recirculating System**7.3.1 Baghouses - Recirculating System****7.3.1.1 Recirculating System Ventilation Baghouse**

<i>Device ID #</i>	000135	<i>Device Name</i>	Recirculating System Ventilation Baghouse
<i>Rated Heat Input</i>		<i>Physical Size</i>	18000.00 scf/Minute
<i>Manufacturer</i>	Mikropul	<i>Operator ID</i>	RBH
<i>Model</i>	408R-10/12 -30-TC "C"	<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device</i>	Ventilation of Powder Mills dry end waste recovery; Negative pressure;		
<i>Description</i>	Bag Diam. (in): 4.6; Bag Length (ft): 10.0; Total Cloth Area: 4940; Est. A/C Ratio: 3.6; enclosed		

7.3.2 Bins

<i>Device ID #</i>	103503	<i>Device Name</i>	Bins
<i>Rated Heat Input</i>		<i>Physical Size</i>	
<i>Manufacturer</i>		<i>Operator ID</i>	
<i>Model</i>		<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device</i>			
<i>Description</i>			

7.3.3 Blowers

<i>Device ID #</i>	103505	<i>Device Name</i>	Blowers
<i>Rated Heat Input</i>		<i>Physical Size</i>	
<i>Manufacturer</i>		<i>Operator ID</i>	
<i>Model</i>		<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device</i>			
<i>Description</i>			

7.3.4 Cyclones

<i>Device ID #</i>	103504	<i>Device Name</i>	Cyclones
<i>Rated Heat Input</i>		<i>Physical Size</i>	
<i>Manufacturer</i>		<i>Operator ID</i>	
<i>Model</i>		<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device</i>			
<i>Description</i>			

7.3.5 Screw and dust hole conveyor

<i>Device ID #</i>	103506	<i>Device Name</i>	Screw and dust hole conveyor
<i>Rated Heat Input</i>		<i>Physical Size</i>	
<i>Manufacturer</i>		<i>Operator ID</i>	
<i>Model</i>		<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device</i>	Number of devices is currently unknown.		
<i>Description</i>			

7.4 Truck and Railcar Loading System**7.4.1 Bins**

<i>Device ID #</i>	103491	<i>Device Name</i>	Bins
<i>Rated Heat Input</i>		<i>Physical Size</i>	
<i>Manufacturer</i>		<i>Operator ID</i>	
<i>Model</i>		<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device</i>	Handles material from Lines #3-7 and #11		
<i>Description</i>			

7.4.2 Bulk Bins

<i>Device ID #</i>	103493	<i>Device Name</i>	Bulk Bins
<i>Rated Heat Input</i>		<i>Physical Size</i>	
<i>Manufacturer</i>		<i>Operator ID</i>	
<i>Model</i>		<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device</i>			
<i>Description</i>			

7.4.3 Powder Pumps

<i>Device ID #</i>	103492	<i>Device Name</i>	Powder Pumps
<i>Rated Heat Input</i>		<i>Physical Size</i>	
<i>Manufacturer</i>		<i>Operator ID</i>	
<i>Model</i>		<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device</i>			
<i>Description</i>			

7.5 Truck Loading System at No. 5 & 6 Bins

<i>Device ID #</i>	103268	<i>Device Name</i>	Truck Loading System at No. 5 & 6 Bins
<i>Rated Heat Input</i>		<i>Physical Size</i>	20.00 Tons/Hour
<i>Manufacturer</i>		<i>Operator ID</i>	
<i>Model</i>		<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device</i>	Serves: Primary Processing Line No. 7		
<i>Description</i>			

8 Celite Analytical Filter Aid Production Line

<i>Device ID #</i>	103265	<i>Device Name</i>	Celite Analytical Filter Aid Production Line
<i>Rated Heat Input</i>		<i>Physical Size</i>	100.00 lb/Hour
<i>Manufacturer</i>		<i>Operator ID</i>	
<i>Model</i>		<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device</i>			
<i>Description</i>			

8.1 Baghouses - Celite Analytical Filter Aid Prod Line**8.1.1 CAFA Baghouse**

<i>Device ID #</i>	000152	<i>Device Name</i>	CAFA Baghouse
<i>Rated Heat Input</i>		<i>Physical Size</i>	138.00 scf/Minute
<i>Manufacturer</i>	JM Open	<i>Operator ID</i>	CAFABH
<i>Model</i>	Orlon	<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device</i>	Ventilation CAFA equipment; Positive pressure; Bag Diam. (in): 9.0; Bag		
<i>Description</i>	Length (ft): 11.0; Total Cloth Area: 130; Est. A/C Ratio: 1.0; open		

8.2 Cyclone

<i>Device ID #</i>	103452	<i>Device Name</i>	Cyclone
<i>Rated Heat Input</i>		<i>Physical Size</i>	
<i>Manufacturer</i>		<i>Operator ID</i>	
<i>Model</i>		<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device</i>			
<i>Description</i>			

8.3 Drum Packer

<i>Device ID #</i>	103456	<i>Device Name</i>	Drum Packer
<i>Rated Heat Input</i>		<i>Physical Size</i>	100.00 lb/Hour
<i>Manufacturer</i>		<i>Operator ID</i>	
<i>Model</i>		<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device</i>			
<i>Description</i>			

8.4 Feed Hopper

<i>Device ID #</i>	103455	<i>Device Name</i>	Feed Hopper
<i>Rated Heat Input</i>		<i>Physical Size</i>	
<i>Manufacturer</i>		<i>Operator ID</i>	
<i>Model</i>		<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device</i>			
<i>Description</i>			

8.5 Milling Blower

<i>Device ID #</i>	103453	<i>Device Name</i>	Milling Blower
<i>Rated Heat Input</i>		<i>Physical Size</i>	
<i>Manufacturer</i>		<i>Operator ID</i>	
<i>Model</i>		<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device</i>			
<i>Description</i>			

8.6 Screw Conveyor

<i>Device ID #</i>	103457	<i>Device Name</i>	Screw Conveyor
<i>Rated Heat Input</i>		<i>Physical Size</i>	
<i>Manufacturer</i>		<i>Operator ID</i>	
<i>Model</i>		<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device</i>			
<i>Description</i>			

8.7 Surge Bin

<i>Device ID #</i>	103454	<i>Device Name</i>	Surge Bin
<i>Rated Heat Input</i>		<i>Physical Size</i>	
<i>Manufacturer</i>		<i>Operator ID</i>	
<i>Model</i>		<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device</i>			
<i>Description</i>			

9 Celpure Plant

9.1 Aeration Blower

Device ID #	387102	Device Name	Aeration Blower
<i>Rated Heat Input</i>		<i>Physical Size</i>	Brake Horsepower
<i>Manufacturer</i>		<i>Operator ID</i>	810-BL-002
<i>Model</i>		<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device</i>	For silos		
<i>Description</i>			

9.2 Belt Conveyor 1

Device ID #	387107	Device Name	Belt Conveyor 1
<i>Rated Heat Input</i>		<i>Physical Size</i>	
<i>Manufacturer</i>		<i>Operator ID</i>	710-BC-001
<i>Model</i>		<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device</i>	Wet, cake		
<i>Description</i>			

9.3 Belt Conveyor 2 - Backup

Device ID #	387108	Device Name	Belt Conveyor 2 - Backup
<i>Rated Heat Input</i>		<i>Physical Size</i>	
<i>Manufacturer</i>		<i>Operator ID</i>	710-BC-002
<i>Model</i>		<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device</i>	Wet, cake		
<i>Description</i>			

9.4 Celpure Discharge Silo #1

<i>Device ID #</i>	386354	<i>Device Name</i>	Celpure Discharge Silo #1
<i>Rated Heat Input</i>		<i>Physical Size</i>	22000.00 Cubic Feet
<i>Manufacturer</i>	Diversified Storage System	<i>Operator ID</i>	
<i>Model</i>	PD-Tank 2200	<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device Description</i>	Used to store product while another product is processed. Dimensions: 12' diameter x 37' height.		

9.5 Celpure Discharge Silo #2

<i>Device ID #</i>	386356	<i>Device Name</i>	Celpure Discharge Silo #2
<i>Rated Heat Input</i>		<i>Physical Size</i>	22000.00 Cubic Feet
<i>Manufacturer</i>	Diversified Storage System	<i>Operator ID</i>	
<i>Model</i>	PD-Tank 2200	<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device Description</i>	Used to store product while another product is processed. Dimensions: 12' diameter x 37' height.		

9.6 Celpure Discharge Silo #3

<i>Device ID #</i>	386357	<i>Device Name</i>	Celpure Discharge Silo #3
<i>Rated Heat Input</i>		<i>Physical Size</i>	22000.00 Cubic Feet
<i>Manufacturer</i>	Diversified Storage System	<i>Operator ID</i>	
<i>Model</i>	PD-Tank 2200	<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device Description</i>	Used to store product while another product is processed. Dimensions: 12' diameter x 37' height.		

9.7 Celpure Discharge Silo #4

<i>Device ID #</i>	386358	<i>Device Name</i>	Celpure Discharge Silo #4
<i>Rated Heat Input</i>		<i>Physical Size</i>	22000.00 Cubic Feet
<i>Manufacturer</i>	Diversified Storage System	<i>Operator ID</i>	
<i>Model</i>	PD-Tank 2200	<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device Description</i>	Used to store product while another product is processed. Dimensions: 12' diameter x 37' height.		

9.8 Celpure Exempt Equipment**9.9 Celpure Process 1****9.9.1 Crude Belt Conveyor**

<i>Device ID #</i>	106229	<i>Device Name</i>	Crude Belt Conveyor
<i>Rated Heat Input</i>		<i>Physical Size</i>	
<i>Manufacturer</i>	Bulk Material Handling	<i>Operator ID</i>	CP5
<i>Model</i>		<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device Description</i>	14' x 26"		

9.9.2 Crude Bin

<i>Device ID #</i>	106227	<i>Device Name</i>	Crude Bin
<i>Rated Heat Input</i>		<i>Physical Size</i>	2650.00 Cubic Feet
<i>Manufacturer</i>	Steel Structures	<i>Operator ID</i>	CP3
<i>Model</i>		<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device Description</i>			

9.9.3 Crude Bin Ventilation Baghouse

<i>Device ID #</i>	008073	<i>Device Name</i>	Crude Bin Ventilation Baghouse
<i>Rated Heat Input</i>		<i>Physical Size</i>	2811.00 scf/Minute
<i>Manufacturer</i>	DCE Sintamatic	<i>Operator ID</i>	DC1
<i>Model</i>	CS 138FP	<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device</i>	2,811 cfm, 0.00044 gr/acf		
<i>Description</i>			

9.9.4 Detritor

<i>Device ID #</i>	108260	<i>Device Name</i>	Detritor
<i>Rated Heat Input</i>		<i>Physical Size</i>	25.00 Horsepower (Electric Motor)
<i>Manufacturer</i>	Metso Minerals	<i>Operator ID</i>	
<i>Model</i>		<i>Serial Number</i>	62597
<i>Location Note</i>	Added in May 2005 after the removal of the pug mill and attrition scrubber		
<i>Device</i>	Operates with one 25 hp electric motor		
<i>Description</i>			

9.9.5 Hammermill

<i>Device ID #</i>	106226	<i>Device Name</i>	Hammermill
<i>Rated Heat Input</i>		<i>Physical Size</i>	175.00 Tons/Hour
<i>Manufacturer</i>	Jeffry	<i>Operator ID</i>	CP2
<i>Model</i>	45AB	<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device</i>			
<i>Description</i>			

9.9.6 Upper Crude Belt Conveyor

<i>Device ID #</i>	106228	<i>Device Name</i>	Upper Crude Belt Conveyor
<i>Rated Heat Input</i>		<i>Physical Size</i>	
<i>Manufacturer</i>	Power Industries	<i>Operator ID</i>	CP4
<i>Model</i>		<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device</i>	300' x 36 "		
<i>Description</i>			

9.9.7 Upper Crude Hopper

<i>Device ID #</i>	108409	<i>Device Name</i>	Upper Crude Hopper
<i>Rated Heat Input</i>		<i>Physical Size</i>	Tons/Hour
<i>Manufacturer</i>	Spokane Machinery	<i>Operator ID</i>	CP1
<i>Model</i>	custom	<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device</i>			
<i>Description</i>			

9.10 Celpure Process 2**9.10.1 Flotation Cells**

<i>Device ID #</i>	106235	<i>Device Name</i>	Flotation Cells
<i>Rated Heat Input</i>		<i>Physical Size</i>	288.00 Cubic Feet
<i>Manufacturer</i>	Quinn Process Equipment Co.	<i>Operator ID</i>	CP12
<i>Model</i>	18SPL 6 Cell	<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device</i>			
<i>Description</i>			

9.10.2 Flotation Conditioning Tanks

<i>Device ID #</i>	106234	<i>Device Name</i>	Flotation Conditioning Tanks
<i>Rated Heat Input</i>		<i>Physical Size</i>	850.00 Gallons
<i>Manufacturer</i>	Paramount Fabricators	<i>Operator ID</i>	CP11
<i>Model</i>		<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device</i>	two tanks?		
<i>Description</i>			

9.10.3 Hydroclone Feed Tank

<i>Device ID #</i>	106259	<i>Device Name</i>	Hydroclone Feed Tank
<i>Rated Heat Input</i>		<i>Physical Size</i>	
<i>Manufacturer</i>		<i>Operator ID</i>	
<i>Model</i>		<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device</i>			
<i>Description</i>			

9.10.4 Hydroclone Slurry Tank

<i>Device ID #</i>	106261	<i>Device Name</i>	Hydroclone Slurry Tank
<i>Rated Heat Input</i>		<i>Physical Size</i>	
<i>Manufacturer</i>		<i>Operator ID</i>	
<i>Model</i>		<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device</i>			
<i>Description</i>			

9.10.5 Hydroclones

<i>Device ID #</i>	106233	<i>Device Name</i>	Hydroclones
<i>Rated Heat Input</i>		<i>Physical Size</i>	lb/gal
<i>Manufacturer</i>	Krebs Engineers	<i>Operator ID</i>	CP10
<i>Model</i>	Model PCI-1421	<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device</i>	5 lb DE/min/hydroclone		
<i>Description</i>			

9.10.6 Waste (Crude Tailings) Tank

<i>Device ID #</i>	106260	<i>Device Name</i>	Waste (Crude Tailings) Tank
<i>Rated Heat Input</i>		<i>Physical Size</i>	
<i>Manufacturer</i>		<i>Operator ID</i>	
<i>Model</i>		<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device</i>	Receives material from hydroclone slurry tank		
<i>Description</i>			

9.10.7 Wet Screen

<i>Device ID #</i>	106232	<i>Device Name</i>	Wet Screen
<i>Rated Heat Input</i>		<i>Physical Size</i>	170.00 gal/Minute
<i>Manufacturer</i>	Derrick Corp	<i>Operator ID</i>	CP9
<i>Model</i>	2124-60W-2M	<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device</i>			
<i>Description</i>			

9.11 Celpure Process 3**9.11.1 1st Stage Dryer**

<i>Device ID #</i>	008920	<i>Device Name</i>	1st Stage Dryer
<i>Rated Heat Input</i>	3.200 MMBtu/Hour	<i>Physical Size</i>	
<i>Manufacturer</i>	The National Drying Machinery Co.	<i>Operator ID</i>	CP14
<i>Model</i>	Apron Dryer	<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device Description</i>	(CS1) 6 ft x 30 ft. Receives cake from dewatering filter		

9.11.2 1st Stage Dryer Baghouse

<i>Device ID #</i>	008082	<i>Device Name</i>	1st Stage Dryer Baghouse
<i>Rated Heat Input</i>		<i>Physical Size</i>	6143.00 Cubic Feet/Minute
<i>Manufacturer</i>	Mikropul	<i>Operator ID</i>	CP15/ DC4
<i>Model</i>	133-8-100 "C"	<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device Description</i>	(DC4), 6413 acfm, 0.002 gr/dscf, 90 psig header		

9.11.3 Dewatering Filter

<i>Device ID #</i>	106262	<i>Device Name</i>	Dewatering Filter
<i>Rated Heat Input</i>		<i>Physical Size</i>	50.00 Square Feet
<i>Manufacturer</i>	Filtration Systems Tech	<i>Operator ID</i>	CP13
<i>Model</i>	VP-50-1	<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device Description</i>	Receives hydroclone slurry from floatation cells		

9.11.4 Dewatering Filter Feed Tank

<i>Device ID #</i>	106263	<i>Device Name</i>	Dewatering Filter Feed Tank
<i>Rated Heat Input</i>		<i>Physical Size</i>	
<i>Manufacturer</i>		<i>Operator ID</i>	
<i>Model</i>		<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device</i>			
<i>Description</i>			

9.11.5 Dispersing Screen

<i>Device ID #</i>	106236	<i>Device Name</i>	Dispersing Screen
<i>Rated Heat Input</i>		<i>Physical Size</i>	1000.00 lb/Hour
<i>Manufacturer</i>	Kemutec Group	<i>Operator ID</i>	CP16
<i>Model</i>	K650	<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device</i>			
<i>Description</i>			

9.11.6 Soda Ash Bin

<i>Device ID #</i>	106237	<i>Device Name</i>	Soda Ash Bin
<i>Rated Heat Input</i>		<i>Physical Size</i>	110.00 Cubic Feet
<i>Manufacturer</i>	Steel Structures Inc.	<i>Operator ID</i>	CP39
<i>Model</i>	Custom	<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device</i>			
<i>Description</i>			

9.11.7 Soda Ash Bin Baghouse

<i>Device ID #</i>	008074	<i>Device Name</i>	Soda Ash Bin Baghouse
<i>Rated Heat Input</i>		<i>Physical Size</i>	600.00 Cubic Feet/Minute
<i>Manufacturer</i>	Sintamatic	<i>Operator ID</i>	DC2
<i>Model</i>	CSI 12 K5	<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device Description</i>	Associated with Soda Ash Bin Dust Collector (CP42)		

9.11.8 Soda Ash Mill

<i>Device ID #</i>	106239	<i>Device Name</i>	Soda Ash Mill
<i>Rated Heat Input</i>		<i>Physical Size</i>	100.00 lb/Hour
<i>Manufacturer</i>	Micron Powder Systems	<i>Operator ID</i>	CP41
<i>Model</i>	10	<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device Description</i>	with gravity feed		

9.11.9 Soda Ash Mix Tank

<i>Device ID #</i>	106238	<i>Device Name</i>	Soda Ash Mix Tank
<i>Rated Heat Input</i>		<i>Physical Size</i>	250.00 Gallons
<i>Manufacturer</i>	LW LeFort	<i>Operator ID</i>	CP40
<i>Model</i>	Custom	<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device Description</i>			

9.12 Celpure Process 4**9.12.1 350 Scrubber**

<i>Device ID #</i>	106243	<i>Device Name</i>	350 Scrubber
<i>Rated Heat Input</i>		<i>Physical Size</i>	
<i>Manufacturer</i>	Met Pro Corporation	<i>Operator ID</i>	CP22/ SR2
<i>Model</i>		<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device</i>	1st stage dryer. (SR2), 6150 acfm, 98% efficiency		
<i>Description</i>			

9.12.2 370 Scrubber

<i>Device ID #</i>	106242	<i>Device Name</i>	370 Scrubber
<i>Rated Heat Input</i>		<i>Physical Size</i>	
<i>Manufacturer</i>	Met Pro Corporation	<i>Operator ID</i>	CP56/ SR1
<i>Model</i>		<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device</i>	(SR1)		
<i>Description</i>			

9.12.3 Calciner Exhaust Baghouse

<i>Device ID #</i>	008083	<i>Device Name</i>	Calciner Exhaust Baghouse
<i>Rated Heat Input</i>		<i>Physical Size</i>	
<i>Manufacturer</i>	Mikropul	<i>Operator ID</i>	CP21
<i>Model</i>	85-8-35 "C"	<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device</i>	3600 acfm, 0.002 gr/dscf, 90 psig header		
<i>Description</i>			

9.12.4 Cyclone

<i>Device ID #</i>	106240	<i>Device Name</i>	Cyclone
<i>Rated Heat Input</i>		<i>Physical Size</i>	4.00 Diameter (ft)
<i>Manufacturer</i>	Peterson	<i>Operator ID</i>	CP17
<i>Model</i>	Custom	<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device</i>	Ventilated to surge bin baghouse		
<i>Description</i>			

9.12.5 Kiln (Calciner)

<i>Device ID #</i>	008921	<i>Device Name</i>	Kiln (Calciner)
<i>Rated Heat Input</i>	2.640 MMBtu/Hour	<i>Physical Size</i>	
<i>Manufacturer</i>	Vulcan	<i>Operator ID</i>	CP20
<i>Model</i>		<i>Serial Number</i>	97-14322
<i>Location Note</i>			
<i>Device</i>	(CS2) Receives material sent from the kiln rotary feed screw. Exhaust is		
<i>Description</i>	ventilated to the calciner baghouse for PM and to the packed tower scrubber for SOx removal. 6 ft ID x 40 ft		

9.12.6 Kiln Feed (Calciner Surge) Bin

<i>Device ID #</i>	106241	<i>Device Name</i>	Kiln Feed (Calciner Surge) Bin
<i>Rated Heat Input</i>		<i>Physical Size</i>	200.00 Cubic Feet
<i>Manufacturer</i>	Steel Structures	<i>Operator ID</i>	CP19
<i>Model</i>		<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device</i>	Receives material from cyclone with Soda Ash added. Ventilated by surge		
<i>Description</i>	bin baghouse.		

9.12.7 Kiln Feed Baghouse

<i>Device ID #</i>	008075	<i>Device Name</i>	Kiln Feed Baghouse
<i>Rated Heat Input</i>		<i>Physical Size</i>	2800.00 scf/Minute
<i>Manufacturer</i>	Mikropul	<i>Operator ID</i>	CP18/ DC5
<i>Model</i>	55-8-55 "C"	<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device</i>	(DC5) 1995 acfm, 0.005 gr/dscf		
<i>Description</i>			

9.12.8 Kiln Feed Bin Metering Screw

<i>Device ID #</i>	106264	<i>Device Name</i>	Kiln Feed Bin Metering Screw
<i>Rated Heat Input</i>		<i>Physical Size</i>	
<i>Manufacturer</i>		<i>Operator ID</i>	
<i>Model</i>		<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device</i>	Receives material from calciner surge bin, and sends it to the kiln rotary		
<i>Description</i>	feed screw.		

9.12.9 Kiln Rotary Feed Screw

<i>Device ID #</i>	106265	<i>Device Name</i>	Kiln Rotary Feed Screw
<i>Rated Heat Input</i>		<i>Physical Size</i>	
<i>Manufacturer</i>		<i>Operator ID</i>	
<i>Model</i>		<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device</i>	Receives material from the metering bin screw and sends it to the calciner.		
<i>Description</i>			

9.13 Celpure Process 5

9.13.1 Flash Cooler Baghouse

Device ID #	008076	Device Name	Flash Cooler Baghouse
<i>Rated Heat Input</i>		<i>Physical Size</i>	2793.00 Cubic Feet/Minute
<i>Manufacturer Model</i>	Mikropul 69-8-35 "C"	<i>Operator ID</i>	DC7
<i>Location Note</i>		<i>Serial Number</i>	
<i>Device Description</i>	90 psig header, 0.005 gr/dscf. Serves the product mix tank and packing area.		

