air pollution control district
SANTA BARBARA COUNTY

Draft PERMIT TO OPERATE No. 5840 - R7

and

Draft PART 70 RENEWAL OPERATING PERMIT No. 5840

and

Part 70 SIGNIFICANT MODIFICATION PTO 5840-12

IMERYS FILTRATION MINERALS, INC.
LOMPOC PLANT

2500 Miguelito Road, Lompoc, California

<u>OPERATOR</u>

Imerys Filtration Minerals, Inc. ("Imerys")

<u>OWNERSHIP</u>

Imerys Filtration Minerals, Inc.("Imerys")

Santa Barbara County
Air Pollution Control District

March, 2024

PART I – MAIN PLANT

Table of Contents

SECTION **PAGE**

LIST OF FIGURES and TABLES

TABLE/
FIGURE **PAGE**

ABBREVIATIONS/ACRONYMS

AP-42	USEPA's *Compilation of Emission Factors*
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_2S	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

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 PM_{10} ambient air quality standard.

This permit address three permitting actions and objectives:

(1) Renewal of the federal Part 70 permit as mandated by Title V of the CAAA of 1990 to ensure compliance with compliance with federally enforceable requirements,

(2) the reevaluation of the local operating permit to provide a clear and comprehensive set of publicly available federal and local compliance requirements, that incorporates permit changes since the previous permit reevaluation, and

(3) A Part 70 significant modification that allows Imerys to replace quarterly Method 9 visible emission tests on fugitive emission sources at its main plant with quarterly one-minute visible inspections and then a Method 9 test if visible emissions are seen. The revised monitoring method applies to fugitive emissions from the main plant milling circuit equipment and product storage silos, powder pumps and bins, and System 7 processes.

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 seventh renewal of the Part 70 permit and may include additional applicable requirements.

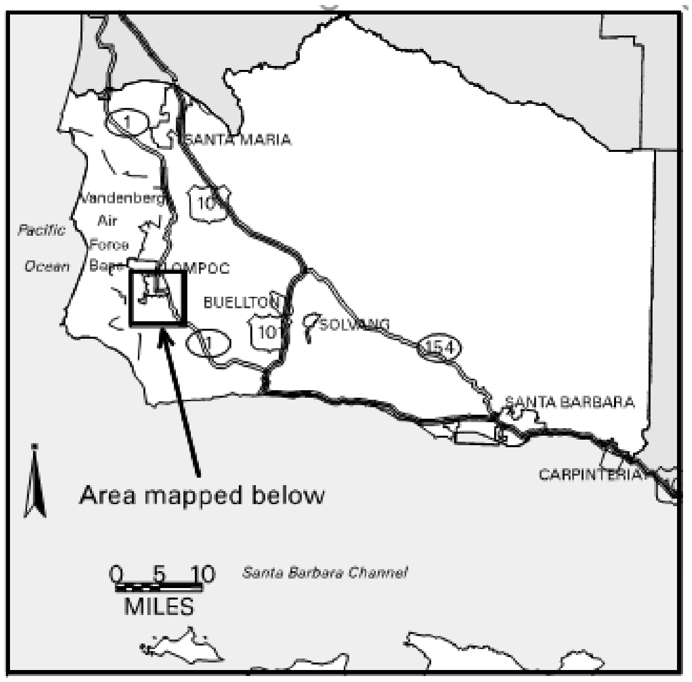
The District triennial permit reevaluation has been combined with this Part 70 Permit renewal, and this permit incorporates previous permits.

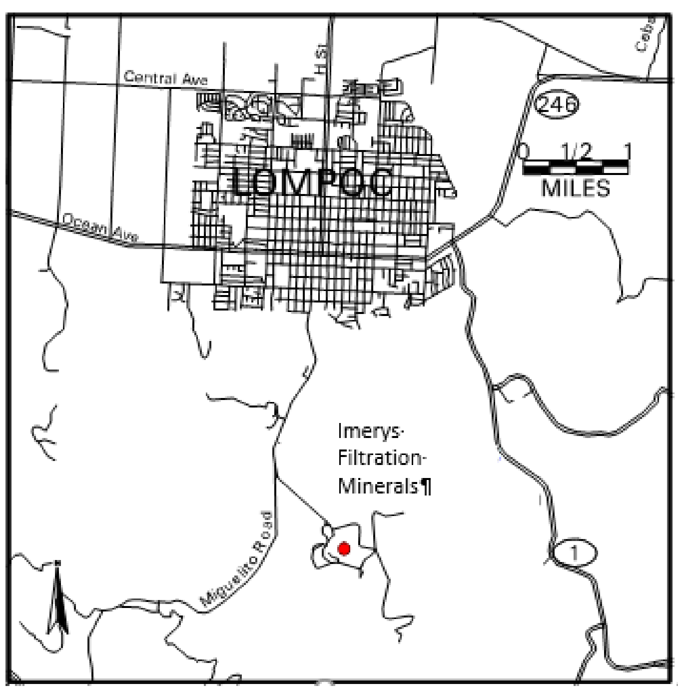
The Lompoc Plant facility constitutes the *Lompoc-Imerys* stationary source (SSID = 1735), which is a major source for VOC[1], NO_x, SO_x, CO, PM, PM_{10}, GHGs and HAPs. Conditions listed in this permit are based on federal, state or local rules and requirements. Sections 9.A, 9.B and 9.C (Parts I and 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.

[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.

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.

Figure 1.1 Location Map for the Lompoc Plant





Part 70 Significant Modification. Imerys Filtration Minerals, Inc. applied to correct the monitoring requirements in Permit to Operate 5840-R6 Condition 9.C.7, Material Handling Equipment. The errors originated from rolling the following permits into Part-70 PTO 5840-R5 and subsequent reevaluations:

- PTO 12091 (Milling Circuit Equipment)
- PTO 12208 (Product storage silos, powder pumps and bins)
- PTO 12105 (Seven System Processing Equipment)

The existing requirements under Condition 9.C.7 required Imerys to conduct Method 9 quarterly inspections on the relevant equipment when operating. This modification revises the monitoring condition to require a one-minute visual inspection, with record-keeping, and a Method 9 inspection if visible emissions are detected. This change reflects the inspection requirements as originally permitted for this equipment.

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 in an unincorporated area of Santa Barbara County. For District regulatory purposes, the facility location is in the Northern Zone of Santa Barbara County[2]. 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 to the plant, eliminating the need to use public roads to transport most of the ore to the plant. Numerous 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 several 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 seven updates incorporating over 100 Authority to Construct permit changes. Moreover, several regulatory changes at both the federal and

[2] District Rule 102, Definition: "Northern Zone"

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-R6 in June 2019, the following NSR permitting actions have been issued for the Imerys Lompoc Plant:

Permit	Date Issued	Permit Action
ATC 15683	7/21/2021	Replace a soda ash weigh feeder with a larger unit
PTO 15683	12/31/2021	Replace a soda ash weigh feeder with a larger unit
PTO Admin 15499	2/5/2020	Change in Responsible Official
PTO Mod 5840-12	At issuance of this permit	Replace quarterly Method 9 inspections on fugitive emission sources with quarterly one-minute visible inspections and then a Method 9 test if visible emissions are seen
PTO Mod 5840-13	10/3/2023	Restricts Silicates Conveyer and Flash Dryer quarterly and annual BTUs per AB 617
PTO 15804	At issuance of this permit	Implementation of AB 617 BARCT PM requirements

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 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 several 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 SOx control

1.5. Offsets/Emission Reduction Credit Overview

The Imerys stationary source potential to emit exceeds the Rule 802 emission offset threshold for ROC, NOx, SOx, PM and PM_{10}. 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 397978)
- 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, and the use of #4 fuel oil, these scenarios have been built into the permit conditions and emission tables. The use of #4 fuel was removed because the only system allowed to use #4 fuel oil was the System 6, and that furnace and kiln were depermitted.

Imerys also 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. Justin Phillips
Site Manager Lompoc DE Celpure & Specialties and Lompoc DE Powder Mill
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 <u>Main Production</u>: 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. 110719). 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 yd^3) 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 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.

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.

California Assembly Bill 617, codified in Sections 39607.1, 40920.8, 42411, 42705.5, and 44391.2 of the California Health and Safety Code, requires facilities subject to California Greenhouse Gas Cap and Trade, and located in specified low-income areas, comply with an expedited Best Available Retrofit Control Technology implementation schedule. Imerys Filtration Minerals, Inc. is one such facility and was required to meet BARCT for particulate matter control. The additional emission control requirements were implemented through an Authority to Construct permit (ATC 15804). Because that permit action was implemented through District New Source Review Regulation VIII, which is federally enforceable, the additional emission control requirements required by AB 617 are federally enforceable.

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 dry material control devices that commenced constructional, reconstruction, or modification except for control devices for a single storage bin, which are exempt from gr/dscf limits.	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 dry material control devices that commenced constructional, reconstruction, or modification during the dates as indicated.	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 constructional, 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 constructional, 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' 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 Device ID 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.

3.3.4 Assembly Bill (AB) 617. This bill was enacted in July 2017, and has a multitude of requirements to address the disproportionate impacts of air pollution in environmental justice communities. One of the key components of AB 617 is to reduce air pollutant emissions from large facilities that participate in the California Greenhouse Gas (GHG) Cap-and-Trade system. AB 617 requires such facilities meet Best Available Retrofit Control Technology (BARCT).

Imerys Filtration Minerals, Inc. is one such facility. Because it is the only facility in the county that is subject to BARCT for particulate matter under AB 617, the additional BARCT PM controls were implemented via a Authority to Construct permit rather than by a prohibitory rule. The additional emission controls include elimination of open sock baghouses, installing bag leak detection systems on larger baghouses, additional more frequent visible emission inspections. Please see Section 3.2.1 for an explanation why the application of AB 617 to Imerys is federally enforceable.

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 by 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 by 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 SO_2 (by volume) and 0.3 gr/scf (at 12% CO_2) 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) can operate 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 by 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 H_2S 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 H_2S) {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 323.1 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, NOx, ROC, CO and requires an engine inspection and maintenance plan including quarterly NOx and CO emission testing using a portable analyzer. Permit Conditions 9.C.1 and 9.D.2 satisfies these requirements.

Rule 342 - Boilers, Steam Generators, and Process Heaters (5 MMBtu/hr and greater): 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 the AB617 provisions of Rule 342 requires the boiler, which was permitted at a NOX emission limit of 30 ppmv, to meet a NOX limit of 7 ppmv by December 31, 2023. In addition, Boiler #2 may not exceed carbon monoxide emissions of 400 ppmv. To comply with this requirement, Imerys submitted ATC application 16046 to replace the existing burner with a compliant unit which was installed before the deadline. Compliance is ensured by the annual tuning of Boiler #1 and biennial testing of Boiler #2.

Rule 353 - Adhesives and Sealants: This rule limits the use if 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 – Boilers, Steam Generators, and Process Heaters (Between 2 – 5 MMBtu/hr): 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 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.

<u>Variances</u>: Imerys has sought variance relief per Regulation V since the last Part 70 renewal permit was issued in 2019.

Case: 2020-12-R: Imerys requested an interim variance to continue operating a boiler past the date it was required to be replaced in violation of Rule 361. Imerys said it needed the extension because of delays in the manufacture, shipping, and installation of the new boiler due to COVID-19. The variance granted Imerys a six-month extension. The new boiler was installed before expiration of the interim variance.

<u>Violations</u>: The last facility inspection occurred on December 12, 2023. The inspector reported that no violations of District rules or permit conditions were found at the time of the inspection. The following violations have been documented since the last Part 70 permit renewal in 2019:

VIOLATION TYPE	NUMBER	ISSUE DATE	DESCRIPTION OF VIOLATION
NOV	11472	06/12/19	Exceeding the sulfur limits on the 1st stage dryer inlet and kiln (calciner)

VIOLATION TYPE	NUMBER	ISSUE DATE	DESCRIPTION OF VIOLATION
NOV	12120	11/08/19	Violation of District Rule 206 and California Code of Regulations, Title 17, Section 93115, Airborne Toxic Control Measure (ATCM) for Station Compression Ignition Engines for operating APCD Device ID 8919 beyond the intended purpose for "emergency use".
NOV	12181	02/04/20	Notice of Violation (NOV) #12181 documenting violation of District Rule 206 by failing to conduct three 6-minute averages of the opacity to the atmosphere in accordance with EPA Method 9 on the Flash Dryer Baghouse (APCD Device ID 391814)
NOV	12245	04/06/20	Violation of District Rule 206 by exceeding the sulfur content of the DE feed at 1st Stage Dryer inlet and the Kiln.
NOV	12500	08/28/20	Violations of District Rule 206 by exceeding the PM10 (reported 0.00673 gr/dscf, limit 0.002 gr/dscf) on Baghouse 345 during the June 8, 2020 source test.
NOV	12801	07/06/21	Violations of District Rule 206 by failing to conduct the first quarter Method 9 Visible Emissions Evaluation on Celpure Plant baghouses and scrubbers:
NOV	12909	01/25/23	Violations of District Rule 206 by failing to conduct the first quarter Method 9 Visible Emissions Evaluation on Celpure Plant baghouses
NOV	13262	02/17/23	Violation of District Rule 206 for failing to calibrate the 7 System portable analyzer

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**
RULE 101: Compliance by Existing Installations	All emission units	Emission of pollutants	June 1981
RULE 102: Definitions	All emission units	Emission of pollutants	June 21, 2012
RULE 103: Severability	All emission units	Emission of pollutants	October 23, 1978
RULE 201: Permits Required	All emission units	Emission of pollutants	June 19, 2008
RULE 202: Exemptions to Rule 201	Applicable emission units	Insignificant activities/emissions, per size/rating/function	August 25, 2016
RULE 203: Transfer	All emission units	Change of ownership	April 17, 1997
RULE 204: Applications	All emission units	Addition of new equipment of modification to existing equipment.	August 25, 2016
RULE 205: Standards for Granting Permits	All emission units	Emission of pollutants	April 17, 1997
RULE 206: Conditional Approval of Authority to Construct or Permit to Operate	All emission units	Applicability of relevant rules	October 15, 1991
RULE 207: Denial of Applications	All emission units	Applicability of relevant rules	October 23, 1978
RULE 208: 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
RULE 212: Emission Statements	All emission units	Administrative	October 20, 1992
RULE 301: Circumvention	All emission units	Any pollutant emission	October 23, 1978
RULE 302: Visible Emissions	All emission units	Particulate matter emissions	June 1981
RULE 303: Nuisance	All emission units	Emissions that can injure, damage or offend.	October 23, 1978

Generic Requirements	Affected Emission Units	Basis for Applicability	Adoption Date
RULE 304: PM Concentration – North Zone	Each PM source	Emission of PM in effluent gas	October 23, 1978
RULE 306: Dust and Fumes – North Zone	All emission units	Emissions of particulate matter	August 1989
RULE 309: Specific Contaminants	All emission units	Combustion contaminants	October 23, 1978
RULE 311: Sulfur Content of Fuel	All combustion units	Use of fuel containing sulfur	October 23, 1978
RULE 317: Organic Solvents	Emission units using solvents	Solvent used in process operations.	October 23, 1978
RULE 321: Solvent Cleaning Operations	Emission units using solvents	Solvent used in process operations.	June 21, 2012
RULE 322: Metal Surface Coating Thinner and Reducer	Emission units using solvents	Solvent used in process operations.	October 23, 1978
RULE 323: Architectural Coatings	Paints used in maintenance and surface coating activities for paints made before Jan 1, 21015	Application of architectural coatings.	November 15, 2001
RULE 323.1: 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
RULE 324: Disposal and Evaporation of Solvents	Emission units using solvents	Solvent used in process operations.	October 23, 1978
RULE 353: Adhesives and Sealants	Emission units using adhesives and sealants	Adhesives and sealants use.	June 21, 2012
RULE 505 SECTIONS A, B1, D: Breakdown Conditions	All emission units	Breakdowns where permit limits are exceeded or rule requirements are not complied with.	October 23, 1978
RULE 603: Emergency Episode Plans	Stationary sources with PTE greater than 100 tpy	Imerys Lompoc PTE is greater than 100 tpy.	June 15, 1981
REGULATION VIII: New Source Review	All emission units	Addition of new equipment of modification to existing equipment. Applications to generate ERC Certificates.	August 25, 2016
RULE 801: New Source Review – Definitions and General Requirements	All emission units	Emission of pollutants	August 25, 2016
RULE 802: New Source Review	All emission units	Emission of pollutants	August 25, 2016
RULE 804: Emission Offsets	All emission units.	Emission of pollutants	August 25, 2016

Generic Requirements	Affected Emission Units	Basis for Applicability	Adoption Date
RULE 805: Air Quality Impact and Modeling	All emission units.	Emission of pollutants	August 25, 2016
RULE 806: Emission Reduction Credits	All emission units.	Emission of pollutants	August 25, 2016
RULE 810: Federal Preventions of Significant Deterioration (PSD)	All emission units.	Emission of pollutants	August 25, 2016
RULE 901: New Source Performance Standards (NSPS)	All emission units	Ne or modified source	September 20, 2010
REGULATION XIII (RULE 1301): General Information for Part 70 Operating Permits	All emission units	Imerys is major source	August 25, 2016
REGULATION XIII (RULES 1302 - 1305): Part 70 Operating Permits	All emission units	Imerys is major source	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
RULE 326: 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
RULE 329: Cutback Asphalt Paving Materials	Maintenance and paving of roads the facility	Use of cutback asphalt for paving	February 25, 1992
RULE 333: 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
RULE 342: 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
RULE 360: 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

Unit-Specific Requirements	Affected Emission Units	Basis for Applicability	Adoption Date
RULE 901: 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
RULE 210: Fees	All emission units	Administrative	March 17, 2005
RULE 310: Organic Sulfides	All emission units.	Odorous sulfide emissions	January 12, 1976
RULE 352: Natural Gas-Fired Fan-Type Central Furnaces and Small Water Heaters	All emission units,	Rated less than 75,000 Btu/hr	October 20, 2011
RULES 501-504: Variance Rules	All emission units.	Administrative	October 18, 1971
RULE 505 SECTIONS B2, B3, C, E, F, G: Breakdown Conditions	All emission units.	Breakdowns where permit limits are exceeded or rule requirements are not complied with.	October 23, 1978
RULES 506-519: 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 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	397978	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	109857	45.0

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

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 adjust by 0.5 for PUC gas, and by 0.79 for fuel oil #2 and #6. The PM emission factor was derived from the PM_{10} factor by using a PM/PM_{10} 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 ROC, $SO_{x,}$ and PM emission factors while fired on PUC gas are based on source test results completed per ATC 9240 - 02. The PM emission factor was derived from the PM_{10} factor by using a PM/PM_{10} 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. The NO_x and CO limits are based on the Rule 343 limits of 7 and 400 ppmv, respectively.

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/PM_{10} 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. Like 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 SO_2 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 SO_2 emission guarantee of 0.05 lbs/minute (3 lb/hour).

The PM/PM_{10} 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/PM_{10} 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.

- SOx emission factor was calculated using mass based CARB diesel sulfur limits.
- The Emergency Lake Pump Engine was subject to a combined NOx_HC emission standard. This emission rate was split 95% for NOx and 5% for HC (ROC) per ARB guidance.
- The Prime Diesel Water Pump Engine NOx, 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:

E1, lb/day = Engine Rating (bhp) * EF (g/bhp-hr) * Daily Hours (hr/day) * (lb/453.6 g)
E2, tpy = Engine Rating (bhp) *EF (g/bhp-hr) *Annual Hours (hr/yr)*(lb/453.6 g) * (ton/2000 lb)

4.2.3 <u>Emission Controls</u>:

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 natural gas. The low NO_x burner allows this boiler to comply with the Rule 342 NO_x concentration limit of 7 ppmv.

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. Operating the units beyond the low-use heat input limits listed in Table 5.1 and Condition 9.3 triggers a requirement to implement BARCT requirements within 18 months after the end of the calendar month in which the low use thresholds were exceeded.

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 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 min/hr *HPP ÷ 7000 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/PM_{10} 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 revese 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 <u>Fugitive Dust from Mining</u>: 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 PM_{10}. The emission factor for inactive piles (EF) is 0.22 lbs/acre/hr for PM and 0.11 lbs/acre/hr for PM_{10}. 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 PM_{10} 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:

$$\text{ER in lb/hour} = \{K * 0.0032 * (U/5)^{1.3} / (M/2)^{1.4}\} * (1\text{-CON}) * QD / 24$$
$$\text{ER in tons/ year} = (\{K * 0.0032 * (U/5)^{1.3} / (M/2)^{1.4}\} * (1\text{-CON}) * QY/2000)$$

Where:	ER =	emission rate (lb/period)	CON=	control efficiency
	K =	PM size fraction (unitless)	QD=	tons handled per day
	U =	average wind speed (miles per hour)	QY=	tons handled per year
	M =	moisture of ore (% by wt)	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). CO_2 equivalent emission factors are calculated for CO_2, CH_4, and N_2O 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 PM_{10} when needed for compliance evaluations. A PM/PM_{10} ratio of 1.0 is assumed.

4.10. BACT/ MACT/NSPS/NESHAPS

4.10.1. <u>BACT</u>: Best Available Control Technology is required for PM and PM_{10} 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 clost 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_2S.	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
Multi Cyclone processing line	Fully enclosed and vented to a particulate control device.	All product processing lines, screw conveyors, and transfer points shall be fully enclosed and vented to a PM control device.	ATC 15882
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:

- 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. NSPS 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 a 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 SO_2 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 SO_2 emissions under the *System 7 Sulfur Dioxide Compliance Monitoring Protocol* are calculated values, whereas the SO_2 emissions under the *System 7 Portable Analyzer Monitoring Plan* are a direct measurement of the SO_2 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.*

<u>The Prime Diesel Water Pump Engine</u> (Dev ID 391449) permitted under ATC 14984 is a source of NOx 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 NOx and CO emission testing using a portable analyzer.

4.11.2. <u>Process Monitoring</u>: In many instances, ongoing compliance beyond a single (snapshot) 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 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 January 2019) 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/PM_{10}); (2) are subject to a federally enforceable emissions standard, (3) use a control device to achieve compliance with this standard, and are not inherent process equipment.

"Inherent process equipment" is defined as equipment that is necessary for the proper or safe functioning of the process, or material recovery equipment that the owner or operator documents is installed and operated primarily for purposes other than compliance with air pollution regulations. If equipment must be operated at an efficiency higher than that achieved during normal process operations to comply with applicable requirements, that equipment will not qualify as inherent process equipment.[5]

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 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

[5] From: ENVIRONMENTAL PROTECTION AGENCY 40 CFR Parts 64, 70, and 71 [IL–64–2–5807; FRL–5908–6] RIN 2060–AD18 Compliance Assurance Monitoring AGENCY: Environmental Protection Agency (EPA). ACTION: Final rule; Final rule revisions. 10/22/1997

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			

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

Device Name	System	Imerys ID	District Device ID
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
				Prime Water Pump Engine[1]	Diesel	Well 39 Pump	391449

Note (1): Required only if quarterly portable analyzer tests shows noncompliance with permit limits.

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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: Although some of the external combustion units (boilers, dryers/heaters, kilns, furnaces, pilots and miscellaneous exempt equipment) are permitted to operate on fuels other than natural gas, historical operations show that natural gas is the primary fuel used at the Imerys facility. For this reason, the HAP emissions were quantified assuming these units are fired on natural gas. The reactive organic HAP emission factors were obtained from Ventura County Air Pollution Control District's May 2001 *AB 2588 Combustion Emission Factors*, Natural Gas Fired External Combustion Equipment Table; note that these emission factor profiles differ for units rated <10 MMBtu/hr and those rated between 10-100 MMBtu/hr. The metal HAP emission factors are from USEPA's July 1998 *AP-42 Chapter 1.4,* with most metals listed in Table 1.4-4: Emission Factors for Metals from Natural Gas Combustion, as well as the lead emission factor from Table 1.4-2: Emission Factors for Criteria Pollutants and Greenhouse Gases from Natural Gas Combustion. All emission factors were converted from units of lb/MMscf to lb/MMBtu using the District default HHV of 1,020 Btu/scf for natural gas.

Solvents: Photochemically reactive and non-photochemically reactive solvents are assumed to contain 5% benzene, 5% toluene and 5% xylenes.

Diatomite emissions: The HAP emission factors for the processed diatomite emissions from the baghouses, rotoclone and mobile plant equipment were obtained from USEPA's November 1995 *AP-42 Chapter 11.22*, Table 11.22-1: Trace Element Content of Finished Diatomite. These emission factors units are fractions, in parts per million by weight, of the *emitted* tonnage of PM.

Uncontrolled diesel fired IC engines: The HAP emission factors for uncontrolled diesel fired IC engines were obtained from South Coast Air Quality Management District's December 2016 *Reporting Procedures for AB2588 Facilities for Reporting their Quadrennial Air Toxics Emissions Inventory*, Table B-2: Default EF for Diesel/Distillate Oil Fuel Combustion, supplemented with factors from Ventura County Air Pollution Control District's May 2001 *AB2588 Combustion Emission Factors*, Diesel Combustion Factors Table - internal combustion. The District default brake specific fuel consumption of 7,800 Btu/bhp-hr was used in the calculations.

Uncontrolled gasoline fired IC engines: The HAP emission factors for uncontrolled gasoline fired IC engines were obtained from South Coast Air Quality Management

District’s December 2016 *Reporting Procedures for AB2588 Facilities for Reporting their Quadrennial Air Toxics Emissions Inventory*, Table B-4: Default EF for Gasoline Combustion - Stationary and Portable Internal Combustion Engines (ICE) - Non-Catalyst. The emission factors were converted from units of lb/1000 gal to lb/MMBtu using the District default HHV of 130,000 Btu/gal for gasoline. The District default brake specific fuel consumption of 10,500 Btu/bhp-hr was used in the calculations.

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.

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) [6]
- ⇒ Reactive Organic Compounds (ROC)
- ⇒ Carbon Monoxide (CO)
- ⇒ Sulfur Oxides (SO_x) [7]
- ⇒ Particulate Matter (PM)
- ⇒ Particulate Matter smaller than 10 microns (PM_{10}) [8]
- ⇒ Particulate Matter smaller than 2.5 microns ($PM_{2.5}$) [9]
- ⇒ Greenhouse Gases (as CO_2e)

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 show 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 a rule limit, or a limit imposed by the facility due to operational limits, 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 for the applicable equipment (denoted “AE”). The Imerys stationary source potential to emit is estimated in section

[6] Calculated and reported as nitrogen dioxide (NO_2)
[7] Calculated and reported as sulfur dioxide (SO_2)
[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

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 or #6.

5.3. Facility Permitted Emissions

The total facility permitted emissions are based on per emission unit enforceable emission limits. As discussed, the limits are based on a rule limit or a limit imposed by the facility that is enforceable. The operating limits, emission factors, hourly/daily, and quarterly/annual potential to emit permitted emissions are given in Tables 5.1 through 5.4 respectively. The emission units are listed below.

- 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

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 the maximum emissions the facility is permitted to emit, which includes emissions from exempt equipment. 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 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			
						On-line			Fuel Use (MMBtu)						
Equipment Item	Process Line	Fuel	District DeviceNo	Size	Units	(hr/day)	(hr/qtr)	(hr/yr)	(per day)	(per qtr)	(per yr)	HHV(5)		Total Sulfur	
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	397978	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		
					On-line		
Equipment Item	Process Line	District DeviceNo	Size	Units	(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 Automatic Packing Station Baghouse (678)		103363	30,000	scf/minute	24	2190	8760
616 Ventilation Baghouse		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	110719	12,290	scf/minute	24	2190	2920
Mill Ventilation Baghouse (1178)		102	36,000	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 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	16	365	1460
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		
					On-line		
Equipment Item	Process Line	District DeviceNo	Size	Units	(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

"Imerys\Permits\Part70 Permits\Part 70 PTO 5840 (2022)\PostR6TableChanges\MainPlantTableChanges\5840-R7P1-EmissionTablesW15804-5840-13-16046.xlsx"\

Table 5.2 Equipment Emission Factors

Equipment Description			Emission Factors									
Equipment Item	**Process Line**	**District DeviceNo**	**NOx**	**ROC**	**CO**	**SOx**	**PM**	**PM10**	**PM2.5**	**GHG**	**Units**	**References**
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
Silicates Boiler #1	NG	81	140	--	--	0.0137	--	--	--	117.00	See Reference	Federally Enforceable Limits, Rule 309.E NOx (lb/hr) and ATC 9240-02
Silicates Boiler #2	NG	397978	0.009	0.0042	0.297	0.0137	0.0075	0.0075	0.0075	117.00	lb/MMBtu	ATC 16046
Silicates Conveyor Dryer		143	140	--	--	0.128	--	--	--	117.00	See Reference	District PGD No 1., NOx (lb/hr) SOx (lb/MMBtu)
Silicates Flash Dryer		140	140	--	--	0.128	--	--	--	117.00	See Reference	District PGD No 1., NOx (lb/hr) SOx (lb/MMBtu)
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
Pellet Plant Kiln		5844	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 1.5
Kiln	Line 7	103370								117.00	lb/MMBtu	PTO 5840 R4
Furnace	Line 7	109857								117.00	lb/MMBtu	PTO 5840 R4
Combined 7 System Kiln and Furnace outlet from Venturi Scrubber/Packge Bed Tower	Line 7	103370 & 109857	0.0925	0.044	0.450	0.050	0.067	0.067	0.067		lb/minute	PTO 12105
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 exhast 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
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	ATC 14156, GHG from Part 2 Emergency Generator ID 103521
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	PTO 14370, SOX emission rate from ATC 14156.

Table 5.2 Equipment Emission Factors (Continued)

Equipment Description			Emission Factors									
Equipment Item	Process Line	District DeviceNo	NOx	ROC	CO	SOx	PM	PM10	PM2.5	GHG	Units	References
3 Air Sifter Ventilation Baghouse		6471					0.00044	0.00044	0.00044		gr/dscf	ATC 9551
345 Baghouse		108					0.005	0.002	0.002		gr/dscf	ATC 15804
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		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 Automatic Packing Station Baghouse (678)		103363					0.022	0.022	0.022		gr/dscf	NSPS OOO
616 Ventilation Baghouse		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 Kiln Bypass BH717	Line 7	110719					0.005	0.005	0.005		gr/dscf	PTO 12105
Mill Ventilation Baghouse (1178)		102					0.005	0.005	0.005		gr/dscf	ATC 15804
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					0.005	0.005	0.005		gr/dscf	ATC 15804
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 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									
Equipment Item	**Process Line**	**District DeviceNo**	**NOx**	**ROC**	**CO**	**SOx**	**PM**	**PM10**	**PM2.5**	**GHG**	**Units**	**References**
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

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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 DeviceNo	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	1,814	43,524	AE
Silicates Boiler #1	NG	81	140.00	3,360.00	--	--	--	--	0.21	5.10	--	--	--	--	--	--	1,814	43,524	FE
Silicates Boiler #2	NG	397978	0.20	4.69	0.10	2.32	6.83	163.94	0.32	7.56	0.17	4.14	0.17	4.14	0.17	4.14	2,691	64,584	FE
Silicates Conveyor Dryer		143	140.0	3,360.0	--	--	--	--	5.76	138.24	--	--	--	--	--	--	5,265	126,360	FE
Silicates Flash Dryer		140	140.0	3,360.0	--	--	--	--	2.24	53.76	--	--	--	--	--	--	2,048	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	527	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	515	12,355	FE
Kiln	Line 7	103370	--	--	--	--	--	--	--	--	--	--	--	--	--	--	5,850	140,400	FE
Furnace	Line 7	109857	--	--	--	--	--	--	--	--	--	--	--	--	--	--	5,265	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	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	210	5,031	FE
Prime Water Pump Engine		398000	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	244	488	AE
Admin Building 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	613	AE

Note: Emissions not calculated for Kiln Bypas because the Kiln annual hour limit includes kiln bypass hours and normal kiln ooperational 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 DeviceNo	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	--	--	--	--	--	--	--	--	0.86	20.57	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 Automatic Packing Station Baghouse (678)		103363	--	--	--	--	--	--	--	--	5.66	135.77	5.66	135.77	5.66	135.77	--	--	FE
616 Ventilation Baghouse		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 Kiln Bypass BH717	Line 7	110719	--	--	--	--	--	--	--	--							--	--	FE
Mill Ventilation Baghouse (1178)		102	--	--	--	--	--	--	--	--	1.54	37.03	1.54	37.03	1.54	37.03	--	--	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	--	--	--	--	--	--	--	--	1.80	43.20	1.80	43.20	1.80	43.20	--	--	FE
Silicates Plant Baghouse 5DC-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 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	0.55	0.03	0.55	0.03	0.55	--	--	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 Kiln Bypas baghouse because the Kiln annual hour limit includes kiln bypass hours and normal kiln ooperational 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 DeviceNo	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, Coveyor Transfer, and Bucket Elevator emissions. PTO 12105 inadvertenly divided hours emissions by 24 rather than daily by 24.

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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		397978	0.208	0.833	0.103	0.412	7.275	29.100	0.336	1.342	0.184	0.735	0.184	0.735	0.184	0.735	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
Prime Water Pump Engine		398000	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 Bypas because the Kiln annual hour limit includes kiln bypass hours and normal kiln ooperational hourly and daily emissions are higher than bypass 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	
3 Air Sifter Ventilation Baghouse		6471	--	--	--	--	--	--	--	--	0.002	0.008	0.002	0.008	0.002	0.008	--	--	FE
345 Baghouse		108	--	--	--	--	--	--	--	--	0.939	3.754	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 Automatic Packing Station Baghouse (678)		103363	--	--	--	--	--	--	--	--	6.195	24.778	6.195	24.778	6.195	24.778	--	--	FE
616 Ventilation Baghouse		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	110719	—	—	—	—	—	—	—	—							—	—	FE
Mill Ventilation Baghouse (1178)		102	--	--	--	--	--	--	--	--	1.689	6.758	1.689	6.758	1.689	6.758	—	—	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	--	--	--	--	--	--	--	--	1.971	7.884	1.971	7.884	1.971	7.884	--	--	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 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	--	--	--	--	--	--	--	--	0.006	0.025	0.006	0.025	0.006	0.025	--	--	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 Bypas baghouse because the Kiln annual hour limit includes kiln bypass hours and normal kiln ooperational 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	0.117	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 inadvertenly divided hours emissions by 24 rather than daily by 24.

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Table 5.5 Permitted Facility Emissions

A. Hourly

Equipment Category	NOx	ROC	CO	SOx	PM	PM10	PM2.5	GHG
External Combustion - Boilers	140.20	0.18	8.11	0.53	0.29	0.29	0.29	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	300.98	300.46	300.46	--
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)	**571.77**	**461.57**	**43.74**	**211.66**	**333.97**	**332.52**	**330.90**	**24,686.59**

B. Daily

Equipment Category	NOx	ROC	CO	SOx	PM	PM10	PM2.5	GHG
External Combustion - Boilers	3,364.69	4.33	194.60	12.66	6.93	6.93	6.93	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	7,223.21	7,210.87	7,210.87	--
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)	**13,611.99**	**3,111.75**	**921.64**	**5,079.52**	**7,978.28**	**7,948.92**	**7,933.88**	**580,368.19**

C. Quarterly

Equipment Category	NOx	ROC	CO	SOx	PM	PM10	PM2.5	GHG
External Combustion - Boilers	10.37	0.11	7.37	0.35	0.19	0.19	0.19	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	329.47	328.91	328.91	--
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)	**469.80**	**141.83**	**40.03**	**220.58**	**363.75**	**362.42**	**361.76**	**24,496.47**

D. Annual

Equipment Category	NOx	ROC	CO	SOx	PM	PM10	PM2.5	GHG
External Combustion - Boilers	41.48	0.44	29.47	1.40	0.77	0.77	0.76	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	1,317.89	1,315.64	1,315.64	--
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)	**1,874.93**	**565.30**	**139.41**	**880.00**	**1,449.18**	**1,445.31**	**1,443.88**	**89,466.25**

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Table 5.6 Estimated Federal Potential to Emit

A. Hourly

Equipment Category	NOx	ROC	CO	SOx	PM	PM10	PM2.5	GHG
External Combustion - Boilers	140.20	0.18	8.11	0.53	0.29	0.29	0.29	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	300.98	300.46	300.46	--
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)	**577.20**	**462.59**	**58.83**	**212.16**	**334.24**	**332.78**	**331.16**	**25,507.95**

B. Daily

Equipment Category	NOx	ROC	CO	SOx	PM	PM10	PM2.5	GHG
External Combustion - Boilers	3,364.69	4.33	194.60	12.66	6.93	6.93	6.93	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	7,223.21	7,210.87	7,210.87	--
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)	**13,742.13**	**3,136.11**	**1,283.88**	**5,091.55**	**7,984.57**	**7,955.20**	**7,940.17**	**600,080.93**

C. Quarterly

Equipment Category	NOx	ROC	CO	SOx	PM	PM10	PM2.5	GHG
External Combustion - Boilers	10.37	0.11	7.37	0.35	0.19	0.19	0.19	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	329.47	328.91	328.91	--
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)	**475.73**	**142.94**	**56.55**	**221.12**	**364.04**	**362.71**	**362.04**	**25,395.87**

D. Annual

Equipment Category	NOx	ROC	CO	SOx	PM	PM10	PM2.5	GHG
External Combustion - Boilers	41.48	0.44	29.47	1.40	0.77	0.77	0.76	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	1,317.89	1,315.64	1,315.64	--
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)	**1,898.68**	**569.75**	**205.52**	**882.20**	**1,450.33**	**1,446.46**	**1,445.03**	**93,063.82**

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Table 5.7 HAP Emission Factors

Equipment Category	Decsription	trict Device	Benzene	Antimony	Arsenic	Beryllium	Cadmium	Chromium	Cobalt	Lead	Manganese	Mercury	Nickel	Selenium
Boilers	Silicates Boiler #1	000082	5.69E-06	--	1.96E-07	1.18E-08	1.08E-06	1.37E-06	8.24E-08	4.90E-07	3.73E-07	2.55E-07	2.06E-06	2.35E-08
	Silicates Boiler #2	000081	5.69E-06	--	1.96E-07	1.18E-08	1.08E-06	1.37E-06	8.24E-08	4.90E-07	3.73E-07	2.55E-07	2.06E-06	2.35E-08
Dryers/Heaters	Silicates Conveyor Dryer	000143	5.69E-06	--	1.96E-07	1.18E-08	1.08E-06	1.37E-06	8.24E-08	4.90E-07	3.73E-07	2.55E-07	2.06E-06	2.35E-08
	Silicates Flash Dryer	000140	5.69E-06	--	1.96E-07	1.18E-08	1.08E-06	1.37E-06	8.24E-08	4.90E-07	3.73E-07	2.55E-07	2.06E-06	2.35E-08
	Pellet Plant Dryer	005843	7.84E-06	--	1.96E-07	1.18E-08	1.08E-06	1.37E-06	8.24E-08	4.90E-07	3.73E-07	2.55E-07	2.06E-06	2.35E-08
Kilns	Pellet Plant Kiln	005844	7.84E-06	--	1.96E-07	1.18E-08	1.08E-06	1.37E-06	8.24E-08	4.90E-07	3.73E-07	2.55E-07	2.06E-06	2.35E-08
	7 System Kiln	103370	5.69E-06	--	1.96E-07	1.18E-08	1.08E-06	1.37E-06	8.24E-08	4.90E-07	3.73E-07	2.55E-07	2.06E-06	2.35E-08
Furnaces	7 System Furnace	109857	5.69E-06	--	1.96E-07	1.18E-08	1.08E-06	1.37E-06	8.24E-08	4.90E-07	3.73E-07	2.55E-07	2.06E-06	2.35E-08
Pilots	7 System Furnace & Kiln Pilots	n/a	7.84E-06	--	1.96E-07	1.18E-08	1.08E-06	1.37E-06	8.24E-08	4.90E-07	3.73E-07	2.55E-07	2.06E-06	2.35E-08
Solvent Usage	Solvent Use - Photochemically Reactive	008043	0.365	--	--	--	--	--	--	--	--	--	--	--
	Solvent Use -non-Photochemically Reactive	008043	27.375	--	--	--	--	--	--	--	--	--	--	--
Baghouses	All Baghouses	various	--	2	5	1	2	100	5	2	60	0.3	120	10
Rotoclone	Rotoclone	000150	--	2	5	1	2	100	5	2	60	0.3	120	10
Mobile Plant	All Mobile Plant Equipment	various	--	2	5	1	2	100	5	2	60	0.3	120	10
Internal Combustion	Diesel IC Engines	various	1.86E-01	--	1.60E-03	--	1.50E-03	6.00E-04	--	8.30E-03	3.10E-03	2.00E-03	3.90E-03	2.20E-03
	Gasoline IC Engines	various	2.93E-02	--	--	--	--	--	--	--	2.54E-05	--	2.54E-05	--
Exempt External Combustion	Natural Gas External Combustion Equipment	various	7.84E-06	--	1.96E-07	1.18E-08	1.08E-06	1.37E-06	8.24E-08	4.90E-07	3.73E-07	2.55E-07	2.06E-06	2.35E-08

Equipment Category	Decsription	Acetaldehyde	Acrolein	1,3-Butadiene	Chlorobenzene	Ethylbenzene	HCl	Toluene	Xylenes	Formaldehyde	Total PAHs	Hexane	Chlorine	Methanol	Methyl tert-butyl ether	Styrene	Units	References
Boilers	Silicates Boiler #1	3.04E-06	2.65E-06	--	--	6.76E-06	--	2.60E-05	1.93E-05	1.21E-05	3.92E-07	4.51E-06	--	--	--	--	lb/MMBtu	A, B, C, D
	Silicates Boiler #2	3.04E-06	2.65E-06	--	--	6.76E-06	--	2.60E-05	1.93E-05	1.21E-05	3.92E-07	4.51E-06	--	--	--	--	lb/MMBtu	A, B, C, D
Dryers/Heaters	Silicates Conveyor Dryer	3.04E-06	2.65E-06	--	--	6.76E-06	--	2.60E-05	1.93E-05	1.21E-05	3.92E-07	4.51E-06	--	--	--	--	lb/MMBtu	A, B, C, D
	Silicates Flash Dryer	3.04E-06	2.65E-06	--	--	6.76E-06	--	2.60E-05	1.93E-05	1.21E-05	3.92E-07	4.51E-06	--	--	--	--	lb/MMBtu	A, B, C, D
	Pellet Plant Dryer	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	A, B, C, D
Kilns	Pellet Plant Kiln	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	A, B, C, D
	7 System Kiln	3.04E-06	2.65E-06	--	--	6.76E-06	--	2.60E-05	1.93E-05	1.21E-05	3.92E-07	4.51E-06	--	--	--	--	lb/MMBtu	A, B, C, D
Furnaces	7 System Furnace	3.04E-06	2.65E-06	--	--	6.76E-06	--	2.60E-05	1.93E-05	1.21E-05	3.92E-07	4.51E-06	--	--	--	--	lb/MMBtu	A, B, C, D
Pilots	7 System Furnace & Kiln Pilots	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	A, B, C, D
Solvent Usage	Solvent Use - Photochemically Reactive	--	--	--	--	--	--	0.365	0.365	--	--	--	--	--	--	--	ton/yr	E
	Solvent Use -non-Photochemically Reactive	--	--	--	--	--	--	27.375	27.375	--	--	--	--	--	--	--	ton/yr	E
Baghouses	All Baghouses	--	--	--	--	--	--	--	--	--	--	--	400	--	--	--	ppm	F
Rotoclone	Rotoclone	--	--	--	--	--	--	--	--	--	--	--	400	--	--	--	ppm	F
Mobile Plant	All Mobile Plant Equipment	--	--	--	--	--	--	--	--	--	--	--	400	--	--	--	ppm	F
Internal Combustion	Diesel IC Engines	0.7833	3.39E-02	0.2174	2.00E-04	1.09E-02	0.1863	0.1054	4.24E-02	1.7261	5.59E-02	2.69E-02	--	--	--	--	lb/1000 gal	G, H
	Gasoline IC Engines	6.38E-03	1.53E-03	7.06E-03	--	1.28E-02	--	5.78E-02	5.11E-02	2.66E-02	1.11E-03	1.11E-02	3.50E-03	5.96E-03	1.58E-02	1.11E-03	lb/MMBtu	I, J
Exempt External Combustion	Natural Gas External Combustion Equipment	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	A, B, C, D

References:

A - Ventura County Air Pollution Control District. May 2001. *AB 2588 Combustion Emission Factors*. Natural Gas Fired External Combustion Equipment Table.
B - USEPA. July 1998. *AP-42 Chapter 1.4*. Table 1.4-4: Emission Factors for Metals from Natural Gas Combustion.
C - USEPA. July 1998. *AP-42 Chapter 1.4*. Table 1.4-2: Emission Factors for Criteria Pollutants and Greenhouse Gases from Natural Gas Combustion.
D - Units were converted from lb/MMscf to lb/MMBtu using an HHV of 1,020 Btu/scf for natural gas.
E - District assumes 5% benzene, 5% toluene and 5% xylenes emitted from solvent usage.
F - USEPA. November 1995. *AP-42 Chapter 11.22*. Table 11.22-1: Trace Element Content of Finished Diatomite.
G - South Coast Air Quality Management District. December 2016. *Reporting Procedures for AB2588 Facilities for Reporting their Quadrennial Air Toxics Emissions Inventory*. Table B-2: Default EF for Diesel/Distillate Oil Fuel Combustion.
H - Ventura County Air Pollution Control District. May 2001. *AB 2588 Combustion Emission Factors*. Diesel Combustion Factors Table - internal combustion.
I - South Coast Air Quality Management District. December 2016. *Reporting Procedures for AB2588 Facilities for Reporting their Quadrennial Air Toxics Emissions Inventory*. Table B-4: Default EF for Gasoline Combustion - Stationary and Portable Internal Combustion Engines (ICE) - Non-Catalyst.
J - Units were converted from lb/1000 gal to lb/MMBtu using an HHV of 130,000 Btu/gal for gasoline.

Table 5.8 Facility HAP Potential to Emit (tpy) Estimate

Equipment Category	Decsription	District Device	Benzene	Antimony	Arsenic	Beryllium	Cadmium	Chromium	Cobalt	Lead	Manganese	Mercury	Nickel	Selenium	Acetaldehyde	Acrolein	1,3-Butadiene	Chlorobenzene	Ethylbenzene	HCl	Toluene	Xylenes	Formaldehyde	Total PAHs	Hexane	Chlorine	Methanol	Methyl-tert-butyl ether	Styrene	TOTAL [1]
Boilers	Silicates Boiler #1	000082	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	0.00	0.00	0.00	0.00
	Silicates Boiler #2	000081	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	0.00	0.00	0.00	0.01
Dryers/Heaters	Silicates Conveyor Dryer	000143	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	0.00	0.00	0.00	0.00
	Silicates Flash Dryer	000140	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	0.00	0.00	0.00	0.00
	Pellet Plant Dryer	005843	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	0.00	0.00	0.00	0.00
Kilns	Pellet Plant Kiln	005844	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	0.00	0.00	0.00	0.00
	7 System Kiln	103370	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	0.00	0.00	0.00	0.02
Furnaces	7 System Furnace	109857	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	0.00	0.00	0.00	0.01
Pilots	7 System Furnace & Kiln Pilots	n/a	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	0.00	0.00	0.00	0.00
Solvent Usage	Solvent Use - Photochemically Reactive	008043	0.33	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	0.37	0.37	0.00	0.00	0.00	0.00	1.06	0.00	0.00	2.13
	Solvent Use -non-Photochemically Reactive	008043	33.31	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	27.38	27.38	0.00	0.00	0.00	0.00	88.06	0.00	0.00	176.11
Baghouses	All Baghouses	various	--	0.00	0.01	0.00	0.00	0.22	0.01	0.00	0.13	0.00	0.26	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.86	0.00	0.00	0.00	1.53
Rotoclone	Rotoclone	000150	--	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.01	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.00	0.00	0.08
Mobile Plant	All Mobile Plant Equipment	various	--	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	0.00	0.00	0.00
Permitted Diesel Engines		various	13.25	0.00	0.11	0.00	0.11	0.04	0.00	0.59	0.22	0.14	0.28	0.16	55.71	2.41	15.46	0.01	0.78	13.25	7.50	3.02	122.77	3.98	1.91	0.00	0.00	0	0	241.70
Exempt StationaryEquipment	Diesel IC Engines	various	1.67	0.00	0.01	0.00	0.01	0.01	0.00	0.07	0.03	0.02	0.03	0.02	7.01	0.30	1.95	0.00	0.10	1.67	0.94	0.38	15.45	0.50	0.24	0.00	0.00	0.00	0.00	30.42
	Gasoline IC Engines	various	0.68	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.04	0.16	0.00	0.30	0.00	1.35	1.19	0.62	0.03	0.26	0.08	0.14	0.37	0.03	5.39
	External Combustion Equipment	various	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	0.00	0.00	0.00	0.00
	SUB-TOTAL HAPS (tpy) =		**49.24**	**0.00**	**0.14**	**0.00**	**0.13**	**0.28**	**0.01**	**0.67**	**0.39**	**0.16**	**0.59**	**0.20**	**62.88**	**2.75**	**17.57**	**0.02**	**1.17**	**14.92**	**37.54**	**32.34**	**138.85**	**4.50**	**2.42**	**0.99**	**89.26**	**0.37**	**0.03**	**457.41**
	TOTAL HAPS (tpy) =	**457.41**																												

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	Napthalene	Antimony	Arsenic	Beryllium	Cadmium	Chromium	Cobalt	Lead	Manganese	Mercury	Nickel
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
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
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**

Facility	Selenium	Acetalaldehyde	Acrolein	1,3-butadiene	Chlorobenzene	Ethylbenzne	HCL	Toluene	Xylene	Formaldehyde	PAH	Hexane	Total HAPs
Main Plant	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	0.01
Stationary Source Total HAPs (tpy) =	**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.

