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DEPARTMENT OF ENVIRONMENTAL QUALITY  
 AIR QUALITY DIVISION  
 ACTIVITY REPORT: Scheduled Inspection

B265831159

FACILITY: Kerr Corporation		SRN / ID: B2658
LOCATION: 28200 Wick Road, ROMULUS		DISTRICT: Detroit
CITY: ROMULUS		COUNTY: WAYNE
CONTACT:		ACTIVITY DATE: 09/15/2015
STAFF: Jorge Acevedo	COMPLIANCE STATUS: Compliance	SOURCE CLASS: Minor
SUBJECT:		
RESOLVED COMPLAINTS:		

COMPANY NAME : Kavo Kerr  
 FACILITY ADDRESS : 28200 Wick Road, Romulus 48174  
 STATE REGISTRAT. NUMBER : B2658  
 SIC CODE :  
 EPA SOURCE CLASS :  
 EPA POLLUTANT CLASS :  
 LEVEL OF INSPECTION : PCE  
 DATE OF INSPECTION : 9/15/15  
 TIME OF INSPECTION : 11:30 AM  
 DATE OF REPORT : 09/25/15  
 REASON FOR INSPECTION : Scheduled Inspection  
 INSPECTED BY : Jorge Acevedo  
 PERSONNEL PRESENT : Sean Melville, Regional Manager- Environmental, Health&Safety  
 FACILITY PHONE NUMBER :  
 FACILITY FAX NUMBER :

**Inspection Narrative:**

On September 15, 2015, Air Quality Division (AQD) staff conducted a partial compliance evaluation of the Kerr Corporation facility. I arrived at the facility at 11:30AM, checked in with security and proceeded to the lobby. I met with Sean Melville and Emily Hughes. The facility is now known as Kavo-Kerr and the adjacent building is operated by Metrex. Metrex is part of the Kavo-Kerr group.

I explained the inspection process and inquired about changes in the operations since the last inspection (2004). Mr. Melville explained that there were no major changes since the last inspection, but that the Refractories Division was slowing down. After our discussion, we began the inspection. We began in the warehouse area where raw materials are received. I observed the PVS operation. This consisted of mixers ducted to a dust collector. The mixer was not operating at the time of the inspection. Next, I observed several production cells. In this area packaging was occurring. An automatic line was inserting instructions into product.

Next, I observed the Perry room from outside. Inside the room, the amalgam capsule process was occurring. Mercury capsules were encapsulated to prevent mercury emissions. After observing the process, we entered the reactor room. This housed the Sta-Warm Kettle. The Reactor processes approximately 160 lbs a batch. The reaction is exhausted into a hood. The exhaust is manually turned on.

After observing the reactor, we walked towards the refractory operations. I observed a dust collector. It was operating and was at 0.5 inches of water pressure drop. Particulate was collected in 55 gallon drums. No excess dust was observed near the drums.

We walked into the Refractory operations. There were no operations at the time. I observed that the Sly and Fuller dust collectors were not operating due to fact that there was no production occurring at the time of my inspection. I observed two furnaces. One had a pilot light, the other did not. Mr. Melville explained that the furnaces operate a handful of times.

After that, we walked into the atomization process area. First the raw materials of copper, tin, and silver alloy billets are received and weighed. An electrically powered induction furnace is used to melt silver, tin, and copper-based alloy billets and alloy powders under vacuum. The resultant molten alloy is poured into a chamber located below the furnace where it is exposed to a stream of nitrogen gas. The nitrogen gas flows opposite to the molten metal, which atomizes the material. Excess gases and airborne particulate emissions resulting from the atomizer are directed to a separate existing cyclone and dust collector.

I asked Mr. Melville about the Ribbon Blender and the Gypsum Bag Dump so we went back into the plant and found a staff person. The staff person said that the Ribbon Blender was removed and the Gypsum Bag Dump was in the refractory area so we walked there and I observed it as it was not operating.

Next, we walked to the ZOE room which had 3 mixers. The mixers were not operating at the time of the inspection. After that we walked through the shipping and warehousing area and outside the building. I observed the Sand Silo. It was not operating at the time of my inspection. I looked inside and did not see excess sand.

We then walked to the Metrex Building which is adjacent to the Kerr-Kavo Building. Metrex produces medical grade disinfectants. Inside the building, I observed two tanks which contained deionized water. Next, we went downstairs and I observed several tanks containing isopropanol and glutaraldehyde. I also observed the bottling line which is done in an enclosed area.

We went back to the conference room and I asked for records which are required by the permit. I left the facility at 1:40PM. Ms. Hughes emailed me the records on September 18, 2015.

#### **Facility Background:**

The Kerr Corporation, established in 1965, has been bought out by Sybron Dental Specialties. Kerr is in the business of manufacturing dental supplies such as dental tools, silver fillings, dental impressions, casting materials, and other commercial impression mold materials. The Romulus facility is about 200,000 sq. ft.

#### **Complaint History:**

None

#### **Outstanding Lows:**

None

#### **Operating Schedule/Production Rate:**

16 hours a day, 5 days a week and 50 weeks a year, a third shift is added when necessary

#### **Process Description & Control Equipment:**

Refractories production, PVS production, Alloy production and General Chemical production are the four main operations that occur at the Kerr Romulus facility.

The Refractories business is a three step process that includes the formulating area, air mixing area, and packaging area. The raw materials are gypsum, sand, and silica and are received, weighed, and screened at the formulating area. The raw materials are then mixed together with the air blend mixing equipment. The mixed materials are then stored in silos until they are packaged and sold. Dust collectors control particulate emissions from the Refractories equipment.

The PVS business is another three step process. Fumed silica and other raw materials are used to make PVS catalyst and base and are weighed on separate scales. The PVS catalyst and base are each sent to a separate planetary mixer and press out mix vessel. The catalyst and base are then packaged in separate cartridges. Cartridges are packaged in cartons and then cartons are packaged into cases. When the catalyst and base are squeezed out of their cartridges and mixed they form an impression material that hardens as the two parts react.

The PVS quick-set dental impression catalyst and reagent have the potential to accumulate on agitators and mixing containers that contact these materials. Therefore, these components will require periodic cleaning with the use of solvents such as isopropyl alcohol and Soltrol 170/IsoparM.

Three individual cleaning stations (cold cleaners) will be installed to clean the process equipment components. Each station is equipped with a cover and an air ventilation system to exhaust solvent vapors to a blower/fan located on the roof of the building. All the cold cleaners meet the Rule 281(h) exemption.

The isopropyl alcohol tank will be equipped with a carbon adsorption system to reduce solvent vapor emissions that will be exhausted into the ambient air.

The Alloy business is operated in the following order. First the raw materials of copper, tin, and silver alloy billets are received and weighed. An electrically powered induction furnace is used to melt silver, tin, and copper-based alloy billets and alloy powders under vacuum. The resultant molten alloy is poured into a chamber located below the furnace where it is exposed to a stream of nitrogen gas. The nitrogen gas flows opposite to the molten metal, which atomizes the material. Excess gases and airborne particulate emissions resulting from the atomizer are directed to a separate existing cyclone and dust collector. The alloy pickling is no longer operating and the equipment was removed.

Atomized metal (particulate spheres) falls to a collection bin where it is transferred to a blender via a vacuum transport system (Vacumax). The blended material is then vacuum transported to the screener where it is sized to remelt material (>44 microns) and product material (<44 microns). After the material is screened it may go through a series of other material handling operations including air classification, blending with cut alloy, heat treating, and drying.