9.13.2 Flash Cooling Cyclone

Device ID #	106245	Device Name	Flash Cooling Cyclone
<i>Rated Heat Input</i>		<i>Physical Size</i>	5.00 Diameter (ft)
<i>Manufacturer Model</i>	Peterson Custom	<i>Operator ID</i>	CP24
<i>Location Note</i>		<i>Serial Number</i>	
<i>Device Description</i>	Flash cools dried DE. Calcined material is sent to the product mix tank.		

9.13.3 Leach Slurry Storage Tank

Device ID #	106248	Device Name	Leach Slurry Storage Tank
<i>Rated Heat Input</i>		<i>Physical Size</i>	2300.00 Gallons
<i>Manufacturer Model</i>	Paramount Fabricators	<i>Operator ID</i>	CP28
<i>Location Note</i>		<i>Serial Number</i>	
<i>Device Description</i>	Ventilated to the packed bed scrubber (SR1)		

9.13.4 Leach Tank

<i>Device ID #</i>	106247	<i>Device Name</i>	Leach Tank
<i>Rated Heat Input</i>		<i>Physical Size</i>	1500.00 Gallons
<i>Manufacturer</i>	Ametek	<i>Operator ID</i>	CP27
<i>Model</i>		<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device</i>	Receives slurried calcined material from the product mix tank. Adds		
<i>Description</i>	sulfuric acid and heated with steam from boiler.		

9.13.5 Mix Tank

<i>Device ID #</i>	106246	<i>Device Name</i>	Mix Tank
<i>Rated Heat Input</i>		<i>Physical Size</i>	2300.00 Gallons
<i>Manufacturer</i>	Paramount Fabricators	<i>Operator ID</i>	CP26
<i>Model</i>		<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device</i>	Receives cooled material from cyclone. Material is slurried with water.		
<i>Description</i>			

9.13.6 Refeed (Bag Breaking) Station

<i>Device ID #</i>	106244	<i>Device Name</i>	Refeed (Bag Breaking) Station
<i>Rated Heat Input</i>		<i>Physical Size</i>	
<i>Manufacturer</i>	Celite	<i>Operator ID</i>	CP23
<i>Model</i>	Custom	<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device</i>	4 bags/minute. Allows the addition of bagged material at three locations.		
<i>Description</i>	Consists of a feed hopper, and an empty bag compactor. Ventilated to the dedicated refeed baghouse.		

9.13.7 Refeed Station Baghouse

<i>Device ID #</i>	008079	<i>Device Name</i>	Refeed Station Baghouse
<i>Rated Heat Input</i>		<i>Physical Size</i>	
<i>Manufacturer</i>	DCE Sintamatic	<i>Operator ID</i>	CP38/ DC11
<i>Model</i>	CSI 32F10	<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device</i>	2000 acfm, 0.00044 gr/acf		
<i>Description</i>			

9.13.8 Refeed Station Powder Pump Packer

<i>Device ID #</i>	106249	<i>Device Name</i>	Refeed Station Powder Pump Packer
<i>Rated Heat Input</i>		<i>Physical Size</i>	400.00 lb/Hour
<i>Manufacturer</i>	Bulk Materials	<i>Operator ID</i>	CP55
	Handling		
<i>Model</i>	Custom	<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device</i>	Pump used for the Refeed Station Powder Packer		
<i>Description</i>			

9.14 Celpure Process 6**9.14.1 2nd Stage Dryer**

<i>Device ID #</i>	008922	<i>Device Name</i>	2nd Stage Dryer
<i>Rated Heat Input</i>	3.200 MMBtu/Hour	<i>Physical Size</i>	
<i>Manufacturer</i>	The National Drying	<i>Operator ID</i>	CP31
	Machine Company		
<i>Model</i>		<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device</i>	(CS3) direct fired process heater: 6' x 30 '. Dries slurry from the rinsing		
<i>Description</i>	and deacidifying filters. PM is controlled by the dryer exhaust baghouse		

9.14.2 Bag Packing Station

<i>Device ID #</i>	106255	<i>Device Name</i>	Bag Packing Station
<i>Rated Heat Input</i>		<i>Physical Size</i>	
<i>Manufacturer</i>	PAC 21	<i>Operator ID</i>	CP36
<i>Model</i>		<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device</i>	Bag filler is ventilated to the Packing Station Baghouse. 150 lb/min		
<i>Description</i>			

9.14.3 Packaging Station Cyclone

<i>Device ID #</i>	106252	<i>Device Name</i>	Packaging Station Cyclone
<i>Rated Heat Input</i>		<i>Physical Size</i>	3.00 Diameter (ft)
<i>Manufacturer</i>	Peterson	<i>Operator ID</i>	CP33
<i>Model</i>	Custom	<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device</i>	Receives material from the dryer, which is sent to the rotary screen.		
<i>Description</i>			

9.14.4 Packer Bin

<i>Device ID #</i>	106254	<i>Device Name</i>	Packer Bin
<i>Rated Heat Input</i>		<i>Physical Size</i>	500.00 Cubic Feet
<i>Manufacturer</i>	Steel Structures	<i>Operator ID</i>	CP35
<i>Model</i>	Custom	<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device</i>			
<i>Description</i>			

9.14.5 Packing Station Baghouse

<i>Device ID #</i>	008078	<i>Device Name</i>	Packing Station Baghouse
<i>Rated Heat Input</i>		<i>Physical Size</i>	
<i>Manufacturer</i>	Mikropul	<i>Operator ID</i>	CP37
<i>Model</i>	31-8-85 C	<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device</i>	(DC9) 1260 acfm, 0.002 gr/dscf, 90 psig header		
<i>Description</i>			

9.14.6 Product Dispersing Screen

<i>Device ID #</i>	106253	<i>Device Name</i>	Product Dispersing Screen
<i>Rated Heat Input</i>		<i>Physical Size</i>	1000.00 lb/Hour
<i>Manufacturer</i>	Kemutec Group	<i>Operator ID</i>	CP34
<i>Model</i>	K650	<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device</i>	Material is discharged into a packer bin.		
<i>Description</i>			

9.14.7 Rinsing Filter

<i>Device ID #</i>	106251	<i>Device Name</i>	Rinsing Filter
<i>Rated Heat Input</i>		<i>Physical Size</i>	200.00 Square Feet
<i>Manufacturer</i>	Filtration Systems	<i>Operator ID</i>	CP30
<i>Model</i>	Tech	<i>Serial Number</i>	
<i>Location Note</i>	VP-50-4		
<i>Device</i>	Rinses and filters the reacted slurry		
<i>Description</i>			

9.14.8 Second Stage Dryer Baghouse

<i>Device ID #</i>	008077	<i>Device Name</i>	Second Stage Dryer Baghouse
<i>Rated Heat Input</i>		<i>Physical Size</i>	
<i>Manufacturer</i>	Mikropul	<i>Operator ID</i>	BH420
<i>Model</i>	133-8-100 C	<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device</i>	(DC8) 6143 acfm, 0.002 gr/dscf, 90 psig header		
<i>Description</i>			

9.14.9 Semi-Bulk Packing Station

<i>Device ID #</i>	108405	<i>Device Name</i>	Semi-Bulk Packing Station
<i>Rated Heat Input</i>		<i>Physical Size</i>	
<i>Manufacturer</i>	Sota	<i>Operator ID</i>	
<i>Model</i>	BB4P3	<i>Serial Number</i>	99 403
<i>Location Note</i>			
<i>Device</i>	Added per ATC 11007. Served by the Packing Station Baghouse		
<i>Description</i>			

9.15 Celpure Process 7**9.15.1 Alternate Soda Ash Bin**

<i>Device ID #</i>	106257	<i>Device Name</i>	Alternate Soda Ash Bin
<i>Rated Heat Input</i>		<i>Physical Size</i>	690.00 Cubic Feet
<i>Manufacturer</i>	Steel Structures, Inc.	<i>Operator ID</i>	CP52
<i>Model</i>	Custom	<i>Serial Number</i>	
<i>Location Note</i>	Vented through the Alternative Soda Ash Baghouse (309200), and then to the Soda Ash Bin BH (8074).		
<i>Device</i>			
<i>Description</i>			

9.15.2 DE Bin

<i>Device ID #</i>	106256	<i>Device Name</i>	DE Bin
<i>Rated Heat Input</i>		<i>Physical Size</i>	690.00 Cubic Feet
<i>Manufacturer</i>	Steel Structures Inc	<i>Operator ID</i>	CP50
<i>Model</i>	Custom	<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device</i>			
<i>Description</i>			

9.15.3 Package Boiler

<i>Device ID #</i>	008923	<i>Device Name</i>	Package Boiler
<i>Rated Heat Input</i>	3.780 MMBtu/Hour	<i>Physical Size</i>	
<i>Manufacturer</i>	Parker Industries	<i>Operator ID</i>	CP44
<i>Model</i>	105-90	<i>Serial Number</i>	49330
<i>Location Note</i>			
<i>Device</i>	direct fired process heater; Steam is used to heat slurry mixed with sulfuric acid in leach tank CP27. Horizontal drum steam boiler.		
<i>Description</i>			

9.16 Convey Air Blower

<i>Device ID #</i>	387101	<i>Device Name</i>	Convey Air Blower
<i>Rated Heat Input</i>		<i>Physical Size</i>	Brake Horsepower
<i>Manufacturer</i>		<i>Operator ID</i>	810-PD-001
<i>Model</i>		<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device</i>	For silos		
<i>Description</i>			

9.17 Detritor

<i>Device ID #</i>	387109	<i>Device Name</i>	Detritor
<i>Rated Heat Input</i>		<i>Physical Size</i>	Kilowatts
<i>Manufacturer</i>		<i>Operator ID</i>	710-DT-001
<i>Model</i>		<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device</i>	Wet slurry		
<i>Description</i>			

9.18 Dust Collector 1

<i>Device ID #</i>	387104	<i>Device Name</i>	Dust Collector 1
<i>Rated Heat Input</i>		<i>Physical Size</i>	scf/Minute
<i>Manufacturer</i>		<i>Operator ID</i>	810-DC-001
<i>Model</i>		<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device</i>	For silos		
<i>Description</i>			

9.19 Dust Collector 2

<i>Device ID #</i>	387105	<i>Device Name</i>	Dust Collector 2
<i>Rated Heat Input</i>		<i>Physical Size</i>	scf/Minute
<i>Manufacturer</i>		<i>Operator ID</i>	810-DC-002
<i>Model</i>		<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device</i>	For silos		
<i>Description</i>			

9.20 Elevator

<i>Device ID #</i>	387111	<i>Device Name</i>	Elevator
<i>Rated Heat Input</i>		<i>Physical Size</i>	Kilowatts
<i>Manufacturer</i>		<i>Operator ID</i>	710-EL-001
<i>Model</i>		<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device</i>	Wet		
<i>Description</i>			

9.21 Emergency Power Generator

<i>Device ID #</i>	103521	<i>Maximum Rated BHP</i>	50.00
<i>Device Name</i>	Emergency Power Generator	<i>Serial Number</i>	CD050/3777E068
<i>Engine Use</i>	Electrical Power	<i>EPA Engine Family Name</i>	
<i>Manufacturer</i>	Caterpillar	<i>Operator ID</i>	CP46
<i>Model Year</i>	1998	<i>Fuel Type</i>	CARB Diesel - ULSD
<i>Model</i>	CD50		
<i>DRP/ISC?</i>	No	<i>Healthcare Facility?</i>	No
<i>Daily Hours</i>		<i>Annual Hours</i>	
<i>Location</i>			
<i>Note</i>			
<i>Device Description</i>	Celpure Plant: diesel-fired,		

9.22 Filter Press (Rinsing Filter)

<i>Device ID #</i>	387106	<i>Device Name</i>	Filter Press (Rinsing Filter)
<i>Rated Heat Input</i>		<i>Physical Size</i>	scf/Minute
<i>Manufacturer</i>		<i>Operator ID</i>	710-VP-001
<i>Model</i>		<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device Description</i>	Wet slurry		

9.23 Gravity Diverter

<i>Device ID #</i>	387112	<i>Device Name</i>	Gravity Diverter
<i>Rated Heat Input</i>		<i>Physical Size</i>	
<i>Manufacturer</i>		<i>Operator ID</i>	710-GD-001
<i>Model</i>		<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device Description</i>	Wet		

9.24 Semi Dense Phase Conveyer (Powder Pump)

<i>Device ID #</i>	387103	<i>Device Name</i>	Semi Dense Phase Conveyer (Powder Pump)
<i>Rated Heat Input</i>		<i>Physical Size</i>	
<i>Manufacturer</i>		<i>Operator ID</i>	810-PP-001
<i>Model</i>		<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device</i>	For silos		
<i>Description</i>			

9.25 Storage Silo 1

<i>Device ID #</i>	387094	<i>Device Name</i>	Storage Silo 1
<i>Rated Heat Input</i>		<i>Physical Size</i>	
<i>Manufacturer</i>		<i>Operator ID</i>	810-BN-001
<i>Model</i>		<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device</i>	Stores product during downtime.		
<i>Description</i>			

9.26 Storage Silo 2

<i>Device ID #</i>	387100	<i>Device Name</i>	Storage Silo 2
<i>Rated Heat Input</i>		<i>Physical Size</i>	
<i>Manufacturer</i>		<i>Operator ID</i>	810-BN-002
<i>Model</i>		<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device</i>	Stores product during downtime.		
<i>Description</i>			

9.27 Tank Pump

<i>Device ID #</i>	387113	<i>Device Name</i>	Tank Pump
<i>Rated Heat Input</i>		<i>Physical Size</i>	gal/Minute
<i>Manufacturer</i>		<i>Operator ID</i>	710-PP-001
<i>Model</i>		<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device</i>	Wet		
<i>Description</i>			

9.28 Vacuum System**10 Chromosorb Production Line****10.1 Baghouses - Chromosorb Prod Line****10.1.1 Chromosorb Ventilation Baghouse - South**

<i>Device ID #</i>	000149	<i>Device Name</i>	Chromosorb Ventilation Baghouse - South
<i>Rated Heat Input</i>		<i>Physical Size</i>	7800.00 scf/Minute
<i>Manufacturer</i>	Flex-Kleen	<i>Operator ID</i>	CPVBHS
<i>Model</i>	16 oz Dacron polyester felt	<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device</i>	Ventilation chromosorb processes; Negative pressure; Bag Diam. (in):		
<i>Description</i>	5.75; Bag Length (ft): 8.5; Total Cloth Area: 2252; enclosed		

10.2 Chemical Treatment and Storage Tanks

<i>Device ID #</i>	103449	<i>Device Name</i>	Chemical Treatment and Storage Tanks
<i>Rated Heat Input</i>		<i>Physical Size</i>	
<i>Manufacturer</i>		<i>Operator ID</i>	
<i>Model</i>		<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device</i>			
<i>Description</i>			

10.3 Chromosorb Bins

<i>Device ID #</i>	103443	<i>Device Name</i>	Chromosorb Bins
<i>Rated Heat Input</i>		<i>Physical Size</i>	
<i>Manufacturer</i>		<i>Operator ID</i>	
<i>Model</i>		<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device</i>	(1) bag feed bin		
<i>Description</i>			

10.4 Chromosorb Blowers

<i>Device ID #</i>	103442	<i>Device Name</i>	Chromosorb Blowers
<i>Rated Heat Input</i>		<i>Physical Size</i>	
<i>Manufacturer</i>		<i>Operator ID</i>	
<i>Model</i>		<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device</i>			
<i>Description</i>			

10.5 Chromosorb Cyclones

<i>Device ID #</i>	103441	<i>Device Name</i>	Chromosorb Cyclones
<i>Rated Heat Input</i>		<i>Physical Size</i>	
<i>Manufacturer</i>		<i>Operator ID</i>	
<i>Model</i>		<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device</i>			
<i>Description</i>			

10.6 Chromosorb Hoppers

<i>Device ID #</i>	103445	<i>Device Name</i>	Chromosorb Hoppers
<i>Rated Heat Input</i>		<i>Physical Size</i>	
<i>Manufacturer</i>		<i>Operator ID</i>	
<i>Model</i>		<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device</i>	(1) coarse hopper, (1) fines hopper		
<i>Description</i>			

10.7 Chromosorb Packers

<i>Device ID #</i>	103446	<i>Device Name</i>	Chromosorb Packers
<i>Rated Heat Input</i>		<i>Physical Size</i>	100.00 lb/Hour
<i>Manufacturer</i>		<i>Operator ID</i>	
<i>Model</i>		<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device</i>			
<i>Description</i>			

10.8 Chromosorb Plant: Rotoclone Scrubber

<i>Device ID #</i>	000150	<i>Device Name</i>	Chromosorb Plant: Rotoclone Scrubber
<i>Rated Heat Input</i>		<i>Physical Size</i>	10000.00 scf/Minute
<i>Manufacturer</i>		<i>Operator ID</i>	CROTO
<i>Model</i>		<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device</i>			
<i>Description</i>			

10.9 Chromosorb Product Wash Equipment

<i>Device ID #</i>	103451	<i>Device Name</i>	Chromosorb Product Wash Equipment
<i>Rated Heat Input</i>		<i>Physical Size</i>	
<i>Manufacturer</i>		<i>Operator ID</i>	
<i>Model</i>		<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device</i>	Number of devices is currently unknown.		
<i>Description</i>			

10.10 Chromosorb Screens

<i>Device ID #</i>	103444	<i>Device Name</i>	Chromosorb Screens
<i>Rated Heat Input</i>		<i>Physical Size</i>	
<i>Manufacturer</i>		<i>Operator ID</i>	
<i>Model</i>		<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device</i>			
<i>Description</i>			

10.11 Crushers

<i>Device ID #</i>	103447	<i>Device Name</i>	Crushers
<i>Rated Heat Input</i>		<i>Physical Size</i>	
<i>Manufacturer</i>		<i>Operator ID</i>	
<i>Model</i>		<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device</i>			
<i>Description</i>			

10.12 Electric Ovens

<i>Device ID #</i>	103450	<i>Device Name</i>	Electric Ovens
<i>Rated Heat Input</i>		<i>Physical Size</i>	
<i>Manufacturer</i>		<i>Operator ID</i>	
<i>Model</i>		<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device</i>	(1) OSI, (2) Despatch, (1) Proctor & Schwartz		
<i>Description</i>			

10.13 Mills

<i>Device ID #</i>	103448	<i>Device Name</i>	Mills
<i>Rated Heat Input</i>		<i>Physical Size</i>	
<i>Manufacturer</i>		<i>Operator ID</i>	
<i>Model</i>		<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device</i>			
<i>Description</i>			

11 IC Engines (CARB-PERP) (See Exempt Equipment)**12 Line No. 7****12.1 Blender**

<i>Device ID #</i>	389133	<i>Device Name</i>	Blender
<i>Rated Heat Input</i>		<i>Physical Size</i>	
<i>Manufacturer</i>	Stanley Equipment	<i>Operator ID</i>	CYB-ML-001
<i>Model</i>	400 CD	<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device Description</i>	2,992 gallons, 75 hp electric motor. Blends solution from pump CYB-PP-001 (District ID 389134) and DE from bag loading into this blender.		

12.2 Crude Delivery Line #7**12.2.1 Bucket Elevator #1**

<i>Device ID #</i>	109781	<i>Device Name</i>	Bucket Elevator #1
<i>Rated Heat Input</i>		<i>Physical Size</i>	
<i>Manufacturer</i>	Kaman	<i>Operator ID</i>	
<i>Model</i>		<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device Description</i>			

12.2.2 Conveyors (8)

<i>Device ID #</i>	110768	<i>Device Name</i>	Conveyors (8)
<i>Rated Heat Input</i>		<i>Physical Size</i>	
<i>Manufacturer</i>		<i>Operator ID</i>	
<i>Model</i>		<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device</i>	8 Conveyors are as follows:		
<i>Description</i>	BF#9 (26"x15'); BF #11 (26"x12.5'); BF #12 (26"x15'); #7 Reversible (30"x28'); #6 Reversible (30"x20'); #6 Main Incline (30"x91'); #7 Main Incline (30"x108'); #1 Hot Pipe (24"x38')		
	Note: This equipment will be removed from Dev No 103279 in PTO 5840 at the next permit modification or reevaluation.		

12.2.3 Crude Bins (2)

<i>Device ID #</i>	110772	<i>Device Name</i>	Crude Bins (2)
<i>Rated Heat Input</i>		<i>Physical Size</i>	
<i>Manufacturer</i>		<i>Operator ID</i>	Bins #1 & #2
<i>Model</i>		<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device</i>	Capacity of each bin = 31 DMT		
<i>Description</i>			

12.2.4 Crude Bins (3)

<i>Device ID #</i>	110767	<i>Device Name</i>	Crude Bins (3)
<i>Rated Heat Input</i>		<i>Physical Size</i>	39.00 Tons of Raw Material
<i>Manufacturer</i>		<i>Operator ID</i>	Bins #9, #11, #12
<i>Model</i>		<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device</i>	Each bin capacity = 39 DMT		
<i>Description</i>	Note: This equipment will be removed from Dev No 106129 in PTO 5840 at the next permit modification or reevaluation.		