Need to fix this

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 Striper 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**

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 (μg/m^3)	Background (μg/m^3)	Total (μg/m^3)	California AAQS (μg/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:

	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.

As of the issuance of this permit, 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 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 facility must be consistent with the provisions of the USEPA and State approved Clean Air Plans (CAP) and must not interfere with progress toward attainment of state ambient air quality standards. Under District regulations, any modifications at the source that result in an emissions increase of any nonattainment pollutant exceeding 25 lbs/day must apply BACT Non-Attainment Review (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 240 lbs/day for all attainment pollutants and precursors (except carbon monoxide and PM2.5) and 25 tons/year for all nonattainment pollutants and precursors (except carbon monoxide and PM2.5).

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 December 2022 the District Board adopted the 2022 Ozone Plan. The 2022 Plan provides a three-year update to the Clean Air Plan. The 2022 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, NOx, SOx, PM and $PM_{10.}$ 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.

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 pror 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	0339-0319	(b)
3	ATC 14908	04/06/17	No	Bagouse 789 modification	0.000	0.000	0.000	0.494	0.494	0442-0319	(b)
4	ATC 14942	05/12/17	No	New storage silos at Celpure Plant	0.000	0.000	0.000	0.143	0.143	0444-0319	(b)
5	ATC 14984	07/25/17	No	171 bhp prime diesel generator engine	0.739	0.351	0.009	0.016	0.016	0445-0319	(b)
6	ATC 14999	08/22/17	No	System 7 line modification	0.000	0.000	0.000	0.168	0.168	0449-0319	(b)
7	PTO 14860	10/31/17	No	Powder mills project	0.000	0.000	0.000	0.144	0.041	0451-0319	(b)
8	ATC 15060	12/19/17	No	Celpure system changes	0.000	0.000	0.269	0.405	0.405	0451-0319	(b)
9	ATC 15077	03/22/18	No	Celpure plant modifications	2.779	0.154	0.367	0.955	0.955	0457-0319	(b)
10	ATC 15176	09/24/18	No	Burner and baghouse modifications	0.684	0.076	0.192	0.138	0.138	0173-0319	(b)
11	ATC 14999	08/26/19	Yes	Permit cancelled	0.000	0.000	0.000	(0.168)	(0.168)	n/a	(d)
12	ATC 14942	08/26/19	Yes	Permit cancelled	0.000	0.000	0.000	(0.143)	(0.143)	n/a	(d)
13	ATC 15538	09/30/20	No	Increase DE sulfur content Celpure	0.000	0.000	0.792	0.000	0.000	0510-0324	(b)
14	ATC 15544	11/12/20	No	New Celpure Package Boiler	0.000	0.000	0.000	0.143	0.143	0545-0324	(b)
15	ATC 15544	11/12/20	No	New Celpure Package Boiler	0.000	0.000	0.000	0.173	0.173	0546-0324	(b)
16	ATC 15544	11/12/20	No	New Celpure Package Boiler	0.000	0.000	0.881	0.000	0.000	0566-0324	(b)
17	ATC 15544	11/12/20	No	New Celpure Package Boiler	0.708	0.347	0.000	0.167	0.167	0527-0624	(b)
18	ATC 15544-01	09/30/21	Yes	Decrease size of New Celpure Package Boiler	(0.284)	(0.139)	(0.354)	(0.194)	(0.194)	n/a	(d)
				TOTALS (tpy) =	4.910	0.928	2.510	2.760	2.657		

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.

\\sbcapcd.org\shares\Groups\ENGR\WP\CELITE\Offsets\[Post 2016 NSR Rule Change Imerys Offset-ERC Table - 15544-01 (9-10-21).xlsx]Table 7.1- Offsets

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	0339-0319	--
3	ATC 14908	04/06/17	No	0.000	0.000	0.000	0.543	0.543	1.1	0442-0319	--
4	ATC 14942	05/12/17	No	0.000	0.000	0.000	0.157	0.157	1.1	0444-0319	--
5	ATC 14984	07/25/17	No	0.813	0.386	0.010	0.018	0.018	1.1	0445-0319	--
6	ATC 14999	08/22/17	No	0.000	0.000	0.000	0.185	0.185	1.1	0449-0319	--
7	PTO 14860	10/31/17	No	0.000	0.000	0.000	0.158	0.045	1.1	0451-0319	--
8	ATC 15060	12/19/17	No	0.000	0.000	0.296	0.446	0.446	1.1	0451-0319	--
9	ATC 15077	03/22/18	No	3.057	0.169	0.404	1.051	1.051	1.1	0457-0319	(c)
10	ATC 15176	09/24/18	No	0.752	0.083	0.211	0.152	0.152	1.1	0173-0319	(d)
11	ATC 14999	08/26/19	Yes	0.000	0.000	0.000	(0.185)	(0.185)	1.1	n/a	
12	ATC 14942	08/26/19	Yes	0.000	0.000	0.000	(0.157)	(0.157)	1.1	n/a	
13	ATC 15538	09/30/20	No	0.000	0.000	0.871	0.000	0.000	1.1	0510-0324	
14	ATC 15544	11/12/20	No	0.000	0.000	0.000	0.157	0.157	1.1	0545-0324	
15	ATC 15544	11/12/20	No	0.000	0.000	0.000	0.190	0.190	1.1	0546-0324	
16	ATC 15544	11/12/20	No	0.000	0.000	0.969	0.000	0.000	1.1	0566-0324	
17	ATC 15544	11/12/20	No	0.779	0.382	0.000	0.184	0.184	1.1	0527-0624	
18	ATC 15544-01	09/30/21	Yes	(0.313)	(0.153)	(0.389)	(0.213)	(0.213)	1.1	n/a	
			TOTALS (tpy) =	4.622	0.639	0.921	2.505	2.391			

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. NOx ERCs (0.169 tpy NOx) used to offset ROC increase of 0.154 tpy. IP trade at 1:1. Total NOx ERCs used = 3.226 tpy.

(d) ATC 15176. NOx ERCs (0.092 tpy NOx) used to offset ROC increase of 0.084 tpy. IP trade at 1:1. Total NOx ERCs used = 0.836 tpy

\\sbcapcd.org\shares\Groups\ENGR\WP\CELITE\Offsets\[Post 2016 NSR Rule Change Imerys Offset-ERC Table - 15544-01 (9-10-21).xlsx]Table 7.1- Offsets

7.4. Emission Reduction Credits

Imerys currently holds emission reduction credits as follows:

DOI	NO^x (tons/yr)	ROC (tons/yr)	CO (tons/yr)	SO_x (tons/yr)	PM (tons/yr)	PM_{10} (tons/yr)
047	3.15	0	0	191.88	22.57	0
089	12.891	0.374	2.62	0.233	27.85	7.823
106	5.749	2.04	2.189	0.196	29.708	14.763

DOI: Decision of Issuance.

For a list of current emission reduction credits and transactions see https://www.ourair.org/erc/ These ERCs were created by the facility owner taking the following permit actions:

- Replacing the System 7 Furnace, CHEAF, and process baghouses with lower emission 7 System combustion equipment and a Venturi Scrubber/Packed Bed Tower control system.
- Permanently shutting down 3 System and 5 System diatomaceous earth processing lines, which eliminated the 3 System Furnace, Kiln, CHEAF, and process baghouses, and the 5 System Furnace, Kiln, Scrubber, and process baghouse.
- Permanently decommissions the 6 System processing equipment including the: 6 System CHEAF, 6 Furnace, 6 Kiln, 601 Dry End Baghouse, 602 Dry End Baghouse, 6 Natural Baghouse, 6 Natural Ventilation Baghouse and all other dedicated 6 System equipment.

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

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. [*Re: 40 CFR Part 70.6.(a)(6), District Rules 1303.D.1]*

A.2 **Emergency Provisions.** *Rescinded.*

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 CRF 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). [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.

(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. 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 more than 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 more than 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), gaseous fuel (including propane) in excess of 796 ppmvd or 50 gr/100scf (calculated as H_2S). Imerys shall demonstrate compliance and maintain records for the different fuel types as follows [*Ref: District Rule 311*]:

(a) Fuel oil #2 #6: The permittee shall comply with (i) or (ii)

(i) For each calendar year in which #2 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 certification from its diesel fuel vendor(s) that the diesel fuel sold Imerys meets California Code of Regulations, Title 13, Section 2281 standards (i.e., ARB "Clean Diesel").

(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 Device ID
Combustion Equipment		
Powder Mills Emergency Natural Gas ICE	1017	8069
Prime Diesel Water Pump Engine		391449
Emergency Lake Pump Engine		8919
Admin Building Emergency Standby Engine		387654

(a) Emission Limits

(i) Emissions from the Prime Diesel Water Pump Engine shall not exceed 35 ppmv NO_x at 15 % O_2, 48 ppmv ROC at 15% O_2 and 721 ppmv CO at 15% O_2. *[ATC 14984]*.

(ii) Emissions from the Emergency Lake Pump Engine shall not exceed the emissions listed in Tables 5.3 and 5.4. *[ATC 14156]*

(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) *Lake Pump Emergency Standby Diesel-Fueled CI Engine Hour Limit.* This engine shall not be operated for more than 50 hours per year for maintenance and testing purposes.

(iii) *Diesel Fuel Sulfur Limit*. The total sulfur content of the diesel fuel used shall not exceed 15 ppmv.

(iv) *Opacity Limits.* The Emergency Lake Pump Engine and Admin Building Emergency Standby Engines shall not exceeds the Rule 302 opacity limits.

(v) *NESHAP Maintenance Requirements*: The permittee must conduct the following maintenance on the reciprocating, internal combustion in-use emergency standby engines (Powder Mills Emergency Natural Gas ICE (Device ID 8069), Emergency Standby Lake Pump Engine (Device ID 8919) and the Admin Building Emergency Standby Engine (Device ID 387654):

(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.

(4) 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.

(c) Monitoring: The following monitoring conditions apply to the IC engines:

(i) *Operating Hours* - Imerys shall record the hours of operation of the IC engines using 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 on certification by the vendor that the diesel fuel sold Imerys 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) *Visible Emission Inspection (Method 9*) Once per calendar quarter when operational, Imerys shall perform a visible emissions inspection for a one-minute period on the Emergency Standby Lake Pump Engine (Device ID 8919) and the Admin Building Emergency Standby Engine (Device ID 387654). 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.

(v) *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]*.

(vi) *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]*.

(vii) *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% O_2, 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) <u>Recordkeeping</u>.

(i) *Hours of Operation*.

(1) 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]*.

(2) For the Powder Mills Emergency Natural Gas ICE the operating hours per month and year shall be recorded.

(3) For the Emergency Lake Pump Engine the hours the engine was operated for a) maintenance and testing and b) emergency use shall be recorded per month and year.

(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) *Visible Emissions Observations (Method 9)* - Imerys shall record the following for the readings obtained by the use of US EPA Method 9 on the two emergency engines: The date of reading, name of reader, most recent Method 9 certification date of reader, engine name and device number and individual interval readings required by Method 9, and the final reading.

(iv) *Portable Analyzer Monitoring Results*. Results of the portable analyzer monitoring required by Rule 333 and as specified in condition 9.C.1.(c)(vi). *[ATC 14984*]

(v) *Engine Inspection and Maintenance Logs*. IC engine inspection and maintenance logs shall be maintained, including quarterly inspection results, consistent with the NESHAP maintenance requirements, and the Rule 333 Inspection and Maintenance Plan reporting requirements, as applicable. *[ATC 14984 and NESHAP Subpart ZZZZ]*

(vi) *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 Device ID**
Combustion Equipment		
Silicate Plant Boiler #1	SPB1	81
Silicate Plant Boiler #2	SPB2	397978

(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 SO_2) 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* - Emissions from Boiler #2 shall not exceed 7 ppmv NOx at 3% O2 and 400 ppmv CO at 3% O2. Compliance shall be based on biennial source testing for NOx and CO. *[Ref: Rule 342, ATC 16046]*

(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 and 16046]*:

(1) *PUC Quality Gas Requirement* - Boiler #2 shall be fired only on PUC-quality natural gas.

(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 (60°F and 14.7 psia). Imerys shall demonstrate compliance with gas analyses provided by the gas utility.

(3) *Boiler #2 Heat Input Limits* The hourly, daily, and annual heat input limits for the Silicates Boiler #2 shall not exceed the values listed in Table 5.1. Unless otherwise designated by the District, the following fuel content shall be used for determining compliance: Natural Gas = 1,050 Btu/scf.

(4) *Hours of Operation*. The Silicates Boiler #2 shall not operate more than 8,520 hours per year.

(iii) *Fuel Oil Limits* - Fuel oil #2 or #6 may be used in Boiler #1 so long as the total annual time 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) *Prohibition on Simultaneous Use* - At no time shall Silicates Boiler #1 (Device ID 000081) and Silicates Boiler #2 (Device ID 397978) be operated simultaneously.

(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.

(2) Source testing Boiler #1 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]*

(ii) *Fuel Gas Metering Boiler #1* - Imerys shall monitor fuel gas used by Boiler #1 by use of a dedicated, pressure corrected, fuel use totalizing flow meter. *[Ref: Rule 342.I.2, ATC 9240-02 PCs 8 & 9]*

(iii) *Fuel Gas Usage Metering – Boiler #2 - Units Rated at 5.0 MMBtu/hr and Greater*. The volume of fuel gas used (in units of standard cubic feet) shall be measured using a dedicated District-approved calibrated non-resettable totalizing fuel meter as described in the District approved Fuel Use Monitoring Plan. The gas meter shall be temperature and pressure corrected. The fuel meters shall be accurate to within five percent (5%) of the full-scale reading. The meter shall be calibrated according to the manufacturer's specifications and the calibration records shall be made available to the District upon request. The fuel meters shall be calibrated no later than the date of the next required emissions source test. *[ATC 16046]*

(iv) *Fuel Oil Metering.* The volumes of #2 and #6 fuel oils used by Boiler #1 shall be monitored by use of a dedicated fuel use totalizer capable of recording gallons of liquid fuel used during each two-hour period. A single dedicated meter capable of monitoring both #2 and #6 fuel oil is acceptable. The meter shall be included in and operated consistent with Imerys's *Process Monitor Calibration and Maintenance Plan.*

(v) *Natural Gas Sulfur and Heat Content* – Billing records or other data shall be retained showing that the fuel gas is obtained from a natural gas utility. These records shall be obtained at least annually. If the District default Higher Heating Value is not used to determine compliance with Silicates Boiler #2 MMBtu limits, Imerys shall monitor fuel gas heat content annually using ASTM method D 1826-88 and any subsequent updates to that test method. *[Rule 311 and ATC 16046]*.

(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.

(vii) *Hour Meter*. The hours the unit is in operation shall be recorded using 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. *[ATC 16046]*

(d) Recordkeeping: Imerys shall maintain the following records for each boiler. This data shall be maintained for a minimum of five (5) years from the date of each entry and made available to the District upon request.

(i) *Fuel Volumes – Boiler #1*. 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 Volumes -Natural Gas.-* The volume of fuel gas used each month (in units of standard cubic feet) in each boiler and the number of days in each month that the unit operated. The fuel use data shall also be summarized for each calendar year. If the District default Higher Heating Value is not used, maintain lab analysis records of the fuel's heating value. *[Rule 342, ATC 16046]*

(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) *Fuel Use Meter Calibration and Maintenance Records*. Calibration and maintenance records of District-approved fuel use meters. *[ATC 16046]*

(v) *Hours of Operation*. The hours of operation each boiler operated per month and calendar year, and, as applicable, buy fuel type. *[ATC 16046]*

(vi) *Boiler #1* – Imerys shall maintain the following additional 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.

(vii) *Boiler #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) <u>Reporting</u>: 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 Device ID
Combustion Equipment		
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:

(i) *No Visible Emissions*. There shall be no visible emissions when the Silicate Conveyor Dryer exhaust stream is re-routed to atmosphere:

(ii) *Heat Input Limits – Low Use Limit*. After December 31, 2023, the hourly, daily, and annual heat input limits for the Silicates Conveyor Dryer (DID# 000143) and Silicates Flash Dryer (DID# 000140) shall not exceed the values listed in Table 5.1. Regardless of the above, exceeding the quarterly or annual heat input limits shall not be considered a violation of the permit if the requirements of Condition 9.C.3(b)(iii) are implemented following the exceedance. Unless otherwise designated by the District, the following fuel heat content shall be used for determining compliance: Natural Gas = 1,050 Btu/scf. *[PTO Mod 5840-13]*

(iii) *Low-Use Limit Exceedance*. If the quarterly or annual heat input thresholds for the Silicates Conveyor Dryer (DID# 000143) or the Silicates Flash Dryer (DID# 000140) are exceeded in any calendar month, Imerys shall notify the District of the exceedance and submit an ATC application to implement BARCT requirements, as defined in the District's Board-approved Assembly Bill 617 BARCT Analysis for Miscellaneous Combustion Units, for the unit that exceeded the threshold no later than 30 days after the end of the calendar month during which the threshold was exceeded. The affected equipment shall demonstrate compliance with BARCT standards no later than 18 months after the end of the calendar month during which the threshold was exceeded. *[PTO Mod 5840-13]*

(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]*

(iv) *Fuel Gas Usage Metering*. After December 31, 2023, the volume of fuel gas used (in units of standard cubic feet) in the Silicates Conveyor Dryer (DID# 000143) and the Silicates Flash Dryer (DID# 000140) shall be measured using separate dedicated District-approved calibrated non-resettable totalizing fuel meters for each unit as described in the District approved AB617 Fuel Use Monitoring Plan. The gas meter shall be temperature and pressure corrected. The fuel meters shall be accurate to within five percent (5%) of the full-scale reading. The meter shall be calibrated according to the manufacturer's specifications and the calibration records shall be made available to the District upon request.

(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]*

(iv) *Fuel Volumes* - After December 31, 2023, the volume of fuel gas used each calendar month (in units of standard cubic feet) in the Silicates Conveyor Dryer (DID# 000143) and the Silicates Flash Dryer (DID# 000140) and the number of days in each month that the units operated shall be recorded. The fuel use data shall also be summarized for each calendar year. *[PTO Mod 5840-13]*

(v) *Monthly Heat Input Records - Low Use Threshold.* At the end of each calendar month starting with January 2024, Imerys shall calculate and record the monthly heat input to the Silicates Conveyor Dryer (DID# 000143) and the Silicates Flash

Dryer (DID# 000140) using the monthly fuel use records for each unit and the heat content of the gas as specified in Condition 9.C.3(b)(ii). Each monthly record shall include the cumulative total heat input to each unit since January 1st of the reporting year to ensure the units did not exceed the quarterly or annual heat input low use limits during the month. The record shall also clearly state whether each unit remains in compliance with the low-use threshold. *[PTO Mod 5840-13*

(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
Combustion Equipment		
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 (H_2S) content (calculated as H_2S 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 NO_2) 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 SO_2) 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/PM_{10}) BACT Emission Limits*. The particulate (PM/PM_{10}) 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. 110719) 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_2O

(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_2O

(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. 110719).

(xii) *D-Family Crude Throughput.* The 7 System shall not process crude blends with greater than 43% D-Family crude types by weight.

(xiii) *Feed Rate.* The total wet DE crude ore feed rate shall not exceed 45.0 short tons per hour.

(xiv) *Visible Emissions Restriction*. Imerys shall not cause or allow any visible emissions from the Venturi Scrubber/Packed Bed Tower, except as allowed per the start-up provisions of 9.C.5.(b)(xv). Notwithstanding the above, Imerys shall not be considered in violation of this condition if Imerys implements all necessary corrective actions to eliminate the visible emissions within 24 hours and completes a new Method 22 observation to ensure no visible emissions are present. If Imerys, after taking all corrective actions, subsequently observes visible emissions, Imerys shall shut down the PM emitting equipment that vents to the Venturi Scrubber/Packaged Bed Tower until additional steps are taken to prevent the visible emissions.

(xv) *Start Up Provision*. The PM exhaust concentration requirement of Condition 9.C.5.(a)(iv) and visible emission operating restrictions of Condition 9.C.5.b.xiv shall not apply during start-up of a PM control device, including start-up after a repair to fix an equipment breakdown or after a scheduled maintenance activity. For the purposes of this condition, the start-up interval shall not last longer than necessary to reach stable operating conditions and in no case shall be longer than 45 minutes.

(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 always.

(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 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.

(xii) Weekly Method 22 Inspections. Imerys shall conduct a 6-minute Method 22 visible emissions inspection on Venturi Scrubber/Packed Bed Tower exhaust using an observer trained in Method 22 at least once each calendar week. To the extent that multiple Method 22 observations can be conducted simultaneously, Imerys may observe multiple sources at the same time if all the sources are in the same field of view of the observer and appropriate records are kept for each observation. If the operator detects any visible emissions during the observation, the operator shall continue the observation on the source with visible emissions and stop the observation(s) on the additional sources(s). If the activity being observed is consistently a duration of less than six minutes, then the Method 22 observation shall be for the period in which the activity takes place.

If visible emissions are detected exiting the PM control device at any time, including during a weekly Method 22 inspection, Imerys shall comply with the requirements of Condition 9.C.5.(b)(xiv).

Notwithstanding the above, weekly Method 22 inspections are not required if the Ventur Scrubber/Packed Bed Tower is not operated during the calendar week, as verified through operational records maintained per Condition 9.C.5.(d)(x).

(xiii) Imerys shall record the calendar weeks the Venturi Scrubber/Packed bed tower is not in operation using the log of the System 7 kiln in bypass mode per Condition 9.C.5.(c)(x).

(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) 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.

(xii) Weekly Method 22 Inspections. Imerys shall maintain records of each weekly Method 22 inspection pursuant to the requirements of Condition 9.C.5.(c)(xii) including.

(1) Observer's name and affiliation.

(2) Date and time of each weekly Method 22 observation.

(3) Process unit(s) being observed including Device ID.

(4) Observer's position relative to the source.

(5) Observation duration.

(6) Whether visible emissions occurred, and cumulative amount of time visible emissions occurred during the observation; If visible emissions are detected the following information shall be recorded:

(a) The date, time, and description of the corrective action taken to eliminate any visible emissions and the name of the person performing the corrective action.

(7) If the Venturi Scrubber/Packed Bed Tower is not in operation during that week, a notation in items (1) through (6) to that effect

(e) <u>Reporting</u>: 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) <u>Best Available Control Technology (BACT)</u>: 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.

(g) Modification Requirements: Prior to making any modifications to the System 7 line, including tie-ins to 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 and Other PM Control devices.** 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	Baghouse (BH916)	Enclosed	BH916	108940
Mill Ventilation Baghouse	Enclosed	11VBH	102	7 Kiln Bypass BH717	Enclosed	BH717	110719
345 Baghouse	Enclosed	345BH	108	Baghouse BH101	Enclosed	BH101	110191
378 Baghouse	Enclosed	378BH	109	Baghouse BH102	Enclosed	BH102	110192
978 Baghouse	Enclosed	978BH	110	Baghouse BH103	Enclosed	BH103	110193
578 Baghouse	Enclosed	578BH	119	Baghouse BH104	Enclosed	BH104	110194
616 Ventilation Baghouse	Enclosed	616VBH	128	Baghouse BH105	Enclosed	BH105	110195
Recirculating System Ventilation Baghouse	Enclosed	RSVBH	135	Baghouse BH106	Enclosed	BH106	110196
Preseparator Waste Baghouse	Enclosed	PSWBH	136	Baghouse BH107	Enclosed	BH107	110197
General Waste Baghouse	Enclosed	GWBH	137	Baghouse BH108	Enclosed	BH108	110198
Silicate Plant Feed Mix Baghouse	Enclosed	SPFMBH	138	Process Baghouse (BH912)	Enclosed	BH912	110203
Silicate Plant Lime Baghouse	Enclosed	SPLTBH	139	Packing Sta BH125	Enclosed	BH125	110525
Silicate Plant Production Baghouse	Enclosed	SPPBH	141	Bin Vent BH131A1	Enclosed	BH131A1	110532
Silicate Plant Ventilation Baghouse (Pack)	Enclosed	SPVBH	142	Bin Vent BH131A2	Enclosed	BH131A2	110533
Mortar Plant Ventilation Baghouse	Enclosed	MPVBH	146	Bin Vent BH131B1	Enclosed	BH131B1	110534
Pellet Plant Ventilation Baghouse - Cold	Enclosed	PPCVBH	147	Bin Vent BH131B2	Enclosed	BH131B2	110535
Pellet Plant Ventilation Baghouse - Hot	Enclosed	PPHVBH	148	Baghouse BH925A	Enclosed	BH925A	110641
Chromosorb Ventilation Baghouse - South	Enclosed	CPVBHS	149	Baghouse BH925B	Enclosed	BH925B	110642
3 Bulk Bin Baghouse	Enclosed	3BBVBH	151	Baghouse BH109A	Enclosed	BH109A	110649
Celite Analytical Filter Aid Baghouse	Open	CAFABH	152	Baghouse BH109B	Enclosed	BH109B	110650
Sackroom Baghouse	Open	SRBH	153	Baghouse BH110A	Enclosed	BH110A	110651
Soda Ash Baghouse	Enclosed	SABH	109452	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
Feed Bin Baghouse (BH901)	Enclosed	BH901	108935				

(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 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 9.3 shall not be exceeded.

(iii) All baghouses with a cumulative filter surface area greater than 7,500 square feet, which exhaust to the atmosphere, shall meet an outlet PM concentration of less than or equal to 0.005 grains per dry standard cubic foot (gr/dscf) except as allowed per the start-up provisions of Condition 9.C.1(b)(xvi).

Table 9.1 Baghouse Stack Concentrations, Emissions and Opacity Limits

Device Name	District Device No	PM Limit (gr/dscf)	Federal Enforceable	BACT Required	NSPS Subpart OOO Emission Limit	Fed Opacity Limit	AB 617 Opacity Limit	BLDS Equipped	Quart Method 9	Daily No VE	AB 617 Weekly Method 22
Capture System											
Crushing Plant Vent. BH	100	0.0059	ATC 9192, 15804			20%	0%		√	√	√
Mill Ventilation Baghouse	102	0.005	Rule 304, ATC 15804			20%	0%	√			
345 Baghouse	108	0.005	ATC 8202-01, 15804	√	√	7%	0%	√			
378 Baghouse	109	0.0074	ATC 9696-01, 15804		√	7%	0%		√	√	√
978 Baghouse	110	0.3	Rule 304, ATC 15804			20%	0%		√	√	√
578 Baghouse	119	0.005	ATC 9696-01, 15804	√	√	7%	0%		√	√	√
616 Ventilation Baghouse	128	0.022	NSPS OOO, ATC 15804		√	7%	0%		√	√	√
Recirculating System Ventilation Baghouse	135	0.005	ATC 10858, 15804	√	√	7%	0%		√	√	√
Preseparator Waste Baghouse	136	0.005	ATC 10783, 15804			20%	0%		√	√	√
General Waste Baghouse	137	0.0045	ATC 10023, 15804		√	7%	0%		√	√	√
Silicate Plant Feed Mix Baghouse	138	0.3	Rule 304, ATC 15804		NA	20%	0%		√	√	√
Silicate Plant Lime Baghouse	139	0.3	Rule 304, ATC 15804		NA	20%	0%		√	√	√
Silicate Plant Production Baghouse	141	0.3	Rule 304, ATC 15804		NA	20%	0%		√	√	√
Silicate Plant Ventilation Baghouse (Pack)	142	0.005	ATC 9696-01, 15804		√	7%	0%	√			
Mortar Plant Ventilation Baghouse	146	0.3	Rule 304, ATC 15804			20%	0%		√	√	√
Pellet Plant Ventilation Baghouse - Cold	147	0.3	Rule 304, ATC 15804			20%	0%		√	√	√
Pellet Plant Ventilation Baghouse - Hot	148	0.004	ATC 10257, 15804		√	7%	0%		√	√	√
Chromosorb Ventilation Baghouse - South	149	0.3	Rule 304, ATC 15804			20%	0%		√	√	√
3 Bulk Bin Baghouse	151	0.0044	ATC 9193, 15804		√	7%	0%		√	√	√
Celite Analytical Filter Aid Baghouse	152	0.3	Rule 304, ATC 15804			20%	0%		√	√	√
Sackroom Baghouse	153	0.3	Rule 304, ATC 15804			20%	0%		√	√	√
Soda Ash Baghouse	109452	0.005	ATC 11083, 15804	√	√	7%	0%		√	√	√
Experimental Plant Ventilation Baghouse	5935	0.3	Rule 304, ATC 15804			20%	0%		√	√	√
3 Air Sifter Ventilation Baghouse	6471	0.00044	ATC 9551, 15804		√	7%	0%		√	√	√
5 Air Sifter Ventilation Baghouse	6472	0.00044	ATC 9551, 15804		√	7%	0%		√	√	√
6 Automatic Packing Station Baghouse (678)	103363	0.022	NSPS OOO, ATC 15804		√	7%	0%		√	√	√
Silicate Plant Flash Dryer Baghouse	103474	0.3	Rule 304, ATC 15804			20%	0%		√	√	√
4 Bulk Bin Baghouse	103514	0.0044	ATC 9193, 15804		√	7%	0%		√	√	√
Feed Bin Baghouse (BH901)	108935	0.005	ATC 12091, 15804	√	√	7%	0%		√	√	√
Baghouse (BH916)	108940	0.005	ATC 12091, 15804	√	√	7%	0%		√	√	√
7 Kiln Bypass BH717	110719	0.005	PTO 12105, ATC 15804	√	√	7%	0%		√	√	√
Baghouse BH101	110191	0.005	ATC 12208, 15804	√	√	7%	0%		√	√	√
Baghouse BH102	110192	0.005	ATC 12208, 15804	√	√	7%	0%		√	√	√
Baghouse BH103	110193	0.005	ATC 12208, 15804	√	√	7%	0%		√	√	√
Baghouse BH104	110194	0.005	ATC 12208, 15804	√	√	7%	0%		√	√	√
Baghouse BH105	110195	0.005	ATC 12208, 15804	√	√	7%	0%		√	√	√
Baghouse BH106	110196	0.005	ATC 12208, 15804	√	√	7%	0%		√	√	√
Baghouse BH107	110197	0.005	ATC 12208, 15804	√	√	7%	0%		√	√	√
Baghouse BH108	110198	0.005	ATC 12208, 15804	√	√	7%	0%		√	√	√
Process Baghouse (BH912)	110203	0.005	ATC 12091, 15804	√	√	7%	0%		√	√	√
Packing Sta BH125	110525	0.005	ATC 12398, 15804	√	√	7%	0%		√	√	√
Bin Vent BH131A1	110532	0.005	ATC 12398, 15804	√	√	7%	0%		√	√	√
Bin Vent BH131A2	110533	0.005	ATC 12398, 15804	√	√	7%	0%		√	√	√
Bin Vent BH131B1	110534	0.005	ATC 12398, 15804	√	√	7%	0%		√	√	√
Bin Vent BH131B2	110535	0.005	ATC 12398, 15804	√	√	7%	0%		√	√	√
Baghouse BH925A	110641	0.005	ATC 12398, 15804	√	√	7%	0%		√	√	√
Baghouse BH925B	110642	0.005	ATC 12398, 15804	√	√	7%	0%		√	√	√
Baghouse BH109A	110649	0.005	ATC 12398, 15804	√	√	7%	0%		√	√	√
Baghouse BH109B	110650	0.005	ATC 12398, 15804	√	√	7%	0%		√	√	√
Baghouse BH110A	110651	0.005	ATC 12398, 15804	√	√	7%	0%		√	√	√
Baghouse BH110B	110652	0.005	ATC 12398, 15804	√	√	7%	0%		√	√	√
7 Dry End Baghouse BH775	110720	0.005	PTO 12105, ATC 15804	√	√	7%	0%		√	√	√
7 Dry End Baghouse BH777	110721	0.005	PTO 12105, ATC 15804	√	√	7%	0%	√			
7 Dry End Baghouse BH788	110722	0.005	PTO 12105, ATC 15804	√	√	7%	0%		√	√	√
7 Dry End Baghouse BH789	110723	0.005	PTO 12105, ATC 15804	√	√	7%	0%		√	√	√
7 Wet End Baghouse BH721	110724	0.005	PTO 12105, ATC 15804	√	√	7%	0%		√	√	√
Baghouse 5DC-01	114326	0.005	ATC 13570, 15804			7%	0%		√	√	√

Table 9.2 Equipment Exhaust Flow and Operating Limits

Device Name	Imerys ID	District Device No	Baghouse Subject to Table 9.4 Limits?	Pressure Drop	Daily Pressure Drop Monitoring	Flow	Annual Hours of Operation	Federal Enforceability
				(in. of H_2O)		(scfm)		
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	PPHVBH	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

Table 9.3 SOx/NOx Emission Limits

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

(b) Operational Limits: The following operational limits shall apply:

(i) *Operating Schedule.* The equipment listed in Table 9.2 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 9.2 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 9.2 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, ATC 15804]*

(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/PM_{10} 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]*

(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 110719) 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)*

(vii) *Bag Leak Detection System*. Imerys shall install and operate BLDS on the following baghouses in accordance with the requirements of the District approved *BLDS Process Monitoring, Calibration and Maintenance Plan*: Baghouse 777 (DID# 110721), Mill Vent Baghouse (DID# 000102), Baghouse 345 (DID# 000108), and Silicate Plant Ventilation Baghouse (DID# 000142). *[Ref ATC 15804]*

(viii) *Visible Emissions Restriction – PM Air Pollution Control Devices without BLDS*. Imerys shall not cause or allow any visible emissions from any PM control device, which is not equipped with a District approved BLDS, except as allowed per the start-up provisions of Condition 9.C.6.(b)(xvi). Notwithstanding the above, Imerys shall not be considered in violation of this condition if Imerys is in the process of complying or has complied with the requirements below:

(1) If any visible emissions are observed exiting any of the PM control devices that are not equipped with a District approved BLDS, Imerys shall implement all necessary corrective actions to eliminate the visible emissions within 24 hours, and:

(a) To verify that the corrective actions were effective, Imerys shall complete a new Method 22 observation to ensure no visible emissions are present.

(b) If Imerys, after taking all corrective actions, subsequently observes visible emissions, Imerys shall shut down the PM emitting equipment that vents into the control device until additional steps are taken to prevent the visible emissions.

(ix) *Visible Emissions Restriction – PM Air Pollution Control Devices with BLDS*. On or after the date the District-approved BLDS is installed, Imerys shall not cause or allow any visible emissions from any PM control device which is equipped with a District approved BLDS, except as allowed per the start-up provisions of Condition 9.C.6.(b)(xvi). Notwithstanding the above, Imerys shall not be considered in violation of this condition if Imerys is in the process of complying or has complied with the requirements below:

(1) If Imerys receives an alarm from the BLDS, Imerys shall investigate the control device and the BLDS, observe if there are any visible emissions from the control device exhaust, and take all necessary corrective actions to eliminate the cause of the alarm and any visible emissions. Corrective actions to eliminate the cause of the alarm and any visible emissions shall be performed within 3 hours of detecting the alarm. Notwithstanding the above, the District may allow Imerys more than 3 hours to alleviate a specific alarm condition if the issue has been identified in the *AB617 Compliance Plan*, Imerys adequately explains why it is not feasible to alleviate the condition within 3 hours, and

demonstrates that the condition will be fixed as expeditiously as practicable.

(x) *New Baghouses and Bag Leak Detection Systems*. Imerys shall not operate any new baghouses with a cumulative filter surface area greater than 7,500 square feet that vents to atmosphere, unless the baghouse is equipped with a District approved BLDS, which is installed, operated, calibrated and maintained pursuant to the manufacturers written recommendations to monitor baghouse performance, and complies with the requirements of Condition 9.C.6.(a)(iii) and Condition 9.C.6.(b)(ix). *[Ref ATC 15804]*

(xi) *Prohibition On Use of Manual Shaker Baghouses.* On or after December 31, 2023, Imerys shall not operate the Celite Analytical Filter Aid Baghouse (DID# 000152), Sackroom Baghouse (DID# 000153) and the Experimental Plant Ventilation Baghouse (DID# 005935) unless a valid ATC permit has been issued to authorize the replacement or retrofit of the baghouse, with at a minimum, an automated shaker baghouse and the modification or replacement has been completed prior to resuming operations. In addition, Imerys shall not install any new manual shaker baghouses. *[ATC 15804]*

(xii) All PM control devices shall be operated and maintained in accordance with the manufacturer's operation and maintenance manual or other similar written materials supplied by the manufacturer or distributor of a control device to ensure that the control device remains in proper operating condition. If such documents are not available, the operator shall provide and follow written operation and maintenance procedures for the PM control device(s). Such documentation shall be made available to the Control Officer immediately upon request.

(xiii) Imerys shall install and maintain the ventilation system to all existing and new baghouses with a cumulative filter surface area greater than 100 square feet, such that the ventilation system meets the minimum capture velocity requirement specified in the applicable standards of the most current edition of the U.S. Industrial Ventilation Handbook, American Conference of Governmental Industrial Hygienists, at the time of installation. *[ATC 15804]*

(xiv) Imerys shall discharge material collected in all PM control devices in such a way as to prevent fugitive emissions from being re-entrained in the atmosphere, including, but not limited to, the use of shrouding or the use of dust suppressants to stabilize the material.

(xv) Any PM control device equipped with a District approved BLDS as listed in the *BLDS Process Monitoring, Calibration and Maintenance Plan* and subject to the no visible emission requirements of Condition 9.C.6.(b)(ix), is exempt from the daily visible emissions observation requirements, quarterly Method 9 inspection requirements and quarterly Method 22 inspection requirements listed in conditions 9.C.6.(c)(iii) except as provided in Condition 9.C.6.(c)(v)(11).

(xvi) *PM Control Device Start-up Provisions*: The exhaust concentration requirement of Condition 9.C.6.(a)(iii) and visible emission operating restrictions of Condition 9.C.6.(b)(viii) and 9.C.6.(b)(ix) shall not apply during start-up of a PM control device, including start-up after a repair to fix an equipment breakdown or after a scheduled maintenance activity. For the purposes of this condition, the start-up interval shall not last longer than necessary to reach stable operating conditions and in no case shall be longer than 45 minutes.

Additionally, alarms detected during the start-up interval as defined above, shall not be included in the rolling 6 month alarm activation limit calculation per condition 9.C.6.(c)(v)(9).

This condition does not relieve Imerys from complying with the PM concentration (grain loading) requirements of Rule 304, 305 or the opacity requirements as specified in Rule 302. *[ATC 15804]*

(xvii) *Non-Operational Provisions*: Permitted baghouses that are non-operational and listed in the AB 617 Compliance Plan as being non-operational, may remain in a non-operational state in-lieu of complying with the requirements in Conditions 9.C.6.a,b,c and d. of this permit. Any PM control device listed as non-operational in the AB 617 Compliance Plan shall immediately become subject to the requirements of these Conditions upon operation. *[ATC 15804]*

(xviii) *BLDS Installation Authorization*: Imerys may install BLDS on any baghouse without the need to first obtain a District permit if all the following requirements are met:

(1) Imerys submits for District review and approval a revised *BLDS Process Monitoring, Calibration and Maintenance Plan.*

(2) Imerys submits for District review and approval a revised *AB 617 Compliance Plan* which identifies the applicable baghouse as being equipped with BLDS.

(3) Imerys receives written District approval to proceed with installation and operation of the BLDS. Upon installation and initial operations, the BLDS system will become subject to the operational, monitoring, recordkeeping and reporting requirements given in Condition 9.C.6.

(4) Imerys notifies the District within 14 days of the start of BLDS operation (engr@sbcapcd.org

(5) Installation of a BLDS without meeting these requirements or without a valid District permit shall constitute a violation of District Rule 201.

(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]*

(iii) *Visual Emissions Inspections – PM Control Devices Without a Bag Leak Detection System.*

(1) <u>Daily No Visible Emission Inspections</u>. 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 initializing or signing their name next to the entry. Imerys shall perform a visual inspection of each baghouse and baghouse exhaust once per day. Imerys can use portable computers/tablets and similar devices in the place of hard-copy written records provided Imerys submits a request to the District detailing the system to be used and obtains the District's written approval.

(2) <u>Weekly Method 22 Inspections</u>. Imerys shall conduct a 6-minute Method 22 visible emissions inspection on all baghouses not equipped with a District approved BLDS, using an observer trained in Method 22 at least once each calendar week. To the extent that multiple Method 22 observations can be conducted simultaneously, Imerys may observe multiple sources at the same time if all the sources are in the same field of view of the observer and appropriate records are kept for each observation. If the operator detects any visible emissions during the observation, the operator shall continue the observation on the source with visible emissions and stop the observation(s) on the additional sources(s). If the activity being observed is consistently a duration of less than six minutes, then the Method 22 observation shall be for the period in which the activity takes place.

If visible emissions are detected exiting the PM control device at any time, including during a weekly Method 22 inspection, Imerys shall comply with the requirements of Condition 9.C.6.(b)(viii).

Notwithstanding the above, weekly Method 22 inspections are not required on a PM control device, if any of the following apply:

(a) The PM control device is not operated during the calendar week, as verified through operational records maintained per Condition 9.C.6.(c)(x).

(b) The PM control device vents a non-continuous process[1] or meets the definition of a bin vent[2] and is listed in the *AB617 Compliance Plan*.

(c) The PM control device is a portable dust collector, fume extractor, or negative air machine, has a manufacturer's maximum rated capacity of less than or equal to 3,000 cubic feet per minute, and is listed in the *AB 617 Compliance Plan.*

(d) Baghouses with a cumulative surface area less than or equal to 100 square feet as identified in the *AB617 Compliance Plan.*

(e) The PM control device is connected in series and does not exhaust to the atmosphere as identified in the AB 617 Compliance Plan. *[ATC 15804]*

(3) Quarterly 30 Minute Method 22 Inspections. 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 for 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,]*

(4) Quarterly EPA Method 9 Inspections. Once per 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 as listed in Table 9.1. 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]*

(v) Baghouse Leak Detection Systems (BLDS). All District approved BLDS installed on a baghouse shall meet the following monitoring requirements, except if the PM control device is operated in series, does not vent to the atmosphere and is listed in the District approved *AB 617 Compliance Plan* as exempt from the provisions of this condition:

(1) The BLDS sensor must provide an output of relative PM emissions; and

(2) The BLDS shall meet the requirements specified in 40 CFR Part 60 Subpart OOO § 60.674 (d).

(3) The BLDS shall output raw data to the Data Acquisition System (DAS) which must have a visible and audible alarm set to activate automatically when the BLDS detects a significant increase in relative PM emissions greater than a preset level as identified in the District approved *BLDS Process Monitoring, Calibration and Maintenance Plan*.

(4) The BLDS and associated DAS shall be installed, operated, calibrated and maintained pursuant to the manufacturer written recommendations and the District approved *BLDS Process Monitoring, Calibration and Maintenance Plan.*

(5) The BLDS shall be certified by the manufacturer to be capable of alarming automatically before visible emissions can be seen in the exhaust of the PM control device and shall set the BLDS to operate at such level. The alarm level shall be detailed in the BLDS Process Monitoring, Calibration and Maintenance Plan.

(6) The BLDS baseline output shall be established as follows

(a) Adjust and maintain the range and the averaging period of the device for the specific application per the manufacturer's written specifications and recommendations; and

(b) Establish and maintain the alarm set points and the alarm delay time per the manufacturer's written specifications and recommendations.

(7) The operator shall perform adequate maintenance and inspections of each BLDS, according to the written specifications and recommendations of the manufacturer and the District approved *BLDS Process Monitoring, Calibration and Maintenance Plan*, to ensure that the monitor is operating properly at all times.

(8) Imerys shall follow the requirements of Condition 9.C.6.(b)(ix) if an alarm is detected from a BLDS.

(9) <u>Alarm Activation Limit:</u> Imerys shall maintain the filters and operate the PM control device such that the BLDS alarm activation is minimized and the cumulative number of hours of alarm activation within a continuous six-month rolling period does not exceed more than five percent (5%) of the total operating hours in that period. If cumulative alarm time exceeds five percent of the total operating hours based on any continuous six-month rolling period, the operator shall shut down the equipment that vents into the associated PM control device until necessary actions are taken to eliminate the elevated emissions.

(10) Minimum Quarterly Data Recovery Efficiency: Each BLDS must achieve a minimum quarterly data recovery efficiency (DRE) of 90-percent based on actual hours of operation. The DRE shall be calculated by dividing the BLDS operating hours each quarter by the total PM control device actual operating hours and multiplying by 100.

(11) BLDS Downtime: Upon detecting a BLDS equipment failure, Imerys shall implement daily visual emissions monitoring on the PM control device in accordance with Condition 9.C.6.(c)(iii)(1) within 24 hours, until such time that the BLDS resumes normal operation.

(vi) *Pressure Drop Monitoring.* The pressure drop across the baghouses checked in the "Daily Pressure Drop Monitoring" column in Table 9.2 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 H_2O. *[PTO 12105]*. If the pressure drop falls outside the range listed in Condition 9.C.6.(b)(ii), immediate corrective action shall be taken to return the pressure drop to the allowable range. *[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]*

(vii) *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]*

(viii) *Air Flow Rate.*

(1) Baghouse 345. 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]*

(2) Baghouse 578. Imerys shall monitor the one-minute block average air flow of Baghouse 578 in accordance with the District approved *Baghouse 578 Process Monitor Plan*. *[ATC 15804]*

(ix) *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]* 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]*

(x) *Hours of Operation*: The hours of operation for each baghouse shall be monitored using a non-resettable hour meter. *[ATC 15804]*

Table 9.1 Baghouses Subject to an Inspection and Maintenance Plan

Device Name	Imerys ID	District Device No	Federal Enforceability
Capture System			
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	PSWBH	136	ATC 10783
General Waste Baghouse	GWBH	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 9.2 Baghouses Requiring Sock Replacement During Scheduled Overhauls

Device Name	Imerys ID	District Device No	Type	Subject to Sock Replacement During Scheduled Overhaul
Crushing Plant Vent. BH	CRVBH	100	Enclosed	
Mill Ventilation Baghouse	11VBH	102	Enclosed	
345 Baghouse	345BH	108	Enclosed	
378 Baghouse	378BH	109	Enclosed	
978 Baghouse	978BH	110	Enclosed	√
578 Baghouse	578BH	119	Enclosed	
616 Ventilation Baghouse	616VBH	128	Enclosed	√
Recirculating System Ventilation Baghouse	RSVBH	135	Enclosed	√
Preseparator Waste Baghouse	PSWBH	136	Enclosed	√
General Waste Baghouse	GWBH	137	Enclosed	
Silicate Plant Feed Mix Baghouse	SPFMBH	138	Enclosed	√
Silicate Plant Lime Baghouse	SPLTBH	139	Enclosed	√
Silicate Plant Production Baghouse	SPPBH	141	Enclosed	√
Silicate Plant Ventilation Baghouse (Pack)	SPVBH	142	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	√
3 Bulk Bin Baghouse	3BBVBH	151	Enclosed	
Celite Analytical Filter Aid Baghouse	CAFABH	152	Open	√
Sackroom Baghouse	SRBH	153	Open	√
Soda Ash Baghouse	SABH	109452	Enclosed	
Experimental Plant Ventilation Baghouse	XBBH	5935	Open	√
3 Air Sifter Ventilation Baghouse	3ASBH	6471	Enclosed	
5 Air Sifter Ventilation Baghouse	5ASBH	6472	Enclosed	
6 Automatic Packing Station Baghouse (678)	678BH	103363	Enclosed	√
Silicate Plant Flash Dryer Baghouse	SPFDBH	103474	Enclosed	√

(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 and BLDS malfunction, maintenance, pressure drop and visible emission correction activities for all baghouses. The records shall include a malfunction summary specifying:

(1) Device identification name and District ID.

(2) Date of malfunction, preventive maintenance activity or pressure drop correction activity.

(3) Description of activity.