Particulate emissions from the material handling operations are captured by ventilation hoods and will be controlled by a new Dustex 1250 dust collector having an exhaust air flow rate of 5,980 cfm. The controlled exhaust gases are released to the ambient environment through an exhaust stack.

After the copper, tin, and silver alloy is atomized it is either put into a capsule or made into a tablet.

The Alloy Powder/Tablet processing area is as follows. Silver, tin, and copper billets are poured at the Kerr facility and shipped off-site and milled into a thin flake-like material. Upon returning to Kerr, the flake alloy is put through a vibratory mill (V-mill) and then pulverized in a small, high speed hammer mill. The pulverized powder is screened to produce remelt material (particle diameter < 53 microns).

Contour cut alloy and Contour powder from the alloy atomization processing area (particulate spheres) are blended at a ratio of 30 : 70 to produce Contour product. The Contour product undergoes heat treating in a vacuum oven. A portion (approximately 5 tons per year, Tpy) of the product is blended in an annealing dryer and the remaining product is blended into smaller batches. Portions of the atomized alloy powder are used to make tablet products. The powder is put through a heat treating process in vacuum ovens. Then the heat treated powder is acid pickled, dried, blended, screened through a blender/strainer, tabletized and then annealed in a vacuum oven.

Particulate emissions from the alloy powder/tablet processing operations are captured by existing ventilation hoods and will be controlled by a new Dustex 1750 dust collector having an exhaust air flow rate of 8,800 cfm. The controlled exhaust gases are released to the ambient environment through an exhaust stack.

Mercury emissions are almost non-existent. The capsule filling process now includes mercury in a pillow encapsulated form, which eliminates potential for mercury release.

In the General Chemicals business Formatray Powder, PC Sealer, Copal Resin, Light Permalastic, Regular Permalastic, Heavy Permalastic, and F. I. T. T. Powder are first weighed in as ingredients. The ingredients are then sent either to a reduction grinder or to a Planetary mixer. After ingredients leave the planetary mixer they are sent next to a roll mill. The ingredients leave the roll mill and are transferred into a drum. Materials leave the drums and fill tubes which are packaged into cartons and then packed into cases.

If the materials above go to the reduction grinder instead of the planetary mixer they may be added to the resin reactor.

#### APPLICABLE RULES/PERMIT CONDITIONS:

Permit to Install 350-07A was issued on September 29, 2011. Compliance with the permit conditions are evaluated below.

The following conditions apply to: EU-MAN1R

**DESCRIPTION:** Gypsum bag dump station controlled by a bag dump filter. This is part of the refractory formulating and packaging process.

Flexible Group ID: FG-MAP

POLLUTION CONTROL EQUIPMENT: Filter

**I. EMISSION LIMITS**

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Compliance Determination
1. PM	0.01 lbs per 1000 lbs of exhaust gases calculated on a dry gas basis.	Test Protocol*	EU-MAN1R	Compliance- Equipment was not operating.
2. PM-10	0.09 pph	Test Protocol*	EU-MAN1R	Undetermined- Stack test is needed to determine emission rate. Equipment was not operating at the time of the inspection.
* Test protocol shall specify averaging time.				

**II. MATERIAL LIMITS**

NA

**III. PROCESS/OPERATIONAL RESTRICTIONS**

NA

**IV. DESIGN/EQUIPMENT PARAMETERS**

1. The permittee shall not operate EU-MAN1R unless the bag dump filter is installed, maintained, and operated in a satisfactory manner. (R 336.1224, R 336.1225, R 336.1331, R 336.1901, R 336.1910, R 336.2803, R 336.2804, 40 CFR 52.21 (c) and (d))

Compliance- Filter was installed. Equipment was not operating at the time of the inspection.

**V. TESTING/SAMPLING**

Records shall be maintained on file for a period of five years. (R 336.1201(3))

NA

**VI. MONITORING/RECORDKEEPING**

Records shall be maintained on file for a period of five years. (R 336.1201(3))

1. The permittee shall install, calibrate, maintain and operate in a satisfactory manner, a device to monitor the pressure drop on the bag dump filter on a continuous basis. (R 336.1224, R 336.1225, R 336.1301, R 336.1331, R 336.1901, R 336.1910, R 336.2802, 40 CFR 52.21(c) and (d))

Compliance- Pressure drop gage was present. Equipment was not operating at the time of the inspection.

2. The permittee shall complete all required inspections and monitoring in a format acceptable to the AQD District

Supervisor and make them available by the 15th day of the calendar month, for the previous calendar month, unless otherwise specified in any recordkeeping, reporting or notification special condition. (R 336.1224, R 336.1225, R 336.1901)  
 Compliance- Inspection log was present. Equipment was not operating at the time of the inspection.

**VII. REPORTING**

NA

**VIII. STACK/VENT RESTRICTIONS**

The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted:

Stack & Vent ID	Maximum Exhaust Diameter/Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SV00007	7.0	34.0	R 336.1225, R 336.1901, R 336.2803, R 336.2804, 40 CFR 52.21 (c) & (d)

Undetermined- Measurements were not taken at the time of inspection.

**IX. OTHER REQUIREMENTS**

NA

**Footnotes:**

<sup>1</sup>This condition is state only enforceable and was established pursuant to Rule 201(1)(b).

**The following conditions apply to: EU-OP1R**

**DESCRIPTION:** A silica flour (sand) storage silo controlled by a bin vent filter system. This is part of the refractory formulating and packaging process.

**Flexible Group ID:** FG-MAP

**POLLUTION CONTROL EQUIPMENT:** Bin Vent Filter System

**I. EMISSION LIMITS**

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Compliance Determination
1. PM	0.0022 lbs per 1000 lbs of exhaust gases calculated on a dry gas basis.	Test Protocol*	EU-OP1R	Undetermined- Stack test would be needed to determine emission concentration. Equipment was not operating at the time of the inspection.
2. PM-10	0.006 pph	Test Protocol*	EU-OP1R	Undetermined- Stack test would be

			needed to determine emission rate. Equipment was not operating at the time of the inspection.
* Test protocol shall specify averaging time.			

**II. MATERIAL LIMITS**

1. The permittee shall not operate EU-OP1R for more than 300 hours per 12-month rolling time period as determined at the end of each calendar month. (R 336.1205, R 336.1224, R 336.1225, R 336.1901, R 336.2803, R 336.2804, 40 CFR 52.21 (c) & (d))  
 Compliance- Records received show that 120 hours of use occurred over the last 12 months.

**III. PROCESS/OPERATIONAL RESTRICTIONS**

NA

**IV. DESIGN/EQUIPMENT PARAMETERS**

1. The permittee shall not operate EU-OP1R unless the bin vent filter is installed, maintained, and operated in a satisfactory manner. (R 336.1224, R 336.1225, R 336.1331, R 336.1901, R 336.1910, R 336.2803, R 336.2804, 40 CFR 52.21 (c) and (d))  
 Compliance- Filter was installed. Equipment was not operating at the time of the inspection.