12.2.5 Dump Hopper with Grizzly Feeder

<i>Device ID #</i>	109777	<i>Device Name</i>	Dump Hopper with Grizzly Feeder
<i>Rated Heat Input</i>		<i>Physical Size</i>	
<i>Manufacturer</i>		<i>Operator ID</i>	
<i>Model</i>		<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device</i>	Capacity = 79 cu yd (19 DMT)		
<i>Description</i>			

12.2.6 Scale Wet Tonnes

<i>Device ID #</i>	109779	<i>Device Name</i>	Scale Wet Tonnes
<i>Rated Heat Input</i>		<i>Physical Size</i>	
<i>Manufacturer</i>		<i>Operator ID</i>	BS001
<i>Model</i>		<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device</i>			
<i>Description</i>			

12.2.7 Transfer Belts

<i>Device ID #</i>	109778	<i>Device Name</i>	Transfer Belts
<i>Rated Heat Input</i>		<i>Physical Size</i>	
<i>Manufacturer</i>	West Coast Wire & Steel	<i>Operator ID</i>	See description
<i>Model</i>		<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device</i>	Transfer belts as follows: FB001 (60inx44ft; CB001 (36inx134ft); CB002 (36inx848ft); CB003 (38inx817ft); CB004 (36inx885ft); CB005 (24inx24ft); CB006 (24inx35ft)		
<i>Description</i>			

12.2.8 Vibrating Screen

Device ID #	109780	Device Name	Vibrating Screen
<i>Rated Heat Input</i>		<i>Physical Size</i>	
<i>Manufacturer</i>	Midwestern Industries, Inc.	<i>Operator ID</i>	VS001
<i>Model</i>		<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device</i>	Located at 3 and 4 transfer points.		
<i>Description</i>			

12.3 Dry End Process Line #7**12.3.1 Baghouse BH 773**

Device ID #	112983	Device Name	Baghouse BH 773
<i>Rated Heat Input</i>		<i>Physical Size</i>	
<i>Manufacturer</i>		<i>Operator ID</i>	BH 773
<i>Model</i>		<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device</i>	BH773 contains 864 bags (6"Dx10' L); Blower flow rate = 42,976 scfm,		
<i>Description</i>	exhaust limited to 8,000 scfm; op temp = 450F		

12.3.2 Baghouse BH775

Device ID #	110720	Device Name	Baghouse BH775
<i>Rated Heat Input</i>		<i>Physical Size</i>	10.00 Horsepower (Electric Motor)
<i>Manufacturer</i>		<i>Operator ID</i>	BH775
<i>Model</i>		<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device</i>	BH775 contains 159 bags (4.625"Dx8' L); HP rating of blower = 10HP;		
<i>Description</i>	blower flow rate = 3813 scfm; op temp = 140F		

12.3.3 Baghouse BH777

<i>Device ID #</i>	110721	<i>Device Name</i>	Baghouse BH777
<i>Rated Heat Input</i>		<i>Physical Size</i>	350.00 Horsepower (Electric Motor)
<i>Manufacturer</i>		<i>Operator ID</i>	BH777
<i>Model</i>		<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device</i>	BH777 contains 702 bags (6"Dx10' L); HP rating of blower = 350HP;		
<i>Description</i>	blower flow rate = 23996 scfm; op temp = 300F		

12.3.4 Baghouse BH788

<i>Device ID #</i>	110722	<i>Device Name</i>	Baghouse BH788
<i>Rated Heat Input</i>		<i>Physical Size</i>	15.00 Horsepower (Electric Motor)
<i>Manufacturer</i>		<i>Operator ID</i>	BH788
<i>Model</i>		<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device</i>	BH788 contains 460 bags (4.625"Dx8' L); HP rating of blower = 15HP;		
<i>Description</i>	blower flow rate = 11404 scfm; op temp = 110F		

12.3.5 Baghouse BH789

<i>Device ID #</i>	110723	<i>Device Name</i>	Baghouse BH789
<i>Rated Heat Input</i>		<i>Physical Size</i>	15.00 Horsepower (Electric Motor)
<i>Manufacturer</i>		<i>Operator ID</i>	BH789
<i>Model</i>		<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device</i>	BH789 contains 460 bags (4.625"Dx8' L); HP rating of blower = 15HP;		
<i>Description</i>	blower flow rate = 14037 scfm (increase from 11404 scfm due to source test - see ATC 14908); op temp = 110F		

12.3.6 Belt Scale

<i>Device ID #</i>	110783	<i>Device Name</i>	Belt Scale
<i>Rated Heat Input</i>		<i>Physical Size</i>	
<i>Manufacturer</i>	Schenk Accurate	<i>Operator ID</i>	BS782
<i>Model</i>	DMO Weigh Belt Feeder	<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device</i>			
<i>Description</i>			

12.3.7 Belt Scales (2)

<i>Device ID #</i>	110775	<i>Device Name</i>	Belt Scales (2)
<i>Rated Heat Input</i>		<i>Physical Size</i>	
<i>Manufacturer</i>	Schenk Accurate	<i>Operator ID</i>	BS711, WB705
<i>Model</i>	DMO Weigh Belt Feeder	<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device</i>	24 inch width; in feed to discharge - 7 ft CL		
<i>Description</i>			

12.3.8 Bin

<i>Device ID #</i>	109791	<i>Device Name</i>	Bin
<i>Rated Heat Input</i>		<i>Physical Size</i>	
<i>Manufacturer</i>	Tank Connection	<i>Operator ID</i>	BN775
<i>Model</i>	bin	<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device</i>			
<i>Description</i>			

12.3.9 Blowers, Dry End

<i>Device ID #</i>	109807	<i>Device Name</i>	Blowers, Dry End
<i>Rated Heat Input</i>		<i>Physical Size</i>	
<i>Manufacturer</i>		<i>Operator ID</i>	See description
<i>Model</i>		<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device</i>	Blowers Imerys IDs BL772, BL773, BL775, BL777, BL788, BL789		
<i>Description</i>			

12.3.10 Bucket Elevator

<i>Device ID #</i>	109805	<i>Device Name</i>	Bucket Elevator
<i>Rated Heat Input</i>		<i>Physical Size</i>	
<i>Manufacturer</i>		<i>Operator ID</i>	BE786
<i>Model</i>		<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device</i>			
<i>Description</i>			

12.3.11 Chain Conveyor

<i>Device ID #</i>	109743	<i>Device Name</i>	Chain Conveyor
<i>Rated Heat Input</i>		<i>Physical Size</i>	
<i>Manufacturer</i>		<i>Operator ID</i>	CV771
<i>Model</i>		<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device</i>			
<i>Description</i>			

12.3.12 Classifier

<i>Device ID #</i>	109746	<i>Device Name</i>	Classifier
<i>Rated Heat Input</i>		<i>Physical Size</i>	
<i>Manufacturer</i>		<i>Operator ID</i>	CL775
<i>Model</i>		<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device</i>			
<i>Description</i>			

12.3.13 Classifier

<i>Device ID #</i>	109799	<i>Device Name</i>	Classifier
<i>Rated Heat Input</i>		<i>Physical Size</i>	CL788
<i>Manufacturer</i>		<i>Operator ID</i>	
<i>Model</i>		<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device</i>			
<i>Description</i>			

12.3.14 Classifier

<i>Device ID #</i>	109800	<i>Device Name</i>	Classifier
<i>Rated Heat Input</i>		<i>Physical Size</i>	CL789
<i>Manufacturer</i>		<i>Operator ID</i>	
<i>Model</i>		<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device</i>			
<i>Description</i>			

12.3.15 Collector

<i>Device ID #</i>	109812	<i>Device Name</i>	Collector
<i>Rated Heat Input</i>		<i>Physical Size</i>	CT773
<i>Manufacturer</i>		<i>Operator ID</i>	
<i>Model</i>		<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device</i>			
<i>Description</i>	This device is also known as the "Hot Baghouse"; baghouse exhaust ducted to combustion furnace (FR705)		

12.3.16 Cyclone

<i>Device ID #</i>	109744	<i>Device Name</i>	Cyclone
<i>Rated Heat Input</i>		<i>Physical Size</i>	
<i>Manufacturer</i>		<i>Operator ID</i>	CY772A
<i>Model</i>		<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device</i>			
<i>Description</i>			

12.3.17 Cyclone

<i>Device ID #</i>	109745	<i>Device Name</i>	Cyclone
<i>Rated Heat Input</i>		<i>Physical Size</i>	
<i>Manufacturer</i>		<i>Operator ID</i>	CY772B
<i>Model</i>		<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device</i>			
<i>Description</i>			

12.3.18 Cyclone

<i>Device ID #</i>	109801	<i>Device Name</i>	Cyclone
<i>Rated Heat Input</i>		<i>Physical Size</i>	
<i>Manufacturer</i>		<i>Operator ID</i>	CY776
<i>Model</i>		<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device</i>			
<i>Description</i>			

12.3.19 Delumper

<i>Device ID #</i>	109742	<i>Device Name</i>	Delumper
<i>Rated Heat Input</i>		<i>Physical Size</i>	
<i>Manufacturer</i>		<i>Operator ID</i>	ML771
<i>Model</i>		<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device</i>			
<i>Description</i>			

12.3.20 Feed Bin 566

<i>Device ID #</i>	109900	<i>Device Name</i>	Feed Bin 566
<i>Rated Heat Input</i>		<i>Physical Size</i>	2.00 Tons
<i>Manufacturer</i>		<i>Operator ID</i>	
<i>Model</i>		<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device</i>	Capacity = 2.0 tons		
<i>Description</i>			

12.3.21 Lugger Box

<i>Device ID #</i>	109810	<i>Device Name</i>	Lugger Box
<i>Rated Heat Input</i>		<i>Physical Size</i>	
<i>Manufacturer</i>		<i>Operator ID</i>	
<i>Model</i>		<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device</i>			
<i>Description</i>			

12.3.22 Mill

<i>Device ID #</i>	109808	<i>Device Name</i>	Mill
<i>Rated Heat Input</i>		<i>Physical Size</i>	
<i>Manufacturer</i>		<i>Operator ID</i>	ML775B
<i>Model</i>		<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device</i>			
<i>Description</i>			

12.3.23 Mill

<i>Device ID #</i>	109798	<i>Device Name</i>	Mill
<i>Rated Heat Input</i>		<i>Physical Size</i>	
<i>Manufacturer</i>		<i>Operator ID</i>	ML781
<i>Model</i>		<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device</i>			
<i>Description</i>			

12.3.24 Pumps

<i>Device ID #</i>	109809	<i>Device Name</i>	Pumps
<i>Rated Heat Input</i>		<i>Physical Size</i>	
<i>Manufacturer</i>	Cyclonaire	<i>Operator ID</i>	See description
<i>Model</i>		<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device</i>	Pumps Imerys IDs PP775, PP778, PP790A, PP790B, PP786		
<i>Description</i>	PP775, PP790A & B = 100 ft3 pressure vessels, Model DPV 100B PP778 = 25 ft3 pressure vessels, Model DPV 25B		

12.3.25 Refeed Bin

<i>Device ID #</i>	109803	<i>Device Name</i>	Refeed Bin
<i>Rated Heat Input</i>		<i>Physical Size</i>	
<i>Manufacturer</i>	Tank Connection	<i>Operator ID</i>	BN791
<i>Model</i>	1947 ft3 bin	<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device</i>	5 metric ton capacity		
<i>Description</i>			

12.3.26 Reversible Conveyor

<i>Device ID #</i>	110784	<i>Device Name</i>	Reversible Conveyor
<i>Rated Heat Input</i>		<i>Physical Size</i>	
<i>Manufacturer</i>		<i>Operator ID</i>	
<i>Model</i>		<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device</i>	Size = 30in x 20ft		
<i>Description</i>			

12.3.27 Screens

<i>Device ID #</i>	103378	<i>Device Name</i>	Screens
<i>Rated Heat Input</i>		<i>Physical Size</i>	
<i>Manufacturer</i>	SWECO/Midwestern	<i>Operator ID</i>	SN784, ML775A, ML775B
<i>Model</i>		<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device</i>	(1) screen, and (2) screens		
<i>Description</i>			

12.3.28 Screw Conveyors

<i>Device ID #</i>	109806	<i>Device Name</i>	Screw Conveyors
<i>Rated Heat Input</i>		<i>Physical Size</i>	
<i>Manufacturer</i>		<i>Operator ID</i>	See description
<i>Model</i>		<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device</i>	Screw conveyor Imerys IDs SC773, SC777, SC774, SC780, SC781,		
<i>Description</i>	SC782A, SC782B, SC784, SC786, SC788, SC790A, SC790B		

12.3.29 Separator

<i>Device ID #</i>	109796	<i>Device Name</i>	Separator
<i>Rated Heat Input</i>		<i>Physical Size</i>	
<i>Manufacturer</i>		<i>Operator ID</i>	CL780
<i>Model</i>		<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device</i>			
<i>Description</i>			

12.3.30 Separator

<i>Device ID #</i>	109797	<i>Device Name</i>	Separator
<i>Rated Heat Input</i>		<i>Physical Size</i>	
<i>Manufacturer</i>		<i>Operator ID</i>	CL782
<i>Model</i>		<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device</i>			
<i>Description</i>			

12.3.31 Surge Bin

<i>Device ID #</i>	109792	<i>Device Name</i>	Surge Bin
<i>Rated Heat Input</i>		<i>Physical Size</i>	
<i>Manufacturer</i>	tank Connection	<i>Operator ID</i>	BN778
<i>Model</i>	bin	<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device</i>			
<i>Description</i>			

12.3.32 Surge Bin

<i>Device ID #</i>	109795	<i>Device Name</i>	Surge Bin
<i>Rated Heat Input</i>		<i>Physical Size</i>	
<i>Manufacturer</i>	Tank Connection	<i>Operator ID</i>	BN786
<i>Model</i>	bin	<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device</i>			
<i>Description</i>			

12.3.33 Surge Bin

<i>Device ID #</i>	109793	<i>Device Name</i>	Surge Bin
<i>Rated Heat Input</i>		<i>Physical Size</i>	
<i>Manufacturer</i>	Tank Connection	<i>Operator ID</i>	BN790A
<i>Model</i>	bin	<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device</i>			
<i>Description</i>			

12.3.34 Surge Bin

<i>Device ID #</i>	109794	<i>Device Name</i>	Surge Bin
<i>Rated Heat Input</i>		<i>Physical Size</i>	
<i>Manufacturer</i>	Tank Connection	<i>Operator ID</i>	BN790B
<i>Model</i>	bin	<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device</i>			
<i>Description</i>			

12.4 Dust Collector DC719

<i>Device ID #</i>	385116	<i>Device Name</i>	Dust Collector DC719
<i>Rated Heat Input</i>		<i>Physical Size</i>	100.00 scf/Minute
<i>Manufacturer</i>	Sintamatic	<i>Operator ID</i>	DC719
<i>Model</i>	CSI12K3	<i>Serial Number</i>	TBD
<i>Location Note</i>			
<i>Device</i>	Passive dust collector used to ventilate the Soda Ash Delivery system.		
<i>Description</i>	Exhaust routed to the General Waste Baghouse (Dev. No. 137). Blower 719A (Dev. No. 110774) used for conveyance air.		

12.5 Processing Line #7 (drying, milling, separating)**12.5.1 Air sifters**

<i>Device ID #</i>	103381	<i>Device Name</i>	Air sifters
<i>Rated Heat Input</i>		<i>Physical Size</i>	
<i>Manufacturer</i>		<i>Operator ID</i>	
<i>Model</i>		<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device</i>			
<i>Description</i>			

12.5.2 Bins

<i>Device ID #</i>	103377	<i>Device Name</i>	Bins
<i>Rated Heat Input</i>		<i>Physical Size</i>	
<i>Manufacturer</i>		<i>Operator ID</i>	
<i>Model</i>		<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device</i>	(3) crude bins (#13 -15), (1) soda ash storage bin, (1) refeed bin, (1) air		
<i>Description</i>	sifter process surge bin, (1) surge bin		

12.5.3 Blowers

<i>Device ID #</i>	103373	<i>Device Name</i>	Blowers
<i>Rated Heat Input</i>		<i>Physical Size</i>	
<i>Manufacturer</i>		<i>Operator ID</i>	
<i>Model</i>		<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device</i>	(1) furnace blower, (33) blowers, (4) soda ash blowers (#727A -D), (2)		
<i>Description</i>	rotary kiln blowers (730 & 733)		

12.5.4 Bucket Elevator

<i>Device ID #</i>	103380	<i>Device Name</i>	Bucket Elevator
<i>Rated Heat Input</i>		<i>Physical Size</i>	
<i>Manufacturer</i>		<i>Operator ID</i>	
<i>Model</i>		<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device</i>			
<i>Description</i>			

12.5.5 De-lumpers

<i>Device ID #</i>	103375	<i>Device Name</i>	De-lumpers
<i>Rated Heat Input</i>		<i>Physical Size</i>	
<i>Manufacturer</i>		<i>Operator ID</i>	701A, 701B
<i>Model</i>		<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device</i>			
<i>Description</i>			

12.5.6 Hoppers

<i>Device ID #</i>	103379	<i>Device Name</i>	Hoppers
<i>Rated Heat Input</i>		<i>Physical Size</i>	
<i>Manufacturer</i>		<i>Operator ID</i>	
<i>Model</i>		<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device</i>	Crude Feed Hopper (1), Soda Ash Hopper (1), Natural Baghouse Hoppers		
<i>Description</i>	(6), Dry Product Baghouse Hoppers (9), Kiln discharge Hopper (1), surge hopper (1)		

12.5.7 Pre-separators

<i>Device ID #</i>	103374	<i>Device Name</i>	Pre-separators
<i>Rated Heat Input</i>		<i>Physical Size</i>	
<i>Manufacturer</i>		<i>Operator ID</i>	701A, 701B, 702
<i>Model</i>		<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device</i>			

*Description***12.5.8 Re-separator**

<i>Device ID #</i>	103376	<i>Device Name</i>	Re-separator
<i>Rated Heat Input</i>		<i>Physical Size</i>	
<i>Manufacturer</i>		<i>Operator ID</i>	
<i>Model</i>		<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device</i>			
<i>Description</i>			

12.6 Processing Line #7 (packing)**12.6.1 Capture System and Control (Line #7 Dry End)****12.6.1.1 Baghouse Blowers**

<i>Device ID #</i>	103384	<i>Device Name</i>	Baghouse Blowers
<i>Rated Heat Input</i>		<i>Physical Size</i>	
<i>Manufacturer</i>		<i>Operator ID</i>	
<i>Model</i>		<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device</i>			
<i>Description</i>			

12.6.1.2 Baghouse Hoppers

<i>Device ID #</i>	103385	<i>Device Name</i>	Baghouse Hoppers
<i>Rated Heat Input</i>		<i>Physical Size</i>	
<i>Manufacturer</i>		<i>Operator ID</i>	
<i>Model</i>		<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device</i>			
<i>Description</i>			

12.6.1.3 Cyclone

<i>Device ID #</i>	106140	<i>Device Name</i>	Cyclone
<i>Rated Heat Input</i>		<i>Physical Size</i>	
<i>Manufacturer</i>		<i>Operator ID</i>	713
<i>Model</i>		<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device</i>	4-foot outside diameter		
<i>Description</i>			

12.6.1.4 Product Storage Bins

<i>Device ID #</i>	103325	<i>Device Name</i>	Product Storage Bins
<i>Rated Heat Input</i>		<i>Physical Size</i>	
<i>Manufacturer</i>		<i>Operator ID</i>	
<i>Model</i>		<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device</i>	8 storage bins shared among production lines 11, 3, 5, 6, and 7.		
<i>Description</i>			

12.6.2 Capture System and Control (Line #7 Wet End)**12.6.2.1 Blower**

<i>Device ID #</i>	106137	<i>Device Name</i>	Blower
<i>Rated Heat Input</i>		<i>Physical Size</i>	
<i>Manufacturer</i>		<i>Operator ID</i>	707
<i>Model</i>		<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device</i>			
<i>Description</i>			

12.6.2.2 Cyclone

<i>Device ID #</i>	106138	<i>Device Name</i>	Cyclone
<i>Rated Heat Input</i>		<i>Physical Size</i>	
<i>Manufacturer</i>		<i>Operator ID</i>	704
<i>Model</i>		<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device</i>			
<i>Description</i>			

12.7 Product, Conveyance, Storage, and Packaging Line #7**12.7.1 Bin**

<i>Device ID #</i>	109837	<i>Device Name</i>	Bin
<i>Rated Heat Input</i>		<i>Physical Size</i>	
<i>Manufacturer</i>		<i>Operator ID</i>	BN922
<i>Model</i>		<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device</i>			
<i>Description</i>			

12.7.2 Bin

<i>Device ID #</i>	109836	<i>Device Name</i>	Bin
<i>Rated Heat Input</i>		<i>Physical Size</i>	
<i>Manufacturer</i>		<i>Operator ID</i>	BN921
<i>Model</i>		<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device</i>			
<i>Description</i>			

12.7.3 Bulk Filling Blower

<i>Device ID #</i>	109817	<i>Device Name</i>	Bulk Filling Blower
<i>Rated Heat Input</i>		<i>Physical Size</i>	75.00 Horsepower (Electric Motor)
<i>Manufacturer</i>		<i>Operator ID</i>	BL155
<i>Model</i>		<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device</i>			
<i>Description</i>			

12.7.4 Pumps

<i>Device ID #</i>	109833	<i>Device Name</i>	Pumps
<i>Rated Heat Input</i>		<i>Physical Size</i>	
<i>Manufacturer</i>		<i>Operator ID</i>	PP923, 924
<i>Model</i>		<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device</i>			
<i>Description</i>			

12.7.5 Rework Hose Station

<i>Device ID #</i>	109819	<i>Device Name</i>	Rework Hose Station
<i>Rated Heat Input</i>		<i>Physical Size</i>	
<i>Manufacturer</i>		<i>Operator ID</i>	HS116
<i>Model</i>		<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device</i>			
<i>Description</i>			

12.8 Pump

<i>Device ID #</i>	389134	<i>Device Name</i>	Pump
<i>Rated Heat Input</i>		<i>Physical Size</i>	3.00 hp
<i>Manufacturer</i>	Watson Marlow	<i>Operator ID</i>	CYB-PP-001
<i>Model</i>	APEX35	<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device Description</i>	Pumps moves solution from tank CYB-TK-001 (District ID 389135) to blender CYB ML-001 (District ID 389133)		

12.9 Semi-Bulk Packing Station

<i>Device ID #</i>	389137	<i>Device Name</i>	Semi-Bulk Packing Station
<i>Rated Heat Input</i>		<i>Physical Size</i>	3000.00 Pounds
<i>Manufacturer</i>	National Bulk Equipment	<i>Operator ID</i>	CYB-PK-001
<i>Model</i>	A138462-02H	<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device Description</i>	Bags product from Blender (ID 389133)		

12.10 System 7 Milling Circuit**12.10.1 Baghouse BH912**

<i>Device ID #</i>	110203	<i>Device Name</i>	Baghouse BH912
<i>Rated Heat Input</i>		<i>Physical Size</i>	13000.00 scf/Minute
<i>Manufacturer</i>	Mikropul	<i>Operator ID</i>	BH912
<i>Model</i>	RAF II	<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device Description</i>	Captures product from Alpha Classifier, baghouse blower 15 HP electric motor, contains 320 polyester PTFE coated bags; each bag 4.625 in D x 10 ft L		

12.10.2 Baghouse BH916

<i>Device ID #</i>	108940	<i>Device Name</i>	Baghouse BH916
<i>Rated Heat Input</i>		<i>Physical Size</i>	13243.00 scf/Minute
<i>Manufacturer</i>	Airjet SA	<i>Operator ID</i>	BH916
<i>Model</i>	280-M-10-TRL-B2R	<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device</i>	Captures product from Cyclone CY914; baghouse blower is a 180HP Reitz		
<i>Description</i>	Model KXE160-040030-00 blower (BL919); contains 280 polyester felt-type bags; each bag 5in D x 10 ft L		

12.10.3 Blower

<i>Device ID #</i>	108946	<i>Device Name</i>	Blower
<i>Rated Heat Input</i>		<i>Physical Size</i>	600.00 scf/Minute
<i>Manufacturer</i>	Sutorbilt	<i>Operator ID</i>	
<i>Model</i>		<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device</i>	Product mover powered by a 60 HP electric motor.		
<i>Description</i>			

12.10.4 Blower

<i>Device ID #</i>	109438	<i>Device Name</i>	Blower
<i>Rated Heat Input</i>		<i>Physical Size</i>	300.00 scf/Minute
<i>Manufacturer</i>	Sutorbilt	<i>Operator ID</i>	
<i>Model</i>		<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device</i>	Product mover powered by a 30 HP electric motor		
<i>Description</i>			

12.10.5 Classifier 910

<i>Device ID #</i>	108937	<i>Device Name</i>	Classifier 910
<i>Rated Heat Input</i>		<i>Physical Size</i>	22.50 Tons/Hour
<i>Manufacturer</i>		<i>Operator ID</i>	CL910
<i>Model</i>		<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device</i>	Powered by a 60 HP electric motor.		