(4) Date and time taken to remedy the malfunction or perform maintenance, and name of person performing the maintenance.

(5) 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 – PM Control Devices Without a District Approved BLDS*

(1) Daily No Visible Emission Inspections. Imerys shall record whether 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.

(2) Weekly Method 22 Inspections. Imerys shall maintain records of each weekly Method 22 inspection pursuant to the requirements of Condition 9.C.6.(c)(iii)(2). including:

(a) Observer's name and affiliation.

(b) Date and time of each weekly Method 22 observation.

(c) Process unit(s) being observed including Device ID.

(d) Observer's position relative to the source.

(e) Observation duration.

(f) Whether visible emissions occurred, and cumulative amount of time visible emissions occurred during the observation; If visible emissions are detected, the following additional information shall be recorded:

1. The date, time, and description of the corrective action taken to eliminate any visible emissions and the name of the person performing the corrective action.

(g) If the baghouse is not in operation during that week, a notation in items (a) through (f) to that effect.
[ATC 15804]

(3) Quarterly 30 Minute Method 22 Inspections. Same recordkeeping as listed for the Weekly Method 22 Inspections.

(4) Quarterly EPA Method 9 Inspections - Imerys shall record the following for the readings obtained using 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]*

(iii) PM Control Devices with BLDS: Imerys shall maintain the following records for all PM control devices equipped with BLDS:

(1) Date and time of all routine maintenance and inspections conducted on each BLDS including the name of the facility representative responsible for maintaining each BLDS.

(2) The date and time of any alarm, including length of the alarm time, cause of the alarm, process unit name and Device ID with the alarm state, and visible emissions observations during and after the alarm.

(3) The date and time corrective action was completed to eliminate the cause of the alarm and the name of the person performing the corrective action.

(4) Cumulative alarm time for each BLDS based on the previous six-month rolling period.

(5) Records of BLDS downtime which include the date and time BLDS failure occurred, the Device ID and Device name of the PM control device associated with the failed BLDS, and the date and time the BLDS resumed operation. The DRE shall be calculated by dividing the BLDS operating hours each quarter by the PM control device actual operating hours each quarter.

(6) Records required by the District approved *BLDS Process Monitoring, Calibration and Maintenance Plan*. *[ATC 15804]*

(iv) *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]*

(v) *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

(vi) *Air Flow Rate* - Imerys shall continuously record the air flow rate for baghouse 345BH (Device ID 108) and the 578 Baghouse (Device ID 119). *[Ref: ATC 13544]*

(vii) *Hours of Operation*. The quarterly and annual hours of operation of each PM control device *[ATC 15804]*

(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)*

(ix) Daily records of the date and duration of all startups and shutdowns of each PM control device, including startups after a repair to fix an equipment breakdown or after a scheduled maintenance activity.

(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.

(h) Baghouse Leak Detection System Process Monitoring, Calibration and Maintenance Plan. Prior to the installation of each new BLDS, Imerys shall submit and obtain approval of an updated facility wide BLDS Process Monitoring, Calibration and Maintenance (PMCMP). The plan shall demonstrate compliance with the BLDS plan requirements specified in 40 CFR Part 60 Subpart OOO § 60.674 (d) and include the following:

(i) Device ID and name of the PM control device being monitored by each BLDS including permitted exhaust concentration limits.

(ii) Manufacturer specifications for each BLDS.

(iii) Stack diagram which includes the location of the BLDS probe installation for each PM control device.

(iv) Documentation that each BLDS system is certified by the manufacturer to be capable of detecting PM emissions at concentrations of 0.00044 gr/dscf or less.

(v) The audible and visual alarm setpoint and preset level for each BLDS and the alarm delay time as recommended by the manufacturer.

(vi) The baseline output of the BLDS including range and averaging period of the device. If a third-party DAS system is used to record the BLDS sensor output, provide details of the DAS system make, model and averaging periods.

(vii) Inspection, maintenance, and calibration intervals as recommended or required by the BLDS manufacturer.

Imerys shall not adjust the averaging period, alarm set point, or alarm delay time without first submitting an updated BLDS plan for District review and approval.

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) <u>Monitoring.</u>

(i) *Visual Emissions Inspections (Method 9) 7% and 10% Opacity* - For fugitive emissions from equipment listed in Conditions 9.C.7(a)(i) and (a)(ii) that are located outside a building, Imerys shall conduct quarterly one-minute visible emission inspection on each device. If visible emissions are detected Imerys shall immediately perform a Method 9 Inspection by a certified observer to obtain a reading of visible emissions. The inspection shall be conducted while the equipment is in operation. (PTO 8202, PTO 9616, PTO 9551, PTO 9193, PTO 12091, PTO 12208, PTO 12398, PTO 12105, PTO 13570, PTO 14039, PTO 14860, PTO Mod 5840-12)

(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) <u>Recordkeeping.</u>

(i) Visible Emission Inspections (Method 9) – For monitoring required by 9.C.7.(b)(i), Imerys shall record the results of the quarterly one-minute visual emission inspections, and if a Method 9 Inspection is triggered, the results of the Method 9 Inspection. For the visible emission inspections, the records shall include the date and time of the reading, name of the reader, the equipment name and device ID inspected, and the inspection results. For the Method 9 Inspections, the records shall include 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*]. In addition, the records of the visual emission inspections required by condition 9.C.7(c)(i) shall be provided to the District upon request.

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

Device Name	**Imerys ID**	**District Device ID**
Rotoclones		
Chromosorb Rotoclone	CROTO	150

(a) Emission Limits:

(i) *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:

(i) *Rotoclone Operation*. The equipment served by the rotoclone can only be in operation if the rotoclone is in operation. +*[Ref: 40 CFR 70.6]*

(ii) *Visible Emissions Restriction.* Imerys shall not cause or allow any visible emissions from the rotoclone, except as allowed during start-up. Start-up is defined as the interval necessary to reach stable operating conditions and shall in no case be longer than 45 minutes. Start-up includes start-up after a repair to fix an equipment breakdown or after a scheduled maintenance activity.

Imerys shall not be considered in violation of this condition if visible emissions are observed from the rotoclone and Imerys is in the process of implementing corrective actions to eliminate the visible emissions within 24 hours. To verify that the corrective actions were effective, Imerys shall complete a new Method 22 observation to ensure no visible emissions are present.

If Imerys, after taking all corrective actions, subsequently observes visible emissions, Imerys shall shut down the PM emitting equipment that vents into the control device until additional steps are taken to prevent the visible emissions. *[ATC 15804]*

(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) *Weekly Method 22 Inspections*. Imerys shall conduct a 6-minute Method 22 visible emissions inspection on the rotoclone using an observer trained in Method 22 at least once each calendar week. To the extent that multiple Method 22 observations can be conducted simultaneously, Imerys may observe multiple sources at the same time if all the sources are in the same field of view of the observer and appropriate records are kept for each observation. If the operator detects any visible emissions during the observation, the operator shall continue the observation on the source with visible emissions and stop the observation(s) on the additional sources(s). If the activity being observed is consistently a duration of less than six minutes, then the Method 22 observation shall be for the period in which the activity takes place.

(1) Imerys shall comply with the requirements of Condition 9.C.8.(b)(ii) if visible emissions are detected exiting the rotoclone at any time.

(2) Weekly Method 22 inspections are not required if the rotoclone is not operated during a calendar week, as verified through operational records maintained per Condition 9.C.8.(d)(ii)(7)

(iii) *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:

(i) *Malfunctions*. Imerys shall log malfunctions of the rotoclone and indicate the nature, date of, and duration of repair activity required to eliminate visible emissions.

(ii) *Weekly Method 22 Inspections*. Imerys shall maintain records of each weekly Method 22 inspection pursuant to the requirements of Condition 9.C.8(c)(ii) including:

(1) Observer's name and affiliation.

(2) Date and time of each weekly Method 22 observation.

(3) Process unit(s) being observed including Device ID.

(4) Observer's position relative to the source.

(5) Observation duration.

(6) Whether visible emissions occurred, and cumulative amount of time visible emissions occurred during the observation; If visible emissions are detected the information listed in C.8(d)(i) shall be recorded:

(a) The date, time, and description of the corrective action taken to eliminate any visible emissions and the name of the person performing the corrective action.

(7) If the rotoclone is not in operation during that week, a notation in items (1) through (6) to that effect.
[ATC 15804]

(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 Device ID
Mobile Plant		
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 Tansfer 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/PM_{10} 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/PM_{10} 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. 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.

(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.

Table 9.3 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)

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Table 9.4 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 storge 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 Tranfer 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

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(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.

(viii) Imerys shall monitor the hours per day the Mobile Plant is in operation.

(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.

(ix) Imerys shall record the daily and monthly and annual hours the Mobile Plant is operation.

(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 9.5 Imerys Throughput Limits (Dry unless otherwise indicated)

Equipment Limit	ATC	lb/hr	Tons/hr	Ton/Day[2]	Ton/Year[2]
#3 and #4 bulk bins semi-bulk stations	9193		8.5	204	74,460
#5 Bulk Bin Packing Ctr Filling Stations [3]	10241		12.5	300	109,500
#6 Bulk Bin Packing Ctr Filling Stations[3]	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
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 [4]	12091		10	--	--
Bag Packers 4AP-122A and 4AP-122B	12398		23	--	--
Semi-bulk Packers 5BB-132A and 5BB-132B	12398		13.2	--	--

Notes:

[1]For #7 System throughput limits see Section 9.C.5

[2]Dashes indicate no federally enforceable limits

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

[4]Milling circuit throughput as measured at the weigh bin (Device ID 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 station shall not operate more than 24 hrs/day and 8520 hrs/yr.

(b) Monitoring / Recordkeeping: Imerys shall monitor and 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) Daily, 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 (Device IDs 109822 and 109823) and of semi-bulk bag packers 5BB-132A and 5BB-132B (Device IDs 110526 and 110527).

(viii) The packing rate for Silicates Packer #1 (Device ID 11830) and Silicates Packer #2 (Device ID 113831) in dry short tons per day. *(PTO 13570).*

(c) 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 July 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 July 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]*

Source testing of the Mill Ventilation Baghouse (DID# 102) and the Silicate Plant Ventilation Baghouse (DID# 142) shall be conducted at least once every 5 years from the date of the last source test. Because these baghouses are currently part Group 2, which consists of five baghouses, where one baghouse must be tested every two years, and all baghouses in that group must be tested once before a baghouse in that group can be tested another time, the Mill Ventilation and Silicate Plant Ventilation baghouses should meet the five year source test schedule *provided no additional baghouses are added to that group*. [ATC 15804]

(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 9.6 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 and the Mill Ventilation Baghouse (DID# 102) and Silicate Plant Ventilation Baghouse (DID# 142) tested at least once every 5 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	110719	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 BH916 BH912	108935 108940 110203	Annual
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 one baghouses shall be tested every three years

Notes:

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

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Table 9.7 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.		EPA Method 1			
	Stack Gas Flow Rate		EPA Method 2 or 19			
	O_2	Dry, Mol. Wt	EPA Method 3			
	Moisture Content		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 O_2 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.

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Table 9.8 Source Test Requirements - 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)]
Silicates Boiler #1; Silicates Boiler #2, Silicates Plant Conveyor Dryer, Silicate Plant Flash Dryer	NO_x	ppmv, lb/hr	EPA Method 7E or ARB Method 100, and EPA Method 2 & 4, or 19
	ROC	ppmv, lb/hr	EPA Method 18
	CO	ppmv, lb/hr	EPA Method 10 or ARB Method 100
	SOx[(d)]	ppmv, lb/hr	EPA Method 6
	PM	ppmv, lb/hr	EPA Method 5
	Sampling Point Det.		EPA Method 1
	Stack Gas Flow Rate		EPA Method 2 or 19
	O_2	Dry, Mol. Wt	EPA Method 3
	Moisture Content		EPA Method 4
Fuel Gas	Fuel Gas Flow Rate		Fuel Gas Meter[(f)]
	Higher Heating Value	BTU/scf	ASTM[(j)] D 1826 or 3588
	Total Sulfur Content[(h)]		ASTM[(j)] D 1072 or 5504[(i)]
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 O_2 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)] SOx 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). No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer.

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

[(g)] Boiler #1 shall be tested for NOx only; Boiler #2 shall be tested for NOx and CO; the Silicates Plant Conveyor Dryer shall be tested for NOx and SOx; and the Silicates Plant Flash Dryer shall be tested for PM only.

[(h)] Sulfur content is only required for units not run on utility purchased gas. For units rated at 5 MMBtu/hr or greater, heating value is required in all cases, but gas composition not required if Method 2 is used for stack flow.

[(i)]Total sulfur content fuel samples shall be obtained using EPA Method 18 with Tedlar Bags (or equivalent) equipped with Teflon tubing and fittings. Turnaround time for laboratory analysis of these samples shall be no more than 24 hours from sampling

[(j)]The most recent version of the ASTM method shall be used, unless otherwise approved by the District.

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Table 9.9 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_2O 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/PM10	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, O_2, dry MW, CO_2, 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 $PM:PM_{10}$ 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.

Imerys\Permits\Part70 Permits\Part 70 PTO 5840 (2022)\PostR6TableChanges\MainPlantTableChanges\5840-R7 Part 1-NonEmissionTablesWPostR6W15804.xlsx

Table 9.10 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	NOx- 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_2O
			Scrubber liquid line pressure	psig
109866	Venturi/Packed Bed Tower	Inlet & outlet	SO_x & H_2SO_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

<u>Site Specific Requirements</u>

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

b. For NO_X, CO and O_2, 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.

c. PM is total suspended particulates; and use of $PM:PM_{10}$ ratio = 1 allows testing for PM only.

d. 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.

e. At least one "worst-case" 7 System Venturi Scrubber/Packed Bed Tower source test per year must include simultaneous inlet and outlet PM/PM_{10} and SO_x testing. All other testing may, at Imerys's discretion, be outlet only testing.

<u>Table Notes</u>

ROC = Reactive Organic Compounds per District Rule 102

Imerys\Permits\Part70 Permits\Part 70 PTO 5840 (2022)\PostR6TableChanges\MainPlantTableChanges\5840-R7 Part 1-NonEmissionTablesWPostR6W15804.xlsx

(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 more than 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/PM_{10}, 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 (e-mail to sourcetest@sbcapcd.org) 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 (e-mail to sourcetest@sbcapcd.org)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 (e-mail to sourcetest@sbcapcd.org) 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 Rotoclone): 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/PM_{10} 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), (v), (vi) and (vii).

(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 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 Engines*

(i) The monthly and annual hours of operation for each the Powder Mills Emergency Natural Gas ICE (Device ID 8069) and the Prime Diesel Water Pump Engine (Device ID 391449).

(ii) The monthly and annual hours of operation the Emergency Lake Pump engine (Device 8919) was in operation for maintenance and testing and emergency use.

(iii) Results of the Prime Diesel Water Pump Engine portable analyzer monitoring required by Condition C.1.

(iv) IC engine inspection and maintenance logs for the Prime Diesel Water Pump engine shall be maintained as required by Condition C.1 and Rule 333 Inspection and Maintenance Plan reporting requirements.

(v) Results of quarterly Method 9 visible emissions inspections if triggered by 9.C.1.(c)(iv).

(b) *Combustion Equipment – Silicates Boilers*

(i) *Fuel Volumes* - The monthly and annual usage of each fuel type used by each boiler. For Boiler #1 the report shall include the date fuel type changed 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) *Hours of Operation* - The hours of operation per month and calendar year summarized for each boiler. *[ATC 16046]*

(iv) *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.

(v) *Fuel Gas Data* – If the District default Higher Heating Value is not used, the higher heating value used and corresponding lab analysis. *[ATC 16046]*

(vi) *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 Units*

(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.

(iv) *Fuel Volumes* - The volume of fuel gas used each calendar month (in units of standard cubic feet) in the Silicates Conveyor Dryer (DID# 000143) and the Silicates Flash Dryer (DID# 000140) and the number of days in each month that the units operated shall be reported. The fuel use data shall also be totaled for the year.

(v) Monthly Heat Input Records – Low Use Threshold. Imerys shall submit the monthly heat input records for the Silicates Conveyor Dryer (DID# 000143) and the Silicates Flash Dryer (DID# 000140) required to be maintained by Condition 9.C.3.(d)(v).

(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) 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.

(ii) Daily D-Family crude feed rate of the 7 System in units of weight percent, with the highest daily rate each month flagged.

(iii) 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.

(iv) The volume (in units of gallons) of diesel fuel burned in the furnace and kiln burners daily and summarized monthly and annually.

(v) The number of days and hours the furnace and kiln burners were fired on PUC quality natural gas monthly and annually.

(vi) The number of days and hours the furnace, and kiln burners were fired on diesel fuel monthly and annually

(vii) Diesel fuel vendor analysis or other documentation to demonstrate compliance with permit Condition 9.C.5.(b)(v) of this permit.

(viii) 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.

(ix) 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.

(x) Dates and daily number of hours System 7 operated in kiln bypass mode.

(xi) 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.

(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. These results should be submitted in accordance with the requirements of the District approved *System 7 Portable Analyzer Monitoring Plan.*

(xiii) Weekly Method 22 Observations Summary Log. Imerys shall submit a summary log detailing the results of each weekly Method 22 inspection for Venturi Scrubber/Package Bed Tower. The summary log shall include if Venturi Scrubber/Packed Bed Tower was not in operation during that week. If in operation during that week, the date and time of each weekly Method 22 observation and if visible emission were detected. If visible emissions were detected, the full Method 22 inspection record required by Condition 9.C.5.(d)(xii). shall be attached to the summary log.

(f) *Baghouses*.

(i) *PM Control Devices without BLDS:*

(1) *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.

(2) *Weekly Method 22 Observations Summary Log.* Imerys shall submit a summary log detailing the results of each weekly Method 22 inspection for all PM control devices not equipped with a BLDS. The summary log shall include (1) the baghouse name and District ID, (2) if the baghouse was not in operation during that week. (3) The date and time of each weekly Method 22 observation. (4) If visible emissions were detected, the full Method 22 inspection record required by Condition 9.C.6.(d)(ii)(2) shall be attached to the summary log.

(3) *Quarterly 30 Minute Method 22 Inspection.* The results of the quarterly readings obtained using USEPA Method 22, include (1) the baghouse name and District ID, (2) if the baghouse was not in operation during that

week. (3) The date and time of each weekly Method 22 observation. (4) If visible emissions were detected, the full Method 22 inspection record required by Condition 9.C.6.(d)(ii)(2).

(4) *Quarterly Method 9 Inspection*. For all enclosed baghouses, the results of each visible emission inspections obtained using 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)*

(ii) *PM Control Devices with BLDS*: Imerys shall submit the following records for all PM control devices equipped with BLDS:

(1) Date and time of all routine maintenance and inspections conducted on each BLDS including the name of the facility representative responsible for maintaining each BLDS.

(2) The date and time of any alarm, including length of the alarm time, cause of the alarm, process unit name and Device ID with the alarm state, and visible emissions observations during and after the alarm.

(3) The date and time corrective action was completed to eliminate the cause of the alarm and the name of the person performing the corrective action; and

(4) Cumulative alarm time for each BLDS based on the previous six-month rolling period.

(5) Records of BLDS downtime which include the date and time BLDS failure occurred, the Device ID and Device name of the PM control device associated with the failed BLDS, and the date and time the BLDS resumed operation.

(6) The quarterly operating hours of each BLDS and the calculated quarterly DRE percentage per Condition 9.C.6.(d)(iii)(5).

(7) If the visible emissions are detected or a BLDS alarm is triggered during a PM control device start-up interval per the provision of Condition 9.C.6.(b)(xvi), Imerys shall flag the event as having occurred during start-up and include records of baghouse start-up date and time per Condition 9.C.6.(d)(ix). *[ATC 15804]*

(iii) *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).

(iv) *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)

(v) *Air Flow Rate.* The peak (second-by-second) air flow rate of baghouse 345BH, reported on a weekly basis.

(vi) *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]*

(vii) *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) *Rotoclone*

Weekly Method 22 Observations Summary Log: Imerys shall submit a summary log detailing the results of each weekly Method 22 inspection for Rotoclone. The summary log shall include if Rotoclone was not in operation during that week. If in operation during that week, the date and time of each weekly Method 22 observation and if visible emission were detected. If visible emissions were detected, the full Method 22 inspection record required by Condition 9.C.8.d.ii. shall be attached to the summary log.

(i) *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*. The hours the Mobile Plant is operation per month and year.

(j) *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.

(k) *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 (Device IDs 109822 and 109823) and of semi-bulk bag packers SB132A and SB132B (Device IDs 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).*

(l) *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.

(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 (last updated August 18, 2008; an update per ATC 15077 is pending).
(b) Mobile Plant Offsite Fugitive Dust Monitoring Plan (approved August 18, 2008)
(c) Mobile Plant Crude Ore Fugitive Emission Control Plan (approved August 4, 2008)
(d) Mobile Plant Hardware and Software Plan (approved November 4, 2008)
(e) Milling Circuit Baghouse Inspection and Maintenance Plan (approved October 28, 2008)
(f) Silos Baghouse Inspection and Maintenance Plan (approved March 11, 2008)
(g) Bagging and Packing Baghouse Inspection and Maintenance Plan (approved March 5, 2008)
(h) 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)
(i) Diesel and Gasoline Engine NOx and Particulate Matter Maintenance Plan (approved March 22, 2001)
(j) Rule 333 Fuel Use Monitoring Plan (approved July 20, 1993)
(k) Emergency Episode Plan (approved October 31, 2000)
(l) Fugitive Dust Monitoring Plan (approved August 8, 2000)
(m) Baghouse Inspection and Maintenance Plan (approve March 11, 2008)
(n) Baghouse 5DC-01 Inspection and Maintenance Plan (Approved 4/5/2012). *[PTO 13570]*
(o) *System 7 Process Monitor Calibration and Maintenance Plan* (Approved 8/22/2008). *(PTO 12105)*
(p) *System 7 Baghouse Monitoring, Inspection and Maintenance Plan* (Approved 3/4/2008) *[PTO 12105]*
(q) *Crude Ore Fugitive Emission Control Plan* (Approved 2/25/2008) *[PTO 12105]*
(r) *System 7 Portable Analyzer Monitoring Plan* (Approved January 8, 2015). *[PTO 12105]*
(s) *Well 30 Engine Inspection and Maintenance Plan* (Approved October 10, 2017) *[ATC 14984]*.
(t) *AB617 Fuel Use Monitoring Plan for the Silicates Conveyor Dryer (DID# 000143) and the Silicates Flash Dryer (DID# 000140)*.
(u) *AB 617 PM Control Device Compliance Plan (PM control devices) [ATC 15804]*
(v) *Baghouse Leak Detection Process Monitoring, Calibration and Maintenance Plan [ATC 15804]*
(w) *Baghouse 578 Process Monitor Plan [ATC 15804]*

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 Device ID**
Combustion Equipment		
Silicate Plant Boiler #1	SPB1	81

(a) Emission Limits: Mass emissions from Boiler #1 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 always use PUC-quality natural gas 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) *Heat Input Limits* - Imerys shall not operate the Boiler #1 at heat inputs exceeding the values listed in Table 9.14.

Table 9.11 Silicates Plant Boiler Heat Input Limits

Device Name	Fuel	Hourly Heat Input Limit	Annual Heat Input Limit
		(MMBtu/hr)	(MMBtu/yr)
Combustion Equipment			
Silicate Plant Boiler #1	PUC Natural Gas	15.5	8,999 - D_{btu}
Silicate Plant Boiler #1	Fuel oil #6	15.5	2,976

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.

(iii) *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.

(iv) *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 Device ID
Combustion Equipment		
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 Admin Building Emergency Standby Engine listed above 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

(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 diesel equipment permitted herein is subject to the following operational restrictions listed below. Emergency use operations, as defined in Section (d)(25) of the ATCM[10], have no operational hours limitations.

(i) *Maintenance & Testing Use Limit:* The Admin Building emergency standby diesel-fueled CI engine subject to this permit shall not be operated for more than 20 hours per year for maintenance and testing[11] 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) *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.

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[10] 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
[11] "maintenance and testing" as defined in the ATCM

(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.

(v) *Permanent Engine Replacements.* Any emergency/standby (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 that 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.

(vi) *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.

(vii) *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.

(viii) *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 for the Admin Building emergency standby diesel-fueled CI engine. 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.

(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) First Half and Second Half Reports: Maximum (peak) production rate (in lbs/hour or tons/hour) achieved for the following *[Ref: PTO 5840]*:
- (i) the central natural products system (also called the Snow Floss Plant)
- (ii) the synthetic silicates production system
- (iii) the mortar production system
- (iv) the Chromosorb production system
- (v) the Celite Analytical Filter Aid (CAFA) system

(b) First Half and Second Half Reports: 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) First Half and Annual Reports: For each fuel burned in the synthetic silicates dryers, the type, amount (monthly and annually) *[Ref: PTO 5840, PTO 9240-02]*:

(d) First Half and Second Half Reports: Breakdowns and variances reported/obtained per Regulation V along with the excess emissions that accompanied each occurrence.

(e) Annual Report: Tons per year totals (permitted equipment) of all criteria pollutants (by each emission unit).

(f) Annual Report: 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 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: June, 2025
Semi-Annual reports are due by March 1st and September 1st of each year
This permit supersedes PTO 5840-R6 Main Permit, PTO 15683, PTO Admin 15390, PTO Mod 5840-12, PTO Mod 5840-13, ATC 15804, ATC 16046.

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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.

<u>Reference A - Combustion Engines</u>

1. The maximum operating schedule is in units of hours.

2. Default values for diesel fuel:
   a. Density = 7.4 lb/gal
   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
   b. HHV = 19,036 Btu/lb (150,000 Btu/gal)

4. Default values for gasoline:
   a. Density = 6.5 lb/gal
   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):

$$SO_x\ (as\ SO_2) = 0.169\ *(ppmvS)*HHV$$

See spreadsheet for calculation results.

Reference B – Greenhouse Gases

For natural gas combustion the emission factor is:

(53.02 kg CO_2/MMbtu) (2.2046 lb/kg) = 116.89 lb CO_2/MMBtu

(0.001 kg CH_4/MMBtu) (2.2046 lb/kg)(21 lb CO_2e/lb CH4) = 0.046 lb CO_2e/MMBtu

(0.0001 kg N_2O/MMBtu) (2.2046 lb/kg)(310 lb CO_2e/lb N_2O) = 0.068 lb CO_2e/MMBtu

Total CO2e/MMBtu = 116.89 + 0.046 + 0.068 = 117.00 lb CO_2e/MMBtu

For diesel fuel combustion the emission factor is:

(73.96 kg CO_2/MMbtu) (2.2046 lb/kg) = 163.05 lb CO_2/MMBtu

(0.003 kg CH_4/MMBtu) (2.2046 lb/kg)(21 lb CO_2e/lb CH4) = 0.139 lb CO_2e/MMBtu

(0.0006 kg N_2O/MMBtu) (2.2046 lb/kg)(310 lb CO_2e/lb N_2O) = 0.410 lb CO_2e/MMBtu

Total CO2e/MMBtu = 163.05 + 0.139 + 0.410 = 163.60 lb CO_2e/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		204									

	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 DeviceNo	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**							
Equipment Item	**Fuel**	**District DeviceNo**	**NOx**	**ROC**	**CO**	**SOx**	**PM**	**PM10**	**Units**	**References**
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 DeviceNo**	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. Baghouse Specifications Main Plant and Celpure (for entire list of facility equipment see permit Part II)

Table 10.7 Lompoc Baghouse Specifications

				Bag Specifications									
Device Name	**Imerys ID**	**District Device No**	**General Process Description**	**Manufacturer1**	**Pos./ Neg**	**No. of Socks**	**Diam. (in)**	**Length (ft)**	**Total Cloth Area (ft2)**	**Air Flow (cfm)**	**Air/ Cloth (ratio)**	**Fabric Material**	**Cleaning Method**
Crushing Plant Vent. BH	CRVBH	100	Ventilation crushers, # 1,2,3,4,5,6 crude bins, belts, 6crude 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-Pulsnire	N	960	4.50	8.00	9,048	36,600	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	43,350	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-bck
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
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
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

				Bag Specifications									
Device Name	Imerys ID	District Device No	General Process Description	Manufacturer1	Pos./Neg	No. of Socks	Diam. (in)	Length (ft)	Total Cloth Area	Air Flow (cfm)	Air/Cloth (ratio)	Fabric Material	Cleaning Method
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	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	CPVBHS	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	12	21.60	3.00	245	1,155	3.26	sintered Polyethylene	pulse jet
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 cylcone CY914	Airjet SA	N	280	5.00	10.00	3,665	13,243	1.80	polyester felt	pulse jet
7 Kiln Bypass BH717	BH717	110719	7 Kiln Bypass Ventilation	0	N	256	6.00	10.00	4,021	12,290	3.10	Polyester Micro-Denier, P-84; fiberglass woven media with PTFE membrane, Polyox/Basalt, Aramid	Pulse jet

Table 10.7 Lompoc Baghouse Specifications Continued

				Bag Specifications									
Device Name	Imerys ID	District Device No	General Process Description	Manufacturer1	Pos./ Neg	No. of Socks	Diam. (in)	Length (ft)	Total Cloth Area (ft2)	Air Flow (cfm)	Air/ Cloth (ratio)	Fabric Material	Cleaning Method
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 (BH912)	BH912	110203	Milling Circuit classifier	Mikropul	N	320	4.63	10.00	3,875	13,000	1.68	PTFE coated polyester	pulse jet
Packing Sta BH125	BH125	110525	Packing Station	Donaldson	N	200	20.00	5.00	5,236	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	1,665	3,813	2.50	MicroTex 16oz Polyester with PTFE	Reverse air
7 Dry End Baghouse BH777	BH777	110721	7 Dry End Ventilation	0	N	702	6.00	10.00	11,027	31,520	2.90	Aramid filter fabric, P-84; fiberglass woven media with PTFE membrane; or Polyox/Basalt (per	Pulse jet
7 Dry End Baghouse BH788	BH788	110722	7 Dry End Ventilation	0	N	460	5.00	8.00	4,817	11,404	2.60	MicroTex 16oz Polyester with PTFE	Reverse air
7 Dry End Baghouse BH789	BH789	110723	7 Dry End Ventilation	0	N	460	5.00	8.00	4,817	11,404	2.60	MicroTex 16oz Polyester with PTFE	Reverse air
7 Wet End Baghouse BH721	BH721	110724	7 Wet End Ventilation	0	N	16	5.00	6.00	126	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 10.3

ATC/PTO 15804: Depermitting of four open sock baghouses:

- Dry End BH (Device ID 112)
- Snow Floss Plant BH (Device ID 133)
- Dry End Ventilation BH (Device ID 125)
- Super Fine Super Floss BH (Device ID 126)No ATCs have been issued and completed since PTO 5840-R6 that removed permitted emission generating equipment from service.

ATC/PTO 16046: Derpemitting Silicates Boiler #2 (Device ID 00081)

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

- 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.

Part II

Draft

IMERYS FILTRATION MINERALS. INC.
CELPURE PLANT

2500 Miguelito Road, Lompoc, California

PART II– CELPURE PLANT

Table of Contents

SECTION **PAGE**

LIST OF FIGURE, TABLES, and EQUATIONS

Table/Figure **Page**

ABBREVIATIONS/ACRONYMS

AP-42	USEPA's *Compilation of Emission Factors*
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_2S	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 an nonattainment area for the state ozone ambient air quality standard. The County is also designated a nonattainment area for the state PM_{10} 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 includes 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 VOC[1], NO_x, SO_x, CO, PM, and PM_{10}. 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 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.

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 1^{st} 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-R6 in May 2019, the following NSR permitting actions have been issued for the Celpure Plant:

Permit	Date Issued	Permit Change
PTO 14667	Issuance of this permit	Change in conveyers
PTO 15077	2/13/2020	Additional wet side equipment including leach tanks, new flash dryer and flash dryer baghouse, and related equipment
PTO 15077-01	9/28/2022	Derate the flash dryer flash dryer from 6.5 to 4.8 MMBut/hr.
PTO 15176	9/26/2019	Replace two out of the three 1st Stage Dryer Burners with larger units.
PTO 15538	10/4/2021	Permit an increase in the sulfur content of the DE feed.
PTO 15544	Issuance of this permit	Replace and increase the size of the Package Boiler from 3.78 to 8.800 MMbtu/hr.
PTO 15683	12/31/2021	Replace the soda ash weigh feeder with a larger unit.
PTO 15882	Issuance of this permit	Replace a cyclone.
PTO 15804	Issuance of this permit	Implement BARTC per AB 617 on PM control equipment
PTO-Mod 5840-12	Issuance of this permit	Clarification of visible emission inspection requirements
PTO Mod 5840-13	10/5/2023	Implement AB 617 low use limits on Silicates plan dryer.

In addition to these permits being added to the PTO/Part 70 5840-R7 reevaluation permit the permit conditions for ATC/PTO 14848 were also added. This should have happened in the previous permit reevaluation (R6). While the device information (serval new storage silos) was added to R6 the permit conditions were not.

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 SOx 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. Justin Phillips
Site Manager - Lompoc
Imerys Filtration Minerals, Inc.
2500 Miguelito Road
Lompoc, CA 93436

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, Device ID 108409) is used to transport the DE into the processing building area. The crude bin (CP3, Device ID 106227) stores sized DE for the plant and is ventilated by the crude bin baghouse (CP6/DC1, Device ID 8073). The hammermill (CP2, Device ID 106226) beside the loading station sizes the raw ore and is ventilated to the crude bin baghouse. 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, Device ID 106232) 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, Device ID 106233) 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, Device ID 106234) 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, Device ID 106235) for disposal via the flotation tailings pump to the existing Silicates Plant wastewater system. Product passes as a slurry to the dewatering filter (CP13, Device ID 106262) system at which soda ash and flocculant solutions may be added. The cake from the dewatering filter is conveyed to the 4.800 MMBtu/hr 1st stage (flotation) dryer (CP14, Device ID 8920). The 1st stage dryer is ventilated by the 1st stage (flotation) dryer baghouse (CP15, Device ID 8082). The 1st stage dryer baghouse, in turn, vents to the 350 scrubber (CP22, Device ID 106243).

The product passes from the 1st stage dryer (CP14, Device ID 8920) through a dispersion screen (CP16) and is then air conveyed to the kiln feed cyclone (CP17 106240). Soda ash is added to the air stream prior to the kiln feed cyclone, which feeds into the kiln feed bin (CP19, Device ID 106241), all of which is ventilated by the kiln feed (calciner surge) bin baghouse (CP18, Device ID 8075). From the kiln feed bin screw, material passes to the kiln rotary feed screw into the 2.640 MMBtu/hr kiln (calciner) (CP20, Device ID 8921) fired exclusively on natural gas. The kiln exhaust is ventilated first to the kiln exhaust (calciner) baghouse (CP21, Device ID 8083) for particulate removal and then to the 370 scrubber (CP56 , Device ID 106242) 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/DC7, Device ID 8076). Cooled calcined and flux-calcined material is directed to a product mix tank (CP26, Device ID106246) where it is slurried with water. (Alternatively, the product can be packed in bags). The mix tank is ventilated to the flash cooler baghouse.

The slurry is directed to a one of three leach tanks where it is mixed with sulfuric acid and heated with steam from a 8.800 MMBtu/hr package boiler (Device ID 394769) fired exclusively on natural gas. Three leach tanks and downstream leach slurry storage tank (CP28, Device ID 106248) are ventilated to the 390 scrubber(Device ID 391804) . 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, Device ID106251) and then dried in a 3.200 MMBtu/hr 2nd stage dryer (CP31, Device ID 8922) fired exclusively on natural gas. Particulates of drying loop emissions are controlled by the 2nd stage dryer exhaust baghouse (BH420, Device ID 8077)).

Product from the 2nd stage dryer is conveyed via a dispersion fan through the 4.333 MMBtu/hr Flash Dryer which is ventilated by the Flash Dryer Baghouse before entering the packaging station cyclone (CP33, Device ID 106252), a rotary product dispersing screen (CP34, Device ID 106253) and discharged into the packer bin (CP35, Device ID 106254). The manual bag packing station (CP36, Device ID106255) is able to pack bags and drums and is ventilated to the packing station baghouse (CP37, Device ID 8078).

A 50 horsepower diesel-fired ICE (CP46, Device ID 103521)-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, Device ID106240). 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, Device ID 106238) or to a soda ash mill (CP41, Device ID 106239). The soda ash bin is ventilated to the soda ash bin baghouse (CP42, Device ID 8074). 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, Device ID 106238) and then discharged to the dewatering filter feed tank. A bag breaking (refeed) station (CP23, Device ID 106244) 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 8079). The refeed station feeds the refeed pump packer (CP55 106249).

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.xxxx

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.

California Assembly Bill 617, codified in Sections 39607.1, 40920.8, 42411, 42705.5, and 44391.2 of the California Health and Safety Code, requires facilities subject to California Greenhouse Gas Cap and Trade, and located in specified low-income areas, comply with an expedited Best Available Retrofit Control Technology implementation schedule. Imerys Filtration Minerals, Inc. is one such facility and was required to meet BARCT for particulate matter control. The additional emission control requirements were implemented through an Authority to Construct permit (ATC 15804). Because that permit action was implemented through District New Source Review Regulation VIII, which is federally enforceable, the additional emission control requirements required by AB 617 are federally enforceable.

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

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 constructional, 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 constructional, 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 the1st 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:

[2] Wet material processing includes screening operations which removes unwanted material or 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.

3.2.4.

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 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.12 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 SO_2 (by volume) and 0.3 gr/scf (at 12% CO_2) 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 H_2S 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 H_2S) 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 323.1 - Architectural Coatings: This rule sets standards for the application of architectural coatings convering a broad spectrum of coating application. The primary coating standard that will apply to the plant is 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 323.1 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 if 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 342 – Boilers, Steam Generators, and Process Heaters (5 MMBtu/hr and greater): Rule 342 sets emission standards for external combustion units with a rated heat input of 5.0 MMBtu/hr and greater. The Celpure Plant has one boiler that is subject to this rule: The Package Boiler. This boiler was replaced with a Rule 342 compliant unit during 2021 (device ID 394769).

Rule 361 - Boilers, Steam Generators, and Process Heaters (Between 2 – 5 MMBtu/hr): This rule sets emission standards for external combustion units with a heat input at 2.0 up to 5.0. The Celpure plant has four combustion units this heat input range: 1st and 2nd Stage Dryers, Flash Dryer, and Kiln (calciner). However, section B.1.a of Rule 361 exempts combustion equipment where the products of combustion come into direct contact with the materials being heated. These four units the exemption criteria and are not subject to Rule 361 requirements.

Rule 505 - Breakdown Conditions: This rule describes the procedures that Imerys must follow 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 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 PM_{10} ambient air quality standards. The precursor pollutants of PM_{10} 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.

This Rule was repealed with the NSR Rule revisions approved by the District Board on August 25, 2016. The provisions of Rule 803 were reorganized and relocated to existing Rules in Regulation VIII.

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: See Part 1 of PT-70 PTO 5840-R7 for a list of variances issued to Imerys since the last permit renewal.

3.5.2 Violations: See Part 1 of PT-70 PTO 5840-R7 for a list of variances issued to Imerys since the last permit renewal.

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**
RULE 101: Compliance by Existing Installations	All emission units	Emission of pollutants	June 1981
RULE 102: Definitions	All emission units	Emission of pollutants	June 21, 2012
RULE 103: Severability	All emission units	Emission of pollutants	October 23, 1978
RULE 201: Permits Required	All emission units	Emission of pollutants	June 19, 2008
RULE 202: Exemptions to Rule 201	Applicable emission units	Insignificant activities/emissions, per size/rating/function	June 21, 2012
RULE 203: Transfer	All emission units	Change of ownership	April 17, 1997
RULE 204: Applications	All emission units	Addition of new equipment of modification to existing equipment.	April 17, 1997
RULE 205: Standards for Granting Permits	All emission units	Emission of pollutants	April 17, 1997
RULE 206: Conditional Approval of Authority to Construct or Permit to Operate	All emission units	Applicability of relevant rules	October 15, 1991
RULE 207: Denial of Applications	All emission units	Applicability of relevant rules	October 23, 1978
RULE 208: 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
RULE 212: Emission Statements	All emission units	Administrative	October 20, 1992
RULE 301: Circumvention	All emission units	Any pollutant emission	October 23, 1978
RULE 302: Visible Emissions	All emission units	Particulate matter emissions	June 1981
RULE 303: Nuisance	All emission units	Emissions that can injure, damage or offend.	October 23, 1978
RULE 304: PM Concentration – North Zone	Each PM source	Emission of PM in effluent gas	October 23, 1978
RULE 306: Dust and Fumes – North Zone	All emission units	Emissions of particulate matter	August 1989

Generic Requirements	**Affected Emission Units**	**Basis for Applicability**	**Adoption Date**
RULE 309: Specific Contaminants	All emission units	Combustion contaminants	October 23, 1978
RULE 311: Sulfur Content of Fuel	All combustion units	Use of fuel containing sulfur	October 23, 1978
RULE 317: Organic Solvents	Emission units using solvents	Solvent used in process operations.	October 23, 1978
RULE 321: Solvent Cleaning Operations	Emission units using solvents	Solvent used in process operations.	June 21, 2012
RULE 322: Metal Surface Coating Thinner and Reducer	Emission units using solvents	Solvent used in process operations.	October 23, 1978
RULE 323: Architectural Coatings	Paints used in maintenance and surface coating activities for paints made before Jan 1, 2015.	Application of architectural coatings.	November 15, 2001
RULE 323.1: 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
RULE 324: Disposal and Evaporation of Solvents	Emission units using solvents	Solvent used in process operations.	October 23, 1978
RULE 353: Adhesives and Sealants	Emission units using adhesives and sealants	Adhesives and sealants use.	June 21, 2012.
RULE 505 SECTIONS A, B1, D: Breakdown Conditions	All emission units	Breakdowns where permit limits are exceeded or rule requirements are not complied with.	October 23, 1978
RULE 603: Emergency Episode Plans	Stationary sources with PTE greater than 100 tpy	Imerys Lompoc is greater than 100 tpy.	June 15, 1981
REGULATION VIII: New Source Review	All emission units	Addition of new equipment of modification to existing equipment. Applications to generate ERC Certificates.	August 25, 2016
RULE 810: 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
REGULATION XIII (RULE 1301): General Information for Part 70 Operating Permits	All emission units		August 25, 2016
REGULATION XIII (RULES 1302 - 1305): 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
RULE 326: 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
RULE 329: Cutback Asphalt Paving Materials	Maintenance and paving of roads the facility	Use of cutback asphalt for paving	Feb 25, 1992
RULE 342: Boilers, Steam Generators, and Process Heaters.	Package Boiler	Rated at 5 MMBtu/hr and greater	June 20, 2019
RULE 360: 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
RULE 361: 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
RULE 901: 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
RULE 210: Fees	All emission units	Administrative	March 17, 2005
RULE 310: Organic Sulfides	All emission units.	Odorous sulfide emissions	January 12, 1976
RULE 352: Natural Gas-Fired Fan-Type Central Furnaces and Small Water Heaters	All emission units,	Rated less than 75,000 Btu/hr	October 20, 2011
RULES 501-504: Variance Rules	All emission units	Administrative	October 18, 1971
RULE 505 SECTIONS B2, B3, C, E, F, G: Breakdown Conditions	All emission units	Breakdowns where permit limits are exceeded or rule requirements are not complied with.	October 23, 1978
RULES 506-519: 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 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, a 1st Stage Dryer at 4.8 MMBut/hr, a 2nd Stage Dryer at 3.2 MMBtu/hr, a Flash Dryer at 4.33 MMBtu/hr, and one package boiler rated at 8.80 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 and 2nd Stage Dryer 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.

Emission factors for the package boiler are based on Rule 342 for NOx and CO and USEPA AP-42 Tables 1.4-1 and 1.4-2 for ROC and PM.

The emission factors for the 1st Stage Dryer came from a combination of vender warranties and USEPA AP-42 TABLES 1.4-1 AND 1.4-2. That is the 1st Stage Dryer is comprised of three burners. The USEPA tables cited above were used for one burner at 1.6 MMBtu/hr and for ROC and PM for the other two burners. The NOx and CO emission factors for the other two burners at 1.6 MMBtu/hr each were based on vender warranties at 0.0488 lbs/MMBtu/hr for NOx and 0.2971 lbs/MMBtu for CO. Hence, the emission factors in Table 5.2 for the 1st Stage Dryer are based on a combination of USEPA emission tables and vender warranties for NOx and CO.

The SO_x emission factor for all the external combustion equipment 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, lb/day = Engine Rating (bhp) * EF (g/bhp-hr) * Daily Hours (hr/day) * (lb/453.6 g)
E2, tpy = Engine Rating (bhp) * EF (g/bhp-hr) * Annual Hours (hr/yr) * (lb/453.6 g) * (ton/2000 lb)

4.3. Baghouse $PM/PM_{10}/PM_{2.5}$ 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 OOO. In addition, the baghouse treating calcining kiln emissions is subject to NSPS Subpart UUU. The Subpart OOO 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 (°F)	Fabric
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
Flash Dryer Baghouse	391814	yes	Neg	1000°	Ceramic fabric

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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.

<u>Baghouses Exceeding Flow Rate and Grain Loading Limit</u>. Since issuance of ATC No. 9757 Imerys has experienced difficulties in successfully meeting the PM/PM_{10} emission limits for several of the Celpure plant baghouses. Source test data have periodically have shown minor excursions above the permitted PM/PM_{10} 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/PM_{10} 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/PM_{10} 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 (Calciner 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

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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. The baghouses collect all dust from the equipment it serves. The potential to emit calculations assume no fugitive emissions. All Celpure baghouses operate 24 hours per day. The PM_{10} 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/PM_{10} 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/PM_{10} 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 8,760 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. SOx 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. SOx emissions are calculated using the following equations for uncontrolled and controlled emissions:

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

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

Equation 4.1 Uncontrolled SOx emissions – lb/day

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

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

Equation 4.2 Uncontrolled SOx emissions- ton/year

Where:

$U_{1st\ stage}$ = maximum uncontrolled emission rate of 1st 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 lbs_S per $lb\text{-}mol_S$)
M_R = molar ratio (1.0 $lb\text{-}mol_{SO2}/lb\text{-}mol_S$)
MW_{SO2} = mole molecular weight of sulfur dioxide (64 lb_{SO2} per $lb\text{-}mol_{SO2}$)
F_y r= 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 SO_2 Scrubber Emission Equation Variables

Variable	Value	Units	Reference
F_{hr}	1500	lb DE/hr	Imerys 6-17-98 letter, pg 1.
F_{yr}	4,023.4	tons DE/year	ATC 15060
$C_{drier\ feed}$	0.01749	lb S/lb of dry DE	ATC 15538
C_{kiln}	0.01275	lb S/lb of dry DE	ATC 15538
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 SOx 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 SO_2 Emissions: For a discussion of how PTE is calculated see discussion at 4.6.1 "Calculation Methods." Imerys has historically had problems with SO_2 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 two increases in the sulfur content of the crude DE.

Unit	ATB 9757 (2001) (lb Sulfur/lb DE)	ATC 14161 (2013) (lb Sulfur/lb DE)	ATC 15538 (2021) (lb Sulfur/lb DE)
1st Stage Dryer Feed	0.00500	0.00765	0.01749
Kiln Feed	0.00335	0.00600	0.01275

These increases result in short term and long-term increases in permitted SO_x emissions from the 350 and 370 scrubbers, which are used to control the 1st Stage Dryer and Kiln. Because the Imerys facility exceeds the emission threshold where emission offsets are required for SOx, Imerys was required to offset these emission increases. Imerys accomplished this by retiring a portion of its emission reduction credits. See Part 1 of the Imerys PTO/Part 70 5840-R7 permit for details on emission offsets and credits.

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 SOx emissions requires that the sulfuric acid leach tanks are enclosed and vented to the calcining and leaching scrubber that represents Nonattainment BACT for SOx 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.

The issuance of ATC 15077 resulted in a change to the data used to calculate H_2SO_4 emissions from the Celpure sulfuric acid leaching system. That ATC increased the number of leaching tanks, among other changes. Prior calculations assumed a partial pressure of acid in the vapor at 0.5 mmHg. In its ATC application Imerys gave the partial pressure at 2.92 x 10-11 mmHg District staff reviewed this inconsistency and concluded it is improbable that an aqueous solution of sulfuric acid would have such a high partial pressure at the process temperature of 212 degrees F given that the boiling point of a pure sulfuric acid solution is 639 degrees F. Based on partial pressure values of sulfuric acid-water mixtures found in Perry's Chemical Engineering Handbook, Eighth Edition, the estimated partial pressure proposed by Imerys is much more reasonable and is actually quite close to the partial pressure value of a 10% sulfuric acid 90% water solution.