**V. TESTING/SAMPLING**

Records shall be maintained on file for a period of five years. (R 336.1201(3))  
 NA

**VI. MONITORING/RECORDKEEPING**

Records shall be maintained on file for a period of five years. (R 336.1201(3))

1. The permittee shall install, calibrate, maintain and operate in a satisfactory manner, a device to monitor the pressure drop on the bin vent filter on a continuous basis. (R 336.1224, R 336.1225, R 336.1301, R 336.1331, R 336.1901, R 336.1910, R 336.2802, 40 CFR 52.21(c) and (d))

Compliance- Pressure gage was present. Equipment was not operating at the time of the inspection.

2. The permittee shall complete all required inspections and monitoring in a format acceptable to the AQD District Supervisor and make them available by the 15th day of the calendar month, for the previous calendar month, unless otherwise specified in any recordkeeping, reporting or notification special condition. (R 336.1224, R 336.1225, R 336.1901)

Compliance- Log was present. Equipment was not operating at the time of the inspection.

3. The permittee shall keep, in a satisfactory manner, a log of the operating hours per 12-month rolling time period as determined at the end of each calendar month for EU-OP1R. The permittee shall keep all records on file at the facility and make them available to the Department upon request. (R 336.1205, R 336.1224, R 336.1225, R 336.1901, R 336.2803, R 336.2804, 40 CFR 52.21(c) & (d))

Compliance- Records are kept and were presented.

**VII. REPORTING**

NA

**VIII. STACK/VENT RESTRICTIONS**

The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted:

Stack & Vent ID	Maximum Exhaust Diameter/Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SV00006	8.0	54.0	R 336.1225, R 336.1901, R 336.2803, R 336.2804, 40 CFR 52.21 (c) & (d)

Undetermined- Measurements were not taken during the inspection. Stack height and diameter appeared

**IX. OTHER REQUIREMENTS**

NA

**Footnotes:**

<sup>1</sup>This condition is state only enforceable and was established pursuant to Rule 201(1)(b).

**The following conditions apply to: EU-OP2R**

**DESCRIPTION:** A Cristobalite processing station consisting of material handling stations, weigh stations, mixing pots, screening equipment, and air blending equipment for raw materials all controlled by a Fuller dust collector. This is part of the refractory formulating and packaging process.

Flexible Group ID: FG-MAP

**POLLUTION CONTROL EQUIPMENT:** Fuller dust collector

**I. EMISSION LIMITS**

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Compliance Determination
1. PM	0.01 lbs per 1000 lbs of exhaust gases calculated on a dry gas basis.	Test Protocol*	EU-OP2R	Undetermined- Stack test would need to be performed to determine concentration.
2. PM-10	1.0 pph	Test Protocol*	EU-OP2R	Undetermined- Stack test would need to be performed to determine emission rate.

\* Test protocol shall specify averaging time.

**II. MATERIAL LIMITS**

1. The permittee shall not process more than 14,340 tons of material per 12-month rolling time period as determined at the end of each calendar month through EU-OP2R. (R 336.1205, R 336.1224, R 336.1225, R 336.1901, R 336.2803, R 336.2804, 40 CFR 52.21(c) & (d))  
 Compliance- Less than 3000 Tons were processed. Records were received.

**III. PROCESS/OPERATIONAL RESTRICTIONS**

NA

**IV. DESIGN/EQUIPMENT PARAMETERS**

1. The permittee shall not operate EU-OP2R unless the Fuller dust collector is installed, maintained, and operated in a satisfactory manner. (R 336.1224, R 336.1225, R 336.1331, R 336.1901, R 336.1910, R 336.2803, R 336.2804, 40 CFR 52.21 (c) and (d))

Compliance- No production was occurring during inspection. Dust collector was installed.

**V. TESTING/SAMPLING**

Records shall be maintained on file for a period of five years. (R 336.1201(3))

NA

**VI. MONITORING/RECORDKEEPING**

Records shall be maintained on file for a period of five years. (R 336.1201(3))

1. The permittee shall install, calibrate, maintain and operate in a satisfactory manner, a device to monitor the pressure drop on the Fuller dust collector on a continuous basis. (R 336.1224, R 336.1225, R 336.1301, R 336.1331, R 336.1901, R 336.1910, R 336.2802, 40 CFR 52.21(c) and (d))

Compliance- Pressure gauge was present. The equipment was not operating at the time of the inspection.

2. The permittee shall complete all required inspections and monitoring in a format acceptable to the AQD District Supervisor and make them available by the 15th day of the calendar month, for the previous calendar month, unless otherwise specified in any recordkeeping, reporting or notification special condition. (R 336.1224, R 336.1225, R 336.1901)

Compliance- Inspection log was present.

3. The permittee shall keep, in a satisfactory manner, records of the amount of material processed in tons per 12-month rolling time period as determined at the end of each calendar month for EU-OP2R. The permittee shall keep all records on file at the facility and make them available to the Department upon request. (R 336.1205, R 336.1224, R 336.1225, R 336.1901, R 336.2803, R 336.2804, 40 CFR 52.21(c) & (d))

Compliance- Records are kept and were submitted.

**VII. REPORTING**

NA

**VIII. STACK/VENT RESTRICTIONS**

The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted:

Stack & Vent ID	Maximum Exhaust Diameter/Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SV00008	19.0	30.0	R 336.1225, R 336.1901, R 336.2803, R 336.2804, 40 CFR 52.21 (c) & (d)

Undetermined. Measurements were not taken.

**IX. OTHER REQUIREMENTS**

NA

**Footnotes:**

<sup>1</sup>This condition is state only enforceable and was established pursuant to Rule 201(1)(b).

**The following conditions apply to: EU-OP6R**

**DESCRIPTION:** A plastic and box drum packaging area with shaker table and vibratory conveyer all controlled by a Sly Pleat Jet II dust collector. This is part of the refractory formulating and packaging process.

**Flexible Group ID:** FG-MAP

**POLLUTION CONTROL EQUIPMENT:** Sly Pleat Jet II dust collector

**I. EMISSION LIMITS**

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Compliance Determination
1. PM	0.01 lbs per 1000 lbs of exhaust gases calculated on a dry gas basis.	Test Protocol*	EU-OP6R	Undetermined- Stack test needed to determine concentration. Equipment was not operating at the time of the inspection.
2. PM-10	0.04 pph	Test Protocol*	EU-OP6R	Undetermined- Stack test needed to determine emission rate. Equipment was not operating at the time of the inspection.
* Test protocol shall specify averaging time.				

**II. MATERIAL LIMITS**

NA

**III. PROCESS/OPERATIONAL RESTRICTIONS**

NA

**IV. DESIGN/EQUIPMENT PARAMETERS**

1. The permittee shall not operate EU-OP6R unless the fabric filter dust collector is installed, maintained, and operated in a satisfactory manner. (R 336.1224, R 336.1225, R 336.1331, R 336.1901, R 336.1910, R 336.2803, R 336.2804, 40 CFR 52.21(c) and (d))

**Compliance-** Fabric filter installed. Equipment not operating at the time of the inspection.

**V. TESTING/SAMPLING**

Records shall be maintained on file for a period of five years. (R 336.1201(3))

NA

**VI. MONITORING/RECORDKEEPING**

Records shall be maintained on file for a period of five years. (R 336.1201(3))

1. The permittee shall install, calibrate, maintain and operate in a satisfactory manner, a device to monitor the pressure drop on the fabric filter dust collector on a continuous basis. (R 336.1224, R 336.1225, R 336.1301, R 336.1331, R 336.1901, R 336.1910, R 336.2802, 40 CFR 52.21(c) and (d))

**Compliance-** Pressure drop gage installed.

2. The permittee shall complete all required inspections and monitoring in a format acceptable to the AQD District Supervisor and make them available by the 15th day of the calendar month, for the previous calendar month, unless otherwise

specified in any recordkeeping, reporting or notification special condition. (R 336.1224, R 336.1225, R 336.1901)  
 Compliance- Inspection log posted near equipment.