*Description***12.10.6 Classifier 913**

<i>Device ID #</i>	110202	<i>Device Name</i>	Classifier 913
<i>Rated Heat Input</i>		<i>Physical Size</i>	22.50 Tons/Hour
<i>Manufacturer</i>		<i>Operator ID</i>	CL913
<i>Model</i>		<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device</i>	Powered by a 60 HP electric motor.		
<i>Description</i>			

12.10.7 Cyclone

<i>Device ID #</i>	108939	<i>Device Name</i>	Cyclone
<i>Rated Heat Input</i>		<i>Physical Size</i>	
<i>Manufacturer</i>	Ecutech	<i>Operator ID</i>	CY914
<i>Model</i>	KEZ1900	<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device</i>	Max dia 5.25 ft; collects and sizes product.		
<i>Description</i>			

12.10.8 Enclosed Screw Conveyors (6)

<i>Device ID #</i>	108941	<i>Device Name</i>	Enclosed Screw Conveyors (6)
<i>Rated Heat Input</i>		<i>Physical Size</i>	
<i>Manufacturer</i>	Sinfimasa	<i>Operator ID</i>	
<i>Model</i>		<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device</i>	Celite ID and electric motor HP drive rating: SC902 (3 HP), SC904 (3 HP), SC907 (7.5 HP), SC909 (7.5 HP), SC912 (7.5 HP), SC916 (4 HP)		
<i>Description</i>			

12.10.9 Feed Bin

<i>Device ID #</i>	108934	<i>Device Name</i>	Feed Bin
<i>Rated Heat Input</i>		<i>Physical Size</i>	11.02 Tons
<i>Manufacturer</i>	Acerforma-2	<i>Operator ID</i>	BN901
<i>Model</i>	Ecutec 06.046-FS1	<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device</i>			
<i>Description</i>			

12.10.10 Feed Bin Baghouse BH901

<i>Device ID #</i>	108935	<i>Device Name</i>	Feed Bin Baghouse BH901
<i>Rated Heat Input</i>		<i>Physical Size</i>	2550.00 scf/Minute
<i>Manufacturer</i>	Airjet SA	<i>Operator ID</i>	BH901
<i>Model</i>	81-S-6-TRL-A	<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device</i>	Controls emissions from Feed Bin BN901; baghouse blower is a CBI SA		
<i>Description</i>	Model CHB13 9HP blower (BL901); contains 81 polyester felt-type bags; each bag 5in D x 6 ft L		

12.10.11 Mill

<i>Device ID #</i>	108936	<i>Device Name</i>	Mill
<i>Rated Heat Input</i>		<i>Physical Size</i>	4.00 Tons/Hour
<i>Manufacturer</i>		<i>Operator ID</i>	BM906
<i>Model</i>	BM18/42 R01 DC02	<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device</i>	Drum size 5.9 ft Dia X 13.2 ft Long; powered by a 72.4 HP motor		
<i>Description</i>			

12.10.12 Waste Bulk Bag

<i>Device ID #</i>	108948	<i>Device Name</i>	Waste Bulk Bag
<i>Rated Heat Input</i>		<i>Physical Size</i>	
<i>Manufacturer</i>		<i>Operator ID</i>	
<i>Model</i>		<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device</i>	Totally enclosed semi-bulk bag		
<i>Description</i>			

12.10.13 Weigh Bin

<i>Device ID #</i>	108942	<i>Device Name</i>	Weigh Bin
<i>Rated Heat Input</i>		<i>Physical Size</i>	50.50 Cubic Feet
<i>Manufacturer</i>		<i>Operator ID</i>	BN904
<i>Model</i>		<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device</i>			
<i>Description</i>			

12.11 Tank

<i>Device ID #</i>	389135	<i>Device Name</i>	Tank
<i>Rated Heat Input</i>		<i>Physical Size</i>	10300.00 Gallons
<i>Manufacturer</i>	PolyProcessing	<i>Operator ID</i>	CYB-TK-001
<i>Model</i>		<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device</i>	Holds solution. Connected to pump CYB-PP-001 (District ID 389134)		
<i>Description</i>			

12.12 Wet End Process Line #7**12.12.1 Baghouse BH717**

Device ID #	109846	Device Name	Baghouse BH717
<i>Rated Heat Input</i>		<i>Physical Size</i>	60.00 Horsepower (Electric Motor)
<i>Manufacturer</i>		<i>Operator ID</i>	BH717
<i>Model</i>		<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device</i>	BH717 contains 256 bags (6"Dx10' L); HP rating of blower = 75 HP;		
<i>Description</i>	blower fan rating = 4972 scfm; op temp = 200F		

12.12.2 Baghouse BH721

Device ID #	110724	Device Name	Baghouse BH721
<i>Rated Heat Input</i>		<i>Physical Size</i>	3.00 Horsepower (Electric Motor)
<i>Manufacturer</i>		<i>Operator ID</i>	BH721
<i>Model</i>		<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device</i>	BH721 contains 16 bags (4.625"Dx6' L); HP rating of blower = 3HP;		
<i>Description</i>	blower flow rate = 687 scfm; op temp = 70F		

12.12.3 Blowers

Device ID #	109844	Device Name	Blowers
<i>Rated Heat Input</i>		<i>Physical Size</i>	
<i>Manufacturer</i>		<i>Operator ID</i>	See description
<i>Model</i>		<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device</i>	Various product blowers: BL705, BL708A, BL708B, BL709, BL710,		
<i>Description</i>	BL711, BL715, BL717, BL717B, BL721.		
	Manuf: BL705-No American, BL708A-Alphair, BL708B-Canadian		
	Buffalo, BL709/711, BL717, BL721-Northern Blowers		

12.12.4 Blowers (2)

<i>Device ID #</i>	110774	<i>Device Name</i>	Blowers (2)
<i>Rated Heat Input</i>		<i>Physical Size</i>	
<i>Manufacturer</i>	Robinson	<i>Operator ID</i>	BL719A & B
<i>Model</i>	RB 1806-5 SWSI	<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device</i>	Note: This equipment will be removed from Dev No 103373 in PTO 5840		
<i>Description</i>	at the next permit modification or reevaluation.		

12.12.5 Bucket Elevator

<i>Device ID #</i>	109851	<i>Device Name</i>	Bucket Elevator
<i>Rated Heat Input</i>		<i>Physical Size</i>	
<i>Manufacturer</i>	Kaman Industrial Technology	<i>Operator ID</i>	BE706
<i>Model</i>	SK589-116	<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device</i>	Height = 78 ft		
<i>Description</i>			

12.12.6 Classifier

<i>Device ID #</i>	109853	<i>Device Name</i>	Classifier
<i>Rated Heat Input</i>		<i>Physical Size</i>	
<i>Manufacturer</i>		<i>Operator ID</i>	CL706
<i>Model</i>		<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device</i>			
<i>Description</i>			

12.12.7 Collectors

<i>Device ID #</i>	109872	<i>Device Name</i>	Collectors
<i>Rated Heat Input</i>		<i>Physical Size</i>	
<i>Manufacturer</i>		<i>Operator ID</i>	DC709, DC710, DC711
<i>Model</i>	see description	<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device</i>	Model Nos: DC709 & DC710 -		
<i>Description</i>			

12.12.8 Conveyor belts

<i>Device ID #</i>	103383	<i>Device Name</i>	Conveyor belts
<i>Rated Heat Input</i>		<i>Physical Size</i>	
<i>Manufacturer</i>	See description	<i>Operator ID</i>	
<i>Model</i>		<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device</i>	(1) screw conveyor, (1) soda ash system conveyor, (27) conveyors		
<i>Description</i>			

12.12.9 Crude Bin

<i>Device ID #</i>	110769	<i>Device Name</i>	Crude Bin
<i>Rated Heat Input</i>		<i>Physical Size</i>	
<i>Manufacturer</i>		<i>Operator ID</i>	BN702A
<i>Model</i>		<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device</i>	Capacity = 56 DMT		
<i>Description</i>			

12.12.10 Crude Bin

<i>Device ID #</i>	110770	<i>Device Name</i>	Crude Bin
<i>Rated Heat Input</i>		<i>Physical Size</i>	
<i>Manufacturer</i>		<i>Operator ID</i>	BN702B
<i>Model</i>		<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device</i>	Capacity = 56 DMT		
<i>Description</i>			

12.12.11 Crude Bin

<i>Device ID #</i>	110771	<i>Device Name</i>	Crude Bin
<i>Rated Heat Input</i>		<i>Physical Size</i>	
<i>Manufacturer</i>		<i>Operator ID</i>	BN702C
<i>Model</i>		<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device</i>	Capacity = 56 DMT		
<i>Description</i>			

12.12.12 Cyclone

<i>Device ID #</i>	109876	<i>Device Name</i>	Cyclone
<i>Rated Heat Input</i>		<i>Physical Size</i>	
<i>Manufacturer</i>		<i>Operator ID</i>	CY717
<i>Model</i>		<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device</i>			
<i>Description</i>			

12.12.13 Cyclones

<i>Device ID #</i>	109847	<i>Device Name</i>	Cyclones
<i>Rated Heat Input</i>		<i>Physical Size</i>	120000.00 Cubic Feet/Minute
<i>Manufacturer</i>		<i>Operator ID</i>	CY708
<i>Model</i>	TBD	<i>Serial Number</i>	TBD
<i>Location Note</i>			
<i>Device</i>			
<i>Description</i>			

12.12.14 Feed Hopper

<i>Device ID #</i>	109854	<i>Device Name</i>	Feed Hopper
<i>Rated Heat Input</i>		<i>Physical Size</i>	
<i>Manufacturer</i>		<i>Operator ID</i>	FH706
<i>Model</i>		<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device</i>			
<i>Description</i>			

12.12.15 Furnace

<i>Device ID #</i>	109857	<i>Device Name</i>	Furnace
<i>Rated Heat Input</i>		<i>Physical Size</i>	45.00 MMBtu/Hour
<i>Manufacturer</i>		<i>Operator ID</i>	FR705
<i>Model</i>		<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device</i>			
<i>Description</i>			

12.12.16 Hammer Mills

<i>Device ID #</i>	103278	<i>Device Name</i>	Hammer Mills
<i>Rated Heat Input</i>		<i>Physical Size</i>	150.00 Tons/Hour
<i>Manufacturer</i>		<i>Operator ID</i>	CP2
<i>Model</i>		<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device</i>	Sizes raw ore beside the loading station		
<i>Description</i>			

12.12.17 Imerys Unassigned Devices**12.12.17.1 6 Dry End Ventilation Baghouse**

<i>Device ID #</i>	000125	<i>Device Name</i>	6 Dry End Ventilation Baghouse
<i>Rated Heat Input</i>		<i>Physical Size</i>	18661.00 scf/Minute
<i>Manufacturer</i>	JM Open	<i>Operator ID</i>	6DVBH
<i>Model</i>	Polyester	<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device Description</i>	Production Line 6 Ventilation line 6 dry end packing equip., bagwash, 6 AS, 6P SB, blowoff booth, 6P1 and 6AS bulk packing units; Positive pressure; Bag Diam. (in): 9.0; Bag Length (ft): 48.0; Total Cloth Area: 18661; Est. A/C Ratio: 1.0; open		

12.12.17.2 6 Super Fine Super Floss Baghouse

<i>Device ID #</i>	000126	<i>Device Name</i>	6 Super Fine Super Floss Baghouse
<i>Rated Heat Input</i>		<i>Physical Size</i>	8812.00 scf/Minute
<i>Manufacturer</i>	JM Open	<i>Operator ID</i>	6SFSF
<i>Model</i>	Orlon	<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device Description</i>	Super fine product collection; Positive pressure; Bag Diam. (in): 9.0; Bag Length (ft): 55.0; Total Cloth Area: 8812; Est. A/C Ratio: 1.0; open		

12.12.17.3 616 Ventilation Baghouse

<i>Device ID #</i>	000128	<i>Device Name</i>	616 Ventilation Baghouse
<i>Rated Heat Input</i>		<i>Physical Size</i>	3000.00 scf/Minute
<i>Manufacturer</i>	Mikro-Pulsaire	<i>Operator ID</i>	616VBH
<i>Model</i>	Polypropylene	<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device Description</i>	Production Line 6 Ventilation AP packer chamber, spouts, and bin; Negative pressure; Bag Diam. (in): 4.5; Bag Length (ft): 10.0; Total Cloth Area: 848; Est. A/C Ratio: 3.5; enclosed		

12.12.18 Kiln Exhaust Blower

<i>Device ID #</i>	112930	<i>Device Name</i>	Kiln Exhaust Blower
<i>Rated Heat Input</i>		<i>Physical Size</i>	75.00 Horsepower (Electric Motor)
<i>Manufacturer</i>	JM	<i>Operator ID</i>	BL723
<i>Model</i>		<i>Serial Number</i>	TBD
<i>Location Note</i>			
<i>Device</i>			
<i>Description</i>			

12.12.19 Kiln Feed Cyclones

<i>Device ID #</i>	109855	<i>Device Name</i>	Kiln Feed Cyclones
<i>Rated Heat Input</i>		<i>Physical Size</i>	60000.00 Cubic Feet/Minute
<i>Manufacturer</i>		<i>Operator ID</i>	CY715
<i>Model</i>		<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device</i>			
<i>Description</i>			

12.12.20 Kiln Feed End Seal Blower

<i>Device ID #</i>	112907	<i>Device Name</i>	Kiln Feed End Seal Blower
<i>Rated Heat Input</i>		<i>Physical Size</i>	scf/Minute
<i>Manufacturer</i>		<i>Operator ID</i>	
<i>Model</i>		<i>Serial Number</i>	TBD
<i>Location Note</i>			
<i>Device</i>	30 hp electric motor		
<i>Description</i>	Direct drive blower		
	240 scfm		

12.12.21 Line 7 Kiln

<i>Device ID #</i>	103370	<i>Device Name</i>	Line 7 Kiln
<i>Rated Heat Input</i>	50.000 MMBtu/Hour	<i>Physical Size</i>	438000.00 MMBtu/yr
<i>Manufacturer</i>		<i>Operator ID</i>	KN723
<i>Model</i>		<i>Serial Number</i>	
<i>Location Note</i>	Note (c) Unless otherwise indicated, combustion equipment burns PUC quality natural gas (primary) or No. 2 Diesel (emergency backup).		
<i>Device Description</i>	Control Device: Venturi Scrubber/Packed Bed Tower (Device ID 109866)		

12.12.22 Mill

<i>Device ID #</i>	109852	<i>Device Name</i>	Mill
<i>Rated Heat Input</i>		<i>Physical Size</i>	
<i>Manufacturer</i>		<i>Operator ID</i>	ML706
<i>Model</i>		<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device Description</i>			

12.12.23 Mill

<i>Device ID #</i>	103382	<i>Device Name</i>	Mill
<i>Rated Heat Input</i>		<i>Physical Size</i>	
<i>Manufacturer</i>		<i>Operator ID</i>	ML719
<i>Model</i>		<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device Description</i>	Comprised of ducting from storage bin, hopper, conveyor, pulverizer, and blowers (4) (#727 A - D)		

12.12.24 Pumps

<i>Device ID #</i>	109869	<i>Device Name</i>	Pumps
<i>Rated Heat Input</i>		<i>Physical Size</i>	
<i>Manufacturer</i>		<i>Operator ID</i>	PP718
<i>Model</i>		<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device</i>			
<i>Description</i>			

12.12.25 Screw Conveyors

<i>Device ID #</i>	109845	<i>Device Name</i>	Screw Conveyors
<i>Rated Heat Input</i>		<i>Physical Size</i>	
<i>Manufacturer</i>		<i>Operator ID</i>	See description
<i>Model</i>		<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device</i>	14 screw conveyors: SC708A, SC708B, SC708C, SC708D, SC709,		
<i>Description</i>	SC710, SC711, SC712, SC715, SC716, SC717A, SC717B, SC717C, SC722		

12.12.26 Separator Product Bin

<i>Device ID #</i>	109860	<i>Device Name</i>	Separator Product Bin
<i>Rated Heat Input</i>		<i>Physical Size</i>	
<i>Manufacturer</i>	Tank Connection	<i>Operator ID</i>	BN712
<i>Model</i>	1462CF	<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device</i>	Capacity = 4 MT		
<i>Description</i>			

12.12.27 Separators

<i>Device ID #</i>	109874	<i>Device Name</i>	Separators
<i>Rated Heat Input</i>		<i>Physical Size</i>	
<i>Manufacturer</i>		<i>Operator ID</i>	CL709, CL710, CL711
<i>Model</i>	CL709, CL710, CL711	<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device</i>			
<i>Description</i>			

12.12.28 SO2 Reagent System

<i>Device ID #</i>	109877	<i>Device Name</i>	SO2 Reagent System
<i>Rated Heat Input</i>		<i>Physical Size</i>	
<i>Manufacturer</i>		<i>Operator ID</i>	See description
<i>Model</i>		<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device</i>	SO2 Reagent System consists of Make-up tank (TK721A), 10% Soda		
<i>Description</i>	Solution Tank (TK721B), Reagent Recycle Tank (TK720), Absorber Pump (WP720A) and Venturi Recirc Pump (WP720B), Soda Solution Pump (WP721A & B)		

12.12.29 Surge Bin

<i>Device ID #</i>	109871	<i>Device Name</i>	Surge Bin
<i>Rated Heat Input</i>		<i>Physical Size</i>	
<i>Manufacturer</i>	Tank Connection	<i>Operator ID</i>	BN718
<i>Model</i>	1462CF	<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device</i>	Capacity = 5 MT		
<i>Description</i>			

12.12.30 Venturi/Separator/Packed Bed Tower

<i>Device ID #</i>	109866	<i>Device Name</i>	Venturi/Separator/Packed Bed Tower
<i>Rated Heat Input</i>		<i>Physical Size</i>	
<i>Manufacturer</i>		<i>Operator ID</i>	SB720
<i>Model</i>		<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device</i>	Venturi scrubber with a PM/PM10 removal efficiency of 99.8% and a		
<i>Description</i>	packed bed wet scrubber with an SO2 removal efficiency of 99.75%		

13 Mobile Crude Ore Crushing and Screening Plant**13.1 Crushed Ore Transfer Belt Conveyor to Screen**

<i>Device ID #</i>	110487	<i>Device Name</i>	Crushed Ore Transfer Belt Conveyor to Screen
<i>Rated Heat Input</i>		<i>Physical Size</i>	
<i>Manufacturer</i>	Rock Systems	<i>Operator ID</i>	CB014
<i>Model</i>		<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device</i>	36" belt width X 100ft length; stationary; driven by 40 HP electric motor		
<i>Description</i>			

13.2 Crushed Product Belt Scale

<i>Device ID #</i>	110496	<i>Device Name</i>	Crushed Product Belt Scale
<i>Rated Heat Input</i>		<i>Physical Size</i>	
<i>Manufacturer</i>	Milltronics (Siemens)	<i>Operator ID</i>	BS030
<i>Model</i>		<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device</i>	30" width		
<i>Description</i>			

13.3 Crusher Apron Feeder

<i>Device ID #</i>	110483	<i>Device Name</i>	Crusher Apron Feeder
<i>Rated Heat Input</i>		<i>Physical Size</i>	
<i>Manufacturer</i>	Rexnord	<i>Operator ID</i>	FB011
<i>Model</i>		<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device</i>	65" belt width x 44ft length; 65" Apron type; VFD, driven by 15 HP		
<i>Description</i>	electric motor		

13.4 Crusher Feed Hopper

<i>Device ID #</i>	110482	<i>Device Name</i>	Crusher Feed Hopper
<i>Rated Heat Input</i>		<i>Physical Size</i>	
<i>Manufacturer</i>		<i>Operator ID</i>	FH010
<i>Model</i>		<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device</i>	Capacity of 61 yd3; unlined; above ground		
<i>Description</i>			

13.5 DE Ore Crusher

<i>Device ID #</i>	110486	<i>Device Name</i>	DE Ore Crusher
<i>Rated Heat Input</i>		<i>Physical Size</i>	
<i>Manufacturer</i>	Metso NP1520	<i>Operator ID</i>	CR013
<i>Model</i>		<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device</i>	Size minus 1/2 inch; horizontal shelf impactor; open discharge, VFD;		
<i>Description</i>	driven by 2 - 250 HP electric motors		

13.6 Feed Belt Scale

<i>Device ID #</i>	110488	<i>Device Name</i>	Feed Belt Scale
<i>Rated Heat Input</i>		<i>Physical Size</i>	
<i>Manufacturer</i>	Milltronics (Siemens)	<i>Operator ID</i>	BS014
<i>Model</i>		<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device</i>	36' width		
<i>Description</i>			

13.7 First Oversize Collection Conveyor Belt

<i>Device ID #</i>	110491	<i>Device Name</i>	First Oversize Collection Conveyor Belt
<i>Rated Heat Input</i>		<i>Physical Size</i>	
<i>Manufacturer</i>	Rock Systems	<i>Operator ID</i>	CB020
<i>Model</i>		<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device Description</i>	30" belt width X 60ft length; portable/stackable; driven by a 15 HP electric motor		

13.8 First Undersize Transfer Belt Conveyor

<i>Device ID #</i>	110495	<i>Device Name</i>	First Undersize Transfer Belt Conveyor
<i>Rated Heat Input</i>		<i>Physical Size</i>	
<i>Manufacturer</i>	Rock Systems	<i>Operator ID</i>	CB030
<i>Model</i>		<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device Description</i>	36" belt width X 100ft length; portable; driven by a 40 HP electric motor		

13.9 Fourth Undersize Transfer Conveyor

<i>Device ID #</i>	110499	<i>Device Name</i>	Fourth Undersize Transfer Conveyor
<i>Rated Heat Input</i>		<i>Physical Size</i>	
<i>Manufacturer</i>	Rock Systems	<i>Operator ID</i>	CB033
<i>Model</i>		<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device Description</i>	36" belt width X 50ft length; portable/stackable; driven by a 10 HP electric motor		

13.10 Grizzly Feeder

<i>Device ID #</i>	110481	<i>Device Name</i>	Grizzly Feeder
<i>Rated Heat Input</i>		<i>Physical Size</i>	
<i>Manufacturer</i>		<i>Operator ID</i>	SC010
<i>Model</i>		<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device</i>	16 inch openings on grid		
<i>Description</i>			

13.11 Oversize Stacker

<i>Device ID #</i>	110493	<i>Device Name</i>	Oversize Stacker
<i>Rated Heat Input</i>		<i>Physical Size</i>	
<i>Manufacturer</i>	Rock Systems	<i>Operator ID</i>	ST022
<i>Model</i>		<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device</i>	30" belt width X 80ft length; driven by a 20 HP electric motor		
<i>Description</i>			

13.12 Product Storage Pile - Large

<i>Device ID #</i>	110561	<i>Device Name</i>	Product Storage Pile - Large
<i>Rated Heat Input</i>		<i>Physical Size</i>	4.80 Acres of Storage Piles
<i>Manufacturer</i>		<i>Operator ID</i>	
<i>Model</i>		<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device</i>	Base footprint of each pile = 2.4 acres; surface area of each pile = 2.9		
<i>Description</i>	acres; maximum height of each pile shall not exceed 40 ft		

13.13 Product Storage Pile - Small

<i>Device ID #</i>	110562	<i>Device Name</i>	Product Storage Pile - Small
<i>Rated Heat Input</i>		<i>Physical Size</i>	2.60 Acres of Storage Piles
<i>Manufacturer</i>		<i>Operator ID</i>	
<i>Model</i>		<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device</i>	Base footprint of each pile = 1.3 acres; surface area of each pile = 1.6		
<i>Description</i>	acres; maximum height of each pile shall not exceed 40 ft		