The change in partial pressure reduced the estimated emissions of sulfuric acid from approximately 1 ton per year down to 9.33×10^{-10} tons/year.

The calculations are as follows:

Partial pressure of water and sulfuric acid:

P_H_2O = 0.957 bar = 718 mmHg
$P\_H_2SO_4 = 0.389 \times 10^{-13}$ bar = 2.92×10^{-11} mmHg

Uncontrolled emissions = 3900 cfm x $\frac{(460+32)oR}{(460+212)oR}$ x $\frac{2.92 \; x \; 10^{-11} mmHg}{718 \; mmHg}$ x $\frac{1}{359 \frac{ft^3}{lb-mole}}$ x $98 \frac{lb}{lb-mole}$ x $60 \frac{min}{hour}$ x $24 \frac{hr}{day}$ = $4.56 \times 10^{-8} \frac{lbs}{day}$

Scrubber control efficiency 90%

Controlled emissions = $4.56 \times 10^{-9} \frac{lbs}{day}$ and $9.33 \times 10^{-10} \frac{tons}{year}$

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

4.7. Best Available Control Technology (BACT)

4.7.1 BACT for SOx, PM and PM10 : Best Available Control Technology is required for SO_x, PM and PM_{10}. 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 PM_{10}, 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

[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.

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.

4.7.2 BACT Project Trigger for NO_x. Any future emission increases resulting from the expansion of the project authorized by PTO 15077, PTO 15176, ATC 15077-02, and ATC 15544-01 shall be considered emissions from the project, regardless of the time between permit applications, and shall be added to the project emissions total for the purposes of determining BACT for this project and any future expansion of this project. If BACT is triggered by future emission increases, BACT shall be applied to the entire project.

Table 4.5 BACT Control Technology and Performance Standards

Source	Control Technology	Performance Standard	Reference
Kiln (Calciner) and Two Leach/Slurry Tanks	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. Based on the maximum flow rate for this unit of 6700 scfm, a maximum concentration of 1.00 ppm SOx results in a maximum mass emission rate of 0.05 lb/hr SOx.	ATC 9757, ATC/PTO 10745-01, ATC 14161
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 amd maximum emission rate of 0.18 lb/hr.	ATC 9757, ATC/PTO 10745-01
Product Processing	Fabric Filter (Crude Bin Ventilation Baghouse Device ID 8073; Soda Ash Bin Baghouse, Device ID 8074; Kiln Feed (Calciner Surge) Bin Bahouse, Device ID 8075; Flash Cooler Baghouse, Device ID 8076; Packing Station Baghouse Device, ID 8078; Refeed Station Baghouse, Device ID 8079; Second Stage Dryer Baghouse, Device ID 8077, Flash Dryer Baghouse ID 391814.	Stack outlet concentration shall be equal to or less than 0.005 grains/dscf	ATC 9757 ATC 14848
Product transfer, handling, and conveyance	Fully enclosed and vented to a particulate control device	All product bucket elevators, transport lines, screw conveyors, weight stations, and transfer points shall be fully enclosed and vented to a baghouse.	ATC 9757 ATC 14848, 15683

4.8. Emissions Monitoring/Process Monitoring/CAM

4.8.1. Process Monitoring: In many instances, ongoing compliance beyond a single (snapshot) 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/PM_{10}); (2) are subject to a federally enforceable emissions standard, (3) use a control device to achieve compliance with this standard and are not inherent process equipment.

"Inherent process equipment" is defined as equipment that is necessary for the proper or safe functioning of the process, or material recovery equipment that the owner or operator documents is installed and operated primarily for purposes other than compliance with air pollution regulations.'' If equipment must be operated at an efficiency higher than that achieved during normal process operations to comply with applicable requirements, that equipment will not qualify as inherent process equipment[6]

The compliance monitoring parameter selected for the baghouses is a daily visible emission observation (VEE) as well as a quarterly Method 9 visbile 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.12.

Table 4.6 Celpure Baghouses Subject to CAM

Equipment Item	District DeviceNo
Crude Bin Ventilation Baghouse	8073
Kiln Feed (Calciner Surge) Bin Baghouse	8075
Flash Cooler Baghouse	8076
Second Stage Dryer Baghouse	8077
Packing Station Baghouse	8078
Refeed Station Baghouse	8079
Flash Dryer Baghouse	391814

CELITE\Permits\Part70 Permits\Part 70 PTO 5840 (2022)\PostR6TableChanges\CelpurePlantTableChanges\5840-R7PartII-NonEmissionTables.xlsx"

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.9 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).

[6] From: ENVIRONMENTAL PROTECTION AGENCY 40 CFR Parts 64, 70, and 71 [IL–64–2–5807; FRL–5908–6] RIN 2060–AD18 Compliance Assurance Monitoring AGENCY: Environmental Protection Agency (EPA). ACTION: Final rule; Final rule revisions. 10/22/19997

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. 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.

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) [7]
⇒ Reactive Organic Compounds (ROC)
⇒ Carbon Monoxide (CO)
⇒ Sulfur Oxides (SO_x) [8]
⇒ Particulate Matter (PM)
⇒ Particulate Matter smaller than 10 microns (PM_{10}) [9]
⇒ Particulate Matter smaller than 2.5 microns ($PM_{2.5}$) [10]
⇒ Greenhouse Gases (as CO_2e)

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

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[7] Calculated and reported as nitrogen dioxide (NO_2)
[8] Calculated and reported as sulfur dioxide (SO_2)
[9] Calculated and reported as all particulate matter smaller than 10 μm
[10] Calculated and reported as all particulate matter smaller than 2.5 μm

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					
		District			Pressure Drop (in of H_2O)			On-line			Fuel Sulfur	Material Throughput	
Equipment Item	Fabric	DeviceNo	Size	Units	Minimum	Maximum	Efficiency	(hr/day)	(hr/qtr)	(hr/yr)	(% wt)	lb DE/hr	tons DE/year
Crude Bin Ventilation Baghouse	PTFE-Coated Polyethlene	8073	2,811	scf/minute	1	10		24	2,190	8,760	--	--	--
Soda Ash Bin Baghouse	PTFE-Coated Polyethlene	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	2,000	scf/minute	1	6		24	2,190	8,760	--	--	--
Refeed Station Baghouse	PTFE-Coated Polyethlene	8079	2,397	scf/minute	1	10		24	2,190	8,760	--	--	--
Flash Dryer Baghouse	Ceramic	391814	4,520	scf/minute	1	10		24	2,190	8,760	--	--	--
1st Stage (Flotation) Dryer Baghouse	PTFE-Surfaced Nomex	8082	7,500	scf/minute	1	6		24	2,190	8,760	--	1,500	4,023
350 (1st Stage Dryer) Scrubber		106243	7,500	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
Acid Demisting Scrubber		391804	3,900	scf/minute	--	--	0.90	24	2,190	8,760	--	--	--
1st Stage Dryer		8920	4.80	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		394769	8.80	MMBtu/hr	--	--		24	2,190	8,760	0.008	--	--
Flash Dryer Product Heater		391812	4.33	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.

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Table 5.2 Equipment Emission Factors

Equipment Description	District	Emission Factors									
Equipment Item	**DeviceNo**	**NOx**	**ROC**	**CO**	**SOx**	**PM**	**PM10**	**PM2.5**	**GHG**	**Units**	**References**
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 (Calciner 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	
Flash Dryer Baghouse	391814					0.0050	0.0050	0.0050		gr/dscf	ATC 15077
1st Stage (Flotation) Dryer Baghouse	8082					1.016	1.0160	1.0160		lb/day	See note (6)
350 (1st Stage Dryer) Scrubber	106243				0.01749					lb S/lb dDE	ATC 14161, 15538
Kiln (Calciner) Exhaust Baghouse	8083					0.636	0.6360	0.6360		lb/day	ATC 14743
370 (Calcining and Leaching) Scrubber	106242				0.01275					lb S/lb dDE	ATC 14161, 15538
Acid Demisting Scrubber	391804										
1st Stage Dryer	8920	0.065	0.0054	0.2255	0.0137	0.0075	0.0075	0.0075	117.00	lb/MMBtu	AP-42 Section 1.4 and ATC 15176 (Note 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 (Calciner)	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	394769	0.011	0.0054	0.0297	0.0129	0.0075	0.0075	0.0075	117.00	lb/MMBtu	ATC 15544-01
Flash Dryer Product Heater	391812	0.098	0.0054	0.2971	0.0137	See Note 2	See Note 2	See Note 2	117.00	lb/MMBtu	ATC 15077-02
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)

(2) PM emissions from the Flash Dryer exhaust is routed to and accounted in the emissions from the Flash Dryer Baghouse (ID 391814) emissions.

(3) Acid Demisting Scrubber (ID 391804); See Note 1, Table 5.3

(4) Two replacement burners (3.2 MMBtu/hr combined) at 0.0488 lbs NOX /MMBtu; and one original burner (1.6 MMBtu/hr) at 0.098 lbs Nox/MMBtu; average is 0.065 lbs NOX/MMBtu
Same with CO existing at 0.08235 lbs CO/MMBtu and new at 0.2971 lbs/MMBtu. Avg is 0.2253 lbs

(5) Acid Demisting Scrubber (ID 391804); See Note 1, Table 5.3

(6) The original permitted emission limit was based on a Jan 2020 source test that had the emisions at 0.838 lbs/day. This was increased by the ratio of the flow rate increase of 6,150 to 7,500 scfm authorized by ATC 15176.

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Table 5.3 Short Term Emission Limits

Equipment Description	District DeviceNo	NOx		ROC		CO		SOx		H_2SO_4		PM		PM10		PM2.5		GHG		Federal Enforceability
Equipment Item		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 (Calciner Surge) Bin Baghouse	8075											0.12	2.88	0.12	2.88	0.12	2.88			FE
Flash Cooler 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											0.09	2.06	0.09	2.06	0.09	2.06			FE
Refeed Station Baghouse	8079											0.10	2.47	0.10	2.47	0.10	2.47			FE
Flash Dryer Baghouse	391814											0.19	4.65	0.19	4.65	0.19	4.65			
1st Stage (Flotation) Dryer Baghouse	8082											0.04	1.02	0.04	1.02	0.04	1.02			FE
350 (1st Stage Dryer) Scrubber	106243							0.14	3.41											FE
Acid Demisting Scrubber	106242									0.00	0.00									
Kiln (Calciner) Exhaust Baghouse	8083											0.03	0.64	0.03	0.64	0.03	0.64			FE
370 (Calcining and Leaching) Scrubber	391804							0.38	9.18											FE
1st Stage Dryer	8920	0.31	7.49	0.03	0.62	1.08	25.98	0.07	1.58			0.04	0.86	0.04	0.86	0.04	0.86	561.60	13478.40	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 (Calciner)	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	394769	0.10	2.32	0.05	1.14	0.26	6.27	0.11	2.72			0.07	1.58	0.07	1.58	0.07	1.58	1029.60	24710.40	FE
Flash Dryer Product Heater	391812	0.42	10.15	0.02	0.56	1.29	30.90	0.06	1.42			See Note 2	See Note 2	See Note 2	See Note 2	See Note 2	See Note 2	506.96	12167.06	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 3.51×10^{-9} lbs/day and 6.41×10^{-10} tons/year. See PTO/Part 70 5840-R7 Part II, Section 4.6.3

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

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Table 5.4 Long Term Emission Limits

Equipment Description	District DeviceNo	NOx		ROC		CO		SOx		H_2SO_4		PM		PM10		PM2.5		GHG		Federal Enforceability
Equipment Item		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											0.09	0.38	0.09	0.38	0.09	0.38			FE
Refeed Station Baghouse	8079											0.11	0.45	0.11	0.45	0.11	0.45			FE
Flash Dryer Baghouse	391814											0.21	0.85	0.21	0.85	0.21	0.85			FE
1st Stage (Flotation) Dryer Baghouse	8082											0.05	0.19	0.05	0.19	0.05	0.19			FE
350 (1st Stage Dryer) Scrubber	106243							0.10	0.38											FE
Acid Demisting Scrubber	8083																			
	106242									0.00	0.00									
Kiln (Calciner) Exhaust Baghouse												0.03	0.12	0.03	0.12	0.03	0.12			FE
370 (Calcining and Leaching) Scrubber	391804							0.26	1.03											FE
1st Stage Dryer	8920	0.34	1.37	0.03	0.11	1.19	4.74	0.07	0.29			0.04	0.16	0.04	0.16	0.04	0.16	614.95	2459.81	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	394769	0.11	0.4240	0.05	0.21	0.29	1.14	0.12	0.50			0.07	0.29	0.07	0.29	0.07	0.29	1127.41	4509.65	FE
Flash Dryer Product Heater	391812	0.46	1.85	0.03	0.10	1.41	5.64	0.07	0.26			See Note 1	See Note 1	See Note 1	See Note 1	See Note 1	See Note 1	555.12	2220.49	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

Notes:
(1) Flash Dryer Product Heater exhaust is vented throught the Flash Dryer Baghouse. PM emission are therefore accounted for in the Flash Dryer Baghouse emission estimates.

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Table 5.5 Celpure Plant Potential to Emit

A. Hourly

Equipment Category	NOx	ROC	CO	SOx	H_2SO_4	PM	PM10	PM2.5	GHG
Baghouses	--	--	--	--	--	1.19	1.19	1.19	--
Scrubbers	--	--	--	0.52	0.00	--	--	--	--
External Combustion Equipment	1.40	0.13	3.11	0.31	--	0.15	0.15	0.15	2,781.44
Internal Combustion Engines	1.55	0.12	0.33	0.02	--	0.11	0.11	0.11	61.35
Totals (lb/hr)	**2.95**	**0.25**	**3.45**	**0.86**	**0.00**	**1.44**	**1.44**	**1.44**	**2,842.79**

B. Daily

Equipment Category	NOx	ROC	CO	SOx	H_2SO_4	PM	PM10	PM2.5	GHG
Baghouses	--	--	--	--	--	28.45	28.45	28.45	--
Scrubbers	--	--	--	12.59	0.00	--	--	--	--
External Combustion Equipment	33.70	3.08	74.70	7.54	--	3.50	3.50	3.50	66,754.58
Internal Combustion Engines	3.10	0.25	0.67	0.04	--	0.22	0.22	0.22	122.71
Totals (lb/day)	**36.80**	**3.33**	**75.36**	**20.1687**	**0.00**	**32.17**	**32.17**	**32.17**	**66,877.29**

C. Quarterly

Equipment Category	NOx	ROC	CO	SOx	H_2SO_4	PM	PM10	PM2.5	GHG
Baghouses	--	--	--	--	--	1.30	1.30	1.30	--
Scrubbers	--	--	--	0.35	0.00	--	--	--	--
External Combustion Equipment	1.54	0.14	3.41	0.34	--	0.16	0.16	0.16	3,045.68
Internal Combustion Engines	0.02	0.00	0.00	0.00	--	0.00	0.00	0.00	0.61
Totals (TPQ)	**1.55**	**0.142**	**3.411**	**0.70**	**0.00**	**1.46**	**1.46**	**1.46**	**3,046.29**

D. Annual

Equipment Category	NOx	ROC	CO	SOx	H_2SO_4	PM	PM10	PM2.5	GHG
Baghouses	--	--	--	--	--	5.19	5.19	5.19	--
Scrubbers	--	--	--	1.41	0.00	--	--	--	--
External Combustion Equipment	6.15	0.56	13.63	1.38	--	0.64	0.64	0.64	12,182.71
Internal Combustion Engines	0.02	0.00	0.00	0.00	--	0.00	0.00	0.00	0.61
Totals (TPY)	**6.17**	**0.56**	**13.64**	**2.78**	**0.00**	**5.83**	**5.83**	**5.83**	**12,183.33**

Notes:

(1) Emission totals include ATC 15077-02, which derates Flash Dryer heat input. Final ATC 15077-02 was pending at the time final permit ATC 15544 was issued.

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Table 5.6 Federal Potential to Emit

A. Hourly

Equipment Category	NOx	ROC	CO	SOx	PM	PM10	PM2.5	GHG
Baghouses	--	--	--	--	1.19	1.19	1.19	--
Scrubbers	--	--	--	0.52	--	--	--	--
External Combustion Equipment	1.40	0.13	3.11	0.31	0.15	0.15	0.15	2,781.44
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)	**2.95**	**0.25**	**3.45**	**0.86**	**1.46**	**1.46**	**1.46**	**2,842.79**

B. Daily

Equipment Category	NOx	ROC	CO	SOx	PM	PM10	PM2.5	GHG
Baghouses	--	--	--	--	28.45	28.45	28.45	--
Scrubbers	--	--	--	12.59	--	--	--	--
External Combustion Equipment	33.70	3.08	74.70	7.54	3.50	3.50	3.50	66,754.58
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)	**36.80**	**3.33**	**75.36**	**20.17**	**32.73**	**32.73**	**32.73**	**66,877.29**

C. Quarterly

Equipment Category	NOx	ROC	CO	SOx	PM	PM10	PM2.5	GHG
Baghouses	--	--	--	--	1.30	1.30	1.30	--
Scrubbers	--	--	--	0.35	--	--	--	--
External Combustion Equipment	1.54	0.14	3.41	0.34	0.16	0.16	0.16	3,045.68
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)	**1.55**	**0.14**	**3.41**	**0.70**	**1.48**	**1.48**	**1.48**	**3,046.29**

D. Annual

Equipment Category	NOx	ROC	CO	SOx	PM	PM10	PM2.5	GHG
Baghouses	--	--	--	--	5.19	5.19	5.19	--
Scrubbers	--	--	--	1.41	--	--	--	--
External Combustion Equipment	6.15	0.56	13.63	1.38	0.64	0.64	0.64	12,182.71
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)	**6.17**	**0.56**	**13.64**	**2.78**	**5.93**	**5.93**	**5.93**	**12,183.33**

Notes:

(1) Emission totals include ATC 15077-02, which derates Flash Dryer heat input. Final ATC 15077-02 was pending at the time final permit ATC 15544 was issued.

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Table 5.7 Estimated Permit Exempt Emissions

Item	Equipment Category	NOx	ROC	CO	SOx	PM	PM10	PM2.5	GHG
	Vacuum Station Baghouse	--	--	--	--	0.07	0.07	0.07	--
	Totals (TPY)	**0.00**	**0.00**	**0.00**	**0.00**	**0.07**	**0.07**	**0.07**	**0.00**

Table 5.8 HAP Emission Factors

Equipment Category	Decsription	Benzene	Dichlorobenzene	Napthalene	Antimony	Arsenic	Beryllium	Cadmium	Chromium	Cobalt	Lead	Manganese	Mercury	Nickel
Baghouses	Crude Bin Ventilation Baghouse	--	--	--	2	5	1	2	100	5	2	60	0.3	120
	Soda Ash Bin Baghouse	--	--	--	2	5	1	2	100	5	2	60	0.3	120
	Kiln Feed (Calciner Surge) Bin Bahouse	--	--	--	2	5	1	2	100	5	2	60	0.3	120
	Flash Cooler Baghouse	--	--	--	2	5	1	2	100	5	2	60	0.3	120
	Second Stage Dryer Baghouse	--	--	--	2	5	1	2	100	5	2	60	0.3	120
	Packing Station Baghouse	--	--	--	2	5	1	2	100	5	2	60	0.3	120
	Refeed Station Baghouse	--	--	--	2	5	1	2	100	5	2	60	0.3	120
	DE Bin Baghouse	--	--	--	2	5	1	2	100	5	2	60	0.3	120
	Alternate Materials Bin Baghouse	--	--	--	2	5	1	2	100	5	2	60	0.3	120
	1st Stage (Flotation) Dryer Baghouse	--	--	--	2	5	1	2	100	5	2	60	0.3	120
	Kiln (Calciner) Exhaust Baghouse	--	--	--	2	5	1	2	100	5	2	60	0.3	120
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
	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
	Kiln (Calciner)	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
	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
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
Exempt Equipment	Vacuum Station Baghouse	--	--	--	2	5	1	2	100	5	2	60	0.3	120

Equipment Category	Decsription	Selenium	Acetaldehyde	Acrolein	1,3-butadiene	Chlorobenzene	Ethylbenzene	HCL	Toluene	Xylene	Formaldehyde	PAH	Hexane	Units
Baghouses	Crude Bin Ventilation Baghouse	10	--	--	--	--	--	--	--	--	--	--	--	ppm
	Soda Ash Bin Baghouse	10	--	--	--	--	--	--	--	--	--	--	--	ppm
	Kiln Feed (Calciner Surge) Bin Bahouse	10	--	--	--	--	--	--	--	--	--	--	--	ppm
	Flash Cooler Baghouse	10	--	--	--	--	--	--	--	--	--	--	--	ppm
	Second Stage Dryer Baghouse	10	--	--	--	--	--	--	--	--	--	--	--	ppm
	Packing Station Baghouse	10	--	--	--	--	--	--	--	--	--	--	--	ppm
	Refeed Station Baghouse	10	--	--	--	--	--	--	--	--	--	--	--	ppm
	DE Bin Baghouse	10	--	--	--	--	--	--	--	--	--	--	--	ppm
	Alternate Materials Bin Baghouse	10	--	--	--	--	--	--	--	--	--	--	--	ppm
	1st Stage (Flotation) Dryer Baghouse	10	--	--	--	--	--	--	--	--	--	--	--	ppm
	Kiln (Calciner) Exhaust Baghouse	10	--	--	--	--	--	--	--	--	--	--	--	ppm
External Combustion	1st Stage Dryer	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	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 (Calciner)	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	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	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	10	--	--	--	--	--	--	--	--	--	--	--	ppm

Table 5.9 Facility HAP Potential to Emit (tpy) Estimate

HAP Emissions (tpy) [1]

Equipment Category	Decsription	Benzene	Dichlorobenzene	Napthalene	Antimony	Arsenic	Beryllium	Cadmium	Chromium	Cobalt	Lead	Manganese	Mercury	Nickel	Selenium
Baghouses	Celpure Plant	--	--	--	1.0E-05	2.6E-05	5.2E-06	1.0E-05	5.2E-04	2.6E-05	1.0E-05	3.1E-04	1.5E-06	6.2E-04	5.2E-05
External Combustion	1st Stage Dryer	1.6E-04	--	6.2E-06	--	4.1E-06	2.5E-07	2.3E-05	2.9E-05	1.7E-06	--	7.8E-06	5.4E-06	4.3E-05	4.9E-07
	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
	Kiln (Calciner)	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
	Package Boiler	5.0E-04	--	1.9E-05	--	1.3E-05	7.6E-07	6.9E-05	8.8E-05	5.3E-06	--	2.4E-05	1.6E-05	1.3E-04	1.5E-06
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
Exempt Equipment	Vacuum Station Baghouse	--	--	--	1.4E-07	3.6E-07	7.1E-08	1.4E-07	7.1E-06	3.6E-07	1.4E-07	4.3E-06	2.1E-08	8.6E-06	7.1E-07
	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**
	TOTAL HAPS (tpy) =	**0.01**													

Equipment Category	Decsription	Acetalaldehyde	Acrolein	1,3-butadiene	Chlorobenzene	Ethylbenzne	HCL	Toluene	Xylene	Formaldehyde	PAH	Hexane	Total HAPs
Baghouses	Celpure Plant	--	--	--	--	--	--	--	--	--	--	--	1.6E-03
External Combustion	1st Stage Dryer	--	--	--	--	--	--	7.5E-04	--	3.5E-04	8.2E-06	1.3E-04	1.5E-03
	2nd Stage Dryer	--	--	--	--	--	--	5.0E-04	--	2.3E-04	5.5E-06	8.7E-05	1.0E-03
	Kiln (Calciner)	--	--	--	--	--	--	4.1E-04	--	1.9E-04	4.5E-06	7.1E-05	8.4E-04
	Package Boiler	--	--	--	--	--	--	2.3E-03	--	1.1E-03	2.5E-05	4.0E-04	4.7E-03
IC Engines	Emergency Power Generator	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	--	--	--	--	--	--	--	--	--	--	--	2.2E-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**	**0.01**

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	Napthalene	Antimony	Arsenic	Beryllium	Cadmium	Chromium	Cobalt	Lead	Manganese	Mercury	Nickel	Selenium	Acetalaldehyde	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	0.00	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 PM_{10} 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 December 2019 the District Board adopted the 2019 Ozone Plan. The 2019 Ozone Plan provides a three-year update to the 2016 Clean Air Plan. As Santa Barbara County has yet to attain the state eight-hour ozone standard, the 2019 Clean Air Plan demonstrates how the District plans to attain that standard. The 2019 Ozone 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, NOx, SOx, PM and $PM_{10.}$ 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) 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.** *Rescinded.*

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 CRF 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. *[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 **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 as allowing the violation of any local, state or federal rules, regulations, air quality standards or increments.

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.

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, 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.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.

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.

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

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.

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. [*Re: District Rule 303*]

B.4 **PM Concentration – Northern Zone (Rule 304).** Imerys shall not discharge into the atmosphere, from any source, particulate matter more than 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 more than 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 more than 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 H_2S) for gaseous fuel. [*Re: District Rule 311*] Imerys shall demonstrate compliance and maintain records for the different fuel types as follows:

(a) <u>Fuel oil #6</u>; 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 and Other PM Control Devices.** The following equipment are included in this emissions unit category:

Device Name	District Device No.
Capture System	
Crude Bin Ventilation Baghouse	8073
Soda Ash Bin Baghouse	8074
Kiln Feed (Calciner Surge) Bin Baghouse	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 (Calciner) Exhaust Baghouse	8083
Flash Dryer Baghouse	391814

(a) Emission Limits: Compliance with this condition shall be based on the monitoring, recordkeeping, reporting, and source testing conditions in this permit (as applicable)

(i) Mass emissions from the baghouses shall not exceed the limits listed in Tables 5.3 and 5.4.

(ii) Baghouses are subject to the exhaust emission limits listed in Table 5.2.

(iii) All baghouses with a cumulative filter surface area greater than 7,500 square feet, which exhaust to the atmosphere, shall meet an outlet PM concentration of less than or equal to 0.005 grains per dry standard cubic foot (gr/dscf) except as allowed per the start-up provisions of Condition 9.C.1.b.v.

(b) Operational Limits: The baghouses shall not exceed the following operational limits:

(i) *Visible Emissions Restriction – PM Air Pollution Control Devices without BLDS.* Imerys shall not cause or allow any visible emissions from any PM control device, which is not equipped with a District approved BLDS, except as allowed per the start-up provisions of Condition 9.C.1.b.v. Notwithstanding the above, Imerys shall not be considered in violation of this condition if Imerys is in the process of complying or has complied with the requirements below:

(1) If any visible emissions are observed exiting any of the PM control devices that are not equipped with a District approved BLDS, Imerys shall implement all necessary corrective actions to eliminate the visible emissions within 24 hours, and:

a. To verify that the corrective actions were effective, Imerys shall complete a new Method 22 observation to ensure no visible emissions are present.

b. If Imerys, after taking all corrective actions, subsequently observes visible emissions, Imerys shall shut down the PM emitting equipment that vents into the control device until additional steps are taken to prevent the visible emissions.

(ii) Visible Emissions Restriction – PM Air Pollution Control Devices with BLDS. On or after the date the District-approved BLDS is installed, Imerys shall not cause or allow any visible emissions from any PM control device which is equipped with a District approved BLDS, except as allowed per the start-up provisions of Condition 9.C.1.b.v. Notwithstanding the above, Imerys shall not be considered in violation of this condition if Imerys is in the process of complying or has complied with the requirements below:

(1) If Imerys receives an alarm from the BLDS, Imerys shall investigate the control device and the BLDS, observe if there are any visible emissions from the control device exhaust, and take all necessary corrective actions to eliminate the cause of the alarm and any visible emissions. Corrective actions to eliminate the cause of the alarm and any visible emissions shall be performed within 3 hours of detecting the alarm. Notwithstanding the above, the District may allow Imerys more than 3 hours to alleviate a specific alarm condition if the issue has been identified in the *AB617 Compliance Plan*, Imerys adequately explains why it is not feasible to alleviate the condition within 3 hours, and demonstrates that the condition will be fixed as expeditiously as practicable.

(iii) *Flow Rate and Hour Limits*. The baghouses shall not exceed the exhaust flow rate and hours of operation specified in Table 9.1.

(iv) *Operating Pressure*. The baghouses shall always operate within the pressure drop range specified in Table 9.2. 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. *[ATC 15077]*

(v) *PM Control Device Start-up Provisions*: The exhaust concentration requirement of Condition 9.C.1.(a)(iii) and visible emission operating restrictions of Condition 9.C.1.(b)(i) and 9.C.1.(b)(ii) shall not apply during start-up of a PM control device, including start-up after a repair to fix an equipment breakdown or after a scheduled maintenance activity. For the purposes of this condition, the start-up interval shall not last longer than necessary to reach stable operating conditions and in no case shall be longer than 45 minutes.

Additionally, alarms detected during the start-up interval as defined above, shall not be included in the rolling 6 month alarm activation limit calculation per condition 9.C.1.(c)(iii)(10).

This condition does not relieve Imerys from complying with the PM concentration (grain loading) requirements of Rule 304, 305 or the opacity requirements as specified in Rule 302.

(vi) *Non-Operational Provisions*: Permitted baghouses that are non-operational and listed in the AB 617 Compliance Plan as being non-operational, may remain in a non-operational state in-lieu of complying with the requirements in Conditions 9.C.1.a,b,c and d. of this permit. Any PM control device listed as non-operational in the AB 617 Compliance Plan shall immediately become subject to the requirements of these Conditions upon operation. *[ATC 15804]*

(vii) Imerys shall not operate any new baghouses at the Celpure Plant with a cumulative filter surface area greater than 7,500 square feet that vents to atmosphere, unless the baghouse is equipped with a District approved BLDS, which is installed, operated, calibrated and maintained pursuant to the manufacturers written recommendations to monitor baghouse performance, and complies with the requirements of Condition 9.C.1.(a)(iii) and 9.C.1.(b)(ii) of this permit.

(viii) All PM control devices shall be operated and maintained in accordance with the manufacturer's operation and maintenance manual or other similar written materials supplied by the manufacturer or distributor of a control device to ensure that the control device remains in proper operating condition. If such documents are not available, the operator shall provide and follow written operation and maintenance procedures for the PM control device(s). Such documentation shall be made available to the Control Officer immediately upon request.

(ix) Imerys shall install and maintain the ventilation system to all existing and new baghouses at the Celpure Plant with a cumulative filter surface area greater than 100 square feet, such that the ventilation system meets the minimum capture velocity requirement specified in the applicable standards of the most current edition of the U.S. Industrial Ventilation Handbook, American Conference of Governmental Industrial Hygienists, at the time of installation.

(x) Imerys shall discharge material collected in all PM control devices in such a way as to prevent fugitive emissions from being re-entrained in the atmosphere, including, but not limited to, the use of shrouding or the use of dust suppressants to stabilize the material.

(xi) Any PM control device equipped with a District approved BLDS as listed in the BLDS Process Monitoring, Calibration and Maintenance Plan and subject to the no visible emission requirements of Condition 9.C.1.(b)(ii), is exempt from the daily visible emissions observation requirements, quarterly Method 9 inspection requirements and quarterly Method 22 inspection requirements listed in conditions 9.C.1.(c)(ii) of this part, except as provided in the BLDS downtime provisions of Condition 9.C.1.(c)(iii)(11)

(xii) *BLDS Installation Authorization*: Imerys may install BLDS on any baghouse without the need to first obtain a District permit if all the following requirements are met:

(1) Imerys submits for District review and approval a revised *BLDS Process Monitoring, Calibration and Maintenance Plan.*

(2) Imerys submits for District review and approval a revised *AB 617 Compliance Plan* which identifies the applicable baghouse as being equipped with BLDS.

(3) Imerys receives written District approval to proceed with installation and operation of the BLDS. Upon installation and initial operations, the BLDS system will become subject to the operational, monitoring, recordkeeping and reporting requirements given in Condition 9.C.6.

(4) Imerys notifies the District within 14 days of the start of BLDS operation (engr@sbcapcd.org

Installation of a BLDS without meeting these requirements or without a valid District permit shall constitute a violation of District Rule 201.

Table 9.1 Equipment Exhaust Flow, Opacity, Opacity Tests, and Operating Limits

Equipment Item	District DeviceNo	NSPS	NSPS Opacity Limit	BLDS	Quart Method 9s	3 Daily Method 9s	Daily No VE	Weekly No VE Method 22s	Quart No VE 30 Min Method 22s	Exhaust Flowrate Limit	Schedule	
										(scfm)	(hr/day)	(hr/yr)
Crude Bin Ventilation Baghouse	8073	OOO	7%		√		√	√		2,811	24	8,760
Soda Ash Bin Baghouse	8074	OOO	7%		√		√	√		600	24	8,760
Kiln Feed (Calciner Surge) Bin Baghouse	8075	OOO	7%		√		√	√		2,800	24	8,760
Flash Cooler Baghouse	8076	OOO	0%				√	√	√	2,793	24	8,760
Second Stage Dryer Baghouse	8077	OOO	7%		√		√	√		8,134	24	8,760
Packing Station Baghouse	8078	OOO	0%				√	√	√	1,441	24	8,760
Refeed Station Baghouse	8079	OOO	7%		√		√	√		2,397	24	8,760
1st Stage (Flotation) Dryer Baghouse	8082	Exempt	NA (see note)				√	√		6,150	24	8,760
Kiln (Calciner) Exhaust Baghouse	8083	UUU	NA (see note)				√	√		6,700	24	8,760
Flash Dryer Baghouse	391814	UUU	10%			√	√	√		4,520	24	8,760

Note:
BLDS: Bag leak detection sytem
The 1st Dryer Baghouse is an apron dryer and exempt from Subpart UUU. It has no opacity limit because it vents to atmosphere through the 350 Scrubber. The Kiln Exhaust Baghouse has not opacity limit because it vents to atmosphere through the 370 Scrubber. The visible emission conditions (5840 R7 Part II Section 9.C.2) applicable to the two scrubbers meet District Rule 203 and Subpart UUU requirements.

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Table 9.2 Baghouse Pressure Ranges

Equipment Description		Pressure Drop	
Equipment Item	**District DeviceNo**	**(inches of H2O)**	
		(Minimum)	**(Maximum)**
Crude Bin Ventilation Baghouse	8073	1	10
Soda Ash Bin Baghouse	8074	1	10
Kiln Feed (Calciner Surge) Bin Baghouse	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 (Calciner) Exhaust Baghouse	8083	1	6
Flash Dryer Baghouse	391814	1	10

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(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 September 17, 1998) and any subsequent District-approved revisions. The Plan shall include and comply 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]

(ii) *Visible Emission Inspections – PM Control Devices Without a Bag Leak Detection System.*

(1) *Daily No Visible Emission Inspections.:* For all baghouses listed in Table 9.1 without a District approved BLDS, Imerys shall perform a visual inspection of each baghouse and baghouse exhaust once per day 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 initializing 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.

(2) Weekly Method 22 Inspections. Imerys shall conduct a 6-minute Method 22 visible emissions inspection on all PM control devices not equipped with a District approved BLDS, using an observer trained in Method 22 at least once each calendar week. To the extent that multiple Method 22 observations can be conducted simultaneously, Imerys may observe multiple sources at the same time if all the sources are in the same field of view of the observer and appropriate records are kept for each observation. If the operator detects any visible emissions during the observation, the operator shall continue the observation on the source with visible emissions and stop the observation(s) on the additional sources(s). If the activity being observed is consistently a duration of less than six minutes, then the Method 22 observation shall be for the period in which the activity takes place.

If visible emissions are detected exiting the PM control device at any time, Imerys shall comply with the requirements of Condition 9.C.1.(b)(i).

Notwithstanding the above, weekly Method 22 inspections are not required on a PM control device, if any of the following apply:

(a) The PM control device is not operated during the calendar week, as verified through operational records maintained per Condition 9.C.1.(c)(v).

(b) The PM control device vents a non-continuous process[11] or meets the definition of a bin vent[12] and is listed in the AB617 Compliance Plan.

(c) The PM control device is a portable dust collector, fume extractor, or negative air machine, has a manufacturer's maximum rated capacity of less than or equal to 3,000 cubic feet per minute, and is listed in the AB 617 Compliance Plan.

(d) Baghouses with a cumulative surface area less than or equal to 100 square feet as identified in the AB617 Compliance Plan.

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[11] "Non-Continuous Process" means an emissions generating activity vented to a PM air pollution control device that either operates no more than once per week for a period of less than 20 hours; or operates for periods of less than one hour, not to cumulatively exceed 4 hours during any single day.

[12] "Bin Vent" means an air filtration dust collector designed to remove PM from the air that is displaced by materials filling silos and bins.

(e) The PM control device is connected in series and does not exhaust to the atmosphere as identified in the AB 617 Compliance Plan. *[ATC 15804]*

(3) *Quarterly 30 Minute 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 for 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,]*

(4) *Visible Emissions Inspections -Method 9 – 7% Opacity:* 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 greater than zero. The Method 9 readings when the baghouse is operating due to operation of some or all of the equipment it serves.

(5) *Flash Dryer Baghouse (Device lD 391814). Method 9 Inspections*: Each day when the Flash Dryer Baghouse (Device ID 8076) is in operation Imerys shall conduct three 6-minute averages of the opacity to the atmosphere in accordance with EPA Method 9 40 CFR 60.734(b). Imerys staff certified in visible emission inspections shall perform the VEE and maintain logs in accordance with EPA Method 9. On any day the 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 initializing or signing their name next to the entry. In lieu of the Method 9 inspections, Imerys may use a continuous monitoring system to measure opacity as allowed and defined by 40 CFR 60.734(a) provided Imerys obtains written approval from the District. *[ATC 15077 and Subpart UUU]*

(iii) <u>Baghouse Leak Detection Systems (BLDS).</u> All District approved BLDS installed on a PM control device shall meet the following monitoring requirements, except if the PM control device is operated in series, does not vent to the atmosphere and is listed in the District approved *AB 617 Compliance Plan* as exempt from the provisions of this condition:

(1) The BLDS sensor must provide an output of relative PM emissions; and

(2) The BLDS shall meet the requirements specified in 40 CFR Part 60 Subpart OOO § 60.674 (d).

(3) The BLDS shall output raw data to the Data Acquisition System (DAS) which must have a visible and audible alarm set to activate automatically when the BLDS detects a significant increase in relative PM emissions greater than a preset level as identified in the District approved *BLDS Process Monitoring, Calibration and Maintenance Plan*.

(4) The BLDS and associated DAS shall be installed, operated, calibrated and maintained pursuant to the manufacturer written recommendations and the District approved *BLDS Process Monitoring, Calibration and Maintenance Plan*.

(5) The BLDS shall be certified by the manufacturer to be capable of alarming automatically before visible emissions can be seen in the exhaust of the PM control device and shall set the BLDS to operate at such level. The alarm level shall be detailed in the BLDS Process Monitoring, Calibration and Maintenance Plan.

(6) The BLDS baseline output shall be established as follows:

(a) Adjust and maintain the range and the averaging period of the device for the specific application per the manufacturer's written specifications and recommendations; and

(b) Establish and maintain the alarm set points and the alarm delay time per the manufacturer's written specifications and recommendations.

(7) The operator shall perform adequate maintenance and inspections of each BLDS, according to the written specifications and recommendations of the manufacturer and the District approved *BLDS Process Monitoring, Calibration and Maintenance Plan*, to ensure that the monitor is operating properly at all times.

(8) Imerys shall follow the requirements of Condition 9.C.1.(b)(ii) if an alarm is detected from a BLDS.

(9) <u>Alarm Activation Limit:</u> Imerys shall maintain the filters and operate the PM control device such that the BLDS alarm activation is minimized and the cumulative number of hours of alarm activation within a continuous six-month rolling period does not exceed more than five percent (5%) of the total operating hours in that period. If cumulative alarm time exceeds five percent of the total operating hours based on any continuous six-month rolling period, the operator shall shut down the equipment that vents into the associated PM control device until necessary actions are taken to eliminate the elevated emissions.

(10) <u>Minimum Quarterly Data Recovery Efficiency</u>: Each BLDS must achieve a minimum quarterly data recovery efficiency (DRE) of 90-percent based on actual hours of operation. The DRE shall be calculated by dividing the BLDS operating hours each quarter by the total PM control device actual operating hours and multiplying by 100.

(11) BLDS Downtime: Upon detecting a BLDS equipment failure, Imerys shall implement daily visual emissions monitoring on the PM control device in accordance with Condition 9.C.1.(c)(ii)(1) within 24 hours, until such time that the BLDS resumes normal operation.

(iv) *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.

(v) *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*]

(vi) *Source Test Requirements*: Imerys shall comply with the Source Testing requirement for baghouses given in permit condition 9.C.9.

(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) *Pressure Drop.* Daily, 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.(b)(iv), 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)(iv) shall be recorded.

(ii) *Visible Emission Observations – PM Control Devices Without a District Approved BLDS*

(1) Daily No Visible Emission Inspections. For all baghouses, Imerys shall record whether 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.

(2) Weekly Method 22 Inspections. Imerys shall maintain records of each weekly Method 22 inspection pursuant to the requirements of Condition 9.C.1.(c)(ii)(2) including:

a. Observer's name and affiliation.
b. Date and time of each weekly Method 22 observation.
c. Process unit(s) being observed including Device ID.
d. Observer's position relative to the source.

e. Observation duration.

f. Whether visible emissions occurred, and cumulative amount of time visible emissions occurred during the observation; If visible emissions are detected the date, time, and description of the corrective action taken to eliminate any visible emissions and the name of the person performing the corrective action shall be recorded.

g. If the control device is not in operation during that week, a notation in items a through f to that effect. *[ATC 15804*]

(3) <u>Quarterly 30 Minute Method 22 Inspections</u>. Same recordkeeping as listed for the Weekly Method 22 Inspections.

(4) <u>Quarterly EPA Method 9 Inspections</u> - Imerys shall record the following for the readings obtained using USEPA Method 9 inspections: the date and time of reading, name of reader, most recent Method 9 certification date of reader, baghouse name and device ID number, individual interval readings required by Method 9, and the final reading. Imerys shall also provide the reader's certification date.

(iii) <u>PM Control Devices with BLDS</u>: Imerys shall maintain the following records for all PM control devices equipped with BLDS:

(1) Date and time of all routine maintenance and inspections conducted on each BLDS including the name of the facility representative responsible for maintaining each BLDS.

(2) The date and time of any alarm, including length of the alarm time, cause of the alarm, process unit name and Device ID with the alarm state, and visible emissions observations during and after the alarm.

(3) The date and time corrective action was completed to eliminate the cause of the alarm and the name of the person performing the corrective action.

(4) Cumulative alarm time for each BLDS based on the previous six-month rolling period.

(5) Records of BLDS downtime which include the date and time BLDS failure occurred, the Device ID and Device name of the PM control device associated with the failed BLDS, and the date and time the BLDS resumed operation. The DRE shall be calculated by dividing the BLDS operating hours each quarter by the PM control device actual operating hours each quarter.

(6) Records required by the District approved *BLDS Process Monitoring, Calibration and Maintenance Plan.*

(iv) Daily records of the date and duration of all startups and shutdowns of each PM control device, including startups after a repair to fix an equipment breakdown or after a scheduled maintenance activity.

(v) Quarterly and annual hours of operation for each PM control device.

(vi) *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.

(h) Baghouse Leak Detection System Process Monitoring, Calibration and Maintenance Plan. Prior to the installation of each new BLDS, Imerys shall submit and obtain approval of an updated facility wide BLDS Process Monitoring, Calibration and Maintenance

(PMCMP). The plan shall demonstrate compliance with the BLDS plan requirements specified in 40 CFR Part 60 Subpart OOO § 60.674 (d) and include the following:

(i) Device ID and name of the PM control device being monitored by each BLDS including permitted exhaust concentration limits.

(ii) Manufacturer specifications for each BLDS.

(iii) Stack diagram which includes the location of the BLDS probe installation for each PM control device.

(iv) Documentation that each BLDS system is certified by the manufacturer to be capable of detecting PM emissions at concentrations of 0.00044 gr/dscf or less.

(v) The audible and visual alarm setpoint and preset level for each BLDS and the alarm delay time as recommended by the manufacturer.

(vi) The baseline output of the BLDS including range and averaging period of the device. If a third-party DAS system is used to record the BLDS sensor output, provide details of the DAS system make, model and averaging periods.

(vii) Inspection, maintenance, and calibration intervals as recommended or required by the BLDS manufacturer.

Imerys shall not adjust the averaging period, alarm set point, or alarm delay time without first submitting an updated BLDS plan for District review and approval.

C.2 **SOx Gas Absorption Tower (Scrubber).** The following equipment are included in this emissions unit category:

Device Name	District DeviceNo
Scrubbers	
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.

(i) The 350 and 370 Scrubbers shall have a SO_x removal efficiency of at least 99 percent and the SOx emissions from the stack of each shall not exceed one ppm. Compliance with the concentration limits shall be verified by the source testing requirements of this permit.

(ii) Scrubbers are subject to the exhaust PM emission limits listed in Table 5.2,. Compliance with these limits are based on the operating, monitoring, recordkeeping, reporting and source testing requirements of this permit (as applicable).

(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 Limits[13]

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_2O
		Maximum pollutant gas inlet flow rate	6,150	ACFM @212°F
		Maximum annual operating schedule	8,760	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_2O
		Maximum pollutant gas inlet flow rate	6,700	ACFM @375°F
		Maximum annual operating schedule	8,760	hours/year

CELITE\Permits\Part70 Permits\Part 70 PTO 5840 (2022)\PostR6TableChanges\CelpurePlantTableChanges\5840-R7PartII-NonEmissionTables.xlsx"

[13] 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.

(ii) The permittee shall comply with the District approved *SOx 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 always operational, for the life of the project. *[Ref: ATC 9757-01; PTO 10745-01]*

(iv) *Sulfuric Acid Leach Tanks.* Sulfuric acid leach tanks device IDs 106247 and 106248 shall be fully enclosed and vented to atmosphere through the 370 Scrubber. Sulfuric acid leach tanks 391805 and 391807 shall be fully enclosed and vented to atmosphere through the Acid Demisting Scrubber (device ID 391804). [*ATC 15077]*

(v) *Acid Demisting Scrubber Differential Pressure Drop*. The differential pressure drop across the Acid Demisting Scrubber shall not exceed a minimum of one and a maximum of eight inches of H_20. *[ATC 15077]*

(vi) *Visible Emissions Restriction*. Imerys shall not cause or allow any visible emissions from the 350 or 370 Scrubbers, except as allowed per the start-up provisions of 9.C.2(b)(vii). Notwithstanding the above, Imerys shall not be considered in violation of this condition if Imerys implements all necessary corrective actions to eliminate the visible emissions within 24 hours and completes a new Method 22 observation to ensure no visible emissions are present. If Imerys, after taking all corrective actions, subsequently observes visible emissions, Imerys shall shut down the PM emitting equipment that vents to the Venturi Scubber/Packaged Bed Tower until additional steps are taken to prevent the visible emissions. *[ATC 15804]*

(vii) *Start Up Provision*. The PM exhaust concentration requirement of Condition 9.C.2.(a)(ii) and visible emission operating restrictions of Condition 9.C.2(b)(vi) shall not apply during start-up of a PM control device, including start-up after a repair to fix an equipment breakdown or after a scheduled maintenance activity. For the purposes of this condition, the start-up interval shall not last longer than necessary to reach stable operating conditions and in no case shall be longer than 45 minutes. *[ATC 15804]*

Table 9.4 SO_x Gas Absorption Tower BACT[14], [15]

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_2O
		Maximum pollutant gas inlet flow rate	6,150	ACFM @212°F
		Maximum annual operating schedule	8,760	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_2O
		Maximum pollutant gas inlet flow rate	6,700	ACFM @375°F
		Maximum annual operating schedule	8,760	hours/year

CELITE\Permits\Part70 Permits\Part 70 PTO 5840 (2022)\PostR6TableChanges\CelpurePlantTableChanges\5840-R7PartII-NonEmissionTables.xlsx"

(c) Monitoring:

(i) *Hour Meter*. The hours of operation for the scrubbers and the floatation dryer shall be monitored using a nonresettable hour meter.

(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) *Weekly Method 22 Inspections*. Imerys shall conduct a 6-minute Method 22 visible emissions inspection on Venturi Scrubber/Packed Bed Tower exhaust using an observer trained in Method 22 at least once each calendar week. To the

[14] Each control system is subject to the maintenance schedule as identified in the *SOx Gas Absorption Tower and Process Monitor Calibration and Maintenance Plan*
[15] Process monitoring required for: Solvent pH, solvent flow rate, and pressure drop across each control device.

extent that multiple Method 22 observations can be conducted simultaneously, Imerys may observe multiple sources at the same time if all the sources are in the same field of view of the observer and appropriate records are kept for each observation. If the operator detects any visible emissions during the observation, the operator shall continue the observation on the source with visible emissions and stop the observation(s) on the additional sources(s). If the activity being observed is consistently a duration of less than six minutes, then the Method 22 observation shall be for the period in which the activity takes place.