**VII. REPORTING**

NA

**VIII. STACK/VENT RESTRICTIONS**

The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted:

Stack & Vent ID	Maximum Exhaust Diameter/Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SV00017	8.0	29.5	R 336.1225, R 336.1901, R 336.2803, R 336.2804, 40 CFR 52.21 (c) & (d)

Undetermined- Measurements of height and diameter were not taken.

**IX. OTHER REQUIREMENTS**

NA

**Footnotes:**

<sup>1</sup>This condition is state only enforceable and was established pursuant to Rule 201(1)(b).

The following conditions apply to: EU-OP9R

**DESCRIPTION:** Two (2) 120,000 BTU/hr natural gas-fired enclosed furnaces that cure refractory materials for QA/QC located in a small castings room. This is part of the refractory formulating and packaging process.

Flexible Group ID: FG-MAP

POLLUTION CONTROL EQUIPMENT: NA

**I. EMISSION LIMITS**

NA

**II. MATERIAL LIMITS**

NA

**III. PROCESS/OPERATIONAL RESTRICTIONS**

1. The permittee shall only fire natural gas in EU-OP9R. (R 336.1205, R 336.1901, R 336.2803, R 336.2804, 40 CFR 52.21(c) and (d))

Compliance- Natural gas is fired. Neither furnace is operated routinely. At the time of the inspection, one furnace has an active pilot light and the other one did not.

**IV. DESIGN/EQUIPMENT PARAMETERS**

NA

**V. TESTING/SAMPLING**

Records shall be maintained on file for a period of five years. (R 336.1201(3))

NA

**VI. MONITORING/RECORDKEEPING**

Records shall be maintained on file for a period of five years. (R 336.1201(3))

NA

**VII. REPORTING**

NA

**VIII. STACK/VENT RESTRICTIONS**

The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted:

Stack & Vent ID	Maximum Exhaust Diameter/Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SV00018	15.5 x 19.5	29.5	R 336.1901, R 336.2803, R 336.2804, 40 CFR 52.21 (c) & (d)

Undetermined. Measurements were not taken of diameter and stack height.

**IX. OTHER REQUIREMENTS**

NA

**Footnotes:**

<sup>1</sup>This condition is state only enforceable and was established pursuant to Rule 201(1)(b).

The following conditions apply to: EU-OP1A

**DESCRIPTION:** A eighty (80) kilowatt electric furnace that heats copper, silver, and tin, and a product hopper controlled by a cyclone followed by a cartridge type dust collector. This is part of the alloy atomization process.

Flexible Group ID: FG-MAP

**POLLUTION CONTROL EQUIPMENT:** Cyclone and cartridge type dust collector

**I. EMISSION LIMITS**

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Compliance Determination
1. PM	0.003 lbs per 1000 lbs of exhaust gases calculated on a dry gas basis.	Test Protocol*	EU-OP1A	Undetermined-Stack Test needed to determine concentration of exhaust.
2. PM-10	0.02 pph	Test Protocol*	EU-OP1A	Undetermined- Stack Test needed to determine emission rate.

\* Test protocol shall specify averaging time.

**II. MATERIAL LIMITS**

NA

**III. PROCESS/OPERATIONAL RESTRICTIONS**

NA

**IV. DESIGN/EQUIPMENT PARAMETERS**

1. The permittee shall not operate EU-OP1A unless the cyclone and cartridge type dust collector are installed, maintained, and operated in a satisfactory manner. (R 336.1224, R 336.1225, R 336.1331, R 336.1901, R 336.1910, R 336.2803, R 336.2804, 40 CFR 52.21(c) and (d))

Compliance- Dust Collector installed.

**V. TESTING/SAMPLING**

Records shall be maintained on file for a period of five years. (R 336.1201(3))

NA

**VI. MONITORING/RECORDKEEPING**

Records shall be maintained on file for a period of five years. (R 336.1201(3))

1. The permittee shall install, calibrate, maintain and operate in a satisfactory manner, a device to monitor the pressure drop on the cartridge type dust collector on a continuous basis. (R 336.1224, R 336.1225, R 336.1301, R 336.1331, R 336.1901, R 336.1910, R 336.2802, 40 CFR 52.21(c) and (d))

Compliance- Pressure gauge installed.

2. The permittee shall complete all required inspections and monitoring in a format acceptable to the AQD District Supervisor and make them available by the 15th day of the calendar month, for the previous calendar month, unless otherwise specified in any recordkeeping, reporting or notification special condition. (R 336.1224, R 336.1225, R 336.1901)

Compliance- Inspection log was observed.

**VII. REPORTING**

NA

**VIII. STACK/VENT RESTRICTIONS**

The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted:

Stack & Vent ID	Maximum Exhaust Diameter/Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SV00001	10.0	50.0	R 336.1225, R 336.1901, R 336.2803, R 336.2804, 40 CFR 52.21 (c) & (d)

Undetermined- Stack height and diameter not measured.

**IX. OTHER REQUIREMENTS**

NA

**Footnotes:**

<sup>1</sup>This condition is state only enforceable and was established pursuant to Rule 201(1)(b).

**The following conditions apply to: EU-OP2A**

**DESCRIPTION:** An oversize screen and reduction grinder controlled by a Dustex 2-Bay dust collector. This is part of the alloy atomization process.

**Flexible Group ID:** FG-MAP

**POLLUTION CONTROL EQUIPMENT:** Dustex 2-Bay dust collector

**I. EMISSION LIMITS**

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Compliance Determination
1. PM	0.01 lbs per 1000 lbs of exhaust gases calculated on a dry gas basis.	Test Protocol*	EU-OP1A	Undetermined- Stack test needed to determine concentration in exhaust.
2. PM-10	0.27 pph	Test Protocol*	EU-OP1A	Undetermined- Stack test needed to determine emission rate.

\* Test protocol shall specify averaging time.

**II. MATERIAL LIMITS**

NA

**III. PROCESS/OPERATIONAL RESTRICTIONS**

NA

**IV. DESIGN/EQUIPMENT PARAMETERS**

1. The permittee shall not operate EU-OP2A unless the Dustex dust collector is installed, maintained, and operated in a satisfactory manner. (R 336.1224, R 336.1225, R 336.1331, R 336.1901, R 336.1910, R 336.2803, R 336.2804, 40 CFR 52.21 (c) and (d))

Compliance-Dust collector was installed.

**V. TESTING/SAMPLING**

Records shall be maintained on file for a period of five years. (R 336.1201(3))

NA

**VI. MONITORING/RECORDKEEPING**

Records shall be maintained on file for a period of five years. (R 336.1201(3))

1. The permittee shall install, calibrate, maintain and operate in a satisfactory manner, a device to monitor the pressure drop on the Dustex dust collector on a continuous basis. (R 336.1224, R 336.1225, R 336.1301, R 336.1331, R 336.1901, R 336.1910, R 336.2802, 40 CFR 52.21(c) and (d))

Compliance- Pressure gauge installed.