13.14 Raw Ore Transfer Belt Conveyor to Crusher

<i>Device ID #</i>	110484	<i>Device Name</i>	Raw Ore Transfer Belt Conveyor to Crusher
<i>Rated Heat Input</i>		<i>Physical Size</i>	
<i>Manufacturer</i>	Rock Systems	<i>Operator ID</i>	CB012
<i>Model</i>		<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device</i>	42" belt width X 80ft length; driven by 20 HP electric motor		
<i>Description</i>			

13.15 Reject Belt Scale

<i>Device ID #</i>	110494	<i>Device Name</i>	Reject Belt Scale
<i>Rated Heat Input</i>		<i>Physical Size</i>	
<i>Manufacturer</i>	Belt Way	<i>Operator ID</i>	BS022
<i>Model</i>	100	<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device</i>			
<i>Description</i>			

13.16 Reject Storage Pile

<i>Device ID #</i>	110563	<i>Device Name</i>	Reject Storage Pile
<i>Rated Heat Input</i>		<i>Physical Size</i>	
<i>Manufacturer</i>		<i>Operator ID</i>	
<i>Model</i>		<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device</i>	Merge capacity 650 cu yds to blend piles, maximum height of pile = 15		
<i>Description</i>	feet		

13.17 Second Oversize Conveyor Belt

<i>Device ID #</i>	110492	<i>Device Name</i>	Second Oversize Conveyor Belt
<i>Rated Heat Input</i>		<i>Physical Size</i>	
<i>Manufacturer</i>	Rock Systems	<i>Operator ID</i>	CB021
<i>Model</i>		<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device</i>	30" belt width X 60ft length; portable/stackable; driven by a 15 HP electric		
<i>Description</i>	motor		

13.18 Second Undersize Transfer Conveyor

<i>Device ID #</i>	110497	<i>Device Name</i>	Second Undersize Transfer Conveyor
<i>Rated Heat Input</i>		<i>Physical Size</i>	
<i>Manufacturer</i>	Rock Systems	<i>Operator ID</i>	CB031
<i>Model</i>		<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device</i>	36" belt width X 80ft length; portable; driven by a 25 HP electric motor		
<i>Description</i>			

13.19 Telescoping Radial Stacker Belt

<i>Device ID #</i>	110500	<i>Device Name</i>	Telescoping Radial Stacker Belt
<i>Rated Heat Input</i>		<i>Physical Size</i>	
<i>Manufacturer</i>	Thorstack T150-8	<i>Operator ID</i>	ST034
<i>Model</i>		<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device</i>	36" belt width X 150ft length; able to create > 50ft pile height; driven by a		
<i>Description</i>	72 HP electric motor		

13.20 Third Undersize Transfer Conveyor

<i>Device ID #</i>	110498	<i>Device Name</i>	Third Undersize Transfer Conveyor
<i>Rated Heat Input</i>		<i>Physical Size</i>	
<i>Manufacturer</i>	Rock Systems	<i>Operator ID</i>	CB032
<i>Model</i>		<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device</i>	36" belt width X 80ft length; portable/stackable; driven by a 15 HP electric		
<i>Description</i>	motor		

13.21 Undersize Collection Conveyor Belt

<i>Device ID #</i>	110490	<i>Device Name</i>	Undersize Collection Conveyor Belt
<i>Rated Heat Input</i>		<i>Physical Size</i>	
<i>Manufacturer</i>	JW Jones	<i>Operator ID</i>	FB016
<i>Model</i>		<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device</i>	48' belt width X 25ft length; driven by a 10 HP electric motor		
<i>Description</i>			

14 Mortar Production Line**14.1 Bag Breaking Station**

<i>Device ID #</i>	103431	<i>Device Name</i>	Bag Breaking Station
<i>Rated Heat Input</i>		<i>Physical Size</i>	
<i>Manufacturer</i>		<i>Operator ID</i>	CP23
<i>Model</i>		<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device</i>	Includes a feed hopper and an empty bag compactor		
<i>Description</i>			

14.2 Baghouses - Mortar Prod Line**14.2.1 Mortar Plant Ventilation Baghouse**

<i>Device ID #</i>	000146	<i>Device Name</i>	Mortar Plant Ventilation Baghouse
<i>Rated Heat Input</i>		<i>Physical Size</i>	38465.00 scf/Minute
<i>Manufacturer</i>	Sly	<i>Operator ID</i>	MPVBH
<i>Model</i>	Polyester	<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device</i>	Ventilation to refeed and packaging areas of mortar plant; Negative		
<i>Description</i>	pressure; Bag Diam. (in): 3-sec env.; Bag Length (ft): 43x36 in; Total Cloth Area: 6966; enclosed		

14.3 Bagwasher Flattener

<i>Device ID #</i>	103429	<i>Device Name</i>	Bagwasher Flattener
<i>Rated Heat Input</i>		<i>Physical Size</i>	
<i>Manufacturer</i>		<i>Operator ID</i>	
<i>Model</i>		<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device</i>	Bag flattener and air washer		
<i>Description</i>			

14.4 Cyclones

<i>Device ID #</i>	103426	<i>Device Name</i>	Cyclones
<i>Rated Heat Input</i>		<i>Physical Size</i>	
<i>Manufacturer</i>		<i>Operator ID</i>	
<i>Model</i>		<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device</i>			
<i>Description</i>			

14.5 Hoppers

<i>Device ID #</i>	103427	<i>Device Name</i>	Hoppers
<i>Rated Heat Input</i>		<i>Physical Size</i>	
<i>Manufacturer</i>		<i>Operator ID</i>	
<i>Model</i>		<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device</i>	Mixer feed hopper with (2) hopper mixers, and a spillage hopper		
<i>Description</i>			

14.6 Mixer

<i>Device ID #</i>	103430	<i>Device Name</i>	Mixer
<i>Rated Heat Input</i>		<i>Physical Size</i>	
<i>Manufacturer</i>		<i>Operator ID</i>	
<i>Model</i>		<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device</i>	(2) hopper mixers		
<i>Description</i>			

14.7 Packer

<i>Device ID #</i>	103428	<i>Device Name</i>	Packer
<i>Rated Heat Input</i>		<i>Physical Size</i>	2.00 Tons/Hour
<i>Manufacturer</i>		<i>Operator ID</i>	
<i>Model</i>		<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device</i>	Packer is equipped with the spillage hopper		
<i>Description</i>			

15 Nos. 3 and 5 Air Sifters

<i>Device ID #</i>	103260	<i>Device Name</i>	Nos. 3 and 5 Air Sifters
<i>Rated Heat Input</i>		<i>Physical Size</i>	8.20 Tons/Hour
<i>Manufacturer</i>		<i>Operator ID</i>	
<i>Model</i>		<i>Serial Number</i>	
<i>Location Note</i>	Note (a): Unless otherwise noted, feed rate is from correspondence provided by Steven Kirby, Manville's Attorney, to Joan Heredia, APCD Engineer, dated January 11, 1989.		
<i>Device Description</i>			

15.1 Air Sifters

<i>Device ID #</i>	103414	<i>Device Name</i>	Air Sifters
<i>Rated Heat Input</i>		<i>Physical Size</i>	
<i>Manufacturer</i>		<i>Operator ID</i>	
<i>Model</i>		<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device Description</i>			

15.2 Bins

<i>Device ID #</i>	103411	<i>Device Name</i>	Bins
<i>Rated Heat Input</i>		<i>Physical Size</i>	
<i>Manufacturer</i>		<i>Operator ID</i>	
<i>Model</i>		<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device Description</i>			

15.3 Blowers

<i>Device ID #</i>	103410	<i>Device Name</i>	Blowers
<i>Rated Heat Input</i>		<i>Physical Size</i>	
<i>Manufacturer</i>		<i>Operator ID</i>	
<i>Model</i>		<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device</i>			
<i>Description</i>			

15.4 Cyclones

<i>Device ID #</i>	103409	<i>Device Name</i>	Cyclones
<i>Rated Heat Input</i>		<i>Physical Size</i>	
<i>Manufacturer</i>		<i>Operator ID</i>	
<i>Model</i>		<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device</i>			
<i>Description</i>			

15.5 Packers

<i>Device ID #</i>	103412	<i>Device Name</i>	Packers
<i>Rated Heat Input</i>		<i>Physical Size</i>	8.20 Tons/Hour
<i>Manufacturer</i>		<i>Operator ID</i>	
<i>Model</i>		<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device</i>			
<i>Description</i>			

15.6 Pumps

<i>Device ID #</i>	103413	<i>Device Name</i>	Pumps
<i>Rated Heat Input</i>		<i>Physical Size</i>	
<i>Manufacturer</i>		<i>Operator ID</i>	
<i>Model</i>		<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device</i>			
<i>Description</i>			

15.7 Screws

Device ID #	103415	Device Name	Screws
<i>Rated Heat Input</i>		<i>Physical Size</i>	
<i>Manufacturer</i>		<i>Operator ID</i>	
<i>Model</i>		<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device</i>			
<i>Description</i>			

16 Pellet Production Line

16.1 Baghouses - Pellet Prod Line

16.1.1 Pellet Plant Ventilation Baghouse - Cold

Device ID #	000147	Device Name	Pellet Plant Ventilation Baghouse - Cold
<i>Rated Heat Input</i>		<i>Physical Size</i>	18549.00 scf/Minute
<i>Manufacturer</i>	Mikro-Pulsaire	<i>Operator ID</i>	PPCVBH
<i>Model</i>	Polyester Felt	<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device</i>	Ventilation conveyor dryer, refeed area, surge bin, sweco, conveyors;		
<i>Description</i>	Negative pressure; Bag Diam. (in): 4.5; Bag Length (ft): 10.4; Total Cloth Area: 3313; enclosed		

16.1.2 Pellet Plant Ventilation Baghouse - Hot

Device ID #	000148	Device Name	Pellet Plant Ventilation Baghouse - Hot
<i>Rated Heat Input</i>		<i>Physical Size</i>	10500.00 scf/Minute
<i>Manufacturer</i>	Midwesco Filter Resources	<i>Operator ID</i>	PPHVBH
<i>Model</i>	Aramid w/Tetratex Membrane	<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device</i>	Ventilation sweco, bucket elevator, pellet kilns, packers, vibrating feeder,		
<i>Description</i>	screen. CAFA kiln, cyclone & vent hood; Negative pressure; Bag Diam. (in): 4.625; Bag Length (ft): 10.0; Total Cloth Area: 1744; Est. A/C		

Ratio: 5.9; enclosed

16.2 Belt Conveyors

<i>Device ID #</i>	103438	<i>Device Name</i>	Belt Conveyors
<i>Rated Heat Input</i>		<i>Physical Size</i>	
<i>Manufacturer</i>		<i>Operator ID</i>	
<i>Model</i>		<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device</i>	(1) conveyor associated with bucket elevator, (5) conveyors, (1) belt		
<i>Description</i>	conveyor associated with sweco screen, (1) conveyer associated with surge bin		

16.3 Bins

<i>Device ID #</i>	103433	<i>Device Name</i>	Bins
<i>Rated Heat Input</i>		<i>Physical Size</i>	
<i>Manufacturer</i>		<i>Operator ID</i>	
<i>Model</i>		<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device</i>	(2) surge bins, (3) packer bins		
<i>Description</i>			

16.4 Bucket Elevators

<i>Device ID #</i>	103437	<i>Device Name</i>	Bucket Elevators
<i>Rated Heat Input</i>		<i>Physical Size</i>	
<i>Manufacturer</i>		<i>Operator ID</i>	
<i>Model</i>		<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device</i>			
<i>Description</i>			

16.5 Cyclones

<i>Device ID #</i>	103432	<i>Device Name</i>	Cyclones
<i>Rated Heat Input</i>		<i>Physical Size</i>	
<i>Manufacturer</i>		<i>Operator ID</i>	
<i>Model</i>		<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device</i>			
<i>Description</i>			

16.6 Hoppers

<i>Device ID #</i>	103435	<i>Device Name</i>	Hoppers
<i>Rated Heat Input</i>		<i>Physical Size</i>	
<i>Manufacturer</i>		<i>Operator ID</i>	
<i>Model</i>		<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device</i>			
<i>Description</i>			

16.7 Mixer

<i>Device ID #</i>	103440	<i>Device Name</i>	Mixer
<i>Rated Heat Input</i>		<i>Physical Size</i>	
<i>Manufacturer</i>		<i>Operator ID</i>	
<i>Model</i>		<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device</i>			
<i>Description</i>			

16.8 Packers

<i>Device ID #</i>	103436	<i>Device Name</i>	Packers
<i>Rated Heat Input</i>		<i>Physical Size</i>	10.00 Tons/Hour
<i>Manufacturer</i>		<i>Operator ID</i>	
<i>Model</i>		<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device</i>			
<i>Description</i>			

16.9 Pellet Plant Dryer

<i>Device ID #</i>	005843	<i>Device Name</i>	Pellet Plant Dryer
<i>Rated Heat Input</i>	4.500 MMBtu/Hour	<i>Physical Size</i>	
<i>Manufacturer</i>		<i>Operator ID</i>	
<i>Model</i>		<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device</i>	Fired on natural gas		
<i>Description</i>			

16.10 Pellet Plant Kiln

<i>Device ID #</i>	005844	<i>Device Name</i>	Pellet Plant Kiln
<i>Rated Heat Input</i>	4.400 MMBtu/Hour	<i>Physical Size</i>	
<i>Manufacturer</i>		<i>Operator ID</i>	
<i>Model</i>		<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device</i>	Fired on natural gas		
<i>Description</i>			

16.11 Screens

<i>Device ID #</i>	103434	<i>Device Name</i>	Screens
<i>Rated Heat Input</i>		<i>Physical Size</i>	
<i>Manufacturer</i>		<i>Operator ID</i>	
<i>Model</i>		<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device</i>	(2) Sweco screens		
<i>Description</i>			

16.12 Screws

<i>Device ID #</i>	103439	<i>Device Name</i>	Screws
<i>Rated Heat Input</i>		<i>Physical Size</i>	
<i>Manufacturer</i>		<i>Operator ID</i>	
<i>Model</i>		<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device</i>	Number of devices is currently unknown.		
<i>Description</i>			

17 Powder Mills (Tbl A-2)**17.1 3 Bulk Bin Baghouse**

<i>Device ID #</i>	000151	<i>Device Name</i>	3 Bulk Bin Baghouse
<i>Rated Heat Input</i>		<i>Physical Size</i>	3600.00 scf/Minute
<i>Manufacturer</i>	DCE - Sintamatic	<i>Operator ID</i>	3BBVBH
<i>Model</i>	polyethylene, PTFE coating	<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device</i>	Ventilation bulk bin, 3 semi-bulk station; Negative pressure; Bag Diam.		
<i>Description</i>	(in): cartridge; Bag Length (ft): 5' 1.25"; Total Cloth Area: 850; enclosed		

17.2 378 Baghouse

<i>Device ID #</i>	000109	<i>Device Name</i>	378 Baghouse
<i>Rated Heat Input</i>		<i>Physical Size</i>	45150.00 scf/Minute
<i>Manufacturer</i>	Amer. Air Filter	<i>Operator ID</i>	378BH
<i>Model</i>	gortex/polyester	<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device</i>	Ventilation line pack. stations, railcar load station, bulk bins; Negative		
<i>Description</i>	pressure; Bag Diam. (in): 5.5; Bag Length (ft): 11.7; Total Cloth Area: 7283; Est. A/C Ratio: 6.1		

17.3 5 Air Sifter Ventilation Baghouse

<i>Device ID #</i>	006472	<i>Device Name</i>	5 Air Sifter Ventilation Baghouse
<i>Rated Heat Input</i>		<i>Physical Size</i>	473.00 scf/Minute
<i>Manufacturer</i>	DCE	<i>Operator ID</i>	5ASBH
<i>Model</i>	PTFE	<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device Description</i>	Ventilates the 5 System air sifter; Negative pressure; Bag Diam. (in): cartridge; Bag Length (ft): 4' x 17"; Total Cloth Area: 168; Est. A/C Ratio: 2.7; enclosed		

17.4 578 Baghouse

<i>Device ID #</i>	000119	<i>Device Name</i>	578 Baghouse
<i>Rated Heat Input</i>		<i>Physical Size</i>	31500.00 scf/Minute
<i>Manufacturer</i>	Mikro-Pulsaire	<i>Operator ID</i>	5APVBH
<i>Model</i>	Polypropylene	<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device Description</i>	Ventilation for packing stations; Negative pressure; Bag Diam. (in): 4.5; Bag Length (ft): 12.0; Total Cloth Area: 6729; Est. A/C Ratio: 4.5; enclosed		

17.5 Line No. 3**17.5.1 Capture System and Control Devices (Line #3 Packing)****17.5.1.1 3 Air Sifter Ventilation Baghouse**

<i>Device ID #</i>	006471	<i>Device Name</i>	3 Air Sifter Ventilation Baghouse
<i>Rated Heat Input</i>		<i>Physical Size</i>	473.00 scf/Minute
<i>Manufacturer</i>	DCE	<i>Operator ID</i>	3ASBH
<i>Model</i>	PTFE Material	<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device Description</i>	Ventilates the 3 System air sifter; Negative pressure; Bag Diam. (in): cartridge; Bag Length (ft): 4' x 17"; Total Cloth Area: 168; Est. A/C Ratio: 2.7		

17.5.1.2 345 Baghouse

<i>Device ID #</i>	000108	<i>Device Name</i>	345 Baghouse
<i>Rated Heat Input</i>		<i>Physical Size</i>	20000.00 scf/Minute
<i>Manufacturer</i>	Fabric Filters	<i>Operator ID</i>	345BH
	Northwest		
<i>Model</i>	16 oz Polypropylene	<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device</i>	Ventilation 101, 102, 103, and 104 air sifters and 9 and 10 Bulk Bins;		
<i>Description</i>	Negative pressure; Bag Diam. (in): 5.0; Bag Length (ft): 12.0; Total Cloth Area: 8671; Est. A/C Ratio: 4.0		

17.5.2 Processing Line #3 (drying, milling, separating)**17.5.2.1 Bins**

<i>Device ID #</i>	103309	<i>Device Name</i>	Bins
<i>Rated Heat Input</i>		<i>Physical Size</i>	
<i>Manufacturer</i>		<i>Operator ID</i>	
<i>Model</i>		<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device</i>	(2) Crude ore bins, (1) soda ash mill bin, (2) surge bins		
<i>Description</i>			

17.5.2.2 Conveyor Belts

<i>Device ID #</i>	103313	<i>Device Name</i>	Conveyor Belts
<i>Rated Heat Input</i>		<i>Physical Size</i>	
<i>Manufacturer</i>		<i>Operator ID</i>	
<i>Model</i>		<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device</i>	System #3		
<i>Description</i>			

17.5.2.3 Soda Ash Mill

<i>Device ID #</i>	103312	<i>Device Name</i>	Soda Ash Mill
<i>Rated Heat Input</i>		<i>Physical Size</i>	
<i>Manufacturer</i>		<i>Operator ID</i>	CP41
<i>Model</i>		<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device</i>	Receives soda ash from storage bin and discharged into dispersing screen		
<i>Description</i>	discharge line; consists of a storage bin, weigh belt feeder, hopper, screw conveyor, and pulverizer		

17.5.3 Processing Line #3 (packing)**17.5.3.1 Bulk Bins**

<i>Device ID #</i>	106107	<i>Device Name</i>	Bulk Bins
<i>Rated Heat Input</i>		<i>Physical Size</i>	
<i>Manufacturer</i>	St. Regis	<i>Operator ID</i>	#1 and #2
<i>Model</i>		<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device</i>			
<i>Description</i>			

17.5.3.2 Packer Bins

<i>Device ID #</i>	106106	<i>Device Name</i>	Packer Bins
<i>Rated Heat Input</i>		<i>Physical Size</i>	
<i>Manufacturer</i>	Johns-Manville	<i>Operator ID</i>	
<i>Model</i>		<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device</i>	Packer Bins: A, P, S.C, and "Ten Pound"		
<i>Description</i>			

17.6 Line No. 5**17.6.1 Capture System and Control Devices (Line #5)****17.6.1.1 Waste Bin**

<i>Device ID #</i>	106116	<i>Device Name</i>	Waste Bin
<i>Rated Heat Input</i>		<i>Physical Size</i>	
<i>Manufacturer</i>		<i>Operator ID</i>	
<i>Model</i>		<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device</i>			
<i>Description</i>			

17.6.2 Processing Line #5 (drying, milling separating)**17.6.2.1 Bins**

<i>Device ID #</i>	106146	<i>Device Name</i>	Bins
<i>Rated Heat Input</i>		<i>Physical Size</i>	
<i>Manufacturer</i>		<i>Operator ID</i>	
<i>Model</i>		<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device</i>			
<i>Description</i>			(2) crude ore bins, (1) soda ash storage bin, (1) reject bin

17.6.2.2 Conveyor Belts

<i>Device ID #</i>	103336	<i>Device Name</i>	Conveyor Belts
<i>Rated Heat Input</i>		<i>Physical Size</i>	
<i>Manufacturer</i>		<i>Operator ID</i>	
<i>Model</i>		<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device</i>			
<i>Description</i>			(1) soda ash screw conveyors, (12) conveyors, (2) refeed conveyors

17.6.2.3 Re-Separators

<i>Device ID #</i>	103331	<i>Device Name</i>	Re-Separators
<i>Rated Heat Input</i>		<i>Physical Size</i>	
<i>Manufacturer</i>		<i>Operator ID</i>	
<i>Model</i>		<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device</i>	Two separators and one re-separator		
<i>Description</i>			

17.6.2.4 Soda Ash Mill

<i>Device ID #</i>	103335	<i>Device Name</i>	Soda Ash Mill
<i>Rated Heat Input</i>		<i>Physical Size</i>	
<i>Manufacturer</i>		<i>Operator ID</i>	
<i>Model</i>		<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device</i>	includes a storage bin, belt feeder, hopper, screw conveyor, pulverizer,		
<i>Description</i>	and (2) blowers		

17.7 Line No. 6

<i>Device ID #</i>	103256	<i>Device Name</i>	Line No. 6
<i>Rated Heat Input</i>		<i>Physical Size</i>	37.90 Tons/Hour
<i>Manufacturer</i>		<i>Operator ID</i>	
<i>Model</i>		<i>Serial Number</i>	
<i>Location Note</i>	Note (a): Unless otherwise noted, the rate is shown in a letter from Steve Kirby, Manville Attorney, to Joan Heredia, APCD Engineer, dated December 11, 1989.		
<i>Device</i>	Max Dry Production Rate (a): 18.7 tons/hr		
<i>Description</i>			

17.7.1 6 Automatic Station Baghouse (678)

<i>Device ID #</i>	103363	<i>Device Name</i>	6 Automatic Station Baghouse (678)
<i>Rated Heat Input</i>		<i>Physical Size</i>	30000.00 scf/Minute
<i>Manufacturer</i>	Mikro-Pulsaire	<i>Operator ID</i>	6APVBH
<i>Model</i>	Polypropylene	<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device</i>	Ventilation 6AP equipment; Negative pressure; Bag Diam. (in): 4.5; Bag		
<i>Description</i>	Length (ft): 12.0; Total Cloth Area: 6729; Est. A/C Ratio: 4.5; enclosed		