If visible emissions are detected exiting the PM control device at any time, including during a weekly Method 22 inspection, Imerys shall comply with the requirements of Condition 9.C.2.(b)(vi).

Notwithstanding the above, weekly Method 22 inspections are not required on a PM control device, if the Ventur Scrubber/Packed Bed Tower is not operated during the calendar week, as verified through operational records maintained per Condition 9.C.2.(d)(i).

(v) *Visible Emissions Inspection (Method 9):* Once each calendar quarterImerys 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*]

(vi) *Acid Demisting Scrubber*. Imerys shall install, calibrate, maintain and operate monitoring devices that continuously measure and record the gas stream pressure drop in inches of water column across the Acid Demisting Scrubber (Device ID 391804). The pressure monitoring instrumentation comply with the instrumentation approved by the District. [ATC 15077]

(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 he 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 using 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.

(vii) *Weekly Method 22 Inspections*. Imerys shall maintain records of each weekly Method 22 inspection of each scrubber pursuant to the requirements of Condition 9.C.2.(c)(iv). including.

(1) Observer's name and affiliation.
(2) Date and time of each weekly Method 22 observation.
(3) Process unit(s) being observed including Device ID.
(4) Observer's position relative to the source.
(5) Observation duration.
(6) Whether visible emissions occurred, and cumulative amount of time visible emissions occurred during the observation; If visible emissions are detected the actions required by condition 9.C.2.b.vi shall be recorded:
(7) If the 350 or 370 scrubber is not in operation during that week, a notation in items (a) through (f) to that effect. *[ATC 15804]*

(e) <u>Reporting</u>: 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 (Calciner)	8921
1st Stage Dryer	8920
2nd Stage Dryer	8922
Flash Dryer	391812
Package Boiler	394769

(a) Emission Limits:

(i) *Mass Emission Limits*. Mass emissions from the devices listed above 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.

(ii) *NOx and CO Concentration Limits*: NOx and CO emissions shall not exceed the limits in the table below. [ATC 15077]. Compliance shall be based on the source test requirements of this permit and for the Package Boiler the source requirements of Rule 342.

Device Name	Device ID	NOx (ppmv)	CO (ppmv)
Flash Dryer	391812	80	400
Package Boiler	394769	9	400

(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 of this condition.

	Peak Kiln Feed Rate of DE
Pounds per hour	1,500
Pounds per day	36,000
Tons per year	4,023.4

(ii) *The sulfur content* of the DE feed at the points identified below shall not exceed:

Process location	**Sulfur content limit**
1st Stage Dryer Inlet	0.01749 lb_S/lb_{DE}
Kiln (calciner)	0.01275 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 (H_2S) content (calculated as H_2S 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) *Celpure Flash Dryer Effluent Venting*. The Flash Dryer effluent shall be vented to the Celpure Flash Dryer Baghouse (ID 391814). [ATC 15077]

(vi) *Flash Dryer Derate*. One of the three Flash Dryer gas supply fuel lines shall be permanently capped. [ATC 15077-01]

(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 using the methods given in the table below.

Celpure External Combustion Device Name	Device ID	Fuel Use Monitoring Method
Kiln (Calciner) 1st State Dryer 2nd Stage Dryer	8921 8920 8922	The volume of natural gas (in units of standard cubic feet) used in the units shall be determined by: (1) Using a dedicated APCD-approved hour meter or APCD-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 APCD-approved heating value of the fuel (Btu/ scf) or, (2) dividing the annual, permitted heat input limit for the unit (Btu/year) by the District-approved heating value of the fuel (Btu/scf), or (3) by another District approved method. [PTO 5840-R6, Part II].
Flash Dryer	391812	The volume of natural gas (in units of standard cubic feet) used shall be monitored using a dedicated District-approved temperature and pressure corrected non-resettable totalizing fuel gas flow meter. The fuel meter shall be connected to a District approved electronic Data Acquisition System which continuously records hourly, daily, monthly, and annual standard cubic feet of fuel gas supplied to the Flash Dryer. 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. [ATC 15077-02]
Package Boiler	394769	Fuel usage shall be monitored using the Imerys District approved Fuel Use Monitoring Plan Dated November 23, 2021, and any District approved FUM plan modifications. [ATC 15544-01]

(iv) *Source Test Requirements.* See Section 9.C.9 for the Flash Dryer and Package Boiler source test and reporting requirements.

(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) *DE feed* - Daily, 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 – Units Besides the Package Boiler*. 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 and documentation from the PUC provider that the gas meets PUC standards including sulfur content.

(v) *Fuel Use – Package Boiler*. The volume of fuel gas used each month (in units of standard cubic feet) and the number of days in each month that the unit operated. The fuel use data shall also be summarized for each calendar year. If the District default Higher Heating Value is not used, maintain lab analysis records of the fuel's heating value.

(vi) *Fuel Use Meter Calibration Records*. Calibration records of District-approved fuel use meters.

(vii) *Tuning Records*. For units subject to Rule 342 or Rule 360, maintain documentation verifying the required tune-ups, including a complete copy of each tune-up report

(viii) *Maintenance Logs*. Maintenance logs for the units and hour meters (as applicable), [ATC 15077-01]

(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**
Group 1	
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 (Calciner Surge) Bin	106241
Group 2	
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
Celpure Discharge Silo #5	390227
Celpure Discharge Silo #6	390228
Celpure Discharge Silo #7	390229

(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]

(iii) All Celpure bucket elevators, transport lines, screw conveyors, weight feeders, and transfer points shall be fully enclosed and vented to a baghouse.

(iv) The seven Discharge Silos shall be configured so that only one silo can be filled or discharged at a time vented to the Celpure Flash Cooling Baghouse (District Device ID 8076). [ATC 14848]

(v) The four inch vent line on the Acrison weight feeder (Device ID 395242) shall be permanently sealed. [ATC 15683]

(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 quartely 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]

(iii) *Fugitive Emission Inspections*. Once each quarter, Imerys shall perform a fugitive visible emission inspection for a one-minute period on the building opening(s), excluding vents (mechanically induced airflow), enclosing the newly permitted equipment, excluding wet material processing operation(s) as defined in EPA Subpart 000. 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 15077 PTO 5840 R6, Part II]

(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	3400

(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 equipment, 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 **Internal Combustion Engines**. This emissions unit category applies to the Emergency Power Generator (Diesel), District Device ID 103521.

(a) Operational Limits

(i) Opacity Limit. The Emergency Power Generator shall not exceed the Rule 302 opacity limits.

(ii) NESHAP Maintenance Requirements. The permittee must conduct the following maintenance on the Emergency Power Generator (Diesel), District Device ID 103521:

(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.

(4) 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.

(b) Monitoring: Once per calendar quarter when operational, Imerys shall perform a visible emissions inspection for a one-minute period on the Emergency Power Generator (Diesel), District Device ID 103521. 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.

(c) Recordkeeping.

(i) Visible Emissions Observations (Method 9) - Imerys shall record the following for the readings obtained by the use of US EPA Method 9 on the Emergency Power Generator engine: The date of reading, name of reader, most recent Method 9 certification date of reader, engine name and device number and individual interval readings required by Method 9, and the final reading.

(ii) Engine Inspection and Maintenance Logs. [NESHAP Subpart ZZZZ]

(1) The date of the 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.

(2) The date of the 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.

(3) The date of the 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.

(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.8 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 and Other PM Control Devices*

(i) *PM Control Devices without BLDS:*

(1) *Visible Emission Observations.* Results of daily visible emission observations for all baghouses when emissions were detected.

(2) *Weekly Method 22 Observations Summary Log.* Imerys shall submit a summary log detailing the results of each weekly Method 22 inspection for all PM control devices not equipped with a BLDS. The summary log shall include (1) the units name and District ID, (2) if the control device was not in operation during that week. (3) The date and time of each weekly Method 22 observation. (4) If visible emissions were detected, the full Method 22 inspection record required by Condition 9.C.1.(d)(ii)(2). shall be attached to the summary log.

(3) *Quarterly 30 Minute Method 22 Inspection.* The results of the quarterly readings obtained using USEPA Method 22, include (1) the baghouse name and District ID, (2) if the baghouse was not in operation during that week. (3) The date and time of each weekly Method 22 observation. (4) If visible emissions were detected, the full Method 22 inspection record required by Condition 9.C.1.(d)(ii).

(4) *Quarterly Method 9 Inspection* For all baghouses, the results of the quarterly readings obtained using 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.

(ii) *PM Control devices equipped with BLDS:*

(1) The date and time of all routine maintenance and inspections conducted on each BLDS.

(2) The date and time of any alarm, including length of the alarm time, cause of the alarm, process unit name and Device ID with the alarm state, and visible emissions observations during and after the alarm.

(3) The date and time corrective action was completed to eliminate the cause of the alarm and the name of the person performing the corrective action; and

(4) Cumulative alarm time for each BLDS based on the previous six-month rolling period.

(5) Records of BLDS downtime which include the date and time BLDS failure occurred, the Device ID and Device name of the PM control device associated with the failed BLDS, and the date and time the BLDS resumed operation.

(6) The quarterly operating hours of each BLDS and the calculated quarterly DRE percentage per Condition 9.C.1.(d)(iii)(5).

(7) If the visible emissions are detected or a BLDS alarm is triggered during a PM control device start-up interval per the provision of Condition 6, Imerys shall flag the event as having occurred during start-up and include records of baghouse start-up date and time per Condition 9.C1.(b)(v).

(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.(d)(i).

(iv) *Hours of Operation*. The quarterly and annual hours of operation for each baghouse and the peak hourly per month for the Soda Ash Bin Baghouse (Device ID 8074).

(b) *SOx 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.

(iv) *Weekly Method 22 Observations Summary Log*. Imerys shall submit a summary log detailing the results of each weekly Method 22 inspection for 350 and 370 Scrubbers. The summary log shall include when the scrubbers were not in operation during that week. If in operation during that week, the date and time of each weekly Method 22 observation and if visible emission were detected. If visible emissions were detected, the full Method 22 inspection record required by Condition 9.C.2.(d)(vii). shall be attached to the summary log.

(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) *Fuel Use – Units Excluding the Flash Dryer and Package Boiler*. 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 and documentation from the PUC provider the gas meets PUC standards including sulfur content.

(iv) *Fuel Use - Flash Dryer*. The fuel volume supplied to the Flash Dryer including daily, monthly, and annual totals in units of standard cubic feet as well as the calculated daily, monthly and annual heat input. The heat input shall be calculated by multiplying the recorded fuel usage in units of standard cubic feet by the District default natural gas heat content of 1,050 Btu/scf unless otherwise designated by the District [ATC 15077-01]

(v) *Fuel Use Package Boiler*. The volume of fuel gas used each month (in units of standard cubic feet) and the number of days each month that the unit operated. The fuel use data shall also be summarized for each calendar year. If the District's default Higher Heating Value is not used, report the lab analysis records of the fuel's heating value. [ATC 15544-01]

(vi) *Tuning Records*. For units subject to Rule 342 or Rule 360, a complete copy of each tune-up report.

(d) *Material Handling 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 quartely Method 9 inspections required by condition 9.C.4.(b)(ii), includinge 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 Emissions Inspections (Method 22)* Imerys shall report the results of the Method 22 Inspections required for the building enclosing the semi-bulk packing stations per Condition 9.C.5.(b)(i) including the date and time of reading, name of reader, the building name/location and whether fugitive emissions were observed..

(iii) *Visible Emissions Inspections (Method 9)* - For all Method 9 inspections required by Condition 9.C.5.(b)(ii) Imerys shall report the name and most recent Method 9 certification date of the reader, the name of the equipment and the date and time of the reading, and the reading.

(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.

(g) *Internal Combustion Engine*.

(i) Results of the Emergency Power Generator engine Method 9 inspection, if required, including the name and most recent Method 9 certification date of the reader, the name of the equipment and the date and time of the reading, and the reading.

(ii) Engine oil change, air filter inspection/replacement, engine/belt inspection/replacement records. If an oil analysis was performed, the date and results of each oil analysis and the Total Base Number and oil viscosity of the oil when new.

C.9 Source Testing. Imerys shall conduct source testing of the equipment identified in Table 9.5, Table 9.6 and Table 9.7. 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 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 Stage Drying) 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) The Flash Dryer (Device ID 391812) shall be source tested on an annual basis with the date of the last source test as the anniversary date. If the dryer meets the emission limits for two successive annual source tests, subsequent source tests will be required on a triennial basis. In the dryer fails to meet a triennial emission limit, the dyer shall be required to be tested again annually. *[ATC 15077]*

(c) One unit in Table 9.5 (including the scrubbers in Table 9.6 and excluding the Flash Dryer Baghouse) shall be tested biennially for PM/PM_{10}. Each unit shall be tested at least once before any unit is tested a second time. Testing shall be performed on a biennial schedule with the initial SCDP source test as the anniversary date.

(d) The Celpure Flash Dryer Baghouse (Device ID 391814) shall be source tested on an annual basis in accordance with the source test requirements given in Table 9.7

(e) The Celpure Package Boiler (Device ID 394769) shall be test biennially in accordance with the source test requirements given in Table 9.8.

(f) 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.

(g) 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.

(h) 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.

(i) 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: Kiln Feed (Calciner Surge) Bin (ID 8075), Flash Cooler (ID 8076), Second Stage Dryer (ID 8077), Second Stage Dryer (ID 8077), Packing Station (ID 8078), Refeed Station (ID 8079), Flash Dryer (ID 391814)	PM/PM_{10} PM/PM_{10} Stack Gas Flow Rate Blower Static Pressure[e]	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.1 (b).

Table 9.6 Scrubber Source Testing Requirements

Scrubbers
Source Testing Requirements

Emission Test Point[b]	Pollutants[d], [e]	Parameters	Test Methods[a]
350 (1st StageDrying) and the 370 (Calcining/Leaching)			
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	SOx	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_2O	
	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[f]

Notes:

[a] Alternative methods may be acceptable on a case-by-case basis.

[b] Scrubber Test Frequency: The scrubbers shall be tested annually for SOx 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: SOx Gas Absorption Towers (350 and 370 Scrubbers)

[f] The most version of the ASTM method shall be used.

Table 9.7 Flash Dryer Source Test Requirements

Celpure Flash Dryer
Source Testing Requirements

Test Location	Pollutants	Parameters	Test Methods
Outlet Concentration	NO_x	ppmv & lb/mmBTU, lb/hr	EPA Method 7E
	CO	ppmv & lb/mmBTU, lb/hr	EPA Method 10
	O_2, CO_2,	Dry Mol Wt	EPA Method 3
	Stack Flow Rate	dscfm	EPA Method 2 or 19
	Moisture Content	% H_2O	EPA Method 4

Alternative methods may be acceptable on a case-by-case basis

Table 9.8 Package Dryer Source Test Requirements

Emission & Limit Test Points	**Pollutants**	**Parameters**	**Test Methods** [(a)]
Combustion Stack [(b)(c)(d)]	NOx	ppmv, lb/hr	EPA Method 7E, ARB 100
	CO	ppmv, lb/hr	EPA Method 10, ARB 100
	ROC	ppmv, lb/hr	EPA Method 18
	Sampling Point Det.		EPA Method 1
	Stack Gas Flow Rate		EPA Method 2 or 19
	O2, CO2, Dry MW		EPA Method 3
	Moisture Content		EPA Method 4
	Stack Temperature	^oF	Calibrated Thermocouple
Fuel Gas [(g)]	Fuel Gas Flow Rate		Fuel Gas Meter [(e)]
	Higher Heating Value	Btu/lb	ASTM[(h)] D 1826 or 3588
	Total Sulfur Content	ppmw	ASTM[(h)] D 1072 or 5504 [(f)]
	Gas Composition	CHONS%, F-factor	ASTM[(h)] 1945

Notes:

(a) Source testing shall comply with Rule 362 source test requirements and emission limits. 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, CO and ROC and O_2 a minimum of three 40-minute runs shall be obtained during each test.

(d) All emission determinations shall be made in the as-found operating condition, at the maximum attainable firing rate to be approved by the source test plan. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer.

(e) Fuel meter shall be calibrated within 60 days prior to testing.

(f) Total sulfur content fuel samples shall be obtained using EPA Method 18 with Tedlar Bags (or equivalent)

(g) Fuel gas heating value and composition are optional for Rule 361 applicable units. Sulfur content only required for units not run on utility purchased gas. For units rated at 5 MMBtu/hr or greater, heating value is required in all cases, but gas composition not required if Method 2 is used for stack flow.

(h) The most version of the ASTM method shall be used.

C.10 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.11 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.12 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/PM_{10} 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 Device ID
Combustion Equipment	
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 ATCM[16], have no operational hours limitations.

(i) *Maintenance & Testing Use Limit:* 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 testing[17] 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.

[16] 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
[17] "maintenance and testing" is defined in Section (d)(41) of the ATCM

(iv) *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: enfr@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.

(v) *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 that 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: enfr@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.

(vi) *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.

(vii) *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.

(viii) *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) of the ATCM {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.

(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: June, 2025
Semi-Annual reports are due by March 1st and September 1st of each year
This permit supersedes PTO 5840-R6 Part II, ATC 14667, PTO 15077-01, PTO 15176, PTO 15538, ATC 15544, PTO 15683, ATC 15882, ATC 15804, PTO Mod 5840-12, PTO Mod 5840-13.

RECOMMENDATION
It is recommended that this permit be granted with the conditions as specified in the permit.

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.

<u>Reference A - Combustion Engines</u>

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 NOx, ROC, CO,and PM/PM10/PM2.5 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 kg CO_2/MMbtu) (2.2046 lb/kg) = 116.89 lb CO_2/MMBtu

(0.001 kg CH_4/MMBtu) (2.2046 lb/kg)(21 lb CO_2e/lb CH4) = 0.046 lb CO_2e/MMBtu

(0.0001 kg N_2O/MMBtu) (2.2046 lb/kg)(310 lb CO_2e/lb N_2O) = 0.068 lb CO_2e/MMBtu

Total CO2e/MMBtu = 116.89 + 0.046 + 0.068 = 117.00 lb CO_2e/MMBtu

For diesel fuel combustion the emission factor is:

(73.96 kg CO_2/MMbtu) (2.2046 lb/kg) = 163.05 lb CO_2/MMBtu

(0.003 kg CH_4/MMBtu) (2.2046 lb/kg)(21 lb CO_2e/lb CH4) = 0.139 lb CO_2e/MMBtu

(0.0006 kg N_2O/MMBtu) (2.2046 lb/kg)(310 lb CO_2e/lb N_2O) = 0.410 lb CO_2e/MMBtu

Total CO2e/MMBtu = 163.05 + 0.139 + 0.410 = 163.60 lb CO_2e/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 ExemptEmissions – 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 and Celpure Plant

A PERMITTED EQUIPMENT

1 Acid Washed Filter Aid Production Line

1.1 Acid Wash Blowers

Device ID #	**103417**	***Device Name***	**Acid Wash Blowers**
Rated Heat Input		*Physical Size*	
Manufacturer		*Operator ID*	
Model		*Serial Number*	
Location Note			
Device Description			

1.2 Acid Wash Cyclones

Device ID #	**103416**	***Device Name***	**Acid Wash Cyclones**
Rated Heat Input		*Physical Size*	
Manufacturer		*Operator ID*	
Model		*Serial Number*	
Location Note			
Device Description			

1.3 Acid Wash Hoppers

Device ID #	**103418**	***Device Name***	**Acid Wash Hoppers**
Rated Heat Input		*Physical Size*	
Manufacturer		*Operator ID*	
Model		*Serial Number*	
Location Note			
Device Description			

1.4 Acid Wash Packers

Device ID #	**103419**	***Device Name***	**Acid Wash Packers**
Rated Heat Input		*Physical Size*	1200.00 lb/Hour

Manufacturer		*Operator ID*	
Model		*Serial Number*	
Location Note			
Device Description			

1.5 Acid Wash Pumps

Device ID #	**103425**	***Device Name***	**Acid Wash Pumps**
Rated Heat Input		*Physical Size*	
Manufacturer		*Operator ID*	
Model		*Serial Number*	
Location Note			
Device Description	Filtrate pump, vacuum pump, and sump pump		

1.6 Holding Tanks

Device ID #	**103423**	***Device Name***	**Holding Tanks**
Rated Heat Input		*Physical Size*	
Manufacturer		*Operator ID*	
Model		*Serial Number*	
Location Note			
Device Description			

1.7 Horizontal Belt Filter

Device ID #	**103424**	***Device Name***	**Horizontal Belt Filter**
Rated Heat Input		*Physical Size*	
Manufacturer		*Operator ID*	
Model		*Serial Number*	
Location Note			
Device Description	includes a belt conveyor		

1.8 Premix Tank

Device ID #	**103421**	***Device Name***	**Premix Tank**
Rated Heat Input		*Physical Size*	
Manufacturer		*Operator ID*	

Model		*Serial Number*	
Location Note			
Device Description			

1.9 Reaction Tank

Device ID #	**103422**	***Device Name***	**Reaction Tank**
Rated Heat Input		*Physical Size*	
Manufacturer		*Operator ID*	
Model		*Serial Number*	
Location Note			
Device Description			

1.10 Sulfuric Acid Tank

Device ID #	**103420**	***Device Name***	**Sulfuric Acid Tank**
Rated Heat Input		*Physical Size*	
Manufacturer		*Operator ID*	
Model		*Serial Number*	
Location Note			
Device Description			

2 Admin Emergency Generator

Device ID #	387654	*Maximum Rated BHP*	250.00
Device Name	Admin Emergency Generator	*Serial Number*	WS4486N1200651
Engine Use	Electrical Power	*EPA Engine Family Name*	YNVXL0530ANC
Manufacturer	Caterpillar/Navistar	*Operator ID*	
Model Year	2000	*Fuel Type*	CARB Diesel - ULSD
Model	GC250		
DRP/ISC?	No	*Healthcare Facility?*	No
Daily Hours	2.00	*Annual Hours*	20
Location Note			
Device Description	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

Device ID #	**000138**	***Device Name***	**Silicate Plant Feed Mix Baghouse**
Rated Heat Input		*Physical Size*	35984.00 scf/Minute
Manufacturer	Sly	*Operator ID*	SPFMBH
Model	Polyester	*Serial Number*	
Location Note			
Device Description	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

Device ID #	**103474**	***Device Name***	**Silicate Plant Flash Dryer Baghouse**
Rated Heat Input		*Physical Size*	14700.00 scf/Minute
Manufacturer	Mikro-Pulsaire	*Operator ID*	SPFDBH
Model	Gortex/Polyester	*Serial Number*	
Location Note			
Device Description	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

Device ID #	**000139**	***Device Name***	**Silicate Plant Lime Baghouse**
Rated Heat Input		*Physical Size*	3000.00 scf/Minute
Manufacturer	Fuller Bulk Handling	*Operator ID*	SPLBH
Model	Nylon	*Serial Number*	
Location Note			
Device Description	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

Device ID #	**000141**	***Device Name***	**Silicate Plant Production Baghouse**
Rated Heat Input		*Physical Size*	3300.00 scf/Minute
Manufacturer	Mikro Collector	*Operator ID*	SPPBH
Model	18 oz Dralon felt	*Serial Number*	

Location Note			
Device Description	Product collection; Negative pressure; Bag Diam. (in): 18.0; Bag Length (ft): 11.83; Total Cloth Area: 892; Est. A/C Ratio: 2.5; enclsoed		

3.1.5 Silicate Plant Ventilation Baghouse (Pack Area)

Device ID #	**000142**	***Device Name***	**Silicate Plant Ventilation Baghouse (Pack Area)**
Rated Heat Input		*Physical Size*	40000.00 scf/Minute
Manufacturer	Mikro-Pulsaire	*Operator ID*	SPVBH
Model	Polypropylene	*Serial Number*	
Location Note			
Device Description	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

Device ID #	**103396**	***Device Name***	**Bag air washer**
Rated Heat Input		*Physical Size*	
Manufacturer		*Operator ID*	
Model		*Serial Number*	
Location Note			
Device Description	Number of devices is currently unknown.		

3.2.2 Baghouses - Cent. Nat Prod Line (Snow Floss Plant)

3.2.3 Blowers

Device ID #	**103391**	***Device Name***	**Blowers**
Rated Heat Input		*Physical Size*	
Manufacturer		*Operator ID*	
Model		*Serial Number*	
Location Note			
Device Description			

3.2.4 Central Nature Product (Packing)

3.2.4.1 Packers

Device ID #	**103393**	***Device Name***	**Packers**
Rated Heat Input		*Physical Size*	9.00 Tons/Hour
Manufacturer		*Operator ID*	
Model		*Serial Number*	
Location Note			
Device Description	#305, dark floss, #209, #310?		

3.2.5 Conveyors

Device ID #	**103395**	***Device Name***	**Conveyors**
Rated Heat Input		*Physical Size*	
Manufacturer		*Operator ID*	
Model		*Serial Number*	
Location Note			
Device Description			

3.2.6 Cyclones

Device ID #	**103390**	***Device Name***	**Cyclones**
Rated Heat Input		*Physical Size*	
Manufacturer		*Operator ID*	
Model		*Serial Number*	
Location Note			
Device Description	#1202, 1205, and 1206		

3.2.7 Hoppers

Device ID #	**103392**	***Device Name***	**Hoppers**
Rated Heat Input		*Physical Size*	
Manufacturer		*Operator ID*	
Model		*Serial Number*	
Location Note			
Device Description	(4) hoppers on open baghouse #305, and (6) hoppers on the snow floss product baghouse		

3.2.8 Snow/Dark Floss Separator

Device ID #	**103394**	***Device Name***	**Snow/Dark Floss Separator**
Rated Heat Input		*Physical Size*	
Manufacturer		*Operator ID*	
Model		*Serial Number*	
Location Note			
Device Description	Should have 3 associated cyclcones		

3.3 Experimental Plant

Device ID #	**103266**	***Device Name***	**Experimental Plant**
Rated Heat Input		*Physical Size*	500.00 lb/Hour
Manufacturer		*Operator ID*	
Model		*Serial Number*	
Location Note			
Device Description			

3.3.1 Air Sifters

Device ID #	**103463**	***Device Name***	**Air Sifters**
Rated Heat Input		*Physical Size*	
Manufacturer		*Operator ID*	
Model		*Serial Number*	
Location Note			
Device Description			

3.3.2 Belt Conveyor

Device ID #	**103468**	***Device Name***	**Belt Conveyor**
Rated Heat Input		*Physical Size*	
Manufacturer		*Operator ID*	
Model		*Serial Number*	
Location Note			
Device Description	Number of devices is currently unknown.		

3.3.3 Bins

Device ID #	**103460**	*Device Name*	**Bins**
Rated Heat Input		*Physical Size*	
Manufacturer		*Operator ID*	
Model		*Serial Number*	
Location Note			
Device Description			

3.3.4 Blowers

Device ID #	**103459**	*Device Name*	**Blowers**
Rated Heat Input		*Physical Size*	
Manufacturer		*Operator ID*	
Model		*Serial Number*	
Location Note			
Device Description			

3.3.5 Cyclones

Device ID #	**103458**	*Device Name*	**Cyclones**
Rated Heat Input		*Physical Size*	
Manufacturer		*Operator ID*	
Model		*Serial Number*	
Location Note			
Device Description			

3.3.6 Delumper

Device ID #	**103465**	*Device Name*	**Delumper**
Rated Heat Input		*Physical Size*	
Manufacturer		*Operator ID*	
Model		*Serial Number*	
Location Note			
Device Description	Number of devices is currently unknown.		

3.3.7 Experimental Plant Ventilation Baghouse

Device ID #	**005935**	***Device Name***	**Experimental Plant Ventilation Baghouse**
Rated Heat Input		*Physical Size*	1000.00 scf/Minute
Manufacturer	JM Open	*Operator ID*	XPBH
Model	Polyester	*Serial Number*	
Location Note			
Device Description	Ventilates Experimental plant; Positive pressure; Bag Diam. (in): 9.0; Bag Length (ft): 28.0; Total Cloth Area: 990; Est. A/C Ratio: 1.0; open		

3.3.8 Feeders

Device ID #	**103467**	***Device Name***	**Feeders**
Rated Heat Input		*Physical Size*	
Manufacturer		*Operator ID*	
Model		*Serial Number*	
Location Note			
Device Description			

3.3.9 Mill

Device ID #	**103466**	***Device Name***	**Mill**
Rated Heat Input		*Physical Size*	
Manufacturer		*Operator ID*	
Model		*Serial Number*	
Location Note			
Device Description	Number of devices is currently unknown.		

3.3.10 Mixer

Device ID #	**103462**	***Device Name***	**Mixer**
Rated Heat Input		*Physical Size*	
Manufacturer		*Operator ID*	
Model		*Serial Number*	
Location Note			
Device Description	Number of devices is currently unknown.		

3.3.11 Packer Columns

Device ID #	**103469**	***Device Name***	**Packer Columns**
Rated Heat Input		*Physical Size*	
Manufacturer		*Operator ID*	
Model		*Serial Number*	
Location Note			
Device Description			

3.3.12 Packers

Device ID #	**103461**	***Device Name***	**Packers**
Rated Heat Input		*Physical Size*	1.75 Tons/Hour
Manufacturer		*Operator ID*	
Model		*Serial Number*	
Location Note			
Device Description			

3.3.13 Separator

Device ID #	**103464**	***Device Name***	**Separator**
Rated Heat Input		*Physical Size*	
Manufacturer		*Operator ID*	
Model		*Serial Number*	
Location Note			
Device Description	Number of devices is currently unknown.		

3.4 Synthetic Silicate (Packing)

3.4.1 Conveyors

Device ID #	**106210**	***Device Name***	**Conveyors**
Rated Heat Input		*Physical Size*	
Manufacturer		*Operator ID*	
Model		*Serial Number*	
Location Note			
Device Description			

3.4.2 Hoppers

Device ID #	**106208**	***Device Name***	**Hoppers**
Rated Heat Input		*Physical Size*	
Manufacturer		*Operator ID*	
Model		*Serial Number*	
Location Note			
Device Description	(2) spillage hoppers		

3.4.3 Packer Bins

Device ID #	**106209**	***Device Name***	**Packer Bins**
Rated Heat Input		*Physical Size*	
Manufacturer		*Operator ID*	
Model		*Serial Number*	
Location Note			
Device Description			

3.4.4 Pumps

Device ID #	**103407**	***Device Name***	**Pumps**
Rated Heat Input		*Physical Size*	
Manufacturer		*Operator ID*	
Model		*Serial Number*	
Location Note			
Device Description	(1) press well pump		

3.4.5 Silicates Packer #1

Device ID #	**113830**	***Device Name***	**Silicates Packer #1**
Rated Heat Input		*Physical Size*	1.65 Tons/Hour
Manufacturer		*Operator ID*	
Model		*Serial Number*	
Location Note			
Device Description			

3.4.6 Silicates Packer #2

Device ID #	**113831**	*Device Name*	**Silicates Packer #2**
Rated Heat Input		*Physical Size*	1.65 Tons/Hour
Manufacturer		*Operator ID*	
Model		*Serial Number*	
Location Note			
Device Description			

3.4.7 Silicates Packing Station

Device ID #	**103402**	*Device Name*	**Silicates Packing Station**
Rated Heat Input		*Physical Size*	24.00 Tons/Hour
Manufacturer		*Operator ID*	
Model		*Serial Number*	
Location Note			
Device Description	Packing System		

3.5 Sythethic Silicate (processing line)

3.5.1 Belt Conveyors

Device ID #	**103406**	*Device Name*	**Belt Conveyors**
Rated Heat Input		*Physical Size*	
Manufacturer		*Operator ID*	
Model		*Serial Number*	
Location Note			
Device Description	(2) inclined conveyors, (2) conveyors		

3.5.2 Bins

Device ID #	**103399**	*Device Name*	**Bins**
Rated Heat Input		*Physical Size*	
Manufacturer		*Operator ID*	
Model		*Serial Number*	
Location Note			
Device Description	(2) surge bins, (1) lime storage bin		

3.5.3 Blowers

Device ID #	**103398**	***Device Name***	**Blowers**
Rated Heat Input		*Physical Size*	
Manufacturer		*Operator ID*	
Model		*Serial Number*	
Location Note			
Device Description	(1) lime truck vent blower,		

3.5.4 Crushers

Device ID #	**103403**	***Device Name***	**Crushers**
Rated Heat Input		*Physical Size*	
Manufacturer		*Operator ID*	
Model		*Serial Number*	
Location Note			
Device Description			

3.5.5 Cyclones

Device ID #	**103397**	***Device Name***	**Cyclones**
Rated Heat Input		*Physical Size*	
Manufacturer		*Operator ID*	
Model		*Serial Number*	
Location Note			
Device Description	(1) cyclone,		

3.5.6 Lime Truck Unloading Hopper

Device ID #	**103401**	***Device Name***	**Lime Truck Unloading Hopper**
Rated Heat Input		*Physical Size*	
Manufacturer		*Operator ID*	
Model		*Serial Number*	
Location Note			
Device Description			

3.5.7 Mills

Device ID #	**103404**	***Device Name***	**Mills**
Rated Heat Input		*Physical Size*	
Manufacturer		*Operator ID*	
Model		*Serial Number*	
Location Note			
Device Description	(1) hammer mill, (1) ball mill,		

3.5.8 Refeed Station

Device ID #	**103405**	***Device Name***	**Refeed Station**
Rated Heat Input		*Physical Size*	
Manufacturer		*Operator ID*	
Model		*Serial Number*	
Location Note			
Device Description			

3.5.9 Screens

Device ID #	**103400**	***Device Name***	**Screens**
Rated Heat Input		*Physical Size*	
Manufacturer		*Operator ID*	
Model		*Serial Number*	
Location Note			
Device Description			

3.5.10 Screws

Device ID #	**103408**	***Device Name***	**Screws**
Rated Heat Input		*Physical Size*	
Manufacturer		*Operator ID*	
Model		*Serial Number*	
Location Note			
Device Description	Number of devices is currently unknown.		

3.5.11 Silicates Boiler #2 (primary Silicates Plant boiler)

Device ID #	**397978**	***Device Name***	**Silicates Boiler #2 (primary Silicates Plant boiler)**
Rated Heat Input	23.000 MMBtu/Hour	*Physical Size*	195960.00 MMBtu/yr
Manufacturer	Nebraska	*Operator ID*	SPB2
Model	NS-B-32_ECON	*Serial Number*	
Location Note			
Device Description	Boiler burner was replaced with Rule 342 compliant unit per ATC 16046: Alzeta CSB-23 ulta low NOx burner 7 ppmv NOx at 3% O2. The original boiler device ID was 00082.		

3.5.12 Silicate Plant Standby Boiler

Device ID #	**000081**	***Device Name***	**Silicate Plant Standby Boiler**
Rated Heat Input	15.500 MMBtu/Hour	*Physical Size*	8999.00 MMBtu/yr
Manufacturer	Combustion Engineering	*Operator ID*	SPB1
Model	VP	*Serial Number*	APCD ID 2-1
Location Note			
Device Description	PUC gas or low-sulfur fuel oil #2 or #6.		

3.5.13 Silicates Conveyor Dryer (SPCD)

Device ID #	**000143**	***Device Name***	**Silicates Conveyor Dryer (SPCD)**
Rated Heat Input	56.300 MMBtu/Hour	*Physical Size*	
Manufacturer		*Operator ID*	SPCD
Model		*Serial Number*	
Location Note			
Device Description	PUC gas fired.		

3.5.14 Silicates Flash Dryer (SPFD)

Device ID #	**000140**	***Device Name***	**Silicates Flash Dryer (SPFD)**
Rated Heat Input	17.500 MMBtu/Hour	*Physical Size*	
Manufacturer		*Operator ID*	SPFD
Model		*Serial Number*	APCD ID 2-4
Location Note			
Device Description	PUC gas fired.		

3.5.15 Silicates Plant 10 kgal Stirred Tank #1

Device ID #	**113828**	***Device Name***	**Silicates Plant 10 kgal Stirred Tank #1**
Rated Heat Input		*Physical Size*	10000.00 Gallons
Manufacturer		*Operator ID*	
Model		*Serial Number*	
Location Note			
Device Description	Used for proprietary wet processing of product.		

3.5.16 Silicates Plant 10 kgal Stirred Tank #2

Device ID #	**113966**	***Device Name***	**Silicates Plant 10 kgal Stirred Tank #2**
Rated Heat Input		*Physical Size*	10000.00 Gallons
Manufacturer		*Operator ID*	
Model		*Serial Number*	
Location Note			
Device Description	Used for proprietary wet processing of product.		

3.5.16.1 Silicates Plant 40 kgal Stirred Tank #1

Device ID #	**113824**	***Device Name***	**Silicates Plant 40 kgal Stirred Tank #1**
Rated Heat Input		*Physical Size*	40000.00 Gallons
Manufacturer		*Operator ID*	
Model		*Serial Number*	
Location Note			
Device Description	Used for proprietary wet processing of product.		

3.5.17 Silicates Plant 10 kgal Storage Tank #1

Device ID #	**113832**	***Device Name***	**Silicates Plant 10 kgal Storage Tank #1**
Rated Heat Input		*Physical Size*	10000.00 Gallons
Manufacturer		*Operator ID*	
Model		*Serial Number*	

Location Note			
Device Description			

3.5.18 Silicates Plant 10 kgal Storage Tank #2

Device ID #	**113963**	***Device Name***	**Silicates Plant 10 kgal Storage Tank #2**
Rated Heat Input		*Physical Size*	10000.00 Gallons
Manufacturer		*Operator ID*	
Model		*Serial Number*	
Location Note			
Device Description			

3.5.19 Silicates Plant 40 kgal Stirred Tank #2

Device ID #	**113825**	***Device Name***	**Silicates Plant 40 kgal Stirred Tank #2**
Rated Heat Input		*Physical Size*	40000.00 Gallons
Manufacturer		*Operator ID*	
Model		*Serial Number*	
Location Note			
Device Description	Used for proprietary wet processing of product.		

3.5.20 Silicates Plant 40 kgal Stirred Tank #3

Device ID #	**113826**	***Device Name***	**Silicates Plant 40 kgal Stirred Tank #3**
Rated Heat Input		*Physical Size*	40000.00 Gallons
Manufacturer		*Operator ID*	
Model		*Serial Number*	
Location Note			
Device Description	Used for proprietary wet processing of product.		

3.5.21 Silicates Plant Filter Press

Device ID #	**113829**	***Device Name***	**Silicates Plant Filter Press**
Rated Heat Input		*Physical Size*	800.00 Square Feet

Manufacturer		*Operator ID*	
Model		*Serial Number*	
Location Note			
Device Description	Used to filter product.		

4 Bagging and Packing

4.1 Bag Packer

Device ID #	**109822**	***Device Name***	**Bag Packer**
Rated Heat Input		*Physical Size*	
Manufacturer		*Operator ID*	4AP-122A
Model		*Serial Number*	
Location Note			
Device Description	Bagging Capacity = 15 short tons/hr (13.6 mt/hr); packing units = 50 pound bags		

4.2 Bag Packer

Device ID #	**109823**	***Device Name***	**Bag Packer**
Rated Heat Input		*Physical Size*	
Manufacturer		*Operator ID*	4AP-122B
Model		*Serial Number*	
Location Note			
Device Description	Bagging Capacity = 15 short tons/hr (13.6 mt/hr); packing units = 50 pound bags		

4.3 Baghouse BH125

Device ID #	**110525**	***Device Name***	**Baghouse BH125**
Rated Heat Input		*Physical Size*	14259.00 scf/Minute
Manufacturer	Donaldson	*Operator ID*	BH125
Model	DLMC 4/5/15	*Serial Number*	
Location Note			
Device Description	BH125 contains 200 bags (each approx 20in D X 5ft L); del p = 0.1 - 6 in 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

Device ID #	**110532**	***Device Name***	**Baghouse BH131A1**

Rated Heat Input		*Physical Size*	
Manufacturer	Donaldson	*Operator ID*	BH131A1
Model	DLMV 30/15	*Serial Number*	
Location Note			
Device Description	BH131A1 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.		

4.5 Baghouse BH131A2

Device ID #	**110533**	*Device Name*	**Baghouse BH131A2**
Rated Heat Input		*Physical Size*	
Manufacturer	Donaldson	*Operator ID*	BH131A2
Model	DLMV 30/15	*Serial Number*	
Location Note			
Device Description	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

Device ID #	**110534**	*Device Name*	**Baghouse BH131B1**
Rated Heat Input		*Physical Size*	
Manufacturer	Donaldson	*Operator ID*	BH131B1
Model	DLMV 30/15	*Serial Number*	
Location Note			
Device Description	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

Device ID #	**110535**	*Device Name*	**Baghouse BH131B2**
Rated Heat Input		*Physical Size*	
Manufacturer	Donaldson	*Operator ID*	BH131B2
Model	DLMV 30/15	*Serial Number*	
Location Note			
Device Description	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

Device ID #	**110537**	*Device Name*	**Blower**

Rated Heat Input		*Physical Size*	
Manufacturer		*Operator ID*	BL 132
Model		*Serial Number*	
Location Note			
Device Description	Serving Semi Bulk Bag Fillers SB132A and B (Dev Nos 110526 & 110527); HP rating = 3 HP		

4.9 Blower

Device ID #	**110536**	*Device Name*	**Blower**
Rated Heat Input		*Physical Size*	
Manufacturer		*Operator ID*	BL125
Model		*Serial Number*	
Location Note			
Device Description	Serving BH125 (Dev No 110525); HP rating = 30 HP		

4.10 Packer Bin

Device ID #	**109824**	*Device Name*	**Packer Bin**
Rated Heat Input		*Physical Size*	
Manufacturer		*Operator ID*	BN121A
Model		*Serial Number*	
Location Note			
Device Description	Capacity = 4.4 short tons (4 mt) serving bag packer PK122A (Dev No 109822)		

4.11 Semi Bulk Bag Filler

Device ID #	**110526**	*Device Name*	**Semi Bulk Bag Filler**
Rated Heat Input		*Physical Size*	
Manufacturer	Stone Container Corp	*Operator ID*	5BB-132A
Model	MBS-1000	*Serial Number*	
Location Note			
Device Description	Bagging rate = 13.2 short tons/hour (12 mt/hr)		

4.12 Semi Bulk Bag Filler

Device ID #	**110527**	*Device Name*	**Semi Bulk Bag Filler**
Rated Heat Input		*Physical Size*	

Manufacturer	Stone Container Corp	*Operator ID*	5BB-132B
Model	MBS-1000	*Serial Number*	
Location Note			
Device Description	Bagging rate = 13.2 short tons/hour (12 mt/hr)		

4.13 Semi Bulk Packer Bin

Device ID #	**109828**	***Device Name***	**Semi Bulk Packer Bin**
Rated Heat Input		*Physical Size*	
Manufacturer		*Operator ID*	BN131A
Model		*Serial Number*	
Location Note			
Device Description	Capacity = 4.4 short tons (4 mt) serving semi-bulk bag filler SB132A (Dev No 110526)		

4.14 Semi Bulk Packer Bin

Device ID #	**109829**	***Device Name***	**Semi Bulk Packer Bin**
Rated Heat Input		*Physical Size*	
Manufacturer		*Operator ID*	BN131B
Model		*Serial Number*	
Location Note			
Device Description	Capacity = 4.4 short tons (4 mt) serving semi-bulk bag filler SB132B (Dev No 110527)		

5 Baghouse BH717

Device ID #	**110719**	***Device Name***	**Baghouse BH717**
Rated Heat Input		*Physical Size*	60.00 Horsepower (Electric Motor)
Manufacturer	MikroPul	*Operator ID*	BH717
Model	236(S)-10-28 TRH "C"	*Serial Number*	
Location Note			
Device Description	BH717 contains 256 bags (6"Dx10'L); HP rating of blower = 60HP; blower fan rating = 4972 scfm; op temp = 70F		

6 Baghouses - Miscellaneous

6.1 4 Bulk Bin Baghouse

Device ID #	**103514**	***Device Name***	**4 Bulk Bin Baghouse**

Rated Heat Input		*Physical Size*	
Manufacturer	DCE - Sintamatic	*Operator ID*	4BBBH
Model		*Serial Number*	APCD ID 3-17
Location Note			
Device Description	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.		

6.2 978 Baghouse

Device ID #	**000110**	***Device Name***	**978 Baghouse**
Rated Heat Input		*Physical Size*	scf/Day
Manufacturer	Sly	*Operator ID*	978BH
Model		*Serial Number*	
Location Note			
Device Description	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.		

6.3 Sackroom Baghouse

Device ID #	**000153**	***Device Name***	**Sackroom Baghouse**
Rated Heat Input		*Physical Size*	
Manufacturer	JM Open	*Operator ID*	SRBH
Model		*Serial Number*	
Location Note			
Device Description	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.

6.4 Soda Ash Baghouse

Device ID #	**109452**	***Device Name***	**Soda Ash Baghouse**
Rated Heat Input		*Physical Size*	
Manufacturer	DCE	*Operator ID*	SABH
Model	CSI 24K10, Type F	*Serial Number*	
Location Note	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.		
Device Description	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		

6.5 Ventilation Baghouse (1178)

Device ID #	**000102**	***Device Name***	**Ventilation Baghouse (1178)**
Rated Heat Input		*Physical Size*	36000.00 scf/Minute
Manufacturer	Mikro-Pulsaire	*Operator ID*	BH1178
Model	16 oz Polypropylene	*Serial Number*	
Location Note			
Device Description	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

Device ID #	**000137**	***Device Name***	**General Waste Baghouse**
Rated Heat Input		*Physical Size*	24150.00 scf/Minute
Manufacturer	Mikropul	*Operator ID*	GWBH
Model	611R-10-30-TR "C"	*Serial Number*	
Location Note			
Device Description	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

Device ID #	**000136**	***Device Name***	**Preseparator Waste Baghouse**
Rated Heat Input		*Physical Size*	20000.00 Square Feet
Manufacturer	Mikropul	*Operator ID*	PSWBH
Model	520R-10-40-TC "C"	*Serial Number*	
Location Note			
Device Description	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

Device ID #	**103498**	***Device Name***	**General Waste Bins**
Rated Heat Input		*Physical Size*	
Manufacturer		*Operator ID*	
Model		*Serial Number*	
Location Note			
Device Description	Bin #1, Bin #4, Bin #10, Bin #8, Bin #9, and (1) waste bin		

7.1.3 General Waste Blowers

Device ID #	**103500**	***Device Name***	**General Waste Blowers**

Rated Heat Input		*Physical Size*	
Manufacturer		*Operator ID*	
Model		*Serial Number*	
Location Note			
Device Description	(1) general waste blower, (1) booster blower		

7.1.4 General Waste Cyclones

Device ID #	**103499**	***Device Name***	**General Waste Cyclones**
Rated Heat Input		*Physical Size*	
Manufacturer		*Operator ID*	
Model		*Serial Number*	
Location Note			
Device Description			

7.1.5 General Waste Hoppers

Device ID #	**103501**	***Device Name***	**General Waste Hoppers**
Rated Heat Input		*Physical Size*	
Manufacturer		*Operator ID*	
Model		*Serial Number*	
Location Note			
Device Description	(2) hoppers on baghouse, (2) hoppers with general waste bin		

7.1.6 General Waste Screw Conveyors

Device ID #	**103502**	***Device Name***	**General Waste Screw Conveyors**
Rated Heat Input		*Physical Size*	
Manufacturer		*Operator ID*	
Model		*Serial Number*	
Location Note			
Device Description	screw conveyors per line: #4 (5), #5 (3), #6 (2), #7 (1),		

7.2 Preseparator Waste System

7.2.1 Bins

Device ID #	**103494**	*Device Name*	**Bins**
Rated Heat Input		*Physical Size*	
Manufacturer		*Operator ID*	
Model		*Serial Number*	
Location Note			
Device Description	(1) preseparator waste bin		

7.2.2 Cyclones

Device ID #	**103495**	*Device Name*	**Cyclones**
Rated Heat Input		*Physical Size*	
Manufacturer		*Operator ID*	
Model		*Serial Number*	
Location Note			
Device Description			

7.2.3 Hopper

Device ID #	**103497**	*Device Name*	**Hopper**
Rated Heat Input		*Physical Size*	
Manufacturer		*Operator ID*	
Model		*Serial Number*	
Location Note			
Device Description			

7.2.4 Preseparator Waste Blower

Device ID #	**103496**	*Device Name*	**Preseparator Waste Blower**
Rated Heat Input		*Physical Size*	
Manufacturer		*Operator ID*	
Model		*Serial Number*	
Location Note			
Device Description			

7.3 Recirculating System

7.3.1 Baghouses - Recirculating System

7.3.1.1 Recirculating System Ventilation Baghouse

Device ID #	**000135**	*Device Name*	**Recirculating System Ventilation Baghouse**
Rated Heat Input		*Physical Size*	18000.00 scf/Minute
Manufacturer	Mikropul	*Operator ID*	RBH
Model	408R-10/12 -30-TC "C"	*Serial Number*	
Location Note			
Device Description	Ventilation of Powder Mills dry end waste recovery; Negative pressure; 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

Device ID #	**103503**	*Device Name*	**Bins**
Rated Heat Input		*Physical Size*	
Manufacturer		*Operator ID*	
Model		*Serial Number*	
Location Note			
Device Description			

7.3.3 Blowers

Device ID #	**103505**	*Device Name*	**Blowers**
Rated Heat Input		*Physical Size*	
Manufacturer		*Operator ID*	
Model		*Serial Number*	
Location Note			
Device Description			

7.3.4 Cyclones

Device ID #	**103504**	*Device Name*	**Cyclones**
Rated Heat Input		*Physical Size*	
Manufacturer		*Operator ID*	
Model		*Serial Number*	
Location Note			

Device Description	

7.3.5 Screw and dust hole conveyor

Device ID #	**103506**	***Device Name***	**Screw and dust hole conveyor**
Rated Heat Input		*Physical Size*	
Manufacturer		*Operator ID*	
Model		*Serial Number*	
Location Note			
Device Description	Number of devices is currently unknown.		