2. The permittee shall complete all required inspections and monitoring in a format acceptable to the AQD District Supervisor and make them available by the 15th day of the calendar month, for the previous calendar month, unless otherwise specified in any recordkeeping, reporting or notification special condition. (R 336.1224, R 336.1225, R 336.1901)

Compliance- Inspection log present.

**VII. REPORTING**

NA

**VIII. STACK/VENT RESTRICTIONS**

The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted:

Stack & Vent ID	Maximum Exhaust Diameter/Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SV00002	18.0	30.0	R 336.1225, R 336.1901, R 336.2803, R 336.2804, 40 CFR 52.21 (c) & (d)

Undetermined- Measurements of Stack height and diameter were not taken.

**IX. OTHER REQUIREMENTS**

NA

**Footnotes:**

<sup>1</sup>This condition is state only enforceable and was established pursuant to Rule 201(1)(b).

The following conditions apply to: EU-OP4A

**DESCRIPTION:** A heat treat process, a twenty (20) kilowatt alloy dryer, and a table press all controlled by a Dustex 3-Bay dust collector. This is part of the alloy atomization process.

Flexible Group ID: FG-MAP

**POLLUTION CONTROL EQUIPMENT:** Dustex 3-Bay dust collector

**I. EMISSION LIMITS**

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Compliance Determination
1. PM	0.01 lbs per 1000 lbs of exhaust gases calculated on a dry gas basis.	Test Protocol*	EU-OP4A	Undetermined- Stack test needed to determine exhaust concentration.
2. PM-10	0.4 pph	Test Protocol*	EU-OP4A	Undetermined- Stack test needed to determine emission rate.

\* Test protocol shall specify averaging time.

**II. MATERIAL LIMITS**

NA

**III. PROCESS/OPERATIONAL RESTRICTIONS**

NA

**IV. DESIGN/EQUIPMENT PARAMETERS**

1. The permittee shall not operate EU-OP4A unless the Dustex dust collector is installed, maintained, and operated in a satisfactory manner. (R 336.1224, R 336.1225, R 336.1331, R 336.1901, R 336.1910, R 336.2803, R 336.2804, 40 CFR 52.21 (c) and (d))

**Compliance- Dust collector installed.**

**V. TESTING/SAMPLING**

Records shall be maintained on file for a period of five years. (R 336.1201(3))

NA

**VI. MONITORING/RECORDKEEPING**

Records shall be maintained on file for a period of five years. (R 336.1201(3))

1. The permittee shall install, calibrate, maintain and operate in a satisfactory manner, a device to monitor the pressure drop on the Dustex dust collector on a continuous basis. (R 336.1224, R 336.1225, R 336.1301, R 336.1331, R 336.1901, R 336.1910, R 336.2802, 40 CFR 52.21(c) and (d))

**Compliance- Pressure gauge installed.**

2. The permittee shall complete all required inspections and monitoring in a format acceptable to the AQD District Supervisor and make them available by the 15th day of the calendar month, for the previous calendar month, unless otherwise specified in any recordkeeping, reporting or notification special condition. (R 336.1224, R 336.1225, R 336.1901)

**Compliance- Inspection log present**

**VII. REPORTING**

NA

**VIII. STACK/VENT RESTRICTIONS**

The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted:

Stack & Vent ID	Maximum Exhaust Diameter/Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SV00003	20.0	30.0	R 336.1225, R 336.1901, R 336.2803, R 336.2804, 40 CFR 52.21 (c) & (d)

**Undetermined- Stack height and diameter measurements were not taken.**

**IX. OTHER REQUIREMENTS**

NA

**Footnotes:**

<sup>1</sup>This condition is state only enforceable and was established pursuant to Rule 201(1)(b).

The following conditions apply to: EU-OP5A

**DESCRIPTION:** A capsule filling room that is equipped with two (2) metal powder separation cyclones and a vacuum system. Room emissions are controlled by a Torit dust collector. This is part of the alloy atomization process.

**Flexible Group ID:** FG-MAP

**POLLUTION CONTROL EQUIPMENT:** Torit dust collector

**I. EMISSION LIMITS**

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Compliance Determination
1. PM	0.0093 lbs per 1000 lbs of exhaust gases calculated on a dry gas basis.	Test Protocol*	EU-OP5A	Undetermined- Stack Test needed to determine concentration of exhaust
2. PM-10	0.21 pph	Test Protocol*	EU-OP5A	Undetermined- Stack Test needed to determine emission rate
3. Mercury	0.0032 pph	Test Protocol*	EU-OP5A	Undetermined- Stack test needed to determine emission rate. However, mercury is encapsulated so mercury emissions are predicted to be zero.
* Test protocol shall specify averaging time.				

**II. MATERIAL LIMITS**

NA

**III. PROCESS/OPERATIONAL RESTRICTIONS**

NA

**IV. DESIGN/EQUIPMENT PARAMETERS**

- The permittee shall not operate EU-OP4A unless the Torit dust collector is installed, maintained, and operated in a satisfactory manner. (R 336.1224, R 336.1225, R 336.1331, R 336.1901, R 336.1910, R 336.2803, R 336.2804, 40 CFR 52.21 (c) and (d))  
Compliance- Dust collector is installed.

**V. TESTING/SAMPLING**

Records shall be maintained on file for a period of five years. (R 336.1201(3))

NA

**VI. MONITORING/RECORDKEEPING**

Records shall be maintained on file for a period of five years. (R 336.1201(3))

- The permittee shall install, calibrate, maintain and operate in a satisfactory manner, a device to monitor the pressure

drop on the Torit dust collector on a continuous basis. (R 336.1224, R 336.1225, R 336.1301, R 336.1331, R 336.1901, R 336.1910, R 336.2802, 40 CFR 52.21(c) and (d))

**Compliance- Pressure gauge is installed.**

2. The permittee shall complete all required inspections and monitoring in a format acceptable to the AQD District Supervisor and make them available by the 15th day of the calendar month, for the previous calendar month, unless otherwise specified in any recordkeeping, reporting or notification special condition. (R 336.1224, R 336.1225, R 336.1901)

**Compliance- Inspection log present.**

**VII. REPORTING**

NA

**VIII. STACK/VENT RESTRICTIONS**

The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted:

Stack & Vent ID	Maximum Exhaust Diameter/Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SV00004	15.0	10.0	R 336.1225, R 336.1901, R 336.2803,R 336.2804,40 CFR 52.21 (c) & (d)
2. SV-Vacuum	15.0	10.0	R 336.1225, R 336.1901, R 336.2803,R 336.2804,40 CFR 52.21 (c) & (d)

Undetermined- Stack Height and Diameter measurements were not taken.

**IX. OTHER REQUIREMENTS**

NA

**Footnotes:**

<sup>1</sup>This condition is state only enforceable and was established pursuant to Rule 201(1)(b).

**The following conditions apply to: EU-OP1P**

**DESCRIPTION:** A base room planetary mixer and weight scale, and a catalyst room dispersion mixer and weight scale controlled by a cartridge filter dust collector that is shared with EU-OP3M. This is a Poly Vinyl Silicone (PVS) process in which liquids, powders, and vinyl fluid are mixed and packaged as a two-part (catalyst and base) quick-set dental impression product.