17.7.2 Blowers

<i>Device ID #</i>	106126	<i>Device Name</i>	Blowers
<i>Rated Heat Input</i>		<i>Physical Size</i>	
<i>Manufacturer</i>		<i>Operator ID</i>	615A, 616, 678
<i>Model</i>		<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device</i>	Line 6 blowers?		
<i>Description</i>			

17.7.3 Blowers

<i>Device ID #</i>	106125	<i>Device Name</i>	Blowers
<i>Rated Heat Input</i>		<i>Physical Size</i>	
<i>Manufacturer</i>		<i>Operator ID</i>	635, 636
<i>Model</i>		<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device</i>	Line 6 Blowers?		
<i>Description</i>			

17.7.4 Capture System and Control Device (Line #6)**17.7.4.1 Blowers**

<i>Device ID #</i>	106124	<i>Device Name</i>	Blowers
<i>Rated Heat Input</i>		<i>Physical Size</i>	
<i>Manufacturer</i>		<i>Operator ID</i>	607, 607B, 625A - B
<i>Model</i>		<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device</i>			
<i>Description</i>			

17.7.5 Processing Line #6 (Dry End Packing)**17.7.5.1 Conveyor Belts**

<i>Device ID #</i>	106122	<i>Device Name</i>	Conveyor Belts
<i>Rated Heat Input</i>		<i>Physical Size</i>	
<i>Manufacturer</i>		<i>Operator ID</i>	
<i>Model</i>		<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device</i>	(1) screw conveyors located below A/S packers, (1) screw conveyor below		
<i>Description</i>	SFSF packers, (2) conveyors below A/S packers, (7) bag conveyors		

17.7.5.2 Conveyors

<i>Device ID #</i>	106127	<i>Device Name</i>	Conveyors
<i>Rated Heat Input</i>		<i>Physical Size</i>	
<i>Manufacturer</i>		<i>Operator ID</i>	
<i>Model</i>		<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device</i>			
<i>Description</i>			

17.7.5.3 Screws

<i>Device ID #</i>	103360	<i>Device Name</i>	Screws
<i>Rated Heat Input</i>		<i>Physical Size</i>	
<i>Manufacturer</i>		<i>Operator ID</i>	
<i>Model</i>		<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device</i>	PTO 5840 listed one SC located below 6A packers, and one below SFSF		
<i>Description</i>	packers and 6SC packers		

17.7.6 Processing Line #6 (drying, milling, separating)**17.7.6.1 Air Sifters**

<i>Device ID #</i>	103356	<i>Device Name</i>	Air Sifters
<i>Rated Heat Input</i>		<i>Physical Size</i>	
<i>Manufacturer</i>		<i>Operator ID</i>	601, 602, 603, 604
<i>Model</i>		<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device</i>			
<i>Description</i>			

17.7.6.2 Bins

<i>Device ID #</i>	106129	<i>Device Name</i>	Bins
<i>Rated Heat Input</i>		<i>Physical Size</i>	
<i>Manufacturer</i>		<i>Operator ID</i>	
<i>Model</i>		<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device</i>	(4) Crude bins, (2) soda ash storage bins, (1) refeed bin, (1) reject/refeed		
<i>Description</i>	bin, (1) surge bin		

17.7.6.3 Blowers

<i>Device ID #</i>	103348	<i>Device Name</i>	Blowers
<i>Rated Heat Input</i>		<i>Physical Size</i>	
<i>Manufacturer</i>		<i>Operator ID</i>	
<i>Model</i>		<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device</i>	(1) furnace blower, (44) blowers, (2) soda ash system blowers, (2) rotary		
<i>Description</i>	kiln blowers, (1) discharge blower		

17.7.6.4 Bucket Elevator

<i>Device ID #</i>	103355	<i>Device Name</i>	Bucket Elevator
<i>Rated Heat Input</i>		<i>Physical Size</i>	
<i>Manufacturer</i>		<i>Operator ID</i>	
<i>Model</i>		<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device</i>	transfers material from A/S coarse collector screw conveyor to packing		
<i>Description</i>	station #6A		

17.7.6.5 Conveyor belts

<i>Device ID #</i>	103358	<i>Device Name</i>	Conveyor belts
<i>Rated Heat Input</i>		<i>Physical Size</i>	
<i>Manufacturer</i>		<i>Operator ID</i>	
<i>Model</i>		<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device</i>	(4) soda ash screw conveyors, (42) conveyors, (1) A/S coarse screw		
<i>Description</i>	conveyor, (1) screw conveyor, (1) feed conveyor		

17.7.6.6 Cyclones

<i>Device ID #</i>	103347	<i>Device Name</i>	Cyclones
<i>Rated Heat Input</i>		<i>Physical Size</i>	
<i>Manufacturer</i>		<i>Operator ID</i>	
<i>Model</i>		<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device</i>	PTO 5840 listed 6 air sifter cyclones and 19 cyclones		
<i>Description</i>			

17.7.6.7 De-lumpers

<i>Device ID #</i>	103350	<i>Device Name</i>	De-lumpers
<i>Rated Heat Input</i>		<i>Physical Size</i>	
<i>Manufacturer</i>		<i>Operator ID</i>	
<i>Model</i>		<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device</i>			
<i>Description</i>			

17.7.6.8 Hoppers

<i>Device ID #</i>	106128	<i>Device Name</i>	Hoppers
<i>Rated Heat Input</i>		<i>Physical Size</i>	
<i>Manufacturer</i>		<i>Operator ID</i>	
<i>Model</i>		<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device</i>	(6) natural baghouse hoppers, (6) #601 baghouse hoppers, (3) superfine		
<i>Description</i>	baghouse hoppers, (9) #602 baghouse hoppers, (1) soda ash hopper		

17.7.6.9 Hoppers

<i>Device ID #</i>	106130	<i>Device Name</i>	Hoppers
<i>Rated Heat Input</i>		<i>Physical Size</i>	
<i>Manufacturer</i>		<i>Operator ID</i>	
<i>Model</i>		<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device</i>			
<i>Description</i>			

17.7.6.10 Pre-separators

<i>Device ID #</i>	103349	<i>Device Name</i>	Pre-separators
<i>Rated Heat Input</i>		<i>Physical Size</i>	
<i>Manufacturer</i>		<i>Operator ID</i>	601A, 601B, 602
<i>Model</i>		<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device</i>			
<i>Description</i>			

17.7.6.11 Pump

<i>Device ID #</i>	103359	<i>Device Name</i>	Pump
<i>Rated Heat Input</i>		<i>Physical Size</i>	
<i>Manufacturer</i>		<i>Operator ID</i>	
<i>Model</i>		<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device</i>	(1) discharge pump		
<i>Description</i>			

17.7.6.12 Re-separator

<i>Device ID #</i>	103351	<i>Device Name</i>	Re-separator
<i>Rated Heat Input</i>		<i>Physical Size</i>	
<i>Manufacturer</i>		<i>Operator ID</i>	
<i>Model</i>		<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device</i>			
<i>Description</i>			

17.7.6.13 Screens

<i>Device ID #</i>	103353	<i>Device Name</i>	Screens
<i>Rated Heat Input</i>		<i>Physical Size</i>	
<i>Manufacturer</i>		<i>Operator ID</i>	
<i>Model</i>		<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device</i>	(2) Sweco screens,		
<i>Description</i>			

17.7.6.14 Soda Ash Mill

<i>Device ID #</i>	103357	<i>Device Name</i>	Soda Ash Mill
<i>Rated Heat Input</i>		<i>Physical Size</i>	
<i>Manufacturer</i>		<i>Operator ID</i>	
<i>Model</i>		<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device</i>	includes (4) screw conveyors, bucket elevator, (2) bins, ducting from soda		
<i>Description</i>	ash bins, belt feeder, hopper, pulverizier, and (2) blowers		

17.7.7 Processing Line #6 (Wet End Packing)**17.7.7.1 Packing Station**

<i>Device ID #</i>	103352	<i>Device Name</i>	Packing Station
<i>Rated Heat Input</i>		<i>Physical Size</i>	
<i>Manufacturer</i>		<i>Operator ID</i>	6PS
<i>Model</i>		<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device</i>	Includes (1) packer, bag flattener, zip lift, press well and (2) conveyors		
<i>Description</i>			

17.8 Packer Bins

<i>Device ID #</i>	103332	<i>Device Name</i>	Packer Bins
<i>Rated Heat Input</i>		<i>Physical Size</i>	
<i>Manufacturer</i>		<i>Operator ID</i>	5P, 5SC, 5AP
<i>Model</i>		<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device</i>	Packer Bins: 5P, 5SC, 5AP		
<i>Description</i>			

17.9 Packing Station

<i>Device ID #</i>	103354	<i>Device Name</i>	Packing Station
<i>Rated Heat Input</i>		<i>Physical Size</i>	
<i>Manufacturer</i>		<i>Operator ID</i>	6AS
<i>Model</i>		<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device</i>	(1) superfine super floss also know as 6SF, (1) #6A product, (1) #6P, (1)		
<i>Description</i>	#6SC, (1) A/S product, (1) automatic packer #6AP product also known as 2AP.		

17.10 Pumps

<i>Device ID #</i>	103337	<i>Device Name</i>	Pumps
<i>Rated Heat Input</i>		<i>Physical Size</i>	
<i>Manufacturer</i>		<i>Operator ID</i>	
<i>Model</i>		<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device</i>	Number of devices is currently unknown		
<i>Description</i>			

18 Silo Area Group 2**18.1 Conveyors**

<i>Device ID #</i>	103279	<i>Device Name</i>	Conveyors
<i>Rated Heat Input</i>		<i>Physical Size</i>	Tons Processed
<i>Manufacturer</i>		<i>Operator ID</i>	
<i>Model</i>		<i>Serial Number</i>	
<i>Location Note</i>	The conveyors serve the crushing equipment and the processing line feed bins as shown in drawing No. D-101076 (dated June 23, 1952). Excludes conveyors listed in Device 110768.		
<i>Device</i>			
<i>Description</i>			

18.2 Crushing Plant Storage Bins

<i>Device ID #</i>	000043	<i>Device Name</i>	Crushing Plant Storage Bins
<i>Rated Heat Input</i>		<i>Physical Size</i>	9.60 MMcf/Minute
<i>Manufacturer</i>		<i>Operator ID</i>	
<i>Model</i>		<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device</i>			
<i>Description</i>			

18.3 Crushing Plant Ventilation Baghouse

<i>Device ID #</i>	000100	<i>Device Name</i>	Crushing Plant Ventilation Baghouse
<i>Rated Heat Input</i>		<i>Physical Size</i>	
<i>Manufacturer</i>	JM / Mikro-Pulsaire	<i>Operator ID</i>	CRVBH
<i>Model</i>	672R-8-20 TRH	<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device</i>	General Process Descrip: Ventilation crushers, #1,2,3,4,5,6 crude bins,		
<i>Description</i>	belts, 6crude bin discharge		
	Pos./Neg: Neg.		
	Number of Socks: 672		
	Bag Diam. (in): 4.5		
	Bag Length (ft): 8.0		
	Total Cloth Area: 6334		
	Est Air Flow: 34000		
	Est. A/C Ratio:		
	Fabric Material: 16 oz polyprop		
	Cleaning Method: pulse jet.		

18.4 Spiked Roller Mills

<i>Device ID #</i>	103277	<i>Device Name</i>	Spiked Roller Mills
<i>Rated Heat Input</i>		<i>Physical Size</i>	150.00 Tons/Hour
<i>Manufacturer</i>		<i>Operator ID</i>	
<i>Model</i>		<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device</i>			
<i>Description</i>			

18.5 Storage piles (blend piles)

<i>Device ID #</i>	103275	<i>Device Name</i>	Storage piles (blend piles)
<i>Rated Heat Input</i>		<i>Physical Size</i>	8.00 Acres of Storage Piles
<i>Manufacturer</i>		<i>Operator ID</i>	
<i>Model</i>		<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device</i>			
<i>Description</i>			

19 Storage Silos**19.1 Baghouse - BH109A**

<i>Device ID #</i>	110649	<i>Device Name</i>	Baghouse - BH109A
<i>Rated Heat Input</i>		<i>Physical Size</i>	1381.00 scf/Minute
<i>Manufacturer</i>	Donaldson	<i>Operator ID</i>	BH109A
<i>Model</i>	54MBT6	<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device</i>	Particulate emission control on Disposition Bin (BN109A); negative pressure baghouse with a 3HP motor driven blower; contains 54 Tetratex polyester bags; each bag 6 in D x 6 ft L; total fabric area 518 sq ft; pulse jet cleaning; operating temperature 60 - 180F		
<i>Description</i>			

19.2 Baghouse - BH109B

<i>Device ID #</i>	110650	<i>Device Name</i>	Baghouse - BH109B
<i>Rated Heat Input</i>		<i>Physical Size</i>	1381.00 scf/Minute
<i>Manufacturer</i>	Donaldson	<i>Operator ID</i>	BH109B
<i>Model</i>	54MBT6	<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device</i>	Particulate emission control on Disposition Bin (BN109B); negative baghouse with a 3HP motor driven blower; contains 54 Tetratex polyester bags; each bag 6 in D x 6 ft L; total fabric area 518 sq ft; pulse jet cleaning; operating temperature 60 - 180F		
<i>Description</i>			

19.3 Baghouse - BH110A

<i>Device ID #</i>	110651	<i>Device Name</i>	Baghouse - BH110A
<i>Rated Heat Input</i>		<i>Physical Size</i>	1381.00 scf/Minute
<i>Manufacturer</i>	Donaldson	<i>Operator ID</i>	BH110A
<i>Model</i>	54MBT6	<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device Description</i>	Particulate emission control on Disposition Bin (BN110A); negative pressure baghouse with a 3HP motor driven blower; contains 54 Tetratex polyester bags; each bag 6 in D x 6 ft L; total fabric area 518 sq ft; pulse jet cleaning; operating temperature 60F		

19.4 Baghouse - BH110B

<i>Device ID #</i>	110652	<i>Device Name</i>	Baghouse - BH110B
<i>Rated Heat Input</i>		<i>Physical Size</i>	1381.00 scf/Minute
<i>Manufacturer</i>	Donaldson	<i>Operator ID</i>	BH110B
<i>Model</i>	54MBT6	<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device Description</i>	Particulate emission control on Disposition Bin (BN110B); negative pressure baghouse with a 3HP motor driven blower; contains 54 Tetratex polyester bags; each bag 6 in D x 6 ft L; total fabric area 518 sq ft; pulse jet cleaning; operating temperature 60F		

19.5 Baghouse - BH925A

<i>Device ID #</i>	110641	<i>Device Name</i>	Baghouse - BH925A
<i>Rated Heat Input</i>		<i>Physical Size</i>	720.00 scf/Minute
<i>Manufacturer</i>	Donaldson	<i>Operator ID</i>	BH925A
<i>Model</i>	36MBT6	<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device Description</i>	Particulate emission control on Holding Bin (BN925A); positive pressure baghouse; contains 36 Tetratex polyester bags; each bag 6 in D x 6 ft L; total fabric area 345 sq ft; pulse jet cleaning; operating temperature 60F		

19.6 Baghouse - BH925B

<i>Device ID #</i>	110642	<i>Device Name</i>	Baghouse - BH925B
<i>Rated Heat Input</i>		<i>Physical Size</i>	720.00 scf/Minute
<i>Manufacturer</i>	Donaldson	<i>Operator ID</i>	BH925B
<i>Model</i>	36MBT6	<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device Description</i>	Particulate emission control on Holding Bin (BN925B); positive pressure baghouse; contains 36 Tetratex polyester bags; each bag 6 in D x 6 ft L; total fabric area 345 sq ft; pulse jet cleaning; operating temperature 60F		

19.7 Baghouse 101

<i>Device ID #</i>	110191	<i>Device Name</i>	Baghouse 101
<i>Rated Heat Input</i>		<i>Physical Size</i>	2411.00 scf/Minute
<i>Manufacturer</i>	Donaldson	<i>Operator ID</i>	BH101
<i>Model</i>	81MBT8	<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device Description</i>	Controls particulate emissions from product storage silo BN101; positive pressure baghouse ; contains 81Tetratex polyester felt-type bags; each bag 6 in D x 8 ft L; total fabric area 1039 sq ft; pulse jet cleaning		

19.8 Baghouse 102

<i>Device ID #</i>	110192	<i>Device Name</i>	Baghouse 102
<i>Rated Heat Input</i>		<i>Physical Size</i>	2411.00 scf/Minute
<i>Manufacturer</i>	Donaldson	<i>Operator ID</i>	
<i>Model</i>	81MBT8	<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device Description</i>	Controls particulate emissions from product storage silo BN102; positive pressure baghouse ; contains 81Tetratex polyester felt-type bags; each bag 6 in D x 8 ft L; total fabric area 1039 sq ft; pulse jet cleaning		

19.9 Baghouse 103

<i>Device ID #</i>	110193	<i>Device Name</i>	Baghouse 103
<i>Rated Heat Input</i>		<i>Physical Size</i>	2411.00 scf/Minute
<i>Manufacturer</i>	Donaldson	<i>Operator ID</i>	
<i>Model</i>	81MBT8	<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device Description</i>	Controls particulate emissions from product storage silo BN103; positive pressure baghouse ; contains 81Tetratex polyester felt-type bags; each bag 6 in D x 8 ft L; total fabric area 1039 sq ft; pulse jet cleaning		

19.10 Baghouse 104

<i>Device ID #</i>	110194	<i>Device Name</i>	Baghouse 104
<i>Rated Heat Input</i>		<i>Physical Size</i>	2411.00 scf/Minute
<i>Manufacturer</i>	Donaldson	<i>Operator ID</i>	
<i>Model</i>	81MBT8	<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device Description</i>	Controls particulate emissions from product storage silo BN104; positive pressure baghouse ; contains 81Tetratex polyester felt-type bags; each bag 6 in D x 8 ft L; total fabric area 1039 sq ft; pulse jet cleaning		

19.11 Baghouse 105

<i>Device ID #</i>	110195	<i>Device Name</i>	Baghouse 105
<i>Rated Heat Input</i>		<i>Physical Size</i>	2411.00 scf/Minute
<i>Manufacturer</i>	Donaldson	<i>Operator ID</i>	
<i>Model</i>	81MBT8	<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device Description</i>	Controls particulate emissions from product storage silo BN105; positive pressure baghouse ; contains 81Tetratex polyester felt-type bags; each bag 6 in D x 8 ft L; total fabric area 1039 sq ft; pulse jet cleaning		

19.12 Baghouse 106

<i>Device ID #</i>	110196	<i>Device Name</i>	Baghouse 106
<i>Rated Heat Input</i>		<i>Physical Size</i>	2411.00 scf/Minute
<i>Manufacturer</i>	Donaldson	<i>Operator ID</i>	
<i>Model</i>	81MBT8	<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device Description</i>	Controls particulate emissions from product storage silo BN106; positive pressure baghouse ; contains 81Tetratex polyester felt-type bags; each bag 6 in D x 8 ft L; total fabric area 1039 sq ft; pulse jet cleaning		

19.13 Baghouse 107

<i>Device ID #</i>	110197	<i>Device Name</i>	Baghouse 107
<i>Rated Heat Input</i>		<i>Physical Size</i>	2411.00 scf/Minute
<i>Manufacturer</i>	Donaldson	<i>Operator ID</i>	
<i>Model</i>	81MBT8	<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device Description</i>	Controls particulate emissions from product storage silo BN107; positive pressure baghouse ; contains 81Tetratex polyester felt-type bags; each bag 6 in D x 8 ft L; total fabric area 1039 sq ft; pulse jet cleaning		

19.14 Baghouse 108

<i>Device ID #</i>	110198	<i>Device Name</i>	Baghouse 108
<i>Rated Heat Input</i>		<i>Physical Size</i>	2411.00 scf/Minute
<i>Manufacturer</i>	Donaldson	<i>Operator ID</i>	
<i>Model</i>	81MBT8	<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device Description</i>	Controls particulate emissions from product storage silo BN108; positive pressure baghouse ; contains 81Tetratex polyester felt-type bags; each bag 6 in D x 8 ft L; total fabric area 1039 sq ft; pulse jet cleaning		

19.15 Disposition Bin - BN109A

<i>Device ID #</i>	110645	<i>Device Name</i>	Disposition Bin - BN109A
<i>Rated Heat Input</i>		<i>Physical Size</i>	20.00 Tons
<i>Manufacturer</i>	Tank Connection	<i>Operator ID</i>	BN109A
<i>Model</i>		<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device</i>			
<i>Description</i>			

19.16 Disposition Bin - BN109B

<i>Device ID #</i>	110646	<i>Device Name</i>	Disposition Bin - BN109B
<i>Rated Heat Input</i>		<i>Physical Size</i>	20.00 Tons
<i>Manufacturer</i>	Tank Connection	<i>Operator ID</i>	BN109B
<i>Model</i>		<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device</i>			
<i>Description</i>			

19.17 Disposition Bin - BN110A

<i>Device ID #</i>	110647	<i>Device Name</i>	Disposition Bin - BN110A
<i>Rated Heat Input</i>		<i>Physical Size</i>	20.00 Tons
<i>Manufacturer</i>	Tank Connection	<i>Operator ID</i>	BN110A
<i>Model</i>		<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device</i>			
<i>Description</i>			

19.18 Disposition Bin - BN110B

<i>Device ID #</i>	110648	<i>Device Name</i>	Disposition Bin - BN110B
<i>Rated Heat Input</i>		<i>Physical Size</i>	20.00 Tons
<i>Manufacturer</i>	Tank Connection	<i>Operator ID</i>	BN110B
<i>Model</i>		<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device</i>			
<i>Description</i>			

19.19 Holding Bin - BN925A

<i>Device ID #</i>	110643	<i>Device Name</i>	Holding Bin - BN925A
<i>Rated Heat Input</i>		<i>Physical Size</i>	20.00 Tons
<i>Manufacturer</i>	Tank Connection	<i>Operator ID</i>	BN925A
<i>Model</i>		<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device</i>			
<i>Description</i>			

19.20 Holding Bin - BN925B

<i>Device ID #</i>	110644	<i>Device Name</i>	Holding Bin - BN925B
<i>Rated Heat Input</i>		<i>Physical Size</i>	20.00 Tons
<i>Manufacturer</i>	Tank Connection	<i>Operator ID</i>	BN925B
<i>Model</i>		<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device</i>			
<i>Description</i>			

19.21 Inlet Hose Station Product Storage Silos

<i>Device ID #</i>	109231	<i>Device Name</i>	Inlet Hose Station Product Storage Silos
<i>Rated Heat Input</i>		<i>Physical Size</i>	
<i>Manufacturer</i>	Cyclonaire	<i>Operator ID</i>	HS118
<i>Model</i>	Custom	<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device</i>	Product pneumatically transferred from system line bulk bin to storage silo		
<i>Description</i>	by existing 600 cfm Sutorbilt product blower.		

19.22 Outlet Hose Station Product Storage Silos

<i>Device ID #</i>	109232	<i>Device Name</i>	Outlet Hose Station Product Storage Silos
<i>Rated Heat Input</i>		<i>Physical Size</i>	
<i>Manufacturer</i>	Cyclonaire	<i>Operator ID</i>	HS119
<i>Model</i>	Custom	<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device</i>	Product pneumatically transferred from storage silo to existing packer bin,		
<i>Description</i>	bulk bin or railcar by powder pumps PP111-PP115.		