7.4 Truck and Railcar Loading System

7.4.1 Bins

Device ID #	**103491**	***Device Name***	**Bins**
Rated Heat Input		*Physical Size*	
Manufacturer		*Operator ID*	
Model		*Serial Number*	
Location Note			
Device Description	Handles material from Lines #3-7 and #11		

7.4.2 Bulk Bins

Device ID #	**103493**	***Device Name***	**Bulk Bins**
Rated Heat Input		*Physical Size*	
Manufacturer		*Operator ID*	
Model		*Serial Number*	
Location Note			
Device Description			

7.4.3 Powder Pumps

Device ID #	**103492**	***Device Name***	**Powder Pumps**
Rated Heat Input		*Physical Size*	
Manufacturer		*Operator ID*	

Model		*Serial Number*	
Location Note			
Device Description			

7.5 Truck Loading System at No. 5 & 6 Bins

Device ID #	**103268**	***Device Name***	**Truck Loading System at No. 5 & 6 Bins**
Rated Heat Input		*Physical Size*	20.00 Tons/Hour
Manufacturer		*Operator ID*	
Model		*Serial Number*	
Location Note			
Device Description	Serves: Primary Processing Line No. 7		

8 Celite Analytical Filter Aid Production Line

Device ID #	**103265**	***Device Name***	**Celite Analytical Filter Aid Production Line**
Rated Heat Input		*Physical Size*	100.00 lb/Hour
Manufacturer		*Operator ID*	
Model		*Serial Number*	
Location Note			
Device Description			

8.1 Baghouses - Celite Analytical Filter Aid Prod Line

8.1.1 CAFA Baghouse

Device ID #	**000152**	***Device Name***	**CAFA Baghouse**
Rated Heat Input		*Physical Size*	138.00 scf/Minute
Manufacturer	JM Open	*Operator ID*	CAFABH
Model	Orlon	*Serial Number*	
Location Note			
Device Description	Ventilation CAFA equipment; Positive pressure; Bag Diam. (in): 9.0; Bag Length (ft): 11.0; Total Cloth Area: 130; Est. A/C Ratio: 1.0; open		

8.2 Cyclone

Device ID #	**103452**	***Device Name***	**Cyclone**

Rated Heat Input		*Physical Size*	
Manufacturer		*Operator ID*	
Model		*Serial Number*	
Location Note			
Device Description			

8.3 Drum Packer

Device ID #	**103456**	*Device Name*	**Drum Packer**
Rated Heat Input		*Physical Size*	100.00 lb/Hour
Manufacturer		*Operator ID*	
Model		*Serial Number*	
Location Note			
Device Description			

8.4 Feed Hopper

Device ID #	**103455**	*Device Name*	**Feed Hopper**
Rated Heat Input		*Physical Size*	
Manufacturer		*Operator ID*	
Model		*Serial Number*	
Location Note			
Device Description			

8.5 Milling Blower

Device ID #	**103453**	*Device Name*	**Milling Blower**
Rated Heat Input		*Physical Size*	
Manufacturer		*Operator ID*	
Model		*Serial Number*	
Location Note			
Device Description			

8.6 Screw Conveyor

Device ID #	**103457**	*Device Name*	**Screw Conveyor**

Rated Heat Input		*Physical Size*	
Manufacturer		*Operator ID*	
Model		*Serial Number*	
Location Note			
Device Description			

8.7 Surge Bin

Device ID #	**103454**	*Device Name*	**Surge Bin**
Rated Heat Input		*Physical Size*	
Manufacturer		*Operator ID*	
Model		*Serial Number*	
Location Note			
Device Description			

9 Celpure Plant

9.1 Aeration Blower

Device ID #	**387102**	*Device Name*	**Aeration Blower**
Rated Heat Input		*Physical Size*	Brake Horsepower
Manufacturer		*Operator ID*	810-BL-002
Model		*Serial Number*	
Location Note			
Device Description	For silos		

9.2 Belt Conveyor 1

Device ID #	**387107**	*Device Name*	**Belt Conveyor 1**
Rated Heat Input		*Physical Size*	
Manufacturer		*Operator ID*	710-BC-001
Model		*Serial Number*	
Location Note			
Device Description	Wet, cake		

9.3 Belt Conveyor 2 - Backup

Device ID #	**387108**	*Device Name*	**Belt Conveyor 2 - Backup**

Rated Heat Input		*Physical Size*	
Manufacturer		*Operator ID*	710-BC-002
Model		*Serial Number*	
Location Note			
Device Description	Wet, cake		

9.4 Celpure Discharge Silo #1

Device ID #	**386354**	***Device Name***	**Celpure Discharge Silo #1**
Rated Heat Input		*Physical Size*	22000.00 Cubic Feet
Manufacturer	Diversified Storage System	*Operator ID*	
Model	PD-Tank 2200	*Serial Number*	
Location Note			
Device Description	Used to store product while another product is processed. Dimensions: 12' diameter x 37' height.		

9.5 Celpure Discharge Silo #2

Device ID #	**386356**	***Device Name***	**Celpure Discharge Silo #2**
Rated Heat Input		*Physical Size*	22000.00 Cubic Feet
Manufacturer	Diversified Storage System	*Operator ID*	
Model	PD-Tank 2200	*Serial Number*	
Location Note			
Device Description	Used to store product while another product is processed. Dimensions: 12' diameter x 37' height.		

9.6 Celpure Discharge Silo #3

Device ID #	**386357**	***Device Name***	**Celpure Discharge Silo #3**
Rated Heat Input		*Physical Size*	22000.00 Cubic Feet
Manufacturer	Diversified Storage System	*Operator ID*	
Model	PD-Tank 2200	*Serial Number*	
Location Note			
Device Description	Used to store product while another product is processed. Dimensions: 12' diameter x 37' height.		

9.7 Celpure Discharge Silo #4

Device ID #	**386358**	***Device Name***	**Celpure Discharge Silo #4**
Rated Heat Input		*Physical Size*	22000.00 Cubic Feet
Manufacturer	Diversified Storage System	*Operator ID*	
Model	PD-Tank 2200	*Serial Number*	
Location Note			
Device Description	Used to store product while another product is processed. Dimensions: 12' diameter x 37' height.		

9.8 Celpure Discharge Silo #5

Device ID #	**390227**	***Device Name***	**Celpure Discharge Silo #5**
Rated Heat Input		*Physical Size*	22000.00 Cubic Feet
Manufacturer	Diversified Storage System	*Operator ID*	
Model	PD-Tank 2200	*Serial Number*	
Location Note			
Device Description	Used to store product while another product is processed. Dimensions: 12' diameter x 37' height.		

9.9 Celpure Discharge Silo #6

Device ID #	**390228**	***Device Name***	**Celpure Discharge Silo #6**
Rated Heat Input		*Physical Size*	22000.00 Cubic Feet
Manufacturer	Diversified Storage System	*Operator ID*	
Model	PD-Tank 2200	*Serial Number*	
Location Note			
Device Description	Used to store product while another product is processed. Dimensions: 12' diameter x 37' height.		

9.10 Celpure Discharge Silo #7

Device ID #	**390229**	***Device Name***	**Celpure Discharge Silo #7**
Rated Heat Input		*Physical Size*	22000.00 Cubic Feet
Manufacturer	Diversified Storage System	*Operator ID*	
Model	PD-Tank 2200	*Serial Number*	
Location Note			
Device Description	Used to store product while another product is processed. Dimensions: 12' diameter x 37' height.		

9.11 Celpure Exempt Equipment

9.12 Celpure Process 1

9.12.1 Crude Belt Conveyor

Device ID #	**106229**	***Device Name***	**Crude Belt Conveyor**
Rated Heat Input		*Physical Size*	
Manufacturer	Bulk Material Handling	*Operator ID*	CP5
Model		*Serial Number*	
Location Note			
Device Description	14' x 26"		

9.12.2 Crude Bin

Device ID #	**106227**	***Device Name***	**Crude Bin**
Rated Heat Input		*Physical Size*	2650.00 Cubic Feet
Manufacturer	Steel Structures	*Operator ID*	CP3
Model		*Serial Number*	
Location Note			
Device Description			

9.12.3 Crude Bin Ventilation Baghouse

Device ID #	**008073**	***Device Name***	**Crude Bin Ventilation Baghouse**
Rated Heat Input		*Physical Size*	2811.00 scf/Minute
Manufacturer	DCE Sintamatic	*Operator ID*	DC1
Model	CS 138FP	*Serial Number*	
Location Note			
Device Description	2,811 cfm, 0.00044 gr/acf		

9.12.4 Detritor

Device ID #	**108260**	***Device Name***	**Detritor**
Rated Heat Input		*Physical Size*	25.00 Horsepower (Electric Motor)
Manufacturer	Metso Minerals	*Operator ID*	

Model		*Serial Number*	62597
Location Note	Added in May 2005 after the removal of the pug mill and attrition scrubber		
Device Description	Operates with one 25 hp electric motor		

9.12.5 Hammermill

Device ID #	**106226**	***Device Name***	**Hammermill**
Rated Heat Input		*Physical Size*	175.00 Tons/Hour
Manufacturer	Jeffry	*Operator ID*	CP2
Model	45AB	*Serial Number*	
Location Note			
Device Description			

9.12.6 Upper Crude Belt Conveyor

Device ID #	**106228**	***Device Name***	**Upper Crude Belt Conveyor**
Rated Heat Input		*Physical Size*	
Manufacturer	Power Industries	*Operator ID*	CP4
Model		*Serial Number*	
Location Note			
Device Description	300' x 36 "		

9.12.7 Upper Crude Hopper

Device ID #	**108409**	***Device Name***	**Upper Crude Hopper**
Rated Heat Input		*Physical Size*	Tons/Hour
Manufacturer	Spokane Machinery	*Operator ID*	CP1
Model	custom	*Serial Number*	
Location Note			
Device Description			

9.13 Celpure Soda Ash Weigh Feeder

Device ID #	**395242**	***Device Name***	**Celpure Soda Ash Weigh Feeder**
Rated Heat Input		*Physical Size*	3.00 Cubic Feet

Manufacturer	Acrison	*Operator ID*	
Model	405-170	*Serial Number*	
Location Note	Sits between the Celpure soda ash bin and soda ash mill		
Device Description	Fully enclosed soda weight feeder with automatic slide gate with 4 inch vent permanently sealed.		

9.14 Celpure Process 2

9.14.1 Flotation Cells

Device ID #	**106235**	***Device Name***	**Flotation Cells**
Rated Heat Input		*Physical Size*	288.00 Cubic Feet
Manufacturer	Quinn Process Equipment Co.	*Operator ID*	CP12
Model	18SPL 6 Cell	*Serial Number*	
Location Note			
Device Description			

9.14.2 Flotation Conditioning Tanks

Device ID #	**106234**	***Device Name***	**Flotation Conditioning Tanks**
Rated Heat Input		*Physical Size*	850.00 Gallons
Manufacturer	Paramount Fabricators	*Operator ID*	CP11
Model		*Serial Number*	
Location Note			
Device Description	two tanks?		

9.14.3 Hydroclone Feed Tank

Device ID #	**106259**	***Device Name***	**Hydroclone Feed Tank**
Rated Heat Input		*Physical Size*	
Manufacturer		*Operator ID*	
Model		*Serial Number*	
Location Note			
Device Description			

9.14.4 Hydroclone Slurry Tank

Device ID #	**106261**	***Device Name***	**Hydroclone Slurry Tank**
Rated Heat Input		*Physical Size*	
Manufacturer		*Operator ID*	
Model		*Serial Number*	
Location Note			
Device Description			

9.14.5 Hydroclones

Device ID #	**106233**	***Device Name***	**Hydroclones**
Rated Heat Input		*Physical Size*	lb/gal
Manufacturer	Krebs Engineers	*Operator ID*	CP10
Model	Model PCI-1421	*Serial Number*	
Location Note			
Device Description	5 lb DE/min/hydroclone		

9.14.6 Waste (Crude Tailings) Tank

Device ID #	**106260**	***Device Name***	**Waste (Crude Tailings) Tank**
Rated Heat Input		*Physical Size*	
Manufacturer		*Operator ID*	
Model		*Serial Number*	
Location Note			
Device Description	Receives material from hydroclone slurry tank		

9.14.7 Wet Screen

Device ID #	**106232**	***Device Name***	**Wet Screen**
Rated Heat Input		*Physical Size*	170.00 gal/Minute
Manufacturer	Derrick Corp	*Operator ID*	CP9
Model	2124-60W-2M	*Serial Number*	
Location Note			
Device Description			

9.15 Celpure Process 3

9.15.1 1st Stage Dryer

Device ID #	**008920**	***Device Name***	**1st Stage Dryer**
Rated Heat Input	4.800 MMBtu/Hour	*Physical Size*	
Manufacturer	The National Drying Machinery Co.	*Operator ID*	CP14
Model	Apron Dryer	*Serial Number*	
Location Note			
Device Description	Receives cake from dewatering filter. Apron dryer. The dryer originally had 3 burners; two at 0.8 MMBtu/hr and one at 1.6 MMBtu/hr. The two 0.8 MMBtu/hr burners where replaced with two Cyclomax low NOx 1.6 MMBtu/hr burners per ATC 15176 at 40 ppmv NOx at 3%. The existing third burner was permitted at the uncontrolled NOx emission rate of 0.098 lbs/MMBtu . Sulfur content limit of DE input: 0.01749 lb Sulfur/lb DE ATC 15538		

9.15.2 1st Stage Dryer Baghouse

Device ID #	**008082**	***Device Name***	**1st Stage Dryer Baghouse**
Rated Heat Input		*Physical Size*	7500.00 Cubic Feet/Minute
Manufacturer	Mikropul	*Operator ID*	CP15/ DC4
Model	133-8-100 "C"	*Serial Number*	
Location Note			
Device Description	(DC4), 6143 acfm, 0.002 gr/dscf, 90 psig header. Increase in SCFM to 7,500 per ATC 15176		

9.15.3 Dewatering Filter

Device ID #	**106262**	***Device Name***	**Dewatering Filter**
Rated Heat Input		*Physical Size*	50.00 Square Feet
Manufacturer	Filtration Systems Tech	*Operator ID*	CP13
Model	VP-50-1	*Serial Number*	
Location Note			
Device Description	Receives hydroclone slurry from floatation cells		

9.15.4 Dewatering Filter Feed Tank

Device ID #	**106263**	***Device Name***	**Dewatering Filter Feed Tank**
Rated Heat Input		*Physical Size*	
Manufacturer		*Operator ID*	
Model		*Serial Number*	
Location Note			

Device Description			

9.15.5 Dispersing Screen

Device ID #	**106236**	***Device Name***	**Dispersing Screen**
Rated Heat Input		*Physical Size*	1000.00 lb/Hour
Manufacturer	Kemutec Group	*Operator ID*	CP16
Model	K650	*Serial Number*	
Location Note			
Device Description			

9.15.6 Soda Ash Bin

Device ID #	**106237**	***Device Name***	**Soda Ash Bin**
Rated Heat Input		*Physical Size*	110.00 Cubic Feet
Manufacturer	Steel Structures Inc.	*Operator ID*	CP39
Model	Custom	*Serial Number*	
Location Note			
Device Description			

9.15.7 Soda Ash Bin Baghouse

Device ID #	**008074**	***Device Name***	**Soda Ash Bin Baghouse**
Rated Heat Input		*Physical Size*	600.00 Cubic Feet/Minute
Manufacturer	Sintamatic	*Operator ID*	DC2
Model	CSI 12 K5	*Serial Number*	
Location Note			
Device Description	Associated with Soda Ash Bin Dust Collector (CP42)		

9.15.8 Soda Ash Mill

Device ID #	**106239**	***Device Name***	**Soda Ash Mill**
Rated Heat Input		*Physical Size*	100.00 lb/Hour
Manufacturer	Micron Powder Systems	*Operator ID*	CP41
Model	10	*Serial Number*	
Location Note			

Device Description	with gravity feed		

9.15.9 Soda Ash Mix Tank

Device ID #	**106238**	***Device Name***	**Soda Ash Mix Tank**
Rated Heat Input		*Physical Size*	250.00 Gallons
Manufacturer	LW LeFort	*Operator ID*	CP40
Model	Custom	*Serial Number*	
Location Note			
Device Description			

9.16 Celpure Process 4

9.16.1 350 Scrubber

Device ID #	**106243**	***Device Name***	**350 Scrubber**
Rated Heat Input		*Physical Size*	
Manufacturer	Met Pro Corporation	*Operator ID*	CP22/ SR2
Model		*Serial Number*	
Location Note			
Device Description	(SR2), 6150 acfm, 98% efficiency. Increase in SCFM to 7,500 per ATC 15176		

9.16.2 370 Scrubber

Device ID #	**106242**	***Device Name***	**370 Scrubber**
Rated Heat Input		*Physical Size*	
Manufacturer	Met Pro Corporation	*Operator ID*	CP56/ SR1
Model		*Serial Number*	
Location Note			
Device Description	(SR1)		

9.16.3 Calciner Exhaust Baghouse

Device ID #	**008083**	***Device Name***	**Calciner Exhaust Baghouse**
Rated Heat Input		*Physical Size*	
Manufacturer	Mikropul	*Operator ID*	CP21

Model	85-8-35 "C"	*Serial Number*	
Location Note			
Device Description	3600 acfm, 0.002 gr/dscf, 90 psig header		

9.16.4 Kiln (Calciner)

Device ID #	**008921**	***Device Name***	**Kiln (Calciner)**
Rated Heat Input	2.640 MMBtu/Hour	*Physical Size*	
Manufacturer	Vulcan	*Operator ID*	CP20
Model		*Serial Number*	97-14322
Location Note			
Device Description	(CS2) Receives material sent from the kiln rotary feed screw. Exhaust is ventilated to the calciner baghouse for PM and to the packed tower scrubber for SOx removal. 6 ft ID x 40 ft. DE sulfur input limit 0.01275 lbs Sulfur/lb DE. ATC 15538		

9.16.5 Kiln Feed (Calciner Surge) Bin

Device ID #	**106241**	***Device Name***	**Kiln Feed (Calciner Surge) Bin**
Rated Heat Input		*Physical Size*	200.00 Cubic Feet
Manufacturer	Steel Structures	*Operator ID*	CP19
Model		*Serial Number*	
Location Note			
Device Description	Receives material from cyclone with Soda Ash added. Ventilated by surge bin baghouse.		

9.16.6 Kiln Feed Baghouse

Device ID #	**008075**	***Device Name***	**Kiln Feed Baghouse**
Rated Heat Input		*Physical Size*	2800.00 scf/Minute
Manufacturer	Mikropul	*Operator ID*	CP18/ DC5
Model	55-8-55 "C"	*Serial Number*	
Location Note			
Device Description	(DC5) 1995 acfm, 0.005 gr/dscf		

9.16.7 Kiln Feed Bin Metering Screw

Device ID #	**106264**	***Device Name***	**Kiln Feed Bin Metering Screw**

Rated Heat Input		*Physical Size*	
Manufacturer		*Operator ID*	
Model		*Serial Number*	
Location Note			
Device Description	Receives material from calciner surge bin, and sends it to the kiln rotary feed screw.		

9.16.8 Kiln Feed Cyclone

Device ID #	**106240**	***Device Name***	**Kiln Feed Cyclone**
Rated Heat Input		*Physical Size*	4.00 Diameter (ft)
Manufacturer	Peterson	*Operator ID*	CP17
Model	Custom	*Serial Number*	
Location Note			
Device Description	Ventilated to surge bin baghouse		

9.16.9 Kiln Rotary Feed Screw

Device ID #	**106265**	***Device Name***	**Kiln Rotary Feed Screw**
Rated Heat Input		*Physical Size*	
Manufacturer		*Operator ID*	
Model		*Serial Number*	
Location Note			
Device Description	Receives material from the metering bin screw and sends it to the calciner.		

9.17 Celpure Process 5

9.17.1 Flash Cooler Baghouse

Device ID #	**008076**	***Device Name***	**Flash Cooler Baghouse**
Rated Heat Input		*Physical Size*	2793.00 Cubic Feet/Minute
Manufacturer	Mikropul	*Operator ID*	DC7
Model	69-8-35 "C"	*Serial Number*	
Location Note			
Device Description	90 psig header, 0.005 gr/dscf. Serves the product mix tank and packing area.		

9.17.2 Flash Cooling Cyclone

Device ID #	**106245**	***Device Name***	**Flash Cooling Cyclone**

Rated Heat Input		*Physical Size*	5.00 Diameter (ft)
Manufacturer	Peterson	*Operator ID*	CP24
Model	Custom	*Serial Number*	
Location Note			
Device Description	Flash cools dried DE. Calcined material is sent to the product mix tank.		

9.17.3 Leach Slurry Storage Tank

Device ID #	**106248**	***Device Name***	**Leach Slurry Storage Tank**
Rated Heat Input		*Physical Size*	2300.00 Gallons
Manufacturer	Paramount Fabricators	*Operator ID*	CP28
Model		*Serial Number*	
Location Note			
Device Description	Ventilated to the packed bed scrubber (SR1)		

9.17.4 Leach Tank

Device ID #	**106247**	***Device Name***	**Leach Tank**
Rated Heat Input		*Physical Size*	1500.00 Gallons
Manufacturer	Ametek	*Operator ID*	CP27
Model		*Serial Number*	
Location Note			
Device Description	Receives slurried calcined material from the product mix tank. Adds sulfuric acid and heated with steam from boiler.		

9.17.5 Mix Tank

Device ID #	**106246**	***Device Name***	**Mix Tank**
Rated Heat Input		*Physical Size*	2300.00 Gallons
Manufacturer	Paramount Fabricators	*Operator ID*	CP26
Model		*Serial Number*	
Location Note			
Device Description	Receives cooled material from cyclone. Material is slurried with water.		

9.17.6 Refeed (Bag Breaking) Station

Device ID #	**106244**	***Device Name***	**Refeed (Bag Breaking) Station**
Rated Heat Input		*Physical Size*	
Manufacturer	Celite	*Operator ID*	CP23
Model	Custom	*Serial Number*	
Location Note			
Device Description	4 bags/minute. Allows the addition of bagged material at three locations. Consists of a feed hopper, and an empty bag compactor. Ventilated to the dedicated refeed baghouse.		

9.17.7 Refeed Station Baghouse

Device ID #	**008079**	***Device Name***	**Refeed Station Baghouse**
Rated Heat Input		*Physical Size*	
Manufacturer	DCE Sintamatic	*Operator ID*	CP38/ DC11
Model	CSI 32F10	*Serial Number*	
Location Note			
Device Description	2000 acfm, 0.00044 gr/acf		

9.17.8 Refeed Station Powder Pump Packer

Device ID #	**106249**	***Device Name***	**Refeed Station Powder Pump Packer**
Rated Heat Input		*Physical Size*	400.00 lb/Hour
Manufacturer	Bulk Materials Handling	*Operator ID*	CP55
Model	Custom	*Serial Number*	
Location Note			
Device Description	Pump used for the Refeed Station Powder Packer		

9.18 Celpure Process 6

9.18.1 2nd Stage Dryer

Device ID #	**008922**	***Device Name***	**2nd Stage Dryer**
Rated Heat Input	3.200 MMBtu/Hour	*Physical Size*	
Manufacturer	The National Drying Machine Company	*Operator ID*	CP31
Model		*Serial Number*	
Location Note			
Device Description	(CS3) direct fired process heater: 6' x 30 '. Dries slurry from the rinsing and deacidifying filters. PM is controlled by the dryer exhaust baghouse		

9.18.2 Bag Packing Station

Device ID #	**106255**	***Device Name***	**Bag Packing Station**
Rated Heat Input		*Physical Size*	
Manufacturer	PAC 21	*Operator ID*	CP36
Model		*Serial Number*	
Location Note			
Device Description	Bag filler is ventilated to the Packing Station Baghouse. 150 lb/min		

9.18.3 Packaging Station Cyclone

Device ID #	**106252**	***Device Name***	**Packaging Station Cyclone**
Rated Heat Input		*Physical Size*	3.00 Diameter (ft)
Manufacturer	Peterson	*Operator ID*	CP33
Model	Custom	*Serial Number*	
Location Note			
Device Description	Receives material from the dryer, which is sent to the rotary screen.		

9.18.4 Packer Bin

Device ID #	**106254**	***Device Name***	**Packer Bin**
Rated Heat Input		*Physical Size*	500.00 Cubic Feet
Manufacturer	Steel Structures	*Operator ID*	CP35
Model	Custom	*Serial Number*	
Location Note			
Device Description			

9.18.5 Packing Station Baghouse

Device ID #	**008078**	***Device Name***	**Packing Station Baghouse**
Rated Heat Input		*Physical Size*	
Manufacturer	Mikropul	*Operator ID*	CP37
Model	31-8-85 C	*Serial Number*	
Location Note			
Device Description	(DC9) 1260 acfm, 0.002 gr/dscf, 90 psig header		

9.18.6 Product Dispersing Screen

Device ID #	**106253**	***Device Name***	**Product Dispersing Screen**
Rated Heat Input		*Physical Size*	1000.00 lb/Hour
Manufacturer	Kemutec Group	*Operator ID*	CP34
Model	K650	*Serial Number*	
Location Note			
Device Description	Material is discharged into a packer bin.		

9.18.7 Rinsing Filter

Device ID #	**106251**	***Device Name***	**Rinsing Filter**
Rated Heat Input		*Physical Size*	200.00 Square Feet
Manufacturer	Filtration Systems Tech	*Operator ID*	CP30
Model	VP-50-4	*Serial Number*	
Location Note			
Device Description	Rinses and filters the reacted slurry		

9.18.8 Second Stage Dryer Baghouse

Device ID #	**008077**	***Device Name***	**Second Stage Dryer Baghouse**
Rated Heat Input		*Physical Size*	
Manufacturer	Mikropul	*Operator ID*	BH420
Model	133-8-100 C	*Serial Number*	
Location Note			
Device Description	(DC8) 6143 acfm, 0.002 gr/dscf, 90 psig header		

9.18.9 Semi-Bulk Packing Station

Device ID #	**108405**	***Device Name***	**Semi-Bulk Packing Station**
Rated Heat Input		*Physical Size*	
Manufacturer	Sota	*Operator ID*	
Model	BB4P3	*Serial Number*	99 403
Location Note			

Device Description	Added per ATC 11007. Served by the Packing Station Baghouse		

9.19 Celpure Process 7

9.19.1 Alternate Soda Ash Bin

Device ID #	**106257**	***Device Name***	**Alternate Soda Ash Bin**
Rated Heat Input		*Physical Size*	690.00 Cubic Feet
Manufacturer	Steel Structures, Inc.	*Operator ID*	CP52
Model	Custom	*Serial Number*	
Location Note	Vented through the Alternative Soda Ash Baghouse (309200), and then to the Soda Ash Bin BH (8074).		
Device Description			

9.19.2 DE Bin

Device ID #	**106256**	***Device Name***	**DE Bin**
Rated Heat Input		*Physical Size*	690.00 Cubic Feet
Manufacturer	Steel Structures Inc	*Operator ID*	CP50
Model	Custom	*Serial Number*	
Location Note			
Device Description			

9.20 Convey Air Blower

Device ID #	**387101**	***Device Name***	**Convey Air Blower**
Rated Heat Input		*Physical Size*	Brake Horsepower
Manufacturer		*Operator ID*	810-PD-001
Model		*Serial Number*	
Location Note			
Device Description	For silos		

9.21 Detritor

Device ID #	**387109**	***Device Name***	**Detritor**
Rated Heat Input		*Physical Size*	Kilowatts
Manufacturer		*Operator ID*	710-DT-001

Model		*Serial Number*	
Location Note			
Device Description	Wet slurry		

9.22 Dust Collector 1

Device ID #	**387104**	***Device Name***	**Dust Collector 1**
Rated Heat Input		*Physical Size*	scf/Minute
Manufacturer		*Operator ID*	810-DC-001
Model		*Serial Number*	
Location Note			
Device Description	For silos		

9.23 Dust Collector 2

Device ID #	**387105**	***Device Name***	**Dust Collector 2**
Rated Heat Input		*Physical Size*	scf/Minute
Manufacturer		*Operator ID*	810-DC-002
Model		*Serial Number*	
Location Note			
Device Description	For silos		

9.24 Elevator

Device ID #	**387111**	***Device Name***	**Elevator**
Rated Heat Input		*Physical Size*	Kilowatts
Manufacturer		*Operator ID*	710-EL-001
Model		*Serial Number*	
Location Note			
Device Description	Wet		

9.25 Emergency Power Generator

Device ID #	103521	*Maximum Rated BHP*	50.00
Device Name	Emergency Power Generator	*Serial Number*	CD050/3777E068
Engine Use	Electrical Power	*EPA Engine Family Name*	

Manufacturer	Caterpillar	*Operator ID*	CP46
Model Year	1998	*Fuel Type*	CARB Diesel - ULSD
Model	CD50		
DRP/ISC?	No	*Healthcare Facility?*	No
Daily Hours		*Annual Hours*	
Location Note			
Device Description	Celpure Plant: diesel-fired,		

9.26 Filter Press (Rinsing Filter)

Device ID #	**387106**	***Device Name***	**Filter Press (Rinsing Filter)**
Rated Heat Input		*Physical Size*	scf/Minute
Manufacturer		*Operator ID*	710-VP-001
Model		*Serial Number*	
Location Note			
Device Description	Wet slurry		

9.27 Gravity Diverter

Device ID #	**387112**	***Device Name***	**Gravity Diverter**
Rated Heat Input		*Physical Size*	
Manufacturer		*Operator ID*	710-GD-001
Model		*Serial Number*	
Location Note			
Device Description	Wet		

9.28 Semi Dense Phase Conveyer (Powder Pump)

Device ID #	**387103**	***Device Name***	**Semi Dense Phase Conveyer (Powder Pump)**
Rated Heat Input		*Physical Size*	
Manufacturer		*Operator ID*	810-PP-001
Model		*Serial Number*	
Location Note			
Device Description	For silos		

9.29 Storage Silo 1

Device ID #	**387094**	***Device Name***	**Storage Silo 1**
Rated Heat Input		*Physical Size*	
Manufacturer		*Operator ID*	810-BN-001
Model		*Serial Number*	
Location Note			
Device Description	Stores product during downtime.		

9.30 Storage Silo 2

Device ID #	**387100**	***Device Name***	**Storage Silo 2**
Rated Heat Input		*Physical Size*	
Manufacturer		*Operator ID*	810-BN-002
Model		*Serial Number*	
Location Note			
Device Description	Stores product during downtime.		

9.31 Tank Pump

Device ID #	**387113**	***Device Name***	**Tank Pump**
Rated Heat Input		*Physical Size*	gal/Minute
Manufacturer		*Operator ID*	710-PP-001
Model		*Serial Number*	
Location Note			
Device Description	Wet		

9.32 Vacuum System

9.33 Attrition Scrubber

Device ID #	**391797**	***Device Name***	**Attrition Scrubber**
Rated Heat Input		*Physical Size*	80.00 hp
Manufacturer	QPEC	*Operator ID*	310-SR-001
Model	48X48	*Serial Number*	
Location Note			
Device Description	100 gpm.		

9.34 Detritor Feed Pump

Device ID #	**391798**	***Device Name***	**Detritor Feed Pump**
Rated Heat Input		*Physical Size*	20.00 hp
Manufacturer		*Operator ID*	310-PP-002
Model	Metso	*Serial Number*	VT80
Location Note			
Device Description	15- GPM.		

9.35 Tailings Pump First Stage

Device ID #	**391799**	***Device Name***	**Tailings Pump First Stage**
Rated Heat Input		*Physical Size*	125.00 hp
Manufacturer	Shurco	*Operator ID*	480-PP-03A
Model	4HE7SLLLG1055	*Serial Number*	
Location Note			
Device Description	~ 600 GPM.		

9.36 Tailings Pump Second Stage

Device ID #	**391800**	***Device Name***	**Tailings Pump Second Stage**
Rated Heat Input		*Physical Size*	125.00 hp
Manufacturer	Shurco	*Operator ID*	480-PP-003B
Model	4HE7SLLLG1055	*Serial Number*	
Location Note			
Device Description	600 GPM.		

9.37 Conditioning Tank

Device ID #	**391801**	***Device Name***	**Conditioning Tank**
Rated Heat Input		*Physical Size*	850.00 Gallons
Manufacturer	Paramount Fabricators	*Operator ID*	320-TK-004
Model	5' FRP Tank	*Serial Number*	
Location Note			
Device Description			

9.38 Flotation Cell

Device ID #	**391802**	***Device Name***	**Flotation Cell**
Rated Heat Input		*Physical Size*	20.00 hp
Manufacturer	QPEC	*Operator ID*	330-FC-003
Model	18SPL 7 Cells	*Serial Number*	
Location Note			
Device Description	40 GPM.		

9.39 Flotation Product Pump

Device ID #	**391803**	***Device Name***	**Flotation Product Pump**
Rated Heat Input		*Physical Size*	5.00 hp
Manufacturer	Metso	*Operator ID*	330-PP-003
Model	VT-50	*Serial Number*	
Location Note			
Device Description	40 GPM.		

9.40 390 Scrubber (Acid Demisting/Kiln Feed Bin BH Scrubber)

Device ID #	**391804**	***Device Name***	**390 Scrubber (Acid Demisting/Kiln Feed Bin BH Scrubber)**
Rated Heat Input		*Physical Size*	10.00 hp
Manufacturer	Heil	*Operator ID*	390-SR-001
Model	734-X	*Serial Number*	
Location Note			
Device Description	3000 CFM. Includes both a 5 hp recirculation pump and a 5 hp blower; total of 10 hp. Removes sulfuric acid droplets from a leach tank. Vents to atmosphere. 90% control		

9.41 Leach Tank #3

Device ID #	**391805**	***Device Name***	**Leach Tank #3**
Rated Heat Input		*Physical Size*	1000.00 Gallons
Manufacturer	Paramount Fabricators	*Operator ID*	390-TK-006
Model	5' Vinyl Ester Tank	*Serial Number*	
Location Note			

Device Description			

9.42 Leach Tank #3 Agitator

Device ID #	**391806**	***Device Name***	**Leach Tank #3 Agitator**
Rated Heat Input		*Physical Size*	5.00 hp
Manufacturer	SPX	*Operator ID*	390-AG-006
Model	15QC3	*Serial Number*	
Location Note			
Device Description	Agitates mixture in Leach Tank #3 (ID 391767)		

9.43 Leach Tank #4

Device ID #	**391807**	***Device Name***	**Leach Tank #4**
Rated Heat Input		*Physical Size*	1000.00 Gallons
Manufacturer	Paramount Fabricators	*Operator ID*	390-TK-007
Model	5' Vinyl Ester Tank	*Serial Number*	
Location Note			
Device Description			

9.44 Leach Tank #4 Agitator

Device ID #	**391808**	***Device Name***	**Leach Tank #4 Agitator**
Rated Heat Input		*Physical Size*	5.00 hp
Manufacturer	SPX	*Operator ID*	390-AG-007
Model	15QC3	*Serial Number*	
Location Note			
Device Description	Agitates mixture in Leach Tank #4 (ID 391769)		

9.45 Leach Tank #3 Slurry Transfer Pump

Device ID #	**391809**	***Device Name***	**Leach Tank #3 Slurry Transfer Pump**
Rated Heat Input		*Physical Size*	15.00 hp
Manufacturer	Metso	*Operator ID*	390-PP-004
Model	HR75	*Serial Number*	
Location Note			

Device Description	200 GPM.		

9.46 Leach Tank #4 Slurry Transfer Pump

Device ID #	**391810**	***Device Name***	**Leach Tank #4 Slurry Transfer Pump**
Rated Heat Input		*Physical Size*	15.00 hp
Manufacturer	Metso	*Operator ID*	390-PP-005
Model	HR75	*Serial Number*	
Location Note			
Device Description	200 GPM		

9.47 Flash Dryer Combustion Air Blower

Device ID #	**391811**	***Device Name***	**Flash Dryer Combustion Air Blower**
Rated Heat Input		*Physical Size*	10.00 hp
Manufacturer		*Operator ID*	420-FA-003
Model		*Serial Number*	
Location Note			
Device Description	Blows air through the Flash Dryer Heater (ID 391774) for product drying.1200 to 1400 rpm (ATC/PTO 15077)		

9.48 Flash Dryer Product Heater

Device ID #	**391812**	***Device Name***	**Flash Dryer Product Heater**
Rated Heat Input		*Physical Size*	4.33 MMBtu/Hour
Manufacturer	Eclipse	*Operator ID*	420-FR-001
Model		*Serial Number*	
Location Note			
Device Description	ATC 15077-02 derated the dryer from 6/5 to 4.333 MMBtu/hr by permanently capping off one of the three burner fuel supply lines.		

9.49 Flash Dryer Dispersion Fan

Device ID #	**391813**	***Device Name***	**Flash Dryer Dispersion Fan**
Rated Heat Input		*Physical Size*	30.00 hp

Manufacturer	Robinson Fan	*Operator ID*	420-FA-004
Model	PW0618	*Serial Number*	
Location Note	Relocated per ATC 15876-02.		
Device Description	12,000 ACFM @ 1000F.		

9.50 Celpure Flash Dryer Baghouse

Device ID #	**391814**	*Device Name*	**Celpure Flash Dryer Baghouse**
Rated Heat Input		*Physical Size*	4520.00 SCFM
Manufacturer	Griffin Filters	*Operator ID*	420-DC-002
Model	NA-273-3M	*Serial Number*	
Location Note			
Device Description	12000 ACFM (@1000F); 4,520 SCFM. 273 bags/cartridges; ceramic fabric; 4,099 sq feet cloth area; 2.89 air-to-cloth ratio; pulse jet. Controls PM from the Flash Dryer Product Heater (ID 391812)		

9.51 Flash Dryer Baghouse Rotary Airlock

Device ID #	**391815**	*Device Name*	**Flash Dryer Baghouse Rotary Airlock**
Rated Heat Input		*Physical Size*	5.00 hp
Manufacturer	W.M. Meyer	*Operator ID*	420-RV-002
Model	18x18 HDX	*Serial Number*	
Location Note			
Device Description	12". Located at the bottom of Celpure Flash Dryer Baghouse (ID 391776)		

9.52 Flash Dryer Baghouse Blower

Device ID #	**391816**	*Device Name*	**Flash Dryer Baghouse Blower**
Rated Heat Input		*Physical Size*	250.00 hp
Manufacturer	Robinson Fan	*Operator ID*	420-FA-002
Model	RB1610-6	*Serial Number*	
Location Note			
Device Description	Negative pressure BLOWER pulls air through Celpure Flash Dryer Baghouse (ID 391776)		

9.53 Tubular Conveyor Feed Screw

Device ID #	**391817**	***Device Name***	**Tubular Conveyor Feed Screw**
Rated Heat Input		*Physical Size*	3.00 hp
Manufacturer	Thomas Conveyor	*Operator ID*	430-CV-002
Model		*Serial Number*	
Location Note			
Device Description	14" Diameter.		

9.54 Packaging Tubular Conveyor

Device ID #	**391818**	***Device Name***	**Packaging Tubular Conveyor**
Rated Heat Input		*Physical Size*	3.00 hp
Manufacturer	Luxme	*Operator ID*	430-TC-001
Model	Type 200	*Serial Number*	
Location Note			
Device Description	8" Diameter.		

9.55 Packaging Dispersion Screen

Device ID #	**391819**	***Device Name***	**Packaging Dispersion Screen**
Rated Heat Input		*Physical Size*	5.00 hp
Manufacturer	Kemutec	*Operator ID*	430-SC-002
Model	KEK K800C	*Serial Number*	
Location Note			
Device Description	12".		

9.56 Packaging Magnetic Separator

Device ID #	**391820**	***Device Name***	**Packaging Magnetic Separator**
Rated Heat Input		*Physical Size*	5.00 hp
Manufacturer	Industrial Magnetics	*Operator ID*	430-MS-001
Model	12x12 RotaDrawer	*Serial Number*	
Location Note			
Device Description	12".		

9.57 Celpure Package Boiler

Device ID #	**394769**	***Device Name***	**Celpure Package Boiler**
Rated Heat Input	8.800 MMBtu/Hour	*Physical Size*	200.00 Horsepower
Manufacturer	Superior (boiler) / Powerflame (burner)	*Operator ID*	490-BO-001
Model	Boiler: Aztec MS8-X-1500-S200-M	*Serial Number*	To Be Provided
Location Note			
Device Description	New Celpure Package Boiler. Replaces existing 3.78 MMBtu/hr boiler. Burner model no. is LNINVC6-G-30. Boiler steam is used to heat slurry mixed with sulfuric acid in leach tanks.		

10 Chromosorb Production Line

10.1 Baghouses - Chromosorb Prod Line

10.1.1 Chromosorb Ventilation Baghouse - South

Device ID #	**000149**	***Device Name***	**Chromosorb Ventilation Baghouse - South**
Rated Heat Input		*Physical Size*	7800.00 scf/Minute
Manufacturer	Flex-Kleen	*Operator ID*	CPVBHS
Model	16 oz Dacron polyester felt	*Serial Number*	
Location Note			
Device Description	Ventilation chromosorb processes; Negative pressure; Bag Diam. (in): 5.75; Bag Length (ft): 8.5; Total Cloth Area: 2252; enclosed		

10.2 Chemical Treatment and Storage Tanks

Device ID #	**103449**	***Device Name***	**Chemical Treatment and Storage Tanks**
Rated Heat Input		*Physical Size*	
Manufacturer		*Operator ID*	
Model		*Serial Number*	
Location Note			
Device Description			

10.3 Chromosorb Bins

Device ID #	**103443**	***Device Name***	**Chromosorb Bins**

Rated Heat Input		*Physical Size*	
Manufacturer		*Operator ID*	
Model		*Serial Number*	
Location Note			
Device Description	(1) bag feed bin		

10.4 Chromosorb Blowers

Device ID #	**103442**	***Device Name***	**Chromosorb Blowers**
Rated Heat Input		*Physical Size*	
Manufacturer		*Operator ID*	
Model		*Serial Number*	
Location Note			
Device Description			

10.5 Chromosorb Cyclones

Device ID #	**103441**	***Device Name***	**Chromosorb Cyclones**
Rated Heat Input		*Physical Size*	
Manufacturer		*Operator ID*	
Model		*Serial Number*	
Location Note			
Device Description			

10.6 Chromosorb Hoppers

Device ID #	**103445**	***Device Name***	**Chromosorb Hoppers**
Rated Heat Input		*Physical Size*	
Manufacturer		*Operator ID*	
Model		*Serial Number*	
Location Note			
Device Description	(1) coarse hopper, (1) fines hopper		

10.7 Chromosorb Packers

Device ID #	**103446**	***Device Name***	**Chromosorb Packers**

Rated Heat Input		*Physical Size*	100.00 lb/Hour
Manufacturer		*Operator ID*	
Model		*Serial Number*	
Location Note			
Device Description			

10.8 Chromosorb Plant: Rotoclone Scrubber

Device ID #	**000150**	***Device Name***	**Chromosorb Plant: Rotoclone Scrubber**
Rated Heat Input		*Physical Size*	10000.00 scf/Minute
Manufacturer		*Operator ID*	CROTO
Model		*Serial Number*	
Location Note			
Device Description			

10.9 Chromosorb Product Wash Equipment

Device ID #	**103451**	***Device Name***	**Chromosorb Product Wash Equipment**
Rated Heat Input		*Physical Size*	
Manufacturer		*Operator ID*	
Model		*Serial Number*	
Location Note			
Device Description	Number of devices is currently unknown.		

10.10 Chromosorb Screens

Device ID #	**103444**	***Device Name***	**Chromosorb Screens**
Rated Heat Input		*Physical Size*	
Manufacturer		*Operator ID*	
Model		*Serial Number*	
Location Note			
Device Description			

10.11 Crushers

Device ID #	**103447**	***Device Name***	**Crushers**

Rated Heat Input		*Physical Size*	
Manufacturer		*Operator ID*	
Model		*Serial Number*	
Location Note			
Device Description			

10.12 Electric Ovens

Device ID #	**103450**	*Device Name*	**Electric Ovens**
Rated Heat Input		*Physical Size*	
Manufacturer		*Operator ID*	
Model		*Serial Number*	
Location Note			
Device Description	(1) OSI, (2) Despatch, (1) Proctor & Schwartz		

10.13 Mills

Device ID #	**103448**	*Device Name*	**Mills**
Rated Heat Input		*Physical Size*	
Manufacturer		*Operator ID*	
Model		*Serial Number*	
Location Note			
Device Description			

11 Emergency Standby Lake Pump Engine

Device ID #	**008919**	*Device Name*	**Emergency Standby Lake Pump Engine**
Rated Heat Input		*Physical Size*	199.40 Brake Horsepower
Manufacturer	Caterpillar	*Operator ID*	#8198
Model	C6.6	*Serial Number*	66602851
Location Note	Quarries		
Device Description	PERP Registration #108260; ARB Tracking #20001099.		

12 Line No. 7

12.1 Blender

Device ID #	**389133**	***Device Name***	**Blender**
Rated Heat Input		*Physical Size*	
Manufacturer	Stanley Equipment	*Operator ID*	CYB-ML-001
Model	400 CD	*Serial Number*	
Location Note			
Device Description	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

Device ID #	**109781**	***Device Name***	**Bucket Elevator #1**
Rated Heat Input		*Physical Size*	
Manufacturer	Kaman	*Operator ID*	
Model		*Serial Number*	
Location Note			
Device Description			

12.2.2 Conveyors (8)

Device ID #	**110768**	***Device Name***	**Conveyors (8)**
Rated Heat Input		*Physical Size*	
Manufacturer		*Operator ID*	
Model		*Serial Number*	
Location Note			
Device Description	8 Conveyors are as follows: BF#9 (26"x15'); BF #11 (26"x12.5'); BF #12 (26"x15'); #7 Reversable (30"x28'); #6 Reversable (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)

Device ID #	**110772**	***Device Name***	**Crude Bins (2)**
Rated Heat Input		*Physical Size*	
Manufacturer		*Operator ID*	Bins #1 & #2
Model		*Serial Number*	

Location Note	
Device Description	Capacity of each bin = 31 DMT

12.2.4 Crude Bins (3)

Device ID #	**110767**	***Device Name***	**Crude Bins (3)**
Rated Heat Input		*Physical Size*	39.00 Tons of Raw Material
Manufacturer		*Operator ID*	Bins #9, #11, #12
Model		*Serial Number*	
Location Note			
Device Description	Each bin capacity = 39 DMT 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

Device ID #	**109777**	***Device Name***	**Dump Hopper with Grizzly Feeder**
Rated Heat Input		*Physical Size*	
Manufacturer		*Operator ID*	
Model		*Serial Number*	
Location Note			
Device Description	Capacity = 79 cu yd (19 DMT)		

12.2.6 Scale Wet Tonnes

Device ID #	**109779**	***Device Name***	**Scale Wet Tonnes**
Rated Heat Input		*Physical Size*	
Manufacturer		*Operator ID*	BS001
Model		*Serial Number*	
Location Note			
Device Description			

12.2.7 Transfer Belts

Device ID #	**109778**	***Device Name***	**Transfer Belts**
Rated Heat Input		*Physical Size*	

Manufacturer	West Coast Wire & Steel	*Operator ID*	See description
Model		*Serial Number*	
Location Note			
Device Description	Transfer belts as follows: FB001 (60inx44ft; CB001 (36inx134ft); CB002 (36inx848ft); CB003 (38inx817ft); CB004 (36inx885ft); CB005 (24inx24ft); CB006 (24inx35ft)		

12.2.8 Vibrating Screen

Device ID #	**109780**	***Device Name***	**Vibrating Screen**
Rated Heat Input		*Physical Size*	
Manufacturer	Midwestern Industries, Inc.	*Operator ID*	VS001
Model		*Serial Number*	
Location Note			
Device Description	Located at 3 and 4 transfer points.		