**Flexible Group ID:** FG-MAP

**POLLUTION CONTROL EQUIPMENT:** Cartridge filter dust collector

**I. EMISSION LIMITS**

Pollutant	Limit	Time Period / Operating	Equipment	Testing / Monitoring Method Underlying Applicable Requirements
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		Scenario		
1. PM	0.005 lbs per 1000 lbs of exhaust gases calculated on a dry gas basis.	Test Protocol*	EU-OP1P	Undetermined- Stack Test needed to determine concentration in exhaust.
2. PM-10	0.135 pph	Test Protocol*	EU-OP1P	Undetermined- Stack Test needed to determine emission rate.
3. PM-2.5	0.135 pph	Test Protocol*	EU-OP1P	Undetermined- Stack Test needed to determine emission rate.
* Test protocol shall specify averaging time.				

**II. MATERIAL LIMITS**

1. The permittee shall not process more than 133,500 tons of powder materials/additives per 12-month rolling time period as determined at the end of each calendar month through EU-OP1P. (R 336.1205, R 336.1224, R 336.1225, R 336.1901, R 336.2803, R 336.2804, 40 CFR 52.21(c) & (d))  
 Compliance- Records received show that less than 60 tons of power were processed.

**III. PROCESS/OPERATIONAL RESTRICTIONS**

NA

**IV. DESIGN/EQUIPMENT PARAMETERS**

1. The permittee shall not operate EU-OP1P unless the cartridge filter dust collector is installed, maintained, and operated in a satisfactory manner. (R 336.1224, R 336.1225, R 336.1331, R 336.1901, R 336.1910, R 336.2803, R 336.2804, 40 CFR 52.21(c) and (d))

Compliance- Dust collector installed.

**V. TESTING/SAMPLING**

Records shall be maintained on file for a period of five years. (R 336.1201(3))

NA

**VI. MONITORING/RECORDKEEPING**

Records shall be maintained on file for a period of five years. (R 336.1201(3))

1. The permittee shall install, calibrate, maintain and operate in a satisfactory manner, a device to monitor the pressure drop on the cartridge filter dust collector on a continuous basis. (R 336.1224, R 336.1225, R 336.1301, R 336.1331, R 336.1901, R 336.1910, R 336.2802, 40 CFR 52.21(c) and (d))

Compliance- Pressure gauge installed.

2. The permittee shall complete all required inspections and monitoring in a format acceptable to the AQD District Supervisor and make them available by the 15th day of the calendar month, for the previous calendar month, unless otherwise specified in any recordkeeping, reporting or notification special condition. (R 336.1224, R 336.1225, R 336.1901)

Compliance- Inspection log present

3. The permittee shall keep, in a satisfactory manner, records of the amount of powder materials/additives processed in tons per 12-month rolling time period as determined at the end of each calendar month for EU-OP1P. The permittee shall keep all records on file at the facility and make them available to the Department upon request. (R 336.1205, R 336.1224, R 336.1225, R 336.1901, R 336.2803, R 336.2804, 40 CFR 52.21(c) & (d))

Compliance- Records were received.

**VII. REPORTING**

NA

**VIII. STACK/VENT RESTRICTIONS**

The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted:

Stack & Vent ID	Maximum Exhaust Diameter/Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SV00011	22.4	12.0	R 336.1225, R 336.1901, R 336.2803, R 336.2804, 40 CFR 52.21 (c) & (d)

Undetermined- Stack height and diameter measurements were not taken.

**IX. OTHER REQUIREMENTS**

NA

**Footnotes:**

<sup>1</sup>This condition is state only enforceable and was established pursuant to Rule 201(1)(b).

**The following conditions apply to: EU-OP6C**

**DESCRIPTION:** A reactor room that consists of a Sta-Warm kettle and two (2) reaction vessels (Pfaudler #1 and #2). The Sta-Warm kettle and Pfaudler #1 are controlled by exhaust filter and carbon pads. This is part of the chemical process area.

**Flexible Group ID:** FG-MAP

**POLLUTION CONTROL EQUIPMENT:** Exhaust filter and carbon pads

**I. EMISSION LIMITS**

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Compliance Determination
1. PM	0.01 lbs per 1000 lbs of exhaust gases calculated on a dry gas basis.	Test Protocol*	EU-OP6C Sta-Warm Kettle and Pfaudler #1	Undetermined- Stack Test would be needed to determine exhaust concentration.
2. PM-10	0.02 pph	Test Protocol*	EU-OP6C Sta-Warm Kettle and Pfaudler #1	Undetermined- Stack Test would be needed to determine emission rate.
3. PM	0.1 lbs per 1000 lbs of exhaust gases calculated on a dry gas basis.	Test Protocol*	EU-OP6C Pfaudler #2	Undetermined- Stack Test would be needed to determine exhaust concentration.
4. PM-10	0.18 pph	Test Protocol*	EU-OP6C Pfaudler #2	Undetermined- Stack Test would be needed to determine emission rate.

\* Test protocol shall specify averaging time.

**II. MATERIAL LIMITS**

1. The permittee shall not produce more than 28,000 pounds of resin per 12-month rolling time period as determined at the end of each calendar month in EU-OP6C. (R 336.1205, R 336.1224, R 336.1225, R 336.1702(a), R 336.1901, R 336.2803, R 336.2804, 40 CFR 52.21(c) & (d))  
 Compliance- Records received show that less than 5000 lbs of resin was produced.

**III. PROCESS/OPERATIONAL RESTRICTIONS**

NA

**IV. DESIGN/EQUIPMENT PARAMETERS**

1. The permittee shall not operate the Sta-Warm kettle and Pfaudler #1 portions of EU-OP6C unless the exhaust filter and carbon pads are installed, maintained, and operated in a satisfactory manner. (R 336.1224, R 336.1225, R 336.1331, R 336.1901, R 336.1910, R 336.2803, R 336.2804, 40 CFR 52.21(c) and (d))

Compliance- Exhaust was installed.

**V. TESTING/SAMPLING**

Records shall be maintained on file for a period of five years. (R 336.1201(3))  
 NA

**VI. MONITORING/RECORDKEEPING**

Records shall be maintained on file for a period of five years. (R 336.1201(3))

1. The permittee shall install, calibrate, maintain and operate in a satisfactory manner, a device to monitor the pressure drop on the exhaust filter and carbon pads on a continuous basis. (R 336.1224, R 336.1225, R 336.1301, R 336.1331, R 336.1901, R 336.1910, R 336.2802, 40 CFR 52.21(c) and (d))

Compliance- Pressure drop gauge installed.

2. The permittee shall complete all required inspections and monitoring in a format acceptable to the AQD District Supervisor and make them available by the 15th day of the calendar month, for the previous calendar month, unless otherwise specified in any recordkeeping, reporting or notification special condition. (R 336.1224, R 336.1225, R 336.1901)

Compliance- Inspection log observed.

3. The permittee shall keep, in a satisfactory manner, records of the amount of resin produced in pounds per 12-month rolling time period as determined at the end of each calendar month for EU-OP6C. The permittee shall keep all records on file at the facility and make them available to the Department upon request. (R 336.1205, R 336.1224, R 336.1225, R 336.1702

(a), R 336.1901, R 336.2803, R 336.2804, 40 CFR 52.21(c) & (d))

Compliance- Records are kept and were received.