19.23 Powder Pumps - PP111 - PP115

<i>Device ID #</i>	110640	<i>Device Name</i>	Powder Pumps - PP111 - PP115
<i>Rated Heat Input</i>		<i>Physical Size</i>	200.00 Cubic Feet
<i>Manufacturer</i>	Cyclonaire	<i>Operator ID</i>	PP111 - PP115
<i>Model</i>	DPV-200B	<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device</i>	Air pressure driven; 200 cu ft capacity		
<i>Description</i>			

19.24 Powder Pumps - PP116 - PP117 A&B

<i>Device ID #</i>	110653	<i>Device Name</i>	Powder Pumps - PP116 - PP117 A&B
<i>Rated Heat Input</i>		<i>Physical Size</i>	100.00 Cubic Feet
<i>Manufacturer</i>	Cyclonaire	<i>Operator ID</i>	PP116 -117 A&B
<i>Model</i>	DPV-100B	<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device</i>	AIr pressure driven; 100 cu ft capacity		
<i>Description</i>			

19.25 Powder Pumps - PP925 A&B

<i>Device ID #</i>	110654	<i>Device Name</i>	Powder Pumps - PP925 A&B
<i>Rated Heat Input</i>		<i>Physical Size</i>	25.00 Cubic Feet
<i>Manufacturer</i>	Cyclonaire	<i>Operator ID</i>	PP925 A&B
<i>Model</i>	DPV-25B	<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device</i>	AIr pressure driven; 25 cu ft capacity		
<i>Description</i>			

19.26 Product Storage Silo 101

<i>Device ID #</i>	109214	<i>Device Name</i>	Product Storage Silo 101
<i>Rated Heat Input</i>		<i>Physical Size</i>	181.40 Tons Produced
<i>Manufacturer</i>	Tank Connection Co	<i>Operator ID</i>	BN101
<i>Model</i>	Custom	<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device</i>	Dimensions: 25ft dia x 100 ft high (with footings); storage capacity 200		
<i>Description</i>	metric tons		

19.27 Product Storage Silo 102

<i>Device ID #</i>	109216	<i>Device Name</i>	Product Storage Silo 102
<i>Rated Heat Input</i>		<i>Physical Size</i>	181.40 Tons Produced
<i>Manufacturer</i>	Tank Connection Co	<i>Operator ID</i>	BN102
<i>Model</i>	Custom	<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device Description</i>	Dimensions: 25ft dia x 100 ft high (with footings); storage capacity 200 metric tons		

19.28 Product Storage Silo 103

<i>Device ID #</i>	109217	<i>Device Name</i>	Product Storage Silo 103
<i>Rated Heat Input</i>		<i>Physical Size</i>	181.40 Tons Produced
<i>Manufacturer</i>	Tank Connection Co	<i>Operator ID</i>	BN103
<i>Model</i>	Custom	<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device Description</i>	Dimensions: 25ft dia x 100 ft high (with footings); storage capacity 200 metric tons		

19.29 Product Storage Silo 104

<i>Device ID #</i>	109218	<i>Device Name</i>	Product Storage Silo 104
<i>Rated Heat Input</i>		<i>Physical Size</i>	181.40 Tons Produced
<i>Manufacturer</i>	Tank Connection Co	<i>Operator ID</i>	BN104
<i>Model</i>	Custom	<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device Description</i>	Dimensions: 25ft dia x 100 ft high (with footings); storage capacity 200 metric tons		

19.30 Product Storage Silo 105

<i>Device ID #</i>	109219	<i>Device Name</i>	Product Storage Silo 105
<i>Rated Heat Input</i>		<i>Physical Size</i>	181.40 Tons Produced
<i>Manufacturer</i>	Tank Connection Co	<i>Operator ID</i>	BN105
<i>Model</i>	Custom	<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device Description</i>	Dimensions: 25ft dia x 100 ft high (with footings); storage capacity 200 metric tons		

19.31 Product Storage Silo 106

<i>Device ID #</i>	109220	<i>Device Name</i>	Product Storage Silo 106
<i>Rated Heat Input</i>		<i>Physical Size</i>	181.40 Tons Produced
<i>Manufacturer</i>	Tank Connection Co	<i>Operator ID</i>	BN106
<i>Model</i>	Custom	<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device Description</i>	Dimensions: 25ft dia x 100 ft high (with footings); storage capacity 200 metric tons		

19.32 Product Storage Silo 107

<i>Device ID #</i>	109221	<i>Device Name</i>	Product Storage Silo 107
<i>Rated Heat Input</i>		<i>Physical Size</i>	181.40 Tons Produced
<i>Manufacturer</i>	Tank Connection Co	<i>Operator ID</i>	BN107
<i>Model</i>	Custom	<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device Description</i>	Dimensions: 25ft dia x 100 ft high (with footings); storage capacity 200 metric tons		

19.33 Product Storage Silo 108

<i>Device ID #</i>	109222	<i>Device Name</i>	Product Storage Silo 108
<i>Rated Heat Input</i>		<i>Physical Size</i>	181.40 Tons Produced
<i>Manufacturer</i>	Tank Connection Co	<i>Operator ID</i>	BN108
<i>Model</i>	Custom	<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device Description</i>	Dimensions: 25ft dia x 100 ft high (with footings); storage capacity 200 metric tons		

20 Unassigned Imerys Devices**20.1 Jolter Bin**

<i>Device ID #</i>	108175	<i>Device Name</i>	Jolter Bin
<i>Rated Heat Input</i>		<i>Physical Size</i>	
<i>Manufacturer</i>		<i>Operator ID</i>	
<i>Model</i>		<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device Description</i>			

20.2 Prime Diesel Water Pump Engine: 391449

<i>Device ID #</i>	391449	<i>Device Name</i>	Prime Diesel Water Pump Engine: 391449
<i>Rated Heat Input</i>		<i>Physical Size</i>	171.00 hp
<i>Manufacturer</i>	Isuzu	<i>Operator ID</i>	Well 39 Pump
<i>Model</i>	BR-4HK1K	<i>Serial Number</i>	TBD
<i>Location Note</i>	See map in permit.		
<i>Device Description</i>	Powers a Multiquip 100 kW prime rating generator; model DCA125SSIU4. Engine is Final Tier 4 certified; EPA Family No. GSZX05.2RXB. The engine is permitted at 8,760 hrs/yr.		

20.3 Solvent Usage: Cleaning & Degreasing

<i>Device ID #</i>	008043	<i>Device Name</i>	Solvent Usage: Cleaning & Degreasing
<i>Rated Heat Input</i>		<i>Physical Size</i>	
<i>Manufacturer</i>		<i>Operator ID</i>	
<i>Model</i>		<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device</i>			
<i>Description</i>			

B EXEMPT EQUIPMENT**1 6 inch Kiln**

<i>Device ID #</i>	008050	<i>Device Name</i>	6 inch Kiln
<i>Rated Heat Input</i>	0.200 MMBtu/Hour	<i>Physical Size</i>	
<i>Manufacturer</i>		<i>Operator ID</i>	
<i>Model</i>		<i>Serial Number</i>	
<i>Part 70 Insig?</i>	No	<i>District Rule Exemption:</i> 202.G.1 Combustion Equipment < = 2 MMBtu/hr	
<i>Location Note</i>			
<i>Device</i>			
<i>Description</i>			

2 CAFA Rotary Kiln

<i>Device ID #</i>	005845	<i>Device Name</i>	CAFA Rotary Kiln
<i>Rated Heat Input</i>	0.110 MMBtu/Hour	<i>Physical Size</i>	
<i>Manufacturer</i>		<i>Operator ID</i>	
<i>Model</i>		<i>Serial Number</i>	
<i>Part 70 Insig?</i>	No	<i>District Rule Exemption:</i> 202.G.1 Combustion Equipment < = 2 MMBtu/hr	
<i>Location Note</i>			
<i>Device</i>	Fired on Natural Gas		
<i>Description</i>			

3 Drums of Additives

<i>Device ID #</i>	108397	<i>Device Name</i>	Drums of Additives
<i>Rated Heat Input</i>		<i>Physical Size</i>	55.00 Gallons
<i>Manufacturer Model</i>		<i>Operator ID</i>	CP48
<i>Part 70 Insig?</i>	No	<i>Serial Number</i>	
<i>Location Note</i>		<i>District Rule Exemption:</i> 202.V.2 Storage Of Refined Fuel Oil W/Grav < = 40 Api	
<i>Device Description</i>			

4 Experimental Plant Dryer

<i>Device ID #</i>	008048	<i>Device Name</i>	Experimental Plant Dryer
<i>Rated Heat Input</i>	0.300 MMBtu/Hour	<i>Physical Size</i>	
<i>Manufacturer Model</i>		<i>Operator ID</i>	
<i>Part 70 Insig?</i>	No	<i>Serial Number</i>	
<i>Location Note</i>		<i>District Rule Exemption:</i> 202.G.1 Combustion Equipment < = 2 MMBtu/hr	
<i>Device Description</i>			

5 Silicates Plant Tank

<i>Device ID #</i>	113823	<i>Device Name</i>	Silicates Plant Tank
<i>Rated Heat Input</i>		<i>Physical Size</i>	51000.00 Pounds
<i>Manufacturer Model</i>		<i>Operator ID</i>	
<i>Part 70 Insig?</i>	No	<i>Serial Number</i>	
<i>Location Note</i>		<i>District Rule Exemption:</i> 202.V.9.a. Sulfuric Acid W/Acid Strength Of < = 99% Wt	
<i>Device Description</i>	Permit exempt per Rule 202.V.9.a		

*Description***6 Flash Dryer**

Device ID #	005842	Device Name	Flash Dryer
<i>Rated Heat Input</i>	0.600 MMBtu/Hour	<i>Physical Size</i>	
<i>Manufacturer Model</i>		<i>Operator ID</i>	
<i>Part 70 Insig?</i>	No	<i>Serial Number</i>	
<i>Location Note</i>	<i>District Rule Exemption:</i> 202.G.1 Combustion Equipment < = 2 MMBtu/hr		
<i>Device Description</i>			

7 IC Engine: Air Blower

Device ID #	000074	Device Name	IC Engine: Air Blower
<i>Rated Heat Input</i>		<i>Physical Size</i>	49.00 Brake Horsepower
<i>Manufacturer Model</i>	Wisconsin V465D	<i>Operator ID</i>	#8700
<i>Part 70 Insig?</i>	No	<i>Serial Number</i>	446183 6193564
<i>Location Note</i>	<i>District Rule Exemption:</i> 202.F.2 Registered in the State PERP		
<i>Device Description</i>	PERP Registration #108249; ARB Tracking #20001087.		

8 IC Engine: Air Compressor

Device ID #	103524	Device Name	IC Engine: Air Compressor
<i>Rated Heat Input</i>		<i>Physical Size</i>	30.00 Brake Horsepower
<i>Manufacturer Model</i>		<i>Operator ID</i>	
<i>Part 70 Insig?</i>	No	<i>Serial Number</i>	
<i>Location Note</i>	<i>District Rule Exemption:</i> 202.F.1.f. Spark ignition piston-type ICEs < = 50 bhp /Gas Turbines < = 3 MMBtu/hr		
<i>Device Description</i>	One 30 bhp ICE used to drive an air compressor.		

9 IC Engine: Air Compressor Mounted on Bulk Truck Trailer #17

Device ID #	000068	Device Name	IC Engine: Air Compressor Mounted on Bulk Truck Trailer #17
<i>Rated Heat Input</i>		<i>Physical Size</i>	43.00 Brake Horsepower
<i>Manufacturer Model</i>	White G 1600X191	<i>Operator ID</i>	#8776
<i>Part 70 Insig?</i>	No	<i>Serial Number</i>	39283 L-4-HM
<i>Location Note</i>	<i>District Rule Exemption:</i> 202.F.2 Registered in the State PERP		
<i>Device Description</i>	PERP Registration #108252; ARB Tracking #20001090.		

10 IC Engine: Air Compressor Mounted on Bulk Truck Trailer #21

<i>Device ID #</i>	000071	<i>Device Name</i>	IC Engine: Air Compressor Mounted on Bulk Truck Trailer #21
<i>Rated Heat Input</i>		<i>Physical Size</i>	43.00 Brake Horsepower
<i>Manufacturer</i>	White G	<i>Operator ID</i>	#8786
<i>Model</i>	1600X191	<i>Serial Number</i>	A9289 K-1-HG
<i>Part 70 Insig?</i>	No	<i>District Rule Exemption:</i> 202.F.2 Registered in the State PERP	
<i>Location Note</i>			
<i>Device Description</i>	PERP Registration #108261; ARB Tracking #20001100.		

11 IC Engine: Air Compressor Mounted on Bulk Truck Trailer #39

<i>Device ID #</i>	000075	<i>Device Name</i>	IC Engine: Air Compressor Mounted on Bulk Truck Trailer #39
<i>Rated Heat Input</i>		<i>Physical Size</i>	43.00 Brake Horsepower
<i>Manufacturer</i>	White G	<i>Operator ID</i>	#8771
<i>Model</i>	1600X191	<i>Serial Number</i>	XL4918336
<i>Part 70 Insig?</i>	No	<i>District Rule Exemption:</i> 202.F.2 Registered in the State PERP	
<i>Location Note</i>			
<i>Device Description</i>	PERP Registration #108251; ARB Tracking #20001089.		

12 IC Engine: Air Compressor Mounted on Bulk Truck Trailer #43

<i>Device ID #</i>	000069	<i>Device Name</i>	IC Engine: Air Compressor Mounted on Bulk Truck Trailer #43
<i>Rated Heat Input</i>		<i>Physical Size</i>	43.00 Brake Horsepower
<i>Manufacturer</i>	White G	<i>Operator ID</i>	#8778
<i>Model</i>	1600X191	<i>Serial Number</i>	09293 K-1-HG
<i>Part 70 Insig?</i>	No	<i>District Rule Exemption:</i> 202.F.2 Registered in the State PERP	
<i>Location Note</i>			
<i>Device Description</i>	PERP Registration #108255; ARB Tracking #20001093.		

13 IC Engine: Air Compressor Mounted on Bulk Truck Trailer #52

<i>Device ID #</i>	000070	<i>Device Name</i>	IC Engine: Air Compressor Mounted on Bulk Truck Trailer #52
<i>Rated Heat Input</i>		<i>Physical Size</i>	43.00 Brake Horsepower
<i>Manufacturer</i>	White G	<i>Operator ID</i>	#8780
<i>Model</i>	1600X191	<i>Serial Number</i>	10943 A-26-H
<i>Part 70 Insig?</i>	No	<i>District Rule Exemption:</i> 202.F.2 Registered in the State PERP	
<i>Location Note</i>			
<i>Device Description</i>	PERP Registration #108258; ARB Tracking #20001097.		

14 IC Engine: Air Compressor Mounted on Bulk Truck Trailer #84

<i>Device ID #</i>	000072	<i>Device Name</i>	IC Engine: Air Compressor Mounted on Bulk Truck Trailer #84
<i>Rated Heat Input</i>		<i>Physical Size</i>	43.00 Brake Horsepower
<i>Manufacturer</i>	White G	<i>Operator ID</i>	#8795
<i>Model</i>	1600X191	<i>Serial Number</i>	XL4918334
<i>Part 70 Insig?</i>	No	<i>District Rule Exemption:</i> 202.F.2 Registered in the State PERP	
<i>Location Note</i>			
<i>Device Description</i>	PERP Registration #108250; ARB Tracking #20001088.		

15 IC Engine: Arc Welder - Trailer Mounted

<i>Device ID #</i>	000078	<i>Device Name</i>	IC Engine: Arc Welder - Trailer Mounted
<i>Rated Heat Input</i>		<i>Physical Size</i>	36.00 Brake Horsepower
<i>Manufacturer</i>	Continental	<i>Operator ID</i>	#8700-1
<i>Model</i>	F163	<i>Serial Number</i>	F163A-606M
<i>Part 70 Insig?</i>	No	<i>District Rule Exemption:</i> 202.F.2 Registered in the State PERP	
<i>Location Note</i>			
<i>Device Description</i>	PERP Registration #108253; ARB Tracking #20001091.		

16 IC Engine: Arc Welder - Truck Bed Mounted

<i>Device ID #</i>	000077	<i>Device Name</i>	IC Engine: Arc Welder - Truck Bed Mounted
<i>Rated Heat Input</i>		<i>Physical Size</i>	36.00 Brake Horsepower
<i>Manufacturer</i>	Continental	<i>Operator ID</i>	#8700-2
<i>Model</i>	F163	<i>Serial Number</i>	F1634527-332264
<i>Part 70 Insig?</i>	No	<i>District Rule Exemption:</i> 202.F.2 Registered in the State PERP	
<i>Location Note</i>			
<i>Device Description</i>	PERP Registration #108254; ARB Tracking #20001092.		

17 IC Engine: Portable Air Compressor

<i>Device ID #</i>	008054	<i>Device Name</i>	IC Engine: Portable Air Compressor
<i>Rated Heat Input</i>		<i>Physical Size</i>	16.00 Brake Horsepower
<i>Manufacturer</i>		<i>Operator ID</i>	
<i>Model</i>		<i>Serial Number</i>	
<i>Part 70 Insig?</i>	No	<i>District Rule Exemption:</i> 202.F.1.f. Spark ignition piston-type ICEs < = 50 bhp /Gas Turbines < = 3 MMBtu/hr	
<i>Location Note</i>			
<i>Device Description</i>	drive a portable air compressor.		

18 IC Engine: Portable Concrete Mixer

<i>Device ID #</i>	008056	<i>Device Name</i>	IC Engine: Portable Concrete Mixer
<i>Rated Heat Input</i>		<i>Physical Size</i>	9.00 Brake Horsepower
<i>Manufacturer</i>		<i>Operator ID</i>	
<i>Model</i>		<i>Serial Number</i>	
<i>Part 70 Insig?</i>	No	<i>District Rule Exemption:</i> 202.F.1.f. Spark ignition piston-type ICEs < = 50 bhp /Gas Turbines < = 3 MMBtu/hr	
<i>Location Note</i>			
<i>Device Description</i>	gasoline-fired ICE used to drive a portable concrete mixer.		

19 IC Engine: Portable Striper

<i>Device ID #</i>	103522	<i>Device Name</i>	IC Engine: Portable Striper
<i>Rated Heat Input</i>		<i>Physical Size</i>	3.50 Brake Horsepower
<i>Manufacturer</i>		<i>Operator ID</i>	
<i>Model</i>		<i>Serial Number</i>	
<i>Part 70 Insig?</i>	No	<i>District Rule Exemption:</i> 202.F.1.f. Spark ignition piston-type ICEs < = 50 bhp /Gas Turbines < = 3 MMBtu/hr	
<i>Location Note</i>			
<i>Device Description</i>			

20 IC Engine: Quarries and Mines Lake Pump

<i>Device ID #</i>	008919	<i>Device Name</i>	IC Engine: Quarries and Mines Lake Pump
<i>Rated Heat Input</i>		<i>Physical Size</i>	199.40 Brake Horsepower
<i>Manufacturer</i>	Caterpillar	<i>Operator ID</i>	#8198
<i>Model</i>	C6.6	<i>Serial Number</i>	66602851
<i>Part 70 Insig?</i>	No	<i>District Rule Exemption:</i> 202.F.2 Registered in the State PERP	
<i>Location Note</i>	Quarries		
<i>Device Description</i>	PERP Registration #108260; ARB Tracking #20001099.		

21 IC Engine: Vacuum System

<i>Device ID #</i>	008055	<i>Device Name</i>	IC Engine: Vacuum System
<i>Rated Heat Input</i>		<i>Physical Size</i>	18.00 Brake Horsepower
<i>Manufacturer</i>		<i>Operator ID</i>	
<i>Model</i>		<i>Serial Number</i>	
<i>Part 70 Insig?</i>	No	<i>District Rule Exemption:</i> 202.F.1.f. Spark ignition piston-type ICEs < = 50 bhp /Gas Turbines < = 3 MMBtu/hr	
<i>Location Note</i>			
<i>Device Description</i>	Propane-fired ICE used to drive a vacuum system.		

22 ICE 1017 Emergency Electrical Power Generation

<i>Device ID #</i>	008069	<i>Device Name</i>	ICE 1017 Emergency Electrical Power Generation
<i>Rated Heat Input</i>		<i>Physical Size</i>	200.00 Brake Horsepower
<i>Manufacturer Model</i>		<i>Operator ID</i>	ICE 1017
<i>Part 70 Insig?</i>	No	<i>Serial Number</i>	
<i>Location Note</i>		<i>District Rule Exemption:</i> 202.F.1.d. Spark ignition piston-type ICEs for emergency electrical power generation	
<i>Device Description</i>	Natural gas fired, Powder Mills emergency power generator, 200 hr/yr.		