12.3 Dry End Process Line #7

12.3.1 Baghouse BH 773

Device ID #	**112983**	***Device Name***	**Baghouse BH 773**
Rated Heat Input		*Physical Size*	
Manufacturer		*Operator ID*	BH 773
Model		*Serial Number*	
Location Note			
Device Description	BH773 contains 864 bags (6"Dx10'L); Blower flow rate = 42,976 scfm, exhaust limited to 8,000 scfm; op temp = 450F		

12.3.2 Baghouse BH775

Device ID #	**110720**	***Device Name***	**Baghouse BH775**
Rated Heat Input		*Physical Size*	10.00 Horsepower (Electric Motor)
Manufacturer		*Operator ID*	BH775
Model		*Serial Number*	
Location Note			
Device Description	BH775 contains 159 bags (4.625"Dx8'L); HP rating of blower = 10HP; blower flow rate = 3813 scfm; op temp = 140F		

12.3.3 Baghouse BH777

Device ID #	**110721**	***Device Name***	**Baghouse BH777**
Rated Heat Input		*Physical Size*	350.00 Horsepower (Electric Motor)
Manufacturer		*Operator ID*	BH777
Model		*Serial Number*	
Location Note			
Device Description	BH777 contains 702 bags (6"Dx10'L); HP rating of blower = 350HP; blower flow rate = 23996 scfm; op temp = 300F		

12.3.4 Baghouse BH788

Device ID #	**110722**	***Device Name***	**Baghouse BH788**
Rated Heat Input		*Physical Size*	15.00 Horsepower (Electric Motor)
Manufacturer		*Operator ID*	BH788
Model		*Serial Number*	
Location Note			
Device Description	BH788 contains 460 bags (4.625"Dx8'L); HP rating of blower = 15HP; blower flow rate = 11404 scfm; op temp = 110F		

12.3.5 Baghouse BH789

Device ID #	**110723**	***Device Name***	**Baghouse BH789**
Rated Heat Input		*Physical Size*	15.00 Horsepower (Electric Motor)
Manufacturer		*Operator ID*	BH789
Model		*Serial Number*	
Location Note			
Device Description	BH789 contains 460 bags (4.625"Dx8'L); HP rating of blower = 15HP; blower flow rate = 14037 scfm (increase from 11404 scfm due to source test - see ATC 14908); op temp = 110F		

12.3.6 Belt Scale

Device ID #	**110783**	***Device Name***	**Belt Scale**
Rated Heat Input		*Physical Size*	
Manufacturer	Schenk Accurate	*Operator ID*	BS782
Model	DMO Weigh Belt Feeder	*Serial Number*	
Location Note			
Device Description			

12.3.7 Belt Scales (2)

Device ID #	**110775**	***Device Name***	**Belt Scales (2)**
Rated Heat Input		*Physical Size*	
Manufacturer	Schenk Accurate	*Operator ID*	BS711, WB705
Model	DMO Weigh Belt Feeder	*Serial Number*	
Location Note			
Device Description	24 inch width; in feed to discharge - 7 ft CL		

12.3.8 Bin

Device ID #	**109791**	***Device Name***	**Bin**
Rated Heat Input		*Physical Size*	
Manufacturer	Tank Connection	*Operator ID*	BN775
Model	bin	*Serial Number*	
Location Note			
Device Description			

12.3.9 Blowers, Dry End

Device ID #	**109807**	***Device Name***	**Blowers, Dry End**
Rated Heat Input		*Physical Size*	
Manufacturer		*Operator ID*	See description
Model		*Serial Number*	
Location Note			
Device Description	Blowers Imerys IDs BL772, BL773, BL775, BL777, BL788, BL789		

12.3.10 Bucket Elevator

Device ID #	**109805**	***Device Name***	**Bucket Elevator**
Rated Heat Input		*Physical Size*	
Manufacturer		*Operator ID*	BE786
Model		*Serial Number*	
Location Note			
Device Description			

12.3.11 Chain Conveyor

Device ID #	**109743**	***Device Name***	**Chain Conveyor**
Rated Heat Input		*Physical Size*	
Manufacturer		*Operator ID*	CV771
Model		*Serial Number*	
Location Note			
Device Description			

12.3.12 Classifier

Device ID #	**109746**	***Device Name***	**Classifier**
Rated Heat Input		*Physical Size*	
Manufacturer		*Operator ID*	CL775
Model		*Serial Number*	
Location Note			
Device Description			

12.3.13 Classifier

Device ID #	**109799**	***Device Name***	**Classifier**
Rated Heat Input		*Physical Size*	
Manufacturer		*Operator ID*	CL788
Model		*Serial Number*	
Location Note			
Device Description			

12.3.14 Classifier

Device ID #	**109800**	***Device Name***	**Classifier**
Rated Heat Input		*Physical Size*	
Manufacturer		*Operator ID*	CL789
Model		*Serial Number*	
Location Note			
Device Description			

12.3.15 Collector

Device ID #	**109812**	***Device Name***	**Collector**
Rated Heat Input		*Physical Size*	
Manufacturer		*Operator ID*	CT773
Model		*Serial Number*	
Location Note			
Device Description	This device is also known as the "Hot Baghouse"; baghouse exhaust ducted to combustion furnace (FR705)		

12.3.16 Cyclone

Device ID #	**109744**	***Device Name***	**Cyclone**
Rated Heat Input		*Physical Size*	
Manufacturer		*Operator ID*	CY772A
Model		*Serial Number*	
Location Note			
Device Description			

12.3.17 Cyclone

Device ID #	**109745**	***Device Name***	**Cyclone**
Rated Heat Input		*Physical Size*	
Manufacturer		*Operator ID*	CY772B
Model		*Serial Number*	
Location Note			
Device Description			

12.3.18 Cyclone

Device ID #	**109801**	***Device Name***	**Cyclone**
Rated Heat Input		*Physical Size*	
Manufacturer		*Operator ID*	CY776
Model		*Serial Number*	
Location Note			
Device Description			

12.3.19 Delumper

Device ID #	**109742**	***Device Name***	**Delumper**
Rated Heat Input		*Physical Size*	
Manufacturer		*Operator ID*	ML771
Model		*Serial Number*	
Location Note			
Device Description			

12.3.20 Feed Bin 566

Device ID #	**109900**	***Device Name***	**Feed Bin 566**
Rated Heat Input		*Physical Size*	2.00 Tons
Manufacturer		*Operator ID*	
Model		*Serial Number*	
Location Note			
Device Description	Capacity = 2.0 tons		

12.3.21 Lugger Box

Device ID #	**109810**	***Device Name***	**Lugger Box**
Rated Heat Input		*Physical Size*	
Manufacturer		*Operator ID*	
Model		*Serial Number*	
Location Note			
Device Description			

12.3.22 Mill

Device ID #	**109808**	***Device Name***	**Mill**
Rated Heat Input		*Physical Size*	
Manufacturer		*Operator ID*	ML775B
Model		*Serial Number*	
Location Note			
Device Description			

12.3.23 Mill

Device ID #	**109798**	***Device Name***	**Mill**
Rated Heat Input		*Physical Size*	
Manufacturer		*Operator ID*	ML781
Model		*Serial Number*	
Location Note			
Device Description			

12.3.24 Pumps

Device ID #	**109809**	***Device Name***	**Pumps**
Rated Heat Input		*Physical Size*	
Manufacturer	Cyclonaire	*Operator ID*	See description
Model		*Serial Number*	
Location Note			
Device Description	Pumps Imerys IDs PP775, PP778, PP790A, PP790B, PP786 PP775, PP790A & B = 100 ft3 pressure vessels, Model DPV 100B PP778 = 25 ft3 pressure vessels, Model DPV 25B		

12.3.25 Refeed Bin

Device ID #	**109803**	***Device Name***	**Refeed Bin**
Rated Heat Input		*Physical Size*	
Manufacturer	Tank Connection	*Operator ID*	BN791
Model	1947 ft3 bin	*Serial Number*	
Location Note			
Device Description	5 metric ton capacity		

12.3.26 Reversible Conveyor

Device ID #	**110784**	***Device Name***	**Reversible Conveyor**
Rated Heat Input		*Physical Size*	
Manufacturer		*Operator ID*	
Model		*Serial Number*	
Location Note			
Device Description	Size = 30in x 20ft		

12.3.27 Screens

Device ID #	**103378**	***Device Name***	**Screens**
Rated Heat Input		*Physical Size*	
Manufacturer	SWECO/Midwestern	*Operator ID*	SN784, ML775A, ML775B
Model		*Serial Number*	
Location Note			
Device Description	(1) screen, and (2) screens		

12.3.28 Screw Conveyors

Device ID #	**109806**	***Device Name***	**Screw Conveyors**
Rated Heat Input		*Physical Size*	
Manufacturer		*Operator ID*	See description
Model		*Serial Number*	
Location Note			
Device Description	Screw conveyor Imerys IDs SC773, SC777, SC774, SC780, SC781, SC782A, SC782B, SC784, SC786, SC788, SC790A, SC790B		

12.3.29 Separator

Device ID #	**109796**	***Device Name***	**Separator**
Rated Heat Input		*Physical Size*	
Manufacturer		*Operator ID*	CL780
Model		*Serial Number*	
Location Note			
Device Description			

12.3.30 Separator

Device ID #	**109797**	***Device Name***	**Separator**
Rated Heat Input		*Physical Size*	
Manufacturer		*Operator ID*	CL782
Model		*Serial Number*	
Location Note			
Device Description			

12.3.31 Surge Bin

Device ID #	**109792**	***Device Name***	**Surge Bin**
Rated Heat Input		*Physical Size*	
Manufacturer	tank Connection	*Operator ID*	BN778
Model	bin	*Serial Number*	
Location Note			
Device Description			

12.3.32 Surge Bin

Device ID #	**109795**	***Device Name***	**Surge Bin**
Rated Heat Input		*Physical Size*	
Manufacturer	Tank Connection	*Operator ID*	BN786
Model	bin	*Serial Number*	
Location Note			
Device Description			

12.3.33 Surge Bin

Device ID #	**109793**	***Device Name***	**Surge Bin**
Rated Heat Input		*Physical Size*	
Manufacturer	Tank Connection	*Operator ID*	BN790A
Model	bin	*Serial Number*	
Location Note			
Device Description			

12.3.34 Surge Bin

Device ID #	**109794**	***Device Name***	**Surge Bin**
Rated Heat Input		*Physical Size*	
Manufacturer	Tank Connection	*Operator ID*	BN790B
Model	bin	*Serial Number*	
Location Note			
Device Description			

12.4 Dust Collector DC719

Device ID #	**385116**	***Device Name***	**Dust Collector DC719**

Rated Heat Input		*Physical Size*	100.00 scf/Minute
Manufacturer	Sintamatic	*Operator ID*	DC719
Model	CSI12K3	*Serial Number*	TBD
Location Note			
Device Description	Passive dust collector used to ventilate the Soda Ash Delivery system. 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

Device ID #	103381	*Device Name*	Air sifters
Rated Heat Input		*Physical Size*	
Manufacturer		*Operator ID*	
Model		*Serial Number*	
Location Note			
Device Description			

12.5.2 Bins

Device ID #	103377	*Device Name*	Bins
Rated Heat Input		*Physical Size*	
Manufacturer		*Operator ID*	
Model		*Serial Number*	
Location Note			
Device Description	(3) crude bins (#13 -15), (1) soda ash storage bin, (1) refeed bin, (1) air sifter process surge bin, (1) surge bin		

12.5.3 Blowers

Device ID #	103373	*Device Name*	Blowers
Rated Heat Input		*Physical Size*	
Manufacturer		*Operator ID*	
Model		*Serial Number*	
Location Note			
Device Description	(1) furnace blower, (33) blowers, (4) soda ash blowers (#727A -D), (2) rotary kiln blowers (730 & 733)		

12.5.4 Bucket Elevator

Device ID #	**103380**	***Device Name***	**Bucket Elevator**
Rated Heat Input		*Physical Size*	
Manufacturer		*Operator ID*	
Model		*Serial Number*	
Location Note			
Device Description			

12.5.5 De-lumpers

Device ID #	**103375**	***Device Name***	**De-lumpers**
Rated Heat Input		*Physical Size*	
Manufacturer		*Operator ID*	701A, 701B
Model		*Serial Number*	
Location Note			
Device Description			

12.5.6 Hoppers

Device ID #	**103379**	***Device Name***	**Hoppers**
Rated Heat Input		*Physical Size*	
Manufacturer		*Operator ID*	
Model		*Serial Number*	
Location Note			
Device Description	Crude Feed Hopper (1), Soda Ash Hopper (1), Natural Baghouse Hoppers (6), Dry Product Baghouse Hoppers (9), Kiln discharge Hopper (1), surge hopper (1)		

12.5.7 Pre-separators

Device ID #	**103374**	***Device Name***	**Pre-separators**
Rated Heat Input		*Physical Size*	
Manufacturer		*Operator ID*	701A, 701B, 702
Model		*Serial Number*	
Location Note			
Device Description			

12.5.8 Re-separator

Device ID #	**103376**	***Device Name***	**Re-separator**
Rated Heat Input		*Physical Size*	
Manufacturer		*Operator ID*	
Model		*Serial Number*	
Location Note			
Device Description			

12.6 Processing Line #7 (packing)

12.6.1 Capture System and Control (Line #7 Dry End)

12.6.1.1 Baghouse Blowers

Device ID #	**103384**	***Device Name***	**Baghouse Blowers**
Rated Heat Input		*Physical Size*	
Manufacturer		*Operator ID*	
Model		*Serial Number*	
Location Note			
Device Description			

12.6.1.2 Baghouse Hoppers

Device ID #	**103385**	***Device Name***	**Baghouse Hoppers**
Rated Heat Input		*Physical Size*	
Manufacturer		*Operator ID*	
Model		*Serial Number*	
Location Note			
Device Description			

12.6.1.3 Cyclone

Device ID #	**106140**	***Device Name***	**Cyclone**
Rated Heat Input		*Physical Size*	
Manufacturer		*Operator ID*	713
Model		*Serial Number*	
Location Note			
Device Description	4-foot outside diameter		

12.6.1.4 Product Storage Bins

Device ID #	**103325**	***Device Name***	**Product Storage Bins**
Rated Heat Input		*Physical Size*	
Manufacturer		*Operator ID*	
Model		*Serial Number*	
Location Note			
Device Description	8 storage bins shared among production lines 11, 3, 5, 6, and 7.		

12.6.2 Capture System and Control (Line #7 Wet End)

12.6.2.1 Blower

Device ID #	**106137**	***Device Name***	**Blower**
Rated Heat Input		*Physical Size*	
Manufacturer		*Operator ID*	707
Model		*Serial Number*	
Location Note			
Device Description			

12.6.2.2 Cyclone

Device ID #	**106138**	***Device Name***	**Cyclone**
Rated Heat Input		*Physical Size*	
Manufacturer		*Operator ID*	704
Model		*Serial Number*	
Location Note			
Device Description			

12.7 Product, Conveyance, Storage, and Packaging Line #7

12.7.1 Bin

Device ID #	**109837**	***Device Name***	**Bin**
Rated Heat Input		*Physical Size*	
Manufacturer		*Operator ID*	BN922
Model		*Serial Number*	
Location Note			

Device Description			

12.7.2 Bin

Device ID #	**109836**	***Device Name***	**Bin**
Rated Heat Input		*Physical Size*	
Manufacturer		*Operator ID*	BN921
Model		*Serial Number*	
Location Note			
Device Description			

12.7.3 Bulk Filling Blower

Device ID #	**109817**	***Device Name***	**Bulk Filling Blower**
Rated Heat Input		*Physical Size*	75.00 Horsepower (Electric Motor)
Manufacturer		*Operator ID*	BL155
Model		*Serial Number*	
Location Note			
Device Description			

12.7.4 Pumps

Device ID #	**109833**	***Device Name***	**Pumps**
Rated Heat Input		*Physical Size*	
Manufacturer		*Operator ID*	PP923, 924
Model		*Serial Number*	
Location Note			
Device Description			

12.7.5 Rework Hose Station

Device ID #	**109819**	***Device Name***	**Rework Hose Station**
Rated Heat Input		*Physical Size*	
Manufacturer		*Operator ID*	HS116
Model		*Serial Number*	
Location Note			

Device Description	

12.8 Pump

Device ID #	**389134**	***Device Name***	**Pump**
Rated Heat Input		*Physical Size*	3.00 hp
Manufacturer	Watson Marlow	*Operator ID*	CYB-PP-001
Model	APEX35	*Serial Number*	
Location Note			
Device Description	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

Device ID #	**389137**	***Device Name***	**Semi-Bulk Packing Station**
Rated Heat Input		*Physical Size*	3000.00 Pounds
Manufacturer	National Bulk Equipment	*Operator ID*	CYB-PK-001
Model	A138462-02H	*Serial Number*	
Location Note			
Device Description	Bags product from Blender (ID 389133)		

12.10 System 7 Milling Circuit

12.10.1 Baghouse BH912

Device ID #	**110203**	***Device Name***	**Baghouse BH912**
Rated Heat Input		*Physical Size*	13000.00 scf/Minute
Manufacturer	Mikropul	*Operator ID*	BH912
Model	RAF II	*Serial Number*	
Location Note			
Device Description	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

Device ID #	**108940**	***Device Name***	**Baghouse BH916**
Rated Heat Input		*Physical Size*	13243.00 scf/Minute
Manufacturer	Airjet SA	*Operator ID*	BH916

Model	280-M-10-TRL-B2R	*Serial Number*	
Location Note			
Device Description	Captures product from Cyclone CY914; baghouse blower is a 180HP Reitz Model KXE160-040030-00 blower (BL919); contains 280 polyester felt-type bags; each bag 5in D x 10 ft L		

12.10.3 Blower

Device ID #	**108946**	***Device Name***	**Blower**
Rated Heat Input		*Physical Size*	600.00 scf/Minute
Manufacturer	Sutorbilt	*Operator ID*	
Model		*Serial Number*	
Location Note			
Device Description	Product mover powered by a 60 HP electric motor.		

12.10.4 Blower

Device ID #	**109438**	***Device Name***	**Blower**
Rated Heat Input		*Physical Size*	300.00 scf/Minute
Manufacturer	Sutorbilt	*Operator ID*	
Model		*Serial Number*	
Location Note			
Device Description	Product mover powered by a 30 HP electric motor		

12.10.5 Classifier 910

Device ID #	**108937**	***Device Name***	**Classifier 910**
Rated Heat Input		*Physical Size*	22.50 Tons/Hour
Manufacturer		*Operator ID*	CL910
Model		*Serial Number*	
Location Note			
Device Description	Powered by a 60 HP electric motor.		

12.10.6 Classifier 913

Device ID #	**110202**	***Device Name***	**Classifier 913**
Rated Heat Input		*Physical Size*	22.50 Tons/Hour
Manufacturer		*Operator ID*	CL913

Model		*Serial Number*	
Location Note			
Device Description	Powered by a 60 HP electric motor.		

12.10.7 Cyclone

Device ID #	**108939**	*Device Name*	**Cyclone**
Rated Heat Input		*Physical Size*	
Manufacturer	Ecutec	*Operator ID*	CY914
Model	KEZ1900	*Serial Number*	
Location Note			
Device Description	Max dia 5.25 ft; collects and sizes product.		

12.10.8 Enclosed Screw Conveyors (6)

Device ID #	**108941**	*Device Name*	**Enclosed Screw Conveyors (6)**
Rated Heat Input		*Physical Size*	
Manufacturer	Sinfimasa	*Operator ID*	
Model		*Serial Number*	
Location Note			
Device Description	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)		

12.10.9 Feed Bin

Device ID #	**108934**	*Device Name*	**Feed Bin**
Rated Heat Input		*Physical Size*	11.02 Tons
Manufacturer	Acerforma-2	*Operator ID*	BN901
Model	Ecutec 06.046-FS1	*Serial Number*	
Location Note			
Device Description			

12.10.10 Feed Bin Baghouse BH901

Device ID #	**108935**	*Device Name*	**Feed Bin Baghouse BH901**
Rated Heat Input		*Physical Size*	2550.00 scf/Minute

Manufacturer	Airjet SA	*Operator ID*	BH901
Model	81-S-6-TRL-A	*Serial Number*	
Location Note			
Device Description	Controls emissions from Feed Bin BN901; baghouse blower is a CBI SA Model CHB13 9HP blower (BL901); contains 81 polyester felt-type bags; each bag 5in D x 6 ft L		

12.10.11 Mill

Device ID #	**108936**	*Device Name*	**Mill**
Rated Heat Input		*Physical Size*	4.00 Tons/Hour
Manufacturer		*Operator ID*	BM906
Model	BM18/42 R01 DC02	*Serial Number*	
Location Note			
Device Description	Drum size 5.9 ft Dia X 13.2 ft Long; powered by a 72.4 HP motor		

12.10.12 Waste Bulk Bag

Device ID #	**108948**	*Device Name*	**Waste Bulk Bag**
Rated Heat Input		*Physical Size*	
Manufacturer		*Operator ID*	
Model		*Serial Number*	
Location Note			
Device Description	Totally enclosed semi-bulk bag		

12.10.13 Weigh Bin

Device ID #	**108942**	*Device Name*	**Weigh Bin**
Rated Heat Input		*Physical Size*	50.50 Cubic Feet
Manufacturer		*Operator ID*	BN904
Model		*Serial Number*	
Location Note			
Device Description			

12.11 Tank

Device ID #	**389135**	*Device Name*	**Tank**
Rated Heat Input		*Physical Size*	10300.00 Gallons

Manufacturer	PolyProcessing	*Operator ID*	CYB-TK-001
Model		*Serial Number*	
Location Note			
Device Description	Holds solution. Connected to pump CYB-PP-001 (District ID 389134)		

12.12 Wet End Process Line #7

12.12.1 Baghouse BH721

Device ID #	**110724**	***Device Name***	**Baghouse BH721**
Rated Heat Input		*Physical Size*	3.00 Horsepower (Electric Motor)
Manufacturer		*Operator ID*	BH721
Model		*Serial Number*	
Location Note			
Device Description	BH721 contains 16 bags (4.625"Dx6'L); HP rating of blower = 3HP; blower flow rate = 687 scfm; op temp = 70F		

12.12.2 Blowers

Device ID #	**109844**	***Device Name***	**Blowers**
Rated Heat Input		*Physical Size*	
Manufacturer		*Operator ID*	See description
Model		*Serial Number*	
Location Note			
Device Description	Various product blowers: BL705, BL708A, BL708B, BL709, BL710, BL711, BL715, BL717, BL717B, BL721. Manuf: BL705-No American, BL708A-Alphair, BL708B-Canadian Buffalo, BL709/711, BL717, BL721-Northern Blowers		

12.12.3 Blowers (2)

Device ID #	**110774**	***Device Name***	**Blowers (2)**
Rated Heat Input		*Physical Size*	
Manufacturer	Robinson	*Operator ID*	BL719A & B
Model	RB 1806-5 SWSI	*Serial Number*	
Location Note			
Device Description	Note: This equipment will be removed from Dev No 103373 in PTO 5840 at the next permit modification or reevaluation.		

12.12.4 Bucket Elevator

Device ID #	**109851**	***Device Name***	**Bucket Elevator**
Rated Heat Input		*Physical Size*	
Manufacturer	Kaman Industrial Technology	*Operator ID*	BE706
Model	SK589-116	*Serial Number*	
Location Note			
Device Description	Height = 78 ft		

12.12.5 Classifier

Device ID #	**109853**	***Device Name***	**Classifier**
Rated Heat Input		*Physical Size*	
Manufacturer		*Operator ID*	CL706
Model		*Serial Number*	
Location Note			
Device Description			

12.12.6 Collectors

Device ID #	**109872**	***Device Name***	**Collectors**
Rated Heat Input		*Physical Size*	
Manufacturer		*Operator ID*	DC709, DC710, DC711
Model	see description	*Serial Number*	
Location Note			
Device Description	Model Nos: DC709 & DC710 -		

12.12.7 Conveyor belts

Device ID #	**103383**	***Device Name***	**Conveyor belts**
Rated Heat Input		*Physical Size*	
Manufacturer	See description	*Operator ID*	
Model		*Serial Number*	
Location Note			
Device Description	(1) screw conveyor, (1) soda ash system conveyor, (27) conveyors		

12.12.8 Crude Bin

Device ID #	**110769**	***Device Name***	**Crude Bin**
Rated Heat Input		*Physical Size*	
Manufacturer		*Operator ID*	BN702A
Model		*Serial Number*	
Location Note			
Device Description	Capacity = 56 DMT		

12.12.9 Crude Bin

Device ID #	**110770**	***Device Name***	**Crude Bin**
Rated Heat Input		*Physical Size*	
Manufacturer		*Operator ID*	BN702B
Model		*Serial Number*	
Location Note			
Device Description	Capacity = 56 DMT		

12.12.10 Crude Bin

Device ID #	**110771**	***Device Name***	**Crude Bin**
Rated Heat Input		*Physical Size*	
Manufacturer		*Operator ID*	BN702C
Model		*Serial Number*	
Location Note			
Device Description	Capacity = 56 DMT		

12.12.11 Cyclone

Device ID #	**109876**	***Device Name***	**Cyclone**
Rated Heat Input		*Physical Size*	
Manufacturer		*Operator ID*	CY717
Model		*Serial Number*	
Location Note			
Device Description			

12.12.12 Cyclones

Device ID #	**109847**	***Device Name***	**Cyclones**
Rated Heat Input		*Physical Size*	120000.00 Cubic Feet/Minute
Manufacturer		*Operator ID*	CY708
Model	TBD	*Serial Number*	TBD
Location Note			
Device Description			

12.12.13 Feed Hopper

Device ID #	**109854**	***Device Name***	**Feed Hopper**
Rated Heat Input		*Physical Size*	
Manufacturer		*Operator ID*	FH706
Model		*Serial Number*	
Location Note			
Device Description			

12.12.14 Furnace

Device ID #	**109857**	***Device Name***	**Furnace**
Rated Heat Input		*Physical Size*	45.00 MMBtu/Hour
Manufacturer		*Operator ID*	FR705
Model		*Serial Number*	
Location Note			
Device Description			

12.12.15 Hammer Mills

Device ID #	**103278**	***Device Name***	**Hammer Mills**
Rated Heat Input		*Physical Size*	150.00 Tons/Hour
Manufacturer		*Operator ID*	CP2
Model		*Serial Number*	
Location Note			
Device Description	Sizes raw ore beside the loading station		

12.12.16 Imerys Unassigned Devices

12.12.16.1 616 Ventilation Baghouse

Device ID #	**000128**	***Device Name***	**616 Ventilation Baghouse**
Rated Heat Input		*Physical Size*	3000.00 scf/Minute
Manufacturer	Mikro-Pulsaire	*Operator ID*	616VBH
Model	Polypropylene	*Serial Number*	
Location Note			
Device Description	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		

12.12.17 Kiln Exhaust Blower

Device ID #	**112930**	***Device Name***	**Kiln Exhaust Blower**
Rated Heat Input		*Physical Size*	75.00 Horsepower (Electric Motor)
Manufacturer	JM	*Operator ID*	BL723
Model		*Serial Number*	TBD
Location Note			
Device Description			

12.12.18 Kiln Feed Cyclones

Device ID #	**109855**	***Device Name***	**Kiln Feed Cyclones**
Rated Heat Input		*Physical Size*	60000.00 Cubic Feet/Minute
Manufacturer		*Operator ID*	CY715
Model		*Serial Number*	
Location Note			
Device Description			

12.12.19 Kiln Feed End Seal Blower

Device ID #	**112907**	***Device Name***	**Kiln Feed End Seal Blower**
Rated Heat Input		*Physical Size*	scf/Minute
Manufacturer		*Operator ID*	
Model		*Serial Number*	TBD
Location Note			

Device Description	30 hp electric motor Direct drive blower 240 scfm		

12.12.20 Line 7 Kiln

Device ID #	**103370**	***Device Name***	**Line 7 Kiln**
Rated Heat Input	50.000 MMBtu/Hour	*Physical Size*	438000.00 MMBtu/yr
Manufacturer		*Operator ID*	KN723
Model		*Serial Number*	
Location Note	Note (c) Unless otherwise indicated, combustion equipment burns PUC quality natural gas (primary) or No. 2 Diesel (emergency backup).		
Device Description	Control Device: Venturi Scrubber/Packed Bed Tower (Device ID 109866)		

12.12.21 Mill

Device ID #	**109852**	***Device Name***	**Mill**
Rated Heat Input		*Physical Size*	
Manufacturer		*Operator ID*	ML706
Model		*Serial Number*	
Location Note			
Device Description			

12.12.22 Mill

Device ID #	**103382**	***Device Name***	**Mill**
Rated Heat Input		*Physical Size*	
Manufacturer		*Operator ID*	ML719
Model		*Serial Number*	
Location Note			
Device Description	Comprised of ducting from storage bin, hopper, conveyor, pulverizer, and blowers (4) (#727 A - D)		

12.12.23 Pumps

Device ID #	**109869**	***Device Name***	**Pumps**
Rated Heat Input		*Physical Size*	
Manufacturer		*Operator ID*	PP718

Model		*Serial Number*	
Location Note			
Device Description			

12.12.24 Screw Conveyors

Device ID #	**109845**	***Device Name***	**Screw Conveyors**
Rated Heat Input		*Physical Size*	
Manufacturer		*Operator ID*	See description
Model		*Serial Number*	
Location Note			
Device Description	14 screw conveyors: SC708A, SC708B, SC708C, SC708D, SC709, SC710, SC711, SC712, SC715, SC716, SC717A, SC717B, SC717C, SC722		

12.12.25 Separator Product Bin

Device ID #	**109860**	***Device Name***	**Separator Product Bin**
Rated Heat Input		*Physical Size*	
Manufacturer	Tank Connection	*Operator ID*	BN712
Model	1462CF	*Serial Number*	
Location Note			
Device Description	Capacity = 4 MT		

12.12.26 Separators

Device ID #	**109874**	***Device Name***	**Separators**
Rated Heat Input		*Physical Size*	
Manufacturer		*Operator ID*	CL709, CL710, CL711
Model	CL709, CL710, CL711	*Serial Number*	
Location Note			
Device Description			

12.12.27 SO2 Reagent System

Device ID #	**109877**	***Device Name***	**SO2 Reagent System**
Rated Heat Input		*Physical Size*	
Manufacturer		*Operator ID*	See description
Model		*Serial Number*	

Location Note	
Device Description	SO2 Reagent System consists of Make-up tank (TK721A), 10% Soda Solution Tank (TK721B), Reagent Recycle Tank (TK720), Absorber Pump (WP720A) and Venturi Recirc Pump (WP720B), Soda Solution Pump (WP721A & B)

12.12.28 Surge Bin

Device ID #	**109871**	*Device Name*	**Surge Bin**
Rated Heat Input		*Physical Size*	
Manufacturer	Tank Connection	*Operator ID*	BN718
Model	1462CF	*Serial Number*	
Location Note			
Device Description	Capacity = 5 MT		

12.12.29 Venturi/Separator/Packed Bed Tower

Device ID #	**109866**	*Device Name*	**Venturi/Separator/Packed Bed Tower**
Rated Heat Input		*Physical Size*	
Manufacturer		*Operator ID*	SB720
Model		*Serial Number*	
Location Note			
Device Description	Venturi scrubber with a PM/PM10 removal efficiency of 99.8% and a 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

Device ID #	**110487**	*Device Name*	**Crushed Ore Transfer Belt Conveyor to Screen**
Rated Heat Input		*Physical Size*	
Manufacturer	Rock Systems	*Operator ID*	CB014
Model		*Serial Number*	
Location Note			
Device Description	36" belt width X 100ft length; stationary; driven by 40 HP electric motor		

13.2 Crushed Product Belt Scale

Device ID #	**110496**	*Device Name*	**Crushed Product Belt Scale**
Rated Heat Input		*Physical Size*	
Manufacturer	Milltronics (Siemens)	*Operator ID*	BS030
Model		*Serial Number*	
Location Note			
Device Description	30" width		

13.3 Crusher Apron Feeder

Device ID #	**110483**	*Device Name*	**Crusher Apron Feeder**
Rated Heat Input		*Physical Size*	
Manufacturer	Rexnord	*Operator ID*	FB011
Model		*Serial Number*	
Location Note			
Device Description	65" belt width x 44ft length; 65" Apron type; VFD, driven by 15 HP electric motor		

13.4 Crusher Feed Hopper

Device ID #	**110482**	*Device Name*	**Crusher Feed Hopper**
Rated Heat Input		*Physical Size*	
Manufacturer		*Operator ID*	FH010
Model		*Serial Number*	
Location Note			
Device Description	Capacity of 61 yd3; unlined; above ground		

13.5 DE Ore Crusher

Device ID #	**110486**	*Device Name*	**DE Ore Crusher**
Rated Heat Input		*Physical Size*	
Manufacturer	Metso NP1520	*Operator ID*	CR013
Model		*Serial Number*	
Location Note			
Device Description	Size minus 1/2 inch; horizontal shelf impactor; open discharge, VFD; driven by 2 - 250 HP electric motors		

13.6 Feed Belt Scale

Device ID #	**110488**	***Device Name***	**Feed Belt Scale**
Rated Heat Input		*Physical Size*	
Manufacturer	Milltronics (Siemens)	*Operator ID*	BS014
Model		*Serial Number*	
Location Note			
Device Description	36' width		

13.7 First Oversize Collection Conveyor Belt

Device ID #	**110491**	***Device Name***	**First Oversize Collection Conveyor Belt**
Rated Heat Input		*Physical Size*	
Manufacturer	Rock Systems	*Operator ID*	CB020
Model		*Serial Number*	
Location Note			
Device Description	30" belt width X 60ft length; portable/stackable; driven by a 15 HP electric motor		

13.8 First Undersize Transfer Belt Conveyor

Device ID #	**110495**	***Device Name***	**First Undersize Transfer Belt Conveyor**
Rated Heat Input		*Physical Size*	
Manufacturer	Rock Systems	*Operator ID*	CB030
Model		*Serial Number*	
Location Note			
Device Description	36" belt width X 100ft length; portable; driven by a 40 HP electric motor		

13.9 Fourth Undersize Transfer Conveyor

Device ID #	**110499**	***Device Name***	**Fourth Undersize Transfer Conveyor**
Rated Heat Input		*Physical Size*	
Manufacturer	Rock Systems	*Operator ID*	CB033
Model		*Serial Number*	
Location Note			
Device Description	36" belt width X 50ft length; portable/stackable; driven by a 10 HP electric motor		

13.10 Grizzly Feeder

Device ID #	**110481**	***Device Name***	**Grizzly Feeder**
Rated Heat Input		*Physical Size*	
Manufacturer		*Operator ID*	SC010
Model		*Serial Number*	
Location Note			
Device Description	16 inch openings on grid		

13.11 Oversize Stacker

Device ID #	**110493**	***Device Name***	**Oversize Stacker**
Rated Heat Input		*Physical Size*	
Manufacturer	Rock Systems	*Operator ID*	ST022
Model		*Serial Number*	
Location Note			
Device Description	30" belt width X 80ft length; driven by a 20 HP electric motor		

13.12 Product Storage Pile - Large

Device ID #	**110561**	***Device Name***	**Product Storage Pile - Large**
Rated Heat Input		*Physical Size*	4.80 Acres of Storage Piles
Manufacturer		*Operator ID*	
Model		*Serial Number*	
Location Note			
Device Description	Base footprint of each pile = 2.4 acres; surface area of each pile = 2.9 acres; maximum height of each pile shall not exceed 40 ft		

13.13 Product Storage Pile - Small

Device ID #	**110562**	***Device Name***	**Product Storage Pile - Small**
Rated Heat Input		*Physical Size*	2.60 Acres of Storage Piles
Manufacturer		*Operator ID*	
Model		*Serial Number*	
Location Note			
Device Description	Base footprint of each pile = 1.3 acres; surface area of each pile = 1.6 acres; maximum height of each pile shall not exceed 40 ft		

13.14 Raw Ore Transfer Belt Conveyor to Crusher

Device ID #	**110484**	***Device Name***	**Raw Ore Transfer Belt Conveyor to Crusher**
Rated Heat Input		*Physical Size*	
Manufacturer	Rock Systems	*Operator ID*	CB012
Model		*Serial Number*	
Location Note			
Device Description	42" belt width X 80ft length; driven by 20 HP electric motor		

13.15 Reject Belt Scale

Device ID #	**110494**	***Device Name***	**Reject Belt Scale**
Rated Heat Input		*Physical Size*	
Manufacturer	Belt Way	*Operator ID*	BS022
Model	100	*Serial Number*	
Location Note			
Device Description			

13.16 Reject Storage Pile

Device ID #	**110563**	***Device Name***	**Reject Storage Pile**
Rated Heat Input		*Physical Size*	
Manufacturer		*Operator ID*	
Model		*Serial Number*	
Location Note			
Device Description	Merge capacity 650 cu yds to blend piles, maximum height of pile = 15 feet		

13.17 Second Oversize Conveyor Belt

Device ID #	**110492**	***Device Name***	**Second Oversize Conveyor Belt**
Rated Heat Input		*Physical Size*	
Manufacturer	Rock Systems	*Operator ID*	CB021
Model		*Serial Number*	
Location Note			
Device Description	30" belt width X 60ft length; portable/stackable; driven by a 15 HP electric motor		

13.18 Second Undersize Transfer Conveyor

Device ID #	**110497**	***Device Name***	**Second Undersize Transfer Conveyor**
Rated Heat Input		*Physical Size*	
Manufacturer	Rock Systems	*Operator ID*	CB031
Model		*Serial Number*	
Location Note			
Device Description	36" belt width X 80ft length; portable; driven by a 25 HP electric motor		

13.19 Telescoping Radial Stacker Belt

Device ID #	**110500**	***Device Name***	**Telescoping Radial Stacker Belt**
Rated Heat Input		*Physical Size*	
Manufacturer	Thorstack T150-8	*Operator ID*	ST034
Model		*Serial Number*	
Location Note			
Device Description	36" belt width X 150ft length; able to create >50ft pile height; driven by a 72 HP electric motor		

13.20 Third Undersize Transfer Conveyor

Device ID #	**110498**	***Device Name***	**Third Undersize Transfer Conveyor**
Rated Heat Input		*Physical Size*	
Manufacturer	Rock Systems	*Operator ID*	CB032
Model		*Serial Number*	
Location Note			
Device Description	36" belt width X 80ft length; portable/stackable; driven by a 15 HP electric motor		

13.21 Undersize Collection Conveyor Belt

Device ID #	**110490**	***Device Name***	**Undersize Collection Conveyor Belt**
Rated Heat Input		*Physical Size*	
Manufacturer	JW Jones	*Operator ID*	FB016
Model		*Serial Number*	
Location Note			

Device Description	48' belt width X 25ft length; driven by a 10 HP electric motor

14 Mortar Production Line

14.1 Bag Breaking Station

Device ID #	**103431**	***Device Name***	**Bag Breaking Station**
Rated Heat Input		*Physical Size*	
Manufacturer		*Operator ID*	CP23
Model		*Serial Number*	
Location Note			
Device Description	Includes a feed hopper and an empty bag compactor		

14.2 Baghouses - Mortar Prod Line

14.2.1 Mortar Plant Ventilation Baghouse

Device ID #	**000146**	***Device Name***	**Mortar Plant Ventilation Baghouse**
Rated Heat Input		*Physical Size*	38465.00 scf/Minute
Manufacturer	Sly	*Operator ID*	MPVBH
Model	Polyester	*Serial Number*	
Location Note			
Device Description	Ventilation to refeed and packaging areas of mortar plant; Negative pressure; Bag Diam. (in): 3-sec env.; Bag Length (ft): 43x36 in; Total Cloth Area: 6966; enclosed		

14.3 Bagwasher Flattener

Device ID #	**103429**	***Device Name***	**Bagwasher Flattener**
Rated Heat Input		*Physical Size*	
Manufacturer		*Operator ID*	
Model		*Serial Number*	
Location Note			
Device Description	Bag flattener and air washer		

14.4 Cyclones

Device ID #	**103426**	***Device Name***	**Cyclones**

Rated Heat Input		*Physical Size*	
Manufacturer		*Operator ID*	
Model		*Serial Number*	
Location Note			
Device Description			

14.5 Hoppers

Device ID #	**103427**	*Device Name*	**Hoppers**
Rated Heat Input		*Physical Size*	
Manufacturer		*Operator ID*	
Model		*Serial Number*	
Location Note			
Device Description	Mixer feed hopper with (2) hopper mixers, and a spillage hopper		

14.6 Mixer

Device ID #	**103430**	*Device Name*	**Mixer**
Rated Heat Input		*Physical Size*	
Manufacturer		*Operator ID*	
Model		*Serial Number*	
Location Note			
Device Description	(2) hopper mixers		

14.7 Packer

Device ID #	**103428**	*Device Name*	**Packer**
Rated Heat Input		*Physical Size*	2.00 Tons/Hour
Manufacturer		*Operator ID*	
Model		*Serial Number*	
Location Note			
Device Description	Packer is equipped with the spillage hopper		

15 Nos. 3 and 5 Air Sifters

Device ID #	**103260**	*Device Name*	**Nos. 3 and 5 Air Sifters**
Rated Heat Input		*Physical Size*	8.20 Tons/Hour

Manufacturer		*Operator ID*	
Model		*Serial Number*	
Location Note	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.		
Device Description			

15.1 Air Sifters

Device ID #	**103414**	***Device Name***	**Air Sifters**
Rated Heat Input		*Physical Size*	
Manufacturer		*Operator ID*	
Model		*Serial Number*	
Location Note			
Device Description			

15.2 Bins

Device ID #	**103411**	***Device Name***	**Bins**
Rated Heat Input		*Physical Size*	
Manufacturer		*Operator ID*	
Model		*Serial Number*	
Location Note			
Device Description			

15.3 Blowers

Device ID #	**103410**	***Device Name***	**Blowers**
Rated Heat Input		*Physical Size*	
Manufacturer		*Operator ID*	
Model		*Serial Number*	
Location Note			
Device Description			

15.4 Cyclones

Device ID #	**103409**	***Device Name***	**Cyclones**

Rated Heat Input		*Physical Size*	
Manufacturer		*Operator ID*	
Model		*Serial Number*	
Location Note			
Device Description			

15.5 Packers

Device ID #	**103412**	***Device Name***	**Packers**
Rated Heat Input		*Physical Size*	8.20 Tons/Hour
Manufacturer		*Operator ID*	
Model		*Serial Number*	
Location Note			
Device Description			

15.6 Pumps

Device ID #	**103413**	***Device Name***	**Pumps**
Rated Heat Input		*Physical Size*	
Manufacturer		*Operator ID*	
Model		*Serial Number*	
Location Note			
Device Description			

15.7 Screws

Device ID #	**103415**	***Device Name***	**Screws**
Rated Heat Input		*Physical Size*	
Manufacturer		*Operator ID*	
Model		*Serial Number*	
Location Note			
Device Description			

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**
Rated Heat Input		*Physical Size*	18549.00 scf/Minute
Manufacturer	Mikro-Pulsaire	*Operator ID*	PPCVBH
Model	Polyester Felt	*Serial Number*	
Location Note			
Device Description	Ventilation conveyor dryer, refeed area, surge bin, sweco,conveyors; 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**
Rated Heat Input		*Physical Size*	10500.00 scf/Minute
Manufacturer	Midwesco Filter Resources	*Operator ID*	PPHVBH
Model	Aramid w/Tetratex Membrane	*Serial Number*	
Location Note			
Device Description	Ventilation sweco, bucket elevator, pellet kilns, packers, vibrating feeder, 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

Device ID #	**103438**	***Device Name***	**Belt Conveyors**
Rated Heat Input		*Physical Size*	
Manufacturer		*Operator ID*	
Model		*Serial Number*	
Location Note			
Device Description	(1) conveyor associated with bucket elevator, (5) conveyors, (1) belt conveyor associated with sweco screen, (1) convenyor associated with surge bin		

16.3 Bins

Device ID #	**103433**	***Device Name***	**Bins**
Rated Heat Input		*Physical Size*	
Manufacturer		*Operator ID*	
Model		*Serial Number*	
Location Note			

Device Description	(2) surge bins, (3) packer bins		

16.4 Bucket Elevators

Device ID #	**103437**	***Device Name***	**Bucket Elevators**
Rated Heat Input		*Physical Size*	
Manufacturer		*Operator ID*	
Model		*Serial Number*	
Location Note			
Device Description			

16.5 Cyclones

Device ID #	**103432**	***Device Name***	**Cyclones**
Rated Heat Input		*Physical Size*	
Manufacturer		*Operator ID*	
Model		*Serial Number*	
Location Note			
Device Description			

16.6 Hoppers

Device ID #	**103435**	***Device Name***	**Hoppers**
Rated Heat Input		*Physical Size*	
Manufacturer		*Operator ID*	
Model		*Serial Number*	
Location Note			
Device Description			

16.7 Mixer

Device ID #	**103440**	***Device Name***	**Mixer**
Rated Heat Input		*Physical Size*	
Manufacturer		*Operator ID*	
Model		*Serial Number*	
Location Note			

Device Description			

16.8 Packers

Device ID #	**103436**	***Device Name***	**Packers**
Rated Heat Input		*Physical Size*	10.00 Tons/Hour
Manufacturer		*Operator ID*	
Model		*Serial Number*	
Location Note			
Device Description			

16.9 Pellet Plant Dryer

Device ID #	**005843**	***Device Name***	**Pellet Plant Dryer**
Rated Heat Input	4.500 MMBtu/Hour	*Physical Size*	
Manufacturer		*Operator ID*	
Model		*Serial Number*	
Location Note			
Device Description	Fired on natural gas		

16.10 Pellet Plant Kiln

Device ID #	**005844**	***Device Name***	**Pellet Plant Kiln**
Rated Heat Input	4.400 MMBtu/Hour	*Physical Size*	
Manufacturer		*Operator ID*	
Model		*Serial Number*	
Location Note			
Device Description	Fired on natural gas		

16.11 Screens

Device ID #	**103434**	***Device Name***	**Screens**
Rated Heat Input		*Physical Size*	
Manufacturer		*Operator ID*	
Model		*Serial Number*	
Location Note			

Device Description	(2) Sweco screens		

16.12 Screws

Device ID #	**103439**	*Device Name*	**Screws**
Rated Heat Input		*Physical Size*	
Manufacturer		*Operator ID*	
Model		*Serial Number*	
Location Note			
Device Description	Number of devices is currently unknown.		