**VII. REPORTING**

NA

**VIII. STACK/VENT RESTRICTIONS**

The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted:

Stack & Vent ID	Maximum Exhaust Diameter/Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SV00014	7.0	22.0	R 336.1225, R 336.1901, R 336.2803,R 336.2804,40 CFR 52.21 (c) & (d)
2. SV-Pfaudler #2	16.0	20.0	R 336.1225, R 336.1901,

R 336.2803,R 336.2804,40 CFR 52.21 (c) & (d)
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Stack ID SV00014 & SV-Pfaudler#2

Undetermined- Stack height and diameter measurements were not taken.

**IX. OTHER REQUIREMENTS**

NA

**Footnotes:**

<sup>1</sup>This condition is state only enforceable and was established pursuant to Rule 201(1)(b).

**The following conditions apply to: EU-OP7C**

**DESCRIPTION:** A size reduction room with a reduction grinder and cyclone separator controlled by a cartridge type dust collector. This is part of the chemical process area.

**Flexible Group ID:** FG-MAP

**POLLUTION CONTROL EQUIPMENT:** Cartridge type dust collector

**I. EMISSION LIMITS**

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Compliance Determination
1. PM	0.01 lbs per 1000 lbs of exhaust gases calculated on a dry gas basis.	Test Protocol*	EU-OP7C	Undetermined-A Stack Test would be needed to determine concentration of exhaust gas.
2. PM-10	0.027 pph	Test Protocol*	EU-OP7C	Undetermined- A Stack Test would be needed to determine emission rate.

\* Test protocol shall specify averaging time.

**II. MATERIAL LIMITS**

NA

**III. PROCESS/OPERATIONAL RESTRICTIONS**

NA

**IV. DESIGN/EQUIPMENT PARAMETERS**

- The permittee shall not operate EU-OP7C unless the cartridge type dust collector is installed, maintained, and operated in a satisfactory manner. (R 336.1224, R 336.1225, R 336.1331, R 336.1901, R 336.1910, R 336.2803, R 336.2804, 40 CFR 52.21(c) and (d))

Compliance- dust collector is installed.

**V. TESTING/SAMPLING**

Records shall be maintained on file for a period of five years. (R 336.1201(3))

NA

**VI. MONITORING/RECORDKEEPING**

Records shall be maintained on file for a period of five years. (R 336.1201(3))

1. The permittee shall install, calibrate, maintain and operate in a satisfactory manner, a device to monitor the pressure drop on the cartridge type dust collector on a continuous basis. (R 336.1224, R 336.1225, R 336.1301, R 336.1331, R 336.1901, R 336.1910, R 336.2802, 40 CFR 52.21(c) and (d))

Compliance- Pressure gauge installed.

2. The permittee shall complete all required inspections and monitoring in a format acceptable to the AQD District Supervisor and make them available by the 15th day of the calendar month, for the previous calendar month, unless otherwise specified in any recordkeeping, reporting or notification special condition. (R 336.1224, R 336.1225, R 336.1901)

Compliance- Inspection log posted near collector.

**VII. REPORTING**

NA

**VIII. STACK/VENT RESTRICTIONS**

The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted:

Stack & Vent ID	Maximum Exhaust Diameter/Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SV00015	10.0	8.0	R 336.1225, R 336.1901, R 336.2803, R 336.2804, 40 CFR 52.21 (c) & (d)

Undetermined- Measurements of stack height and diameter were not taken.

**IX. OTHER REQUIREMENTS**

NA

**Footnotes:**

<sup>1</sup>This condition is state only enforceable and was established pursuant to Rule 201(1)(b).

The following conditions apply to: EU-OP3M

**DESCRIPTION:** An Activator ribbon blender, filling and inking station, and a pigment station all controlled by a cartridge filter dust collector that is shared with EU-OP1P. This is part of the chemical process area.

Flexible Group ID: FG-MAP

**POLLUTION CONTROL EQUIPMENT:** Cartridge filter dust collector

**. EMISSION LIMITS**

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Compliance Determination

1. PM	0.01 lbs per 1000 lbs of exhaust gases calculated on a dry gas basis.	Test Protocol*	EU-OP3M	Compliance- Equipment was removed.
2. PM-10	0.27 pph	Test Protocol*	EU-OP3M	Compliance- Equipment was removed.
3. PM-2.5	0.27 pph	Test Protocol*	EU-OP3M	Compliance- Equipment was removed.

\* Test protocol shall specify averaging time.

**II. MATERIAL LIMITS**

NA

**III. PROCESS/OPERATIONAL RESTRICTIONS**

NA

**IV. DESIGN/EQUIPMENT PARAMETERS**

1. The permittee shall not operate EU-OP3M unless the cartridge filter dust collector is installed, maintained, and operated in a satisfactory manner. (R 336.1224, R 336.1225, R 336.1331, R 336.1901, R 336.1910, R 336.2803, R 336.2804, 40 CFR 52.21(c) and (d))  
**Compliance- Equipment was removed.**

**V. TESTING/SAMPLING**

Records shall be maintained on file for a period of five years. (R 336.1201(3))  
 NA

**VI. MONITORING/RECORDKEEPING**

Records shall be maintained on file for a period of five years. (R 336.1201(3))

1. The permittee shall install, calibrate, maintain and operate in a satisfactory manner, a device to monitor the pressure drop on the cartridge filter dust collector on a continuous basis. (R 336.1224, R 336.1225, R 336.1301, R 336.1331, R 336.1901, R 336.1910, R 336.2802, 40 CFR 52.21(c) and (d))  
**Compliance- Equipment was removed.**

2. The permittee shall complete all required inspections and monitoring in a format acceptable to the AQD District Supervisor and make them available by the 15th day of the calendar month, for the previous calendar month, unless otherwise specified in any recordkeeping, reporting or notification special condition. (R 336.1224, R 336.1225, R 336.1901)  
**Compliance- Equipment was removed.**

**VII. REPORTING**

NA

**VIII. STACK/VENT RESTRICTIONS**

The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted:

Stack & Vent ID	Maximum Exhaust Diameter/Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SV00011	22.4	12.0	R 336.1225, R 336.1901,

			R 336.2803,R 336.2804,40 CFR 52.21 (c) & (d)
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Compliance- Equipment was removed.

**IX. OTHER REQUIREMENTS**

NA

**Footnotes:**

<sup>1</sup>This condition is state only enforceable and was established pursuant to Rule 201(1)(b).

**The following conditions apply to: FG-Refractories**

**DESCRIPTION:** A portion of the refractory formulating and packaging process which is controlled by a common Sly dust collector.

**Emission Units:** EU-OP5R, EU-OP11R, and EU-MAN2R

**POLLUTION CONTROL EQUIPMENT:** Sly Dust Collector

**I. EMISSION LIMITS**

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Compliance Determination
1. PM	0.01 lbs per 1000 lbs of exhaust gases calculated on a dry gas basis.	Test Protocol*	FG-Refractories	Undetermined- A Stack Test is Needed to determine concentration of exhaust gas.
2. PM-10	1.4 pph	Test Protocol*	FG-Refractories	Undetermined- A Stack Test is needed to determine emission rate.

\* Test protocol shall specify averaging time.