23 Main Kiln

<i>Device ID #</i>	008049	<i>Device Name</i>	Main Kiln
<i>Rated Heat Input</i>	1.500 MMBtu/Hour	<i>Physical Size</i>	
<i>Manufacturer Model</i>		<i>Operator ID</i>	
<i>Part 70 Insig?</i>	No	<i>Serial Number</i>	
<i>Location Note</i>		<i>District Rule Exemption:</i> 202.G.1 Combustion Equipment < = 2 MMBtu/hr	
<i>Device Description</i>			

24 Reverse Osmosis Unit

<i>Device ID #</i>	109786	<i>Device Name</i>	Reverse Osmosis Unit
<i>Rated Heat Input</i>		<i>Physical Size</i>	
<i>Manufacturer Model</i>		<i>Operator ID Serial Number</i>	
<i>Part 70 Insig?</i>	No	<i>District Rule Exemption:</i> 201.A No Potential To Emit Air Contaminants	
<i>Location Note</i>			
<i>Device Description</i>			

25 Rotary Dryer

<i>Device ID #</i>	005841	<i>Device Name</i>	Rotary Dryer
<i>Rated Heat Input</i>	0.600 MMBtu/Hour	<i>Physical Size</i>	
<i>Manufacturer Model</i>		<i>Operator ID Serial Number</i>	
<i>Part 70 Insig?</i>	No	<i>District Rule Exemption:</i> 202.G.1 Combustion Equipment < = 2 MMBtu/hr	
<i>Location Note</i>			
<i>Device Description</i>			

26 Shrink Wrap Gun

<i>Device ID #</i>	008053	<i>Device Name</i>	Shrink Wrap Gun
<i>Rated Heat Input</i>	0.200 MMBtu/Hour	<i>Physical Size</i>	
<i>Manufacturer Model</i>		<i>Operator ID Serial Number</i>	
<i>Part 70 Insig?</i>	No	<i>District Rule Exemption:</i> 202.G.1 Combustion Equipment < = 2 MMBtu/hr	
<i>Location Note</i>			
<i>Device Description</i>			

27 Shrink Wrap Unit 1

<i>Device ID #</i>	008045	<i>Device Name</i>	Shrink Wrap Unit 1
<i>Rated Heat Input</i>	0.800 MMBtu/Hour	<i>Physical Size</i>	
<i>Manufacturer Model</i>		<i>Operator ID Serial Number</i>	
<i>Part 70 Insig?</i>	No	<i>District Rule Exemption:</i> 202.G.1 Combustion Equipment < = 2 MMBtu/hr	
<i>Location Note</i>			
<i>Device Description</i>			

28 Shrink Wrap Unit 2

<i>Device ID #</i>	008047	<i>Device Name</i>	Shrink Wrap Unit 2
<i>Rated Heat Input</i>	0.800 MMBtu/Hour	<i>Physical Size</i>	
<i>Manufacturer Model</i>		<i>Operator ID Serial Number</i>	
<i>Part 70 Insig?</i>	No	<i>District Rule Exemption:</i> 202.G.1 Combustion Equipment < = 2 MMBtu/hr	
<i>Location Note</i>			
<i>Device Description</i>			

29 Steam Cleaner

<i>Device ID #</i>	103525	<i>Device Name</i>	Steam Cleaner
<i>Rated Heat Input</i>	0.350 MMBtu/Hour	<i>Physical Size</i>	
<i>Manufacturer Model</i>		<i>Operator ID Serial Number</i>	
<i>Part 70 Insig?</i>	No	<i>District Rule Exemption:</i> 202.G.1 Combustion Equipment < = 2 MMBtu/hr	
<i>Location Note</i>			
<i>Device Description</i>	PUC NG fired		

30 Sulfuric Acid Tank

Device ID #	108396	Device Name	Sulfuric Acid Tank
<i>Rated Heat Input</i>		<i>Physical Size</i>	5000.00 Gallons
<i>Manufacturer Model</i>		<i>Operator ID</i>	CP47
<i>Part 70 Insig?</i>	No	<i>Serial Number</i>	
<i>Location Note</i>		<i>District Rule Exemption:</i> 202.V.9.a. Sulfuric Acid W/Acid Strength Of < = 99% Wt	
<i>Device Description</i>			

31 Tailings Tank

Device ID #	108398	Device Name	Tailings Tank
<i>Rated Heat Input</i>		<i>Physical Size</i>	3500.00 Gallons
<i>Manufacturer Model</i>		<i>Operator ID</i>	CP49
<i>Part 70 Insig?</i>	No	<i>Serial Number</i>	
<i>Location Note</i>		<i>District Rule Exemption:</i> 202.V.2 Storage Of Refined Fuel Oil W/Grav < = 40 Api	
<i>Device Description</i>	Wastewater		

32 Transfer Point #3 Water Pump

Device ID #	109784	Device Name	Transfer Point #3 Water Pump
<i>Rated Heat Input</i>		<i>Physical Size</i>	
<i>Manufacturer Model</i>		<i>Operator ID</i>	
<i>Part 70 Insig?</i>	No	<i>Serial Number</i>	
<i>Location Note</i>		<i>District Rule Exemption:</i> 201.A No Potential To Emit Air Contaminants	
<i>Device Description</i>			

33 Water Storage Tank

<i>Device ID #</i>	109787	<i>Device Name</i>	Water Storage Tank
<i>Rated Heat Input</i>		<i>Physical Size</i>	
<i>Manufacturer Model</i>		<i>Operator ID Serial Number</i>	
<i>Part 70 Insig?</i>	No	<i>District Rule Exemption:</i> 201.A No Potential To Emit Air Contaminants	
<i>Location Note</i>			
<i>Device Description</i>	1500 gallon capacity		

34 Water Supply Pump

<i>Device ID #</i>	110564	<i>Device Name</i>	Water Supply Pump
<i>Rated Heat Input</i>		<i>Physical Size</i>	15.00 Horsepower (Electric Motor)
<i>Manufacturer Model</i>	ACT-P470	<i>Operator ID Serial Number</i>	
<i>Part 70 Insig?</i>	No	<i>District Rule Exemption:</i> 201.A No Potential To Emit Air Contaminants	
<i>Location Note</i>			
<i>Device Description</i>	Supplies water for the wet suppression control system; pump capacity = 18.5 gpm; powered by a 15 hp motor		

35 Water System

<i>Device ID #</i>	109804	<i>Device Name</i>	Water System
<i>Rated Heat Input</i>		<i>Physical Size</i>	
<i>Manufacturer Model</i>		<i>Operator ID Serial Number</i>	
<i>Part 70 Insig?</i>	No	<i>District Rule Exemption:</i> 201.A No Potential To Emit Air Contaminants	
<i>Location Note</i>			
<i>Device Description</i>	Deionized water storage tank (Celite ID TK785) and water pump (Celite ID WP785)		

36 Water System

<i>Device ID #</i>	110773	<i>Device Name</i>	Water System
<i>Rated Heat Input</i>		<i>Physical Size</i>	
<i>Manufacturer Model</i>		<i>Operator ID</i>	TK002
<i>Part 70 Insig?</i>	No	<i>Serial Number</i>	
<i>Location Note</i>		<i>District Rule Exemption:</i> 201.A No Potential To Emit Air Contaminants	
<i>Device Description</i>			

37 Water Transfer Pump

<i>Device ID #</i>	109782	<i>Device Name</i>	Water Transfer Pump
<i>Rated Heat Input</i>		<i>Physical Size</i>	
<i>Manufacturer Model</i>		<i>Operator ID</i>	
<i>Part 70 Insig?</i>	No	<i>Serial Number</i>	
<i>Location Note</i>		<i>District Rule Exemption:</i> 201.A No Potential To Emit Air Contaminants	
<i>Device Description</i>	20 gpm		

38 Water Transfer Pump

<i>Device ID #</i>	109783	<i>Device Name</i>	Water Transfer Pump
<i>Rated Heat Input</i>		<i>Physical Size</i>	
<i>Manufacturer Model</i>		<i>Operator ID</i>	
<i>Part 70 Insig?</i>	No	<i>Serial Number</i>	
<i>Location Note</i>		<i>District Rule Exemption:</i> 201.A No Potential To Emit Air Contaminants	
<i>Device Description</i>	4 gpm		

*Description***E DE-PERMITTED EQUIPMENT****1 6 Natural Baghouse**

<i>Device ID #</i>	000122	<i>Device Name</i>	6 Natural Baghouse
<i>Rated Heat Input</i>		<i>Physical Size</i>	29500.00 scf/Minute
<i>Manufacturer</i>	JM Open	<i>Operator ID</i>	6NBH
<i>Model</i>	Orlon	<i>Serial Number</i>	
<i>Depermitted</i>		<i>Facility Transfer</i>	
<i>Device Description</i>	Production Line 6 natural product collection; Positive pressure; Bag Diam. (in): 9.0; Bag Length (ft): 53.0; Total Cloth Area: 50201; Est. A/C Ratio: 1.0; open		

2 6 Natural Ventilation Baghouse

<i>Device ID #</i>	000123	<i>Device Name</i>	6 Natural Ventilation Baghouse
<i>Rated Heat Input</i>		<i>Physical Size</i>	8812.00 scf/Minute
<i>Manufacturer</i>	JM Open	<i>Operator ID</i>	6NVBH
<i>Model</i>	Cotton	<i>Serial Number</i>	
<i>Depermitted</i>		<i>Facility Transfer</i>	
<i>Device Description</i>	Production Line 6 Ventilation line 6 wet end pack equip., bag flattener, cyclone 614; Positive pressure; Bag Diam. (in): 9.0; Bag Length (ft): 55.0 Total Cloth Area: 8812; Est. A/C Ratio: 1.0; open		

3 601 Dry End Baghouse

<i>Device ID #</i>	103364	<i>Device Name</i>	601 Dry End Baghouse
<i>Rated Heat Input</i>		<i>Physical Size</i>	37322.00 scf/Minute
<i>Manufacturer</i>	JM Open	<i>Operator ID</i>	6DBH
<i>Model</i>	Orlon	<i>Serial Number</i>	
<i>Depermitted</i>		<i>Facility Transfer</i>	
<i>Device Description</i>	Production Line 6 baghouse product collection; Positive pressure; Bag Diam. (in): 9.0; Bag Length (ft): 48.0; Total Cloth Area: 37322; Est. A/C Ratio: 1.0; open		

4 602 Dry End Baghouse

<i>Device ID #</i>	103365	<i>Device Name</i>	602 Dry End Baghouse
<i>Rated Heat Input</i>		<i>Physical Size</i>	60563.00 scf/Minute
<i>Manufacturer</i>	JM Open	<i>Operator ID</i>	6DBH
<i>Model</i>	Orlon	<i>Serial Number</i>	
<i>Depermitted</i>		<i>Facility Transfer</i>	
<i>Device Description</i>	Production Line 6 baghouse product collection; Positive pressure; Bag Diam. (in): 9.0; Bag Length (ft): 51.0; Total Cloth Area: 60564; Est. A/C Ratio: 1.0; open		

5 Baghouse BH121A 1

<i>Device ID #</i>	110528	<i>Device Name</i>	Baghouse BH121A 1
<i>Rated Heat Input</i>		<i>Physical Size</i>	
<i>Manufacturer</i>	Donaldson	<i>Operator ID</i>	BH121A1
<i>Model</i>	DLMV 30/15	<i>Serial Number</i>	
<i>Depermitted</i>		<i>Facility Transfer</i>	
<i>Device Description</i>	BH121A1 contains 20 bags (each approx 20 in D X 5 ft L); del p = 0.1 - 6 in WC; positive pressure; air flow 1031 scfm, a/c ratio = 3.2; op temp = 60F.		

6 Baghouse BH121A2

<i>Device ID #</i>	110529	<i>Device Name</i>	Baghouse BH121A2
<i>Rated Heat Input</i>		<i>Physical Size</i>	
<i>Manufacturer</i>	Donaldson	<i>Operator ID</i>	BH121A2
<i>Model</i>	DLMV 30/15	<i>Serial Number</i>	
<i>Depermitted</i>		<i>Facility Transfer</i>	
<i>Device Description</i>	BH121A2 contains 20 bags (each approx 20 in D X 5 ft L); del p = 0.1 - 6 in WC; positive pressure; air flow 1031 scfm, a/c ratio = 3.2; op temp = 60F.		

7 Baghouse BH121B1

<i>Device ID #</i>	110530	<i>Device Name</i>	Baghouse BH121B1
<i>Rated Heat Input</i>		<i>Physical Size</i>	
<i>Manufacturer</i>	Donaldson	<i>Operator ID</i>	BH121B1
<i>Model</i>	DLMV 30/15	<i>Serial Number</i>	
<i>Depermitted</i>		<i>Facility Transfer</i>	
<i>Device</i>	BH121B1 contains 20 bags (each approx 20 in D X 5 ft L); del p = 0.1 - 6		
<i>Description</i>	in WC; positive pressure; air flow 1031 scfm, a/c ratio = 3.2; op temp = 60F.		

8 Baghouse BH121B2

<i>Device ID #</i>	110531	<i>Device Name</i>	Baghouse BH121B2
<i>Rated Heat Input</i>		<i>Physical Size</i>	
<i>Manufacturer</i>	Donaldson	<i>Operator ID</i>	BH121B2
<i>Model</i>	DLMV 30/15	<i>Serial Number</i>	
<i>Depermitted</i>		<i>Facility Transfer</i>	
<i>Device</i>	BH121B2 contains 20 bags (each approx 20 in D X 5 ft L); del p = 0.1 - 6		
<i>Description</i>	in WC; positive pressure; air flow 1031 scfm, a/c ratio = 3.2; op temp = 60F.		

9 Cleanable High Efficiency Air Filter (6CHEAF)

<i>Device ID #</i>	000121	<i>Device Name</i>	Cleanable High Efficiency Air Filter (6CHEAF)
<i>Rated Heat Input</i>		<i>Physical Size</i>	63000.00 dscfm
<i>Manufacturer</i>		<i>Operator ID</i>	6CHEAF
<i>Model</i>		<i>Serial Number</i>	
<i>Depermitted</i>		<i>Facility Transfer</i>	
<i>Device</i>	Wet End Control System		
<i>Description</i>			

10 ICE: Emergency Electrical Power Generator

<i>Device ID #</i>	009079	<i>Device Name</i>	ICE: Emergency Electrical Power Generator
<i>Rated Heat Input</i>		<i>Physical Size</i>	
<i>Manufacturer</i>		<i>Operator ID</i>	#8790
<i>Model</i>		<i>Serial Number</i>	WS4486N1200651
<i>Depermitted</i>		<i>Facility Transfer</i>	
<i>Device</i>	PERP Registration # unknown; ARB Tracking #20013333 - Not a valid tracking number. This engine SN is the same as device ID 387654; Admin Emergency Gen and was entered in error. This device ID 8790 was removed form permit in 5840-R6.		
<i>Description</i>			

11 Line 6 Furnace

<i>Device ID #</i>	000047	<i>Device Name</i>	Line 6 Furnace
<i>Rated Heat Input</i>	45.000 MMBtu/Hour	<i>Physical Size</i>	394200.00 MMBtu/yr
<i>Manufacturer</i>		<i>Operator ID</i>	
<i>Model</i>		<i>Serial Number</i>	
<i>Depermitted</i>		<i>Facility Transfer</i>	
<i>Device</i>	Fired on PUC gas/#2, #4, or #6 Fuel Oil/Propane; Control Device: 6CHEAF		
<i>Description</i>			

12 Line 6 Kiln

<i>Device ID #</i>	103345	<i>Device Name</i>	Line 6 Kiln
<i>Rated Heat Input</i>	50.000 MMBtu/Hour	<i>Physical Size</i>	438000.00 MMBtu/yr
<i>Manufacturer</i>		<i>Operator ID</i>	
<i>Model</i>		<i>Serial Number</i>	
<i>Depermitted</i>		<i>Facility Transfer</i>	
<i>Device</i>	Fired on PUC gas/#2, #4, or #6 Fuel Oil/Propane; Control Device: 6CHEAF		
<i>Description</i>			

Eq List 10.4.1 Celpure Baghouse Specifications

Equipment Description				Bag Specifications									
Device Name	Imerys ID	District DeviceNo	General Process Description	Manufacturer	Pos./Neg	No. of Socks	Diam.	Length	Total Cloth Area	Air Flow	Air/Cloth	Fabric	Cleaning
							(in)	(ft)	(ft ²)	(cfm)	Ratio	Material	Method
Crude Bin Ventilation Baghouse	8073			DCE, Inc.		20			409	2,811	3.96	PTFE-Coated Polyethylene	
Soda Ash Bin Baghouse	8074			DCE, Inc.		6			123	600	4.88	PTFE-Coated Polyethylene	
Kiln Feed (Calcliner Surge) Bin Bahouse	8075			Hosokawa Mikropul	N		4.5		547	2,800	3.47	PTFE-Surfaced Polyester or Polyox/Basalt (per APCD 1-26-11 approval)	Pulse Jet
Flash Cooler Baghouse	8076			Hosokawa Mikropul	N	69	4.5	8	686	2,793	3.5	PTFE-Surfaced Nomex	Pulse Jet
Second Stage Dryer Baghouse	8077									8,134		PTFE-Surfaced Nomex; or P-84; fiberglass woven media with PTFE membrane (per APCD 5-5-10 approval) or Polyox/Basalt (per APCD 1-26-11 approval)	
Packing Station Baghouse	8078			Hosokawa Mikropul	N	31	4.5	8	308	1,441	3.89	Mikro-tex Surfaced Polyester or Polyox/Basalt (per APCD 1-26-11 approval)	Pulse Jet
Refeed Station Baghouse	8079			DCE, Inc.		12			336	2,397	5.4	PTFE-Coated Polyethylene	
1st Stage (Flotation) Dryer Baghouse	8082			Hosokawa Mikropul		133	4.5	8	1,323	6,150	4.54	PTFE-Surfaced Nomex; or P-84; fiberglass woven media with PTFE membrane (per APCD 5-5-10 approval)	Pulse Jet
Kiln (Calcliner) Exhaust Baghouse	8083			Hosokawa Mikropul	N	85	4.5	8	846	6,700	4.26	PTFE-coated PPS Ryton; or P-84; fiberglass woven media with PTFE membrane (per APCD 5-5-10 approval)	Pulse Jet

Eq List 10.4.2 Depermitted Equipment – Celpure Plant

No Celpure equipment was depermitted since the last reevaluation (Part 70 Permit to Operate 5840-R4)

-- This Page Left Blank Intentionally --

10.4. Track List of Device Names and Numbers used for Celpure Equipment

Table 10.3 List of Celpure Equipment with Existing and Revised Equipment Names

District Device No.	Celpure Common Name	Eqpt #	Original Permitted Name	PFD Tag	Manufacturer	Model	Rule 202 Exempt?
106226	Loading station	CP1	Loading station		Spokane Machinery	custom	
106227	Hammemill	CP2	Hammemill		Jeffry	45AB	
106228	Crude Bin	CP3	Crude bin		Steel Structures	custom	
106229	Transfer Belt Conveyor	CP4	Transfer belt conveyor		Power Industries	NA	
8073	Metering Belt Conveyor	CP5	Metering belt conveyor		Bulk Material Handling	custom	
106230	Crude Bin Ventilation Baghouse	CP6	Crude bin dust collector	DC1	DCE Sintamatic	CS138FP	
106231	Detritor	CP7	Pug mill		Scott Equipment Co	PM246	
106232	Attrition Scrubber	CP8	Attrition Scrubber		Quinn Process Eqpt Co	24"x25"x4'	
106233	Wet Screen	CP9	Wet Screen		Demick Corp	2124-60W-2M	
106234	Hydroclone Station	CP10	Hydroclone Station		Kebs Engineers	28 Model PCI-1421	
106235	Flotation Conditioning Tanks	CP11	Flotation Conditioning Tanks		Paramount Fabricators	NA	
106236	East and West Flotation Cells	CP12	Flotation Cells		Quinn Process Equipment Co	18SPL 6 cell	
106237	Dewatering Filter	CP13	Dewatering Filter		Filtration Systems Technology	VP-50-1 Ver-tipress filter	
8920	1st Stage Dryer	CP14	Flotation Dryer	CS1	The National Drying Machinery Company	Apron dryer	
8920	1st Stage Dryer burner	CP14	Flotation dryer burner	CS1	Cyclomax	3.2 MMBtu/hr	
8082	1st Stage Dryer Baghouse	CP15	Flotation dryer dust collector	DC4	Mikropul	133-8-100 "C"	
106238	Dispersing screen	CP16	Dispersing screen		Kemutec Group	K650	
106239	Kiln Feed Cyclone	CP17	Cyclone		Peterson	custom	
8075	Kiln Feed Bin Bahouse	CP18	Calciner Surge Bin Bahouse	DC5	Mikropul	55-8-55 "C"	
106240	Kiln Feed Bin	CP19	Calciner surge bin		Steel Structures	NA	
8921	Kiln	CP20	Calciner	CS2	Vulcan	6' ID x 40'	
8921	Kiln burner	CP20	Calciner burner	CS2	North American, 4425-7-A	2.46 MMBtu/hr	
8083	Kiln Exhaust Baghouse	CP21	Calciner Exhaust Baghouse	DC6	Mikropul	85-8-35 "C"	
106241	350 Scrubber	CP22	1 st Stage Drying Scrubber	SR1	Met Pro Corporation		
106242	Refeed Station	CP23	Bag breaking station		Celite	custom	
106243	Flash Cooling Cyclone	CP24	Flash cooling cyclone		Peterson	custom	
8076	Flash Cooler Baghouse	CP25	Flash cooling dust collector	DC7	Mikropul	69-8-35 "C"	
106244	Product Mix tank	CP26	Mix tank		Paramount Fabricators	NA	
106245	Leach Tank	CP27	Leach vessel		Ametek	NA	
106246	Leach Slurry Storage Tank	CP28	Leach slurry storage		Paramount Fabricators	NA	
106247	Deacidifying Filter	CP29	Deacidifying filter		Filtration Systems Technology	VP-50-1 Ver-tipress filter	
106248	Rinsing Filter	CP30	Rinsing filter		Filtration Systems Technology	VP-50-4 Ver-ti-press filter	
8922	2nd Stage Dryer	CP31	2nd Stage Dryer	CS3	The National Drying Machine Company	6' x 30'	
8922	2nd Stage Dryer burner	CP31	Product dryer burner	CS3	Cyclomax	3.2 MMBtu/hr	
8077	Second Stage Dryer Baghouse	CP32	Dryer exhaust dust collector	DC8	Mikropul	133-8-100 C	
8077	Blower motor	CP32	Blower motor	DC8	Baldor	EM411-5T	
106249	Packaging Station Cyclone	CP33	Packaging Station Cyclone		Peterson	custom	
106250	Product Dispersing Screen	CP34	Product dispersing screen		Kemutec Group	K650	
106251	Packaging Bin	CP35	Packaging bin		Steel Structures	custom	
106252	Manual Packing Station	CP36	Bag filler		PAC 21	NA	
8078	Packing Station Baghouse	CP37	Packing Station Baghouse	DC9	Mikropul	31-8-85 "C"	
8079	Refeed Station Baghouse	CP38	Refeed Station Baghouse	DC11	DCE Sintamatic	CSI 32F10	
106253	Soda Ash Bin	CP39	Soda Ash Bin		Steel Structures Inc.	Custom	
106254	Soda Ash Mix Tank	CP40	Soda ash mix tank		LW LeFort	Custom	
106255	Soda Ash Mill	CP41	Soda Ash Mill		Micron Powder Systems	Model 10 w/ gravity feed	
8074	Soda Ash Bin Baghouse	CP42	Soda ash bin dust collector	DC2	DCE Sintamatic	CSI 12K5	
108394	Vacuum system	CP43	Vacuum system		Hoffman (blower)	4207A	
8923	Package Boiler	CP44	Package Boiler ^a	CS4	Parker Industries	3.78 MMBtu/hr	
8084	Vacuum Station Baghouse	CP45	Vacuum baghouse	DC12	Mikropul	12-8-220 "C"	
103521	Emergency Power Generator	CP46	Emergency Generator ICE		Caterpillar CDO 50	50 hp	No
108396	Sulfuric acid tank	CP47	Sulfuric acid tank			5000 gal	Yes
108397	Drums of additives	CP48	Drums of additives			55 gal	Yes
108398	Tailings Tank (wastewater)	CP49	Tailings Tank (wastewater)			3500 gal	Yes
106256	DE bin	CP50	DE bin		Steel Structures, Inc.	Custom	
8080	DE Bin Baghouse	CP51	DE bin baghouse	DC13	DCE Sintamatic	CSI 12K5	
106257	Alternate Materials Bin	CP52	Alternate Materials Bin		Steel Structures, Inc.	Custom	
8081	Alternate Materials Bin Baghouse	CP53	Alternate matls bin BH	DC14	DCE Sintamatic	CSI 12K5	
106258	Calcined Product Bag Filler	CP54	Calcined Product Bag Filler		PAC21	Custom	
106249	Refeed Pump Packer	CP55	Refeed stn powder pump		Bulk Materials Handling	Custom	
106242	370 Scrubber	CP56	Calcining Leaching scrubber	SR2	Met Pro Corporation		

Notes:

Some of the Original Permitted Names have been modified in the "Celpure Common Name" column based on the equipment name familiar to the operators at Celpure. There is no change to the actual equipment. In addition, Celpure does not use the PFD Tags or the Eqpt # previously referenced in the permits, so these numbers have been removed from the current permit. The District Device No. will be the permit reference number.

10.5. District Response to Comments

The notice for public comment on the draft permit was published on xxxx, xx, xxxx. The public comment period extended from xxx,xx,xxxx through xxxx,xx,xxxx.

On xxxx,xx,xxxx the District received comments from Mr. Vindi Ndulute, Imerys Filtration Minerals, Inc.

The District's responses to each comment are given in the attached tables.

Part I, Main Plant				
<i>Item</i>	<i>Page</i>	<i>Section</i>	<i>Imerys Comment</i>	<i>District Response</i>