17 Powder Mills (Tbl A-2)

17.1 3 Bulk Bin Baghouse

Device ID #	**000151**	*Device Name*	**3 Bulk Bin Baghouse**
Rated Heat Input		*Physical Size*	3600.00 scf/Minute
Manufacturer	DCE - Sintamatic	*Operator ID*	3BBVBH
Model	polyethylene, PTFE coating	*Serial Number*	
Location Note			
Device Description	Ventilation bulk bin, 3 semi-bulk station; Negative pressure; Bag Diam. (in): cartridge; Bag Length (ft): 5' 1.25"; Total Cloth Area: 850; enclosed		

17.2 378 Baghouse

Device ID #	**000109**	*Device Name*	**378 Baghouse**
Rated Heat Input		*Physical Size*	45150.00 scf/Minute
Manufacturer	Amer. Air Filter	*Operator ID*	378BH
Model	gortex/polyester	*Serial Number*	
Location Note			
Device Description	Ventilation line pack. stations, railcar load station, bulk bins; Negative 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

Device ID #	**006472**	*Device Name*	**5 Air Sifter Ventilation Baghouse**

Rated Heat Input		*Physical Size*	473.00 scf/Minute
Manufacturer	DCE	*Operator ID*	5ASBH
Model	PTFE	*Serial Number*	
Location Note			
Device Description	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

Device ID #	**000119**	***Device Name***	**578 Baghouse**
Rated Heat Input		*Physical Size*	31500.00 scf/Minute
Manufacturer	Mikro-Pulsaire	*Operator ID*	5APVBH
Model	Polypropylene	*Serial Number*	
Location Note			
Device Description	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

Device ID #	**006471**	***Device Name***	**3 Air Sifter Ventilation Baghouse**
Rated Heat Input		*Physical Size*	473.00 scf/Minute
Manufacturer	DCE	*Operator ID*	3ASBH
Model	PTFE Material	*Serial Number*	
Location Note			
Device Description	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

Device ID #	**000108**	***Device Name***	**345 Baghouse**
Rated Heat Input		*Physical Size*	20000.00 scf/Minute
Manufacturer	Fabric Filters Northwest	*Operator ID*	345BH
Model	16 oz Polypropylene	*Serial Number*	
Location Note			
Device Description	Ventilation 101, 102, 103, and 104 air sifters and 9 and 10 Bulk Bins; 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

Device ID #	**103309**	***Device Name***	**Bins**
Rated Heat Input		*Physical Size*	
Manufacturer		*Operator ID*	
Model		*Serial Number*	
Location Note			
Device Description	(2) Crude ore bins, (1) soda ash mill bin, (2) surge bins		

17.5.2.2 Conveyor Belts

Device ID #	**103313**	***Device Name***	**Conveyor Belts**
Rated Heat Input		*Physical Size*	
Manufacturer		*Operator ID*	
Model		*Serial Number*	
Location Note			
Device Description	System #3		

17.5.2.3 Soda Ash Mill

Device ID #	**103312**	***Device Name***	**Soda Ash Mill**
Rated Heat Input		*Physical Size*	
Manufacturer		*Operator ID*	CP41
Model		*Serial Number*	
Location Note			
Device Description	Receives soda ash from storage bin and discharged into dispersing screen 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

Device ID #	**106107**	***Device Name***	**Bulk Bins**
Rated Heat Input		*Physical Size*	
Manufacturer	St. Regis	*Operator ID*	#1 and #2
Model		*Serial Number*	
Location Note			

Device Description			

17.5.3.2 Packer Bins

Device ID #	**106106**	***Device Name***	**Packer Bins**
Rated Heat Input		*Physical Size*	
Manufacturer	Johns-Manville	*Operator ID*	
Model		*Serial Number*	
Location Note			
Device Description	Packer Bins: A, P, S.C, and "Ten Pound"		

17.6 Line No. 5

17.6.1 Capture System and Control Devices (Line #5)

17.6.1.1 Waste Bin

Device ID #	**106116**	***Device Name***	**Waste Bin**
Rated Heat Input		*Physical Size*	
Manufacturer		*Operator ID*	
Model		*Serial Number*	
Location Note			
Device Description			

17.6.2 Processing Line #5 (drying, milling separating)

17.6.2.1 Bins

Device ID #	**106146**	***Device Name***	**Bins**
Rated Heat Input		*Physical Size*	
Manufacturer		*Operator ID*	
Model		*Serial Number*	
Location Note			
Device Description	(2) crude ore bins, (1) soda ash storage bin, (1) reject bin		

17.6.2.2 Conveyor Belts

Device ID #	**103336**	***Device Name***	**Conveyor Belts**

Rated Heat Input		*Physical Size*	
Manufacturer		*Operator ID*	
Model		*Serial Number*	
Location Note			
Device Description	(1) soda ash screw conveyors, (12) conveyors, (2) refeed conveyors		

17.6.2.3 Re-Separators

Device ID #	**103331**	***Device Name***	**Re-Separators**
Rated Heat Input		*Physical Size*	
Manufacturer		*Operator ID*	
Model		*Serial Number*	
Location Note			
Device Description	Two separators and one re-separator		

17.6.2.4 Soda Ash Mill

Device ID #	**103335**	***Device Name***	**Soda Ash Mill**
Rated Heat Input		*Physical Size*	
Manufacturer		*Operator ID*	
Model		*Serial Number*	
Location Note			
Device Description	includes a storage bin, belt feeder, hopper, screw conveyor, pulverizer, and (2) blowers		

17.7 Line No. 6

Device ID #	**103256**	***Device Name***	**Line No. 6**
Rated Heat Input		*Physical Size*	37.90 Tons/Hour
Manufacturer		*Operator ID*	
Model		*Serial Number*	
Location Note	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.		
Device Description	Max Dry Production Rate (a): 18.7 tons/hr		

17.7.1 6 Automatic Station Baghouse (678)

Device ID #	**103363**	***Device Name***	**6 Automatic Station Baghouse (678)**
Rated Heat Input		*Physical Size*	30000.00 scf/Minute
Manufacturer	Mikro-Pulsaire	*Operator ID*	6APVBH
Model	Polypropylene	*Serial Number*	
Location Note			
Device Description	Ventilation 6AP equipment; Negative pressure; Bag Diam. (in): 4.5; Bag Length (ft): 12.0; Total Cloth Area: 6729; Est. A/C Ratio: 4.5; enclosed		

17.7.2 Blowers

Device ID #	**106126**	***Device Name***	**Blowers**
Rated Heat Input		*Physical Size*	
Manufacturer		*Operator ID*	615A, 616, 678
Model		*Serial Number*	
Location Note			
Device Description	Line 6 blowers?		

17.7.3 Blowers

Device ID #	**106125**	***Device Name***	**Blowers**
Rated Heat Input		*Physical Size*	
Manufacturer		*Operator ID*	635, 636
Model		*Serial Number*	
Location Note			
Device Description	Line 6 Blowers?		

17.7.4 Capture System and Control Device (Line #6)

17.7.4.1 Blowers

Device ID #	**106124**	***Device Name***	**Blowers**
Rated Heat Input		*Physical Size*	
Manufacturer		*Operator ID*	607, 607B, 625A - B
Model		*Serial Number*	
Location Note			
Device Description			

17.7.5 Processing Line #6 (Dry End Packing)

17.7.5.1 Conveyor Belts

Device ID #	**106122**	***Device Name***	**Conveyor Belts**
Rated Heat Input		*Physical Size*	
Manufacturer		*Operator ID*	
Model		*Serial Number*	
Location Note			
Device Description	(1) screw conveyors located below A/S packers, (1) screw conveyor below SFSF packers, (2) conveyors below A/S packers, (7) bag conveyors		

17.7.5.2 Conveyors

Device ID #	**106127**	***Device Name***	**Conveyors**
Rated Heat Input		*Physical Size*	
Manufacturer		*Operator ID*	
Model		*Serial Number*	
Location Note			
Device Description			

17.7.5.3 Screws

Device ID #	**103360**	***Device Name***	**Screws**
Rated Heat Input		*Physical Size*	
Manufacturer		*Operator ID*	
Model		*Serial Number*	
Location Note			
Device Description	PTO 5840 listed one SC located below 6A packers, and one below SFSF packers and 6SC packers		

17.7.6 Processing Line #6 (drying, milling, separating)

17.7.6.1 Air Sifters

Device ID #	**103356**	***Device Name***	**Air Sifters**
Rated Heat Input		*Physical Size*	
Manufacturer		*Operator ID*	601, 602, 603, 604
Model		*Serial Number*	
Location Note			
Device Description			

17.7.6.2 Bins

Device ID #	**106129**	***Device Name***	**Bins**
Rated Heat Input		*Physical Size*	
Manufacturer		*Operator ID*	
Model		*Serial Number*	
Location Note			
Device Description	(4) Crude bins, (2) soda ash storage bins, (1) refeed bin, (1) reject/refeed bin, (1) surge bin		

17.7.6.3 Blowers

Device ID #	**103348**	***Device Name***	**Blowers**
Rated Heat Input		*Physical Size*	
Manufacturer		*Operator ID*	
Model		*Serial Number*	
Location Note			
Device Description	(1) furnace blower, (44) blowers, (2) soda ash system blowers, (2) rotary kiln blowers, (1) discharge blower		

17.7.6.4 Bucket Elevator

Device ID #	**103355**	***Device Name***	**Bucket Elevator**
Rated Heat Input		*Physical Size*	
Manufacturer		*Operator ID*	
Model		*Serial Number*	
Location Note			
Device Description	transfers material from A/S coarse collector screw conveyor to packing station #6A		

17.7.6.5 Conveyor belts

Device ID #	**103358**	***Device Name***	**Conveyor belts**
Rated Heat Input		*Physical Size*	
Manufacturer		*Operator ID*	
Model		*Serial Number*	
Location Note			
Device Description	(4) soda ash screw conveyors, (42) conveyors, (1) A/S coarse screw conveyor, (1) screw conveyor, (1) feed conveyor		

17.7.6.6 Cyclones

Device ID #	**103347**	***Device Name***	**Cyclones**
Rated Heat Input		*Physical Size*	
Manufacturer		*Operator ID*	
Model		*Serial Number*	
Location Note			
Device Description	PTO 5840 listed 6 air sifter cyclones and 19 cyclones		

17.7.6.7 De-lumpers

Device ID #	**103350**	***Device Name***	**De-lumpers**
Rated Heat Input		*Physical Size*	
Manufacturer		*Operator ID*	
Model		*Serial Number*	
Location Note			
Device Description			

17.7.6.8 Hoppers

Device ID #	**106128**	***Device Name***	**Hoppers**
Rated Heat Input		*Physical Size*	
Manufacturer		*Operator ID*	
Model		*Serial Number*	
Location Note			
Device Description	(6) natural baghouse hoppers, (6) #601 baghouse hoppers, (3) superfine baghouse hoppers, (9) #602 baghouse hoppers, (1) soda ash hopper		

17.7.6.9 Hoppers

Device ID #	**106130**	***Device Name***	**Hoppers**
Rated Heat Input		*Physical Size*	
Manufacturer		*Operator ID*	
Model		*Serial Number*	
Location Note			
Device Description			

17.7.6.10 Pre-separators

Device ID #	**103349**	***Device Name***	**Pre-separators**
Rated Heat Input		*Physical Size*	
Manufacturer		*Operator ID*	601A, 601B, 602
Model		*Serial Number*	
Location Note			
Device Description			

17.7.6.11 Pump

Device ID #	**103359**	***Device Name***	**Pump**
Rated Heat Input		*Physical Size*	
Manufacturer		*Operator ID*	
Model		*Serial Number*	
Location Note			
Device Description	(1) discharge pump		

17.7.6.12 Re-separator

Device ID #	**103351**	***Device Name***	**Re-separator**
Rated Heat Input		*Physical Size*	
Manufacturer		*Operator ID*	
Model		*Serial Number*	
Location Note			
Device Description			

17.7.6.13 Screens

Device ID #	**103353**	***Device Name***	**Screens**
Rated Heat Input		*Physical Size*	
Manufacturer		*Operator ID*	
Model		*Serial Number*	
Location Note			
Device Description	(2) Sweco screens,		

17.7.6.14 Soda Ash Mill

Device ID #	**103357**	***Device Name***	**Soda Ash Mill**
Rated Heat Input		*Physical Size*	
Manufacturer		*Operator ID*	
Model		*Serial Number*	
Location Note			
Device Description	includes (4) screw conveyors, bucket elevator, (2) bins, ducting from soda ash bins, belt feeder, hopper, pulverizier, and (2) blowers		

17.7.7 Processing Line #6 (Wet End Packing)

17.7.7.1 Packing Station

Device ID #	**103352**	***Device Name***	**Packing Station**
Rated Heat Input		*Physical Size*	
Manufacturer		*Operator ID*	6PS
Model		*Serial Number*	
Location Note			
Device Description	Includes (1) packer, bag flattener, zip lift, press well and (2) conveyors		

17.8 Packer Bins

Device ID #	**103332**	***Device Name***	**Packer Bins**
Rated Heat Input		*Physical Size*	
Manufacturer		*Operator ID*	5P, 5SC, 5AP
Model		*Serial Number*	
Location Note			
Device Description	Packer Bins: 5P, 5SC, 5AP		

17.9 Packing Station

Device ID #	**103354**	***Device Name***	**Packing Station**
Rated Heat Input		*Physical Size*	
Manufacturer		*Operator ID*	6AS
Model		*Serial Number*	
Location Note			
Device Description	(1) superfine super floss also know as 6SF, (1) #6A product, (1) #6P, (1) #6SC, (1) A/S product, (1) automatic packer #6AP product also known as 2AP.		

17.10 Pumps

Device ID #	**103337**	***Device Name***	**Pumps**
Rated Heat Input		*Physical Size*	
Manufacturer		*Operator ID*	
Model		*Serial Number*	
Location Note			
Device Description	Number of devices is currently unknown		

18 Silicates Plant Baghouse 5DC-01

Device ID #	**114326**	***Device Name***	**Silicates Plant Baghouse 5DC-01**
Rated Heat Input		*Physical Size*	2000.00 scf/Minute
Manufacturer	MikroPul	*Operator ID*	5DC-01
Model	36S-10-30TR"B"	*Serial Number*	tbd
Location Note	Controls 40 kgal stirred tank.		
Device Description	2000 scfm maximum airflow rating. 36 bags, 3398 square feet total filtration area. Air to cloth ratio: 2.36 ft/min. MikroTex bags, 16 oz polyester with PTFE membrane. Guaranteed to 0.005 gr/dscf. Pressure Drop Range 0.5 - 6.0 in H20.		

19 Silo Area Group 2

19.1 Conveyors

Device ID #	**103279**	***Device Name***	**Conveyors**
Rated Heat Input		*Physical Size*	Tons Processed
Manufacturer		*Operator ID*	
Model		*Serial Number*	
Location Note	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.		
Device Description			

19.2 Crushing Plant Storage Bins

Device ID #	**000043**	***Device Name***	**Crushing Plant Storage Bins**

Rated Heat Input		*Physical Size*	9.60 MMcf/Minute
Manufacturer		*Operator ID*	
Model		*Serial Number*	
Location Note			
Device Description			

19.3 Crushing Plant Ventilation Baghouse

Device ID #	**000100**	*Device Name*	**Crushing Plant Ventilation Baghouse**
Rated Heat Input		*Physical Size*	
Manufacturer	JM / Mikro-Pulsaire	*Operator ID*	CRVBH
Model	672R-8-20 TRH	*Serial Number*	
Location Note			
Device Description	General Process Descrip: Ventilation crushers, #1,2,3,4,5,6 crude bins, 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.		

19.4 Spiked Roller Mills

Device ID #	**103277**	*Device Name*	**Spiked Roller Mills**
Rated Heat Input		*Physical Size*	150.00 Tons/Hour
Manufacturer		*Operator ID*	
Model		*Serial Number*	
Location Note			
Device Description			

19.5 Storage piles (blend piles)

Device ID #	**103275**	*Device Name*	**Storage piles (blend piles)**
Rated Heat Input		*Physical Size*	8.00 Acres of Storage Piles
Manufacturer		*Operator ID*	

Model		*Serial Number*	
Location Note			
Device Description			

20 Storage Silos

20.1 Baghouse - BH109A

Device ID #	**110649**	*Device Name*	**Baghouse - BH109A**
Rated Heat Input		*Physical Size*	1381.00 scf/Minute
Manufacturer	Donaldson	*Operator ID*	BH109A
Model	54MBT6	*Serial Number*	
Location Note			
Device Description	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		

20.2 Baghouse - BH109B

Device ID #	**110650**	*Device Name*	**Baghouse - BH109B**
Rated Heat Input		*Physical Size*	1381.00 scf/Minute
Manufacturer	Donaldson	*Operator ID*	BH109B
Model	54MBT6	*Serial Number*	
Location Note			
Device Description	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		

20.3 Baghouse - BH110A

Device ID #	**110651**	*Device Name*	**Baghouse - BH110A**
Rated Heat Input		*Physical Size*	1381.00 scf/Minute
Manufacturer	Donaldson	*Operator ID*	BH110A
Model	54MBT6	*Serial Number*	
Location Note			
Device Description	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		

20.4 Baghouse - BH110B

Device ID #	**110652**	***Device Name***	**Baghouse - BH110B**
Rated Heat Input		*Physical Size*	1381.00 scf/Minute
Manufacturer	Donaldson	*Operator ID*	BH110B
Model	54MBT6	*Serial Number*	
Location Note			
Device Description	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		

20.5 Baghouse - BH925A

Device ID #	**110641**	***Device Name***	**Baghouse - BH925A**
Rated Heat Input		*Physical Size*	720.00 scf/Minute
Manufacturer	Donaldson	*Operator ID*	BH925A
Model	36MBT6	*Serial Number*	
Location Note			
Device Description	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		

20.6 Baghouse - BH925B

Device ID #	**110642**	***Device Name***	**Baghouse - BH925B**
Rated Heat Input		*Physical Size*	720.00 scf/Minute
Manufacturer	Donaldson	*Operator ID*	BH925B
Model	36MBT6	*Serial Number*	
Location Note			
Device Description	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		

20.7 Baghouse 101

Device ID #	**110191**	***Device Name***	**Baghouse 101**
Rated Heat Input		*Physical Size*	2411.00 scf/Minute
Manufacturer	Donaldson	*Operator ID*	BH101
Model	81MBT8	*Serial Number*	
Location Note			

Device Description	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

20.8 Baghouse 102

Device ID #	**110192**	***Device Name***	**Baghouse 102**
Rated Heat Input		*Physical Size*	2411.00 scf/Minute
Manufacturer	Donaldson	*Operator ID*	
Model	81MBT8	*Serial Number*	
Location Note			
Device Description	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		

20.9 Baghouse 103

Device ID #	**110193**	***Device Name***	**Baghouse 103**
Rated Heat Input		*Physical Size*	2411.00 scf/Minute
Manufacturer	Donaldson	*Operator ID*	
Model	81MBT8	*Serial Number*	
Location Note			
Device Description	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		

20.10 Baghouse 104

Device ID #	**110194**	***Device Name***	**Baghouse 104**
Rated Heat Input		*Physical Size*	2411.00 scf/Minute
Manufacturer	Donaldson	*Operator ID*	
Model	81MBT8	*Serial Number*	
Location Note			
Device Description	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		

20.11 Baghouse 105

Device ID #	**110195**	***Device Name***	**Baghouse 105**
Rated Heat Input		*Physical Size*	2411.00 scf/Minute

Manufacturer	Donaldson	*Operator ID*	
Model	81MBT8	*Serial Number*	
Location Note			
Device Description	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		

20.12 Baghouse 106

Device ID #	**110196**	***Device Name***	**Baghouse 106**
Rated Heat Input		*Physical Size*	2411.00 scf/Minute
Manufacturer	Donaldson	*Operator ID*	
Model	81MBT8	*Serial Number*	
Location Note			
Device Description	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		

20.13 Baghouse 107

Device ID #	**110197**	***Device Name***	**Baghouse 107**
Rated Heat Input		*Physical Size*	2411.00 scf/Minute
Manufacturer	Donaldson	*Operator ID*	
Model	81MBT8	*Serial Number*	
Location Note			
Device Description	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		

20.14 Baghouse 108

Device ID #	**110198**	***Device Name***	**Baghouse 108**
Rated Heat Input		*Physical Size*	2411.00 scf/Minute
Manufacturer	Donaldson	*Operator ID*	
Model	81MBT8	*Serial Number*	
Location Note			
Device Description	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		

20.15 Disposition Bin - BN109A

Device ID #	**110645**	***Device Name***	**Disposition Bin - BN109A**
Rated Heat Input		*Physical Size*	20.00 Tons
Manufacturer	Tank Connection	*Operator ID*	BN109A
Model		*Serial Number*	
Location Note			
Device Description			

20.16 Disposition Bin - BN109B

Device ID #	**110646**	***Device Name***	**Disposition Bin - BN109B**
Rated Heat Input		*Physical Size*	20.00 Tons
Manufacturer	Tank Connection	*Operator ID*	BN109B
Model		*Serial Number*	
Location Note			
Device Description			

20.17 Disposition Bin - BN110A

Device ID #	**110647**	***Device Name***	**Disposition Bin - BN110A**
Rated Heat Input		*Physical Size*	20.00 Tons
Manufacturer	Tank Connection	*Operator ID*	BN110A
Model		*Serial Number*	
Location Note			
Device Description			

20.18 Disposition Bin - BN110B

Device ID #	**110648**	***Device Name***	**Disposition Bin - BN110B**
Rated Heat Input		*Physical Size*	20.00 Tons
Manufacturer	Tank Connection	*Operator ID*	BN110B
Model		*Serial Number*	
Location Note			
Device Description			

20.19 Holding Bin - BN925A

Device ID #	**110643**	***Device Name***	**Holding Bin - BN925A**

Rated Heat Input		*Physical Size*	20.00 Tons
Manufacturer	Tank Connection	*Operator ID*	BN925A
Model		*Serial Number*	
Location Note			
Device Description			

20.20 Holding Bin - BN925B

Device ID #	**110644**	***Device Name***	**Holding Bin - BN925B**
Rated Heat Input		*Physical Size*	20.00 Tons
Manufacturer	Tank Connection	*Operator ID*	BN925B
Model		*Serial Number*	
Location Note			
Device Description			

20.21 Inlet Hose Station Product Storage Silos

Device ID #	**109231**	***Device Name***	**Inlet Hose Station Product Storage Silos**
Rated Heat Input		*Physical Size*	
Manufacturer	Cyclonaire	*Operator ID*	HS118
Model	Custom	*Serial Number*	
Location Note			
Device Description	Product pneumatically transferred from system line bulk bin to storage silo by existing 600 cfm Sutorbilt product blower.		

20.22 Outlet Hose Station Product Storage Silos

Device ID #	**109232**	***Device Name***	**Outlet Hose Station Product Storage Silos**
Rated Heat Input		*Physical Size*	
Manufacturer	Cyclonaire	*Operator ID*	HS119
Model	Custom	*Serial Number*	
Location Note			
Device Description	Product pneumatically transferred from storage silo to existing packer bin, bulk bin or railcar by powder pumps PP111-PP115.		

20.23 Powder Pumps - PP111 - PP115

Device ID #	**110640**	***Device Name***	**Powder Pumps - PP111 - PP115**
Rated Heat Input		*Physical Size*	200.00 Cubic Feet
Manufacturer	Cyclonaire	*Operator ID*	PP111 - PP115
Model	DPV-200B	*Serial Number*	
Location Note			
Device Description	AIr pressure driven; 200 cu ft capacity		

20.24 Powder Pumps - PP116 - PP117 A&B

Device ID #	**110653**	***Device Name***	**Powder Pumps - PP116 - PP117 A&B**
Rated Heat Input		*Physical Size*	100.00 Cubic Feet
Manufacturer	Cyclonaire	*Operator ID*	PP116 -117 A&B
Model	DPV-100B	*Serial Number*	
Location Note			
Device Description	AIr pressure driven; 100 cu ft capacity		

20.25 Powder Pumps - PP925 A&B

Device ID #	**110654**	***Device Name***	**Powder Pumps - PP925 A&B**
Rated Heat Input		*Physical Size*	25.00 Cubic Feet
Manufacturer	Cyclonaire	*Operator ID*	PP925 A&B
Model	DPV-25B	*Serial Number*	
Location Note			
Device Description	AIr pressure driven; 25 cu ft capacity		

20.26 Product Storage Silo 101

Device ID #	**109214**	***Device Name***	**Product Storage Silo 101**
Rated Heat Input		*Physical Size*	181.40 Tons Produced
Manufacturer	Tank Connection Co	*Operator ID*	BN101
Model	Custom	*Serial Number*	
Location Note			
Device Description	Dimensions: 25ft dia x 100 ft high (with footings); storage capacity 200 metric tons		

20.27 Product Storage Silo 102

Device ID #	**109216**	***Device Name***	**Product Storage Silo 102**
Rated Heat Input		*Physical Size*	181.40 Tons Produced
Manufacturer	Tank Connection Co	*Operator ID*	BN102
Model	Custom	*Serial Number*	
Location Note			
Device Description	Dimensions: 25ft dia x 100 ft high (with footings); storage capacity 200 metric tons		

20.28 Product Storage Silo 103

Device ID #	**109217**	***Device Name***	**Product Storage Silo 103**
Rated Heat Input		*Physical Size*	181.40 Tons Produced
Manufacturer	Tank Connection Co	*Operator ID*	BN103
Model	Custom	*Serial Number*	
Location Note			
Device Description	Dimensions: 25ft dia x 100 ft high (with footings); storage capacity 200 metric tons		

20.29 Product Storage Silo 104

Device ID #	**109218**	***Device Name***	**Product Storage Silo 104**
Rated Heat Input		*Physical Size*	181.40 Tons Produced
Manufacturer	Tank Connection Co	*Operator ID*	BN104
Model	Custom	*Serial Number*	
Location Note			
Device Description	Dimensions: 25ft dia x 100 ft high (with footings); storage capacity 200 metric tons		

20.30 Product Storage Silo 105

Device ID #	**109219**	***Device Name***	**Product Storage Silo 105**
Rated Heat Input		*Physical Size*	181.40 Tons Produced
Manufacturer	Tank Connection Co	*Operator ID*	BN105
Model	Custom	*Serial Number*	
Location Note			
Device Description	Dimensions: 25ft dia x 100 ft high (with footings); storage capacity 200 metric tons		

20.31 Product Storage Silo 106

Device ID #	**109220**	*Device Name*	**Product Storage Silo 106**
Rated Heat Input		*Physical Size*	181.40 Tons Produced
Manufacturer	Tank Connection Co	*Operator ID*	BN106
Model	Custom	*Serial Number*	
Location Note			
Device Description	Dimensions: 25ft dia x 100 ft high (with footings); storage capacity 200 metric tons		

20.32 Product Storage Silo 107

Device ID #	**109221**	*Device Name*	**Product Storage Silo 107**
Rated Heat Input		*Physical Size*	181.40 Tons Produced
Manufacturer	Tank Connection Co	*Operator ID*	BN107
Model	Custom	*Serial Number*	
Location Note			
Device Description	Dimensions: 25ft dia x 100 ft high (with footings); storage capacity 200 metric tons		

20.33 Product Storage Silo 108

Device ID #	**109222**	*Device Name*	**Product Storage Silo 108**
Rated Heat Input		*Physical Size*	181.40 Tons Produced
Manufacturer	Tank Connection Co	*Operator ID*	BN108
Model	Custom	*Serial Number*	
Location Note			
Device Description	Dimensions: 25ft dia x 100 ft high (with footings); storage capacity 200 metric tons		

21 Unassigned Imerys Devices

21.1 Jolter Bin

Device ID #	**108175**	*Device Name*	**Jolter Bin**
Rated Heat Input		*Physical Size*	
Manufacturer		*Operator ID*	
Model		*Serial Number*	
Location Note			
Device Description			

21.2 Prime Diesel Water Pump Engine: 391449

Device ID #	**391449**	***Device Name***	**Prime Diesel Water Pump Engine: 391449**
Rated Heat Input		*Physical Size*	171.00 hp
Manufacturer	Isuzu	*Operator ID*	Well 39 Pump
Model	BR-4HK1K	*Serial Number*	TBD
Location Note	See map in permit.		
Device Description	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.		

21.3 Solvent Usage: Cleaning & Degreasing

Device ID #	**008043**	***Device Name***	**Solvent Usage: Cleaning & Degreasing**
Rated Heat Input		*Physical Size*	
Manufacturer		*Operator ID*	
Model		*Serial Number*	
Location Note			
Device Description			

B EXEMPT EQUIPMENT

1 6 inch Kiln

Device ID #	**008050**	***Device Name***	**6 inch Kiln**
Rated Heat Input	0.200 MMBtu/Hour	*Physical Size*	
Manufacturer		*Operator ID*	
Model		*Serial Number*	
Part 70 Insig?	No	*District Rule Exemption:* 202.G.1 Combustion Equipment <= 2 MMBtu/hr	
Location Note			
Device Description			

2 CAFA Rotary Kiln

Device ID #	**005845**	***Device Name***	**CAFA Rotary Kiln**

Rated Heat Input	0.110 MMBtu/Hour	*Physical Size*	
Manufacturer		*Operator ID*	
Model		*Serial Number*	
Part 70 Insig?	No	*District Rule Exemption:* 202.G.1 Combustion Equipment <= 2 MMBtu/hr	
Location Note			
Device Description	Fired on Natural Gas		

3 Drums of Additives

Device ID #	**108397**	***Device Name***	**Drums of Additives**
Rated Heat Input		*Physical Size*	55.00 Gallons
Manufacturer		*Operator ID*	CP48
Model		*Serial Number*	
Part 70 Insig?	No	*District Rule Exemption:* 202.V.2 Storage Of Refined Fuel Oil W/Grav <=40 Api	
Location Note			
Device Description			

4 Experimental Plant Dryer

Device ID #	**008048**	***Device Name***	**Experimental Plant Dryer**
Rated Heat Input	0.300 MMBtu/Hour	*Physical Size*	
Manufacturer		*Operator ID*	
Model		*Serial Number*	
Part 70 Insig?	No	*District Rule Exemption:* 202.G.1 Combustion Equipment <= 2 MMBtu/hr	
Location Note			
Device Description			

5 Flash Dryer

Device ID #	**005842**	***Device Name***	**Flash Dryer**
Rated Heat Input	0.600 MMBtu/Hour	*Physical Size*	
Manufacturer		*Operator ID*	

Model		*Serial Number*	
Part 70 Insig?	No	*District Rule Exemption:* 202.G.1 Combustion Equipment <= 2 MMBtu/hr	
Location Note			
Device Description			

6 IC Engine: Air Blower

Device ID #	**000074**	***Device Name***	**IC Engine: Air Blower**
Rated Heat Input		*Physical Size*	49.00 Brake Horsepower
Manufacturer	Wisconsin	*Operator ID*	#8700
Model	V465D	*Serial Number*	446183 6193564
Part 70 Insig?	No	*District Rule Exemption:* 202.F.2 Registered in the State PERP	
Location Note			
Device Description	PERP Registration #108249; ARB Tracking #20001087.		

7 IC Engine: Air Compressor

Device ID #	**103524**	***Device Name***	**IC Engine: Air Compressor**
Rated Heat Input		*Physical Size*	30.00 Brake Horsepower
Manufacturer		*Operator ID*	
Model		*Serial Number*	
Part 70 Insig?	No	*District Rule Exemption:* 202.F.1.f. Spark ignition piston-type ICEs < = 50 bhp /Gas Turbines <= 3 MMBtu/hr	
Location Note			
Device Description	One 30 bhp ICE used to drive an air compressor.		

8 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**
Rated Heat Input		*Physical Size*	43.00 Brake Horsepower

Manufacturer	White G	*Operator ID*	#8776
Model	1600X191	*Serial Number*	39283 L-4-HM
Part 70 Insig?	No	*District Rule Exemption:* 202.F.2 Registered in the State PERP	
Location Note			
Device Description	PERP Registration #108252; ARB Tracking #20001090.		

9 IC Engine: Air Compressor Mounted on Bulk Truck Trailer #21

Device ID #	**000071**	***Device Name***	**IC Engine: Air Compressor Mounted on Bulk Truck Trailer #21**
Rated Heat Input		*Physical Size*	43.00 Brake Horsepower
Manufacturer	White G	*Operator ID*	#8786
Model	1600X191	*Serial Number*	A9289 K-1-HG
Part 70 Insig?	No	*District Rule Exemption:* 202.F.2 Registered in the State PERP	
Location Note			
Device Description	PERP Registration #108261; ARB Tracking #20001100.		

10 IC Engine: Air Compressor Mounted on Bulk Truck Trailer #39

Device ID #	**000075**	***Device Name***	**IC Engine: Air Compressor Mounted on Bulk Truck Trailer #39**
Rated Heat Input		*Physical Size*	43.00 Brake Horsepower
Manufacturer	White G	*Operator ID*	#8771
Model	1600X191	*Serial Number*	XL4918336
Part 70 Insig?	No	*District Rule Exemption:* 202.F.2 Registered in the State PERP	
Location Note			
Device Description	PERP Registration #108251; ARB Tracking #20001089.		

11 IC Engine: Air Compressor Mounted on Bulk Truck Trailer #43

Device ID #	**000069**	***Device Name***	**IC Engine: Air Compressor**

			Mounted on Bulk Truck Trailer #43
Rated Heat Input		*Physical Size*	43.00 Brake Horsepower
Manufacturer	White G	*Operator ID*	#8778
Model	1600X191	*Serial Number*	09293 K-1-HG
Part 70 Insig?	No	*District Rule Exemption:* 202.F.2 Registered in the State PERP	
Location Note			
Device Description	PERP Registration #108255; ARB Tracking #20001093.		

12 IC Engine: Air Compressor Mounted on Bulk Truck Trailer #52

Device ID #	**000070**	***Device Name***	**IC Engine: Air Compressor Mounted on Bulk Truck Trailer #52**
Rated Heat Input		*Physical Size*	43.00 Brake Horsepower
Manufacturer	White G	*Operator ID*	#8780
Model	1600X191	*Serial Number*	10943 A-26-H
Part 70 Insig?	No	*District Rule Exemption:* 202.F.2 Registered in the State PERP	
Location Note			
Device Description	PERP Registration #108258; ARB Tracking #20001097.		

13 Silicates Plant Tank

Device ID #	**113823**	***Device Name***	**Silicates Plant Tank**
Rated Heat Input		*Physical Size*	51000.00 Pounds
Manufacturer		*Operator ID*	
Model		*Serial Number*	
Part 70 Insig?	No	*District Rule Exemption:* 202.V.9.a. Sulfuric Acid W/Acid Strength Of <=99% Wt	
Location Note			
Device Description	Permit exempt per Rule 202.V.9.a		

14 IC Engine: Air Compressor Mounted on Bulk Truck Trailer #84

Device ID #	**000072**	***Device Name***	**IC Engine: Air Compressor Mounted on Bulk Truck Trailer #84**
Rated Heat Input		*Physical Size*	43.00 Brake Horsepower
Manufacturer	White G	*Operator ID*	#8795
Model	1600X191	*Serial Number*	XL4918334
Part 70 Insig?	No	*District Rule Exemption:* 202.F.2 Registered in the State PERP	
Location Note			
Device Description	PERP Registration #108250; ARB Tracking #20001088.		

15 IC Engine: Arc Welder - Trailer Mounted

Device ID #	**000078**	***Device Name***	**IC Engine: Arc Welder - Trailer Mounted**
Rated Heat Input		*Physical Size*	36.00 Brake Horsepower
Manufacturer	Continental	*Operator ID*	#8700-1
Model	F163	*Serial Number*	F163A-606M
Part 70 Insig?	No	*District Rule Exemption:* 202.F.2 Registered in the State PERP	
Location Note			
Device Description	PERP Registration #108253; ARB Tracking #20001091.		

16 IC Engine: Arc Welder - Truck Bed Mounted

Device ID #	**000077**	***Device Name***	**IC Engine: Arc Welder - Truck Bed Mounted**
Rated Heat Input		*Physical Size*	36.00 Brake Horsepower
Manufacturer	Continental	*Operator ID*	#8700-2
Model	F163	*Serial Number*	F1634527-332264
Part 70 Insig?	No	*District Rule Exemption:* 202.F.2 Registered in the State PERP	
Location Note			
Device Description	PERP Registration #108254; ARB Tracking #20001092.		

17 IC Engine: Portable Air Compressor

Device ID #	**008054**	***Device Name***	**IC Engine: Portable Air Compressor**
Rated Heat Input		*Physical Size*	16.00 Brake Horsepower
Manufacturer		*Operator ID*	
Model		*Serial Number*	
Part 70 Insig?	No	*District Rule Exemption:* 202.F.1.f. Spark ignition piston-type ICEs < = 50 bhp /Gas Turbines <= 3 MMBtu/hr	
Location Note			
Device Description	drive a portable air compressor.		

18 IC Engine: Portable Concrete Mixer

Device ID #	**008056**	***Device Name***	**IC Engine: Portable Concrete Mixer**
Rated Heat Input		*Physical Size*	9.00 Brake Horsepower
Manufacturer		*Operator ID*	
Model		*Serial Number*	
Part 70 Insig?	No	*District Rule Exemption:* 202.F.1.f. Spark ignition piston-type ICEs < = 50 bhp /Gas Turbines <= 3 MMBtu/hr	
Location Note			
Device Description	gasoline-fired ICE used to drive a portable concrete mixer.		

19 IC Engine: Portable Striper

Device ID #	**103522**	***Device Name***	**IC Engine: Portable Striper**
Rated Heat Input		*Physical Size*	3.50 Brake Horsepower
Manufacturer		*Operator ID*	
Model		*Serial Number*	
Part 70 Insig?	No	*District Rule Exemption:* 202.F.1.f. Spark ignition piston-type ICEs < = 50 bhp /Gas Turbines <= 3 MMBtu/hr	
Location Note			

Device Description			

20 IC Engine: Vacuum System

Device ID #	**008055**	*Device Name*	**IC Engine: Vacuum System**
Rated Heat Input		*Physical Size*	18.00 Brake Horsepower
Manufacturer		*Operator ID*	
Model		*Serial Number*	
Part 70 Insig?	No	*District Rule Exemption:* 202.F.1.f. Spark ignition piston-type ICEs < = 50 bhp /Gas Turbines <= 3 MMBtu/hr	
Location Note			
Device Description	Propane-fired ICE used to drive a vacuum system.		

21 Main Kiln

Device ID #	**008049**	*Device Name*	**Main Kiln**
Rated Heat Input	1.500 MMBtu/Hour	*Physical Size*	
Manufacturer		*Operator ID*	
Model		*Serial Number*	
Part 70 Insig?	No	*District Rule Exemption:* 202.G.1 Combustion Equipment <= 2 MMBtu/hr	
Location Note			
Device Description			

22 Powder Mills Emergency Natural Gas ICE

Device ID #	**008069**	*Device Name*	**Powder Mills Emergency Natural Gas ICE**
Rated Heat Input		*Physical Size*	200.00 Brake Horsepower
Manufacturer		*Operator ID*	ICE 1017
Model		*Serial Number*	
Part 70 Insig?	No	*District Rule Exemption:* 202.F.1.d. Spark ignition piston-type ICEs for emergency electrical power generation	
Location Note			

Device Description	Natural gas fired, Powder Mills emergency power generator, 200 hr/yr.		

23 Reverse Osmosis Unit

Device ID #	**109786**	***Device Name***	**Reverse Osmosis Unit**
Rated Heat Input		*Physical Size*	
Manufacturer		*Operator ID*	
Model		*Serial Number*	
Part 70 Insig?	No	*District Rule Exemption:* 201.A No Potential To Emit Air Contaminants	
Location Note			
Device Description			

24 Rotary Dryer

Device ID #	**005841**	***Device Name***	**Rotary Dryer**
Rated Heat Input	0.600 MMBtu/Hour	*Physical Size*	
Manufacturer		*Operator ID*	
Model		*Serial Number*	
Part 70 Insig?	No	*District Rule Exemption:* 202.G.1 Combustion Equipment <= 2 MMBtu/hr	
Location Note			
Device Description			

25 Shrink Wrap Gun

Device ID #	**008053**	***Device Name***	**Shrink Wrap Gun**
Rated Heat Input	0.200 MMBtu/Hour	*Physical Size*	
Manufacturer		*Operator ID*	
Model		*Serial Number*	
Part 70 Insig?	No	*District Rule Exemption:* 202.G.1 Combustion Equipment <= 2 MMBtu/hr	
Location Note			
Device Description			

26 Shrink Wrap Unit 1

Device ID #	**008045**	***Device Name***	**Shrink Wrap Unit 1**
Rated Heat Input	0.800 MMBtu/Hour	*Physical Size*	
Manufacturer		*Operator ID*	
Model		*Serial Number*	
Part 70 Insig?	No	*District Rule Exemption:* 202.G.1 Combustion Equipment <= 2 MMBtu/hr	
Location Note			
Device Description			

27 Shrink Wrap Unit 2

Device ID #	**008047**	***Device Name***	**Shrink Wrap Unit 2**
Rated Heat Input	0.800 MMBtu/Hour	*Physical Size*	
Manufacturer		*Operator ID*	
Model		*Serial Number*	
Part 70 Insig?	No	*District Rule Exemption:* 202.G.1 Combustion Equipment <= 2 MMBtu/hr	
Location Note			
Device Description			

28 Steam Cleaner

Device ID #	**103525**	***Device Name***	**Steam Cleaner**
Rated Heat Input	0.350 MMBtu/Hour	*Physical Size*	
Manufacturer		*Operator ID*	
Model		*Serial Number*	
Part 70 Insig?	No	*District Rule Exemption:* 202.G.1 Combustion Equipment <= 2 MMBtu/hr	
Location Note			
Device Description	PUC NG fired		

29 Sulfuric Acid Tank

Device ID #	**108396**	***Device Name***	**Sulfuric Acid Tank**
Rated Heat Input		*Physical Size*	5000.00 Gallons
Manufacturer		*Operator ID*	CP47
Model		*Serial Number*	
Part 70 Insig?	No	*District Rule Exemption:* 202.V.9.a. Sulfuric Acid W/Acid Strength Of <=99% Wt	
Location Note			
Device Description			

30 Tailings Tank

Device ID #	**108398**	***Device Name***	**Tailings Tank**
Rated Heat Input		*Physical Size*	3500.00 Gallons
Manufacturer		*Operator ID*	CP49
Model		*Serial Number*	
Part 70 Insig?	No	*District Rule Exemption:* 202.V.2 Storage Of Refined Fuel Oil W/Grav <=40 Api	
Location Note			
Device Description	Wastewater		

31 Transfer Point #3 Water Pump

Device ID #	**109784**	***Device Name***	**Transfer Point #3 Water Pump**
Rated Heat Input		*Physical Size*	
Manufacturer		*Operator ID*	
Model		*Serial Number*	
Part 70 Insig?	No	*District Rule Exemption:* 201.A No Potential To Emit Air Contaminants	
Location Note			
Device Description			

32 Water Storage Tank

Device ID #	**109787**	***Device Name***	**Water Storage Tank**

Rated Heat Input		*Physical Size*	
Manufacturer		*Operator ID*	
Model		*Serial Number*	
Part 70 Insig?	No	*District Rule Exemption:* 201.A No Potential To Emit Air Contaminants	
Location Note			
Device Description	1500 gallon capacity		

33 Water Supply Pump

Device ID #	**110564**	***Device Name***	**Water Supply Pump**
Rated Heat Input		*Physical Size*	15.00 Horsepower (Electric Motor)
Manufacturer		*Operator ID*	
Model	ACT-P470	*Serial Number*	
Part 70 Insig?	No	*District Rule Exemption:* 201.A No Potential To Emit Air Contaminants	
Location Note			
Device Description	Supplies water for the wet suppression control system; pump capacity = 18.5 gpm; powered by a 15 hp motor		

34 Water System

Device ID #	**109804**	***Device Name***	**Water System**
Rated Heat Input		*Physical Size*	
Manufacturer		*Operator ID*	
Model		*Serial Number*	
Part 70 Insig?	No	*District Rule Exemption:* 201.A No Potential To Emit Air Contaminants	
Location Note			
Device Description	Deionized water storage tank (Celite ID TK785) and water pump Celite ID WP785)		

35 Water System

Device ID #	**110773**	***Device Name***	**Water System**
Rated Heat Input		*Physical Size*	
Manufacturer		*Operator ID*	TK002

Model		*Serial Number*	
Part 70 Insig?	No	*District Rule Exemption:* 201.A No Potential To Emit Air Contaminants	
Location Note			
Device Description			

36 Water Transfer Pump

Device ID #	**109782**	***Device Name***	**Water Transfer Pump**
Rated Heat Input		*Physical Size*	
Manufacturer		*Operator ID*	
Model		*Serial Number*	
Part 70 Insig?	No	*District Rule Exemption:* 201.A No Potential To Emit Air Contaminants	
Location Note			
Device Description	20 gpm		

37 Water Transfer Pump

Device ID #	**109783**	***Device Name***	**Water Transfer Pump**
Rated Heat Input		*Physical Size*	
Manufacturer		*Operator ID*	
Model		*Serial Number*	
Part 70 Insig?	No	*District Rule Exemption:* 201.A No Potential To Emit Air Contaminants	
Location Note			
Device Description	4 gpm		

E DE-PERMITTED EQUIPMENT

1 Snow Floss Plant Baghouse

Device ID #	**000133**	***Device Name***	**Snow Floss Plant Baghouse**
Rated Heat Input		*Physical Size*	12978.00 scf/Minute

Manufacturer	JM Open	*Operator ID*	SFPBH
Model	Orlon	*Serial Number*	
Depermitted		*Facility Transfer*	
Device Description	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		

2 4 Dry End Baghouse

Device ID #	**000112**	***Device Name***	**4 Dry End Baghouse**
Rated Heat Input		*Physical Size*	
Manufacturer	JM Open	*Operator ID*	4DBH
Model		*Serial Number*	
Depermitted		*Facility Transfer*	
Device Description	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.		

3 Silicate Plant Main Boiler

Device ID #	**000082**	***Device Name***	**Silicate Plant Main Boiler**
Rated Heat Input	23.000 MMBtu/Hour	*Physical Size*	195960.00 MMBtu/yr
Manufacturer	Nebraska	*Operator ID*	SPB2
Model	NS-B-32-ECON	*Serial Number*	
Depermitted		*Facility Transfer*	
Device Description	PUC gas or low sulfur fuel oil #2 or #6 , low-NOx burner.		

4 Package Boiler

Device ID #	**008923**	***Device Name***	**Package Boiler**
Rated Heat Input	3.780 MMBtu/Hour	*Physical Size*	
Manufacturer	Parker Industries	*Operator ID*	CP44
Model	105-90	*Serial Number*	49330
Depermitted		*Facility Transfer*	

Device Description	direct fired process heater; Steam is used to heat slurry mixed with sulfuric acid in leach tank CP27. Horizontal drum steam boiler.		

5 6 Dry End Ventilation Baghouse

Device ID #	**000125**	***Device Name***	**6 Dry End Ventilation Baghouse**
Rated Heat Input		*Physical Size*	18661.00 scf/Minute
Manufacturer	JM Open	*Operator ID*	6DVBH
Model	Polyester	*Serial Number*	
Depermitted		*Facility Transfer*	
Device Description	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		

6 6 Super Fine Super Floss Baghouse

Device ID #	**000126**	***Device Name***	**6 Super Fine Super Floss Baghouse**
Rated Heat Input		*Physical Size*	8812.00 scf/Minute
Manufacturer	JM Open	*Operator ID*	6SFSF
Model	Orlon	*Serial Number*	
Depermitted		*Facility Transfer*	
Device Description	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		

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 Polyethlene	
Soda Ash Bin Baghouse		8074		DCE, Inc.		6			123	600	4.88	PTFE-Coated Polyethlene	
Kiln Feed (Calciner 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 Polyethlene	
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 (Calciner) 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-R5)

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10.4. Track List of Device Names and Numbers used for Celpure Equipment

Table 10.3 List of Celpure Equipment with Existing and Revised Names

District Device No.	Celpure Common Name	Eqpt #	Original Permitted Name	PFD Tag	Manufacturer	Model	Rule 202 Exempt?
	Loading station	CP1	Loading station		Spokane Machinery	custom	
106226	Hammermill	CP2	Hammermill		Jeffry	45AB	
106227	Crude Bin	CP3	Crude bin		Steel Structures	custom	
106228	Transfer Belt Conveyor	CP4	Transfer belt conveyor		Power Industries	NA	
106229	Metering Belt Conveyor	CP5	Metering belt conveyor		Bulk Material Handling	custom	
8073	Crude Bin Ventilation Baghouse	CP6	Crude bin dust collector	DC1	DCE Sintamatic	CS138FP	
106230	Detritor	CP7	Pug mill		Scott Equipment Co	PM246	
106231	Attrition Scrubber	CP8	Attrition Scrubber		Quinn Process Eqpt Co	24"x25"x4'	
106232	Wet Screen	CP9	Wet Screen		Derrick Corp	2124-60W-2M	
106220	Hydroclone Station	CP10	Hydroclone Station		Krebs Engineers	28 Model PCI-1421	
106234	Flotation Conditioning Tanks	CP11	Flotation Conditioning Tanks		Paramount Fabricators	NA	
106234	East and West Flotation Cells	CP12	Flotation Cells		Quinn Process Equipment Co	18SPL 6 cell	
106262	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"	
106236	Dispersing screen	CP16	Dispersing screen		Kemutec Group	K650	
106240	Kiln Feed Cyclone	CP17	Cyclone		Peterson	custom	
8075	Kiln Feed Bin Bahouse	CP18	Calciner Surge Bin Bahouse	DC5	Mikropul	55-8-55 "C"	
106241	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	Micropul	85-8-35 "C"	
106243	350 Scrubber	CP22	1st Stage Drying Scrubber	SR1	Met Pro Corporation		
106244	Refeed Station	CP23	Bag breaking station		Celite	custom	
106245	Flash Cooling Cyclone	CP24	Flash cooling cyclone		Peterson	custom	
8076	Flash Cooler Baghouse	CP25	Flash cooling dust collector	DC7	Mikropul	69-8-35 "C"	
106246	Product Mix tank	CP26	Mix tank		Paramount Fabricators	NA	
106247	Leach Tank	CP27	Leach vessel		Ametek	NA	
106248	Leach Slurry Storage Tank	CP28	Leach slurry storage		Paramount Fabricators	NA	
106250	Deacidifying Filter	CP29	Deacidifying filter		Filtration Systems Technology	VP-50-1 Ver-tipress filter	
106251	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	
106252	Packaging Station Cyclone	CP33	Packaging Station Cyclone		Peterson	custom	
106253	Product Dispersing Screen	CP34	Product dispersing screen		Kemutec Group	K650	
106254	Packaging Bin	CP35	Packaging bin		Steel Structures	custom	
106255	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	
106237	Soda Ash Bin	CP39	Soda Ash Bin		Steel Structures Inc.	Custom	
106238	Soda Ash Mix Tank	CP40	Soda ash mix tank		LW LeFort	Custom	
106239	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				
Item	**Page**	**Section**	**Imerys Comment**	**District Response**