**II. MATERIAL LIMITS**

NA

**III. PROCESS/OPERATIONAL RESTRICTIONS**

NA

**IV. DESIGN/EQUIPMENT PARAMETERS**

1. The permittee shall not operate FG-Refractories unless the baghouse dust collector is installed, maintained, and operated in a satisfactory manner. (R 336.1224, R 336.1225, R 336.1331, R 336.1901, R 336.1910, R 336.2803, R 336.2804, 40 CFR 52.21(c) and (d))

Compliance- Dust Collector installed. No activity was occurring during the inspection.

**V. TESTING/SAMPLING**

Records shall be maintained on file for a period of five years. (R 336.1201(3))

NA

**VI. MONITORING/RECORDKEEPING**

Records shall be maintained on file for a period of five years. (R 336.1201(3))

1. The permittee shall install, calibrate, maintain and operate in a satisfactory manner, a device to monitor the pressure drop on the baghouse dust collector on a continuous basis. (R 336.1224, R 336.1225, R 336.1301, R 336.1331, R 336.1901, R 336.1910, R 336.2802, 40 CFR 52.21(c) and (d))

**Compliance- Pressure gauge installed.**

2. The permittee shall complete all required inspections and monitoring in a format acceptable to the AQD District Supervisor and make them available by the 15th day of the calendar month, for the previous calendar month, unless otherwise specified in any recordkeeping, reporting or notification special condition. (R 336.1224, R 336.1225, R 336.1901)

**Compliance- Inspection log posted near dust collector.**

**VII. REPORTING**

NA

**VIII. STACK/VENT RESTRICTIONS**

The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted:

Stack & Vent ID	Maximum Exhaust Diameter/Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SV00010	40.0	29.5	R 336.1225, R 336.1901, R 336.2803, R 336.2804, 40 CFR 52.21 (c) & (d)

Undetermined- Measurements of stack height and diameter were not taken.

**IX. OTHER REQUIREMENTS**

NA

**Footnotes:**

<sup>1</sup>This condition is state only enforceable and was established pursuant to Rule 201(1)(b).

**The following conditions apply to: FG-ChemProcess**

**DESCRIPTION:** A portion of the chemical process area which is controlled by a common Torit Donaldson dust collector. Stack ID SV00013

**Emission Units:** EU-OP1C and EU-OP2C

**POLLUTION CONTROL EQUIPMENT:** Torit Donaldson Dust Collector

**I. EMISSION LIMITS**

		Time Period /		
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Pollutant	Limit	Operating Scenario	Equipment	Compliance Determination
1. PM	0.002 lbs per 1000 lbs of exhaust gases calculated on a dry gas basis.	Test Protocol*	FG-ChemProcess	Undetermined- A Stack Test is needed to determine concentration of exhaust gas.
2. PM-10	0.09 pph	Test Protocol*	FG-ChemProcess	Undetermined- A Stack Test is needed to determine emission rate.

\* Test protocol shall specify averaging time.

## II. MATERIAL LIMITS

- The permittee shall not process more than 14,400 pounds of material per calendar day through FG-ChemProcess. (R 336.1205, R 336.1224, R 336.1225, R 336.1702(a), R 336.1901, R 336.2803, R 336.2804, 40 CFR 52.21(c) & (d))  
Compliance- Less than 5000 lbs processed for last year.

## III. PROCESS/OPERATIONAL RESTRICTIONS

NA

## IV. DESIGN/EQUIPMENT PARAMETERS

- The permittee shall not operate FG-ChemProcess unless the Torit Donaldson dust collector is installed, maintained, and operated in a satisfactory manner. (R 336.1224, R 336.1225, R 336.1331, R 336.1901, R 336.1910, R 336.2803, R 336.2804, 40 CFR 52.21(c) and (d))  
Compliance- Dust collector is installed.
- The permittee shall not operate FG-ChemProcess unless a gauge, which measures the pressure drop across the Torit Donaldson dust collector and sounds an alarm when the pressure drop exceeds the range specified in the Malfunction Abatement Plan required under FG-MAP, is installed, maintained and operated in a satisfactory manner. (R 336.1224, R 336.1225, R 336.1301, R 336.1331, R 336.1901, R 336.1910, R 336.2802, 40 CFR 52.21(c) and (d))  
Compliance- Pressure gauge is installed.

## V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. (R 336.1201(3))

NA

## VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. (R 336.1201(3))

- The permittee shall complete all required inspections and monitoring in a format acceptable to the AQD District Supervisor and make them available by the 15th day of the calendar month, for the previous calendar month, unless otherwise specified in any recordkeeping, reporting or notification special condition. (R 336.1224, R 336.1225, R 336.1901)  
Compliance- Inspection log present near collector
- The permittee shall keep, in a satisfactory manner, records of the amount of material processed in pounds per calendar day through FG-ChemProcess. The permittee shall keep all records on file at the facility and make them available to the Department upon request. (R 336.1205, R 336.1224, R 336.1225, R 336.1901, R 336.2803, R 336.2804, 40 CFR 52.21(c) & (d))  
Compliance- Records are kept.
- The permittee shall inspect the alarm system on FG-ChemProcess on a daily basis and keep, in a satisfactory manner, records of the inspections. The inspection records shall include the date, the time, the initials of the person(s) inspecting the alarm, and the pressure drop readings from the inspection. The permittee shall keep all records on file at the facility and make them available to the Department upon request. (R 336.1205, R 336.1224, R 336.1225, R 336.1901, R 336.2803, R 336.2804, 40 CFR 52.21(c) & (d))  
Compliance- Record log present. Emission unit not used on a daily basis.

**VII. REPORTING**

NA

**VIII. STACK/VENT RESTRICTIONS**

The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted:

Stack & Vent ID	Maximum Exhaust Diameter/Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SV00013	16.0	41.0	R 336.1225, R 336.1901, R 336.2803, R 336.2804, 40 CFR 52.21 (c) & (d)

Undetermined- Measurements of Stack Height and Diameter were not taken.

**IX. OTHER REQUIREMENTS**

NA

**Footnotes:**

<sup>1</sup>This condition is state only enforceable and was established pursuant to Rule 201(1)(b).

**The following conditions apply to: FG-OP2M**

**DESCRIPTION:** All storage tanks in the tank room that consists of twelve (12) tanks with agitators, four (4) raw material storage tanks, a waste product tank and a pH adjustment tank. Each tank is less than 40,000 gallons and is equipped with a conservation vent and an emergency vent. The tank room has a general ventilation exhaust. This is part of the METREX process area.

**Emission Units:** Storage Tanks

**POLLUTION CONTROL EQUIPMENT:** NA

**I. EMISSION LIMITS**

NA

**II. MATERIAL LIMITS**

NA

**III. PROCESS/OPERATIONAL RESTRICTIONS**

1. The permittee shall only store or transfer materials in FG-OP2M that are volatile organic compounds or noncarcinogenic liquids having a true vapor pressure of 1.5 psia or less at actual storage conditions. (R 336.1205, R 336.1224, R 336.1225, R 336.1702(a), R 336.1901)

Compliance- MSDS were received. Liquids stored had vapor pressure of less than 1.5 psia.

**IV. DESIGN/EQUIPMENT PARAMETERS**

NA

**V. TESTING/SAMPLING**

Records shall be maintained on file for a period of five years. (R 336.1201(3))

NA

**VI. MONITORING/RECORDKEEPING**

Records shall be maintained on file for a period of five years. (R 336.1201(3))

1. The permittee shall complete all required inspections and monitoring in a format acceptable to the AQD District Supervisor and make them available by the 15th day of the calendar month, for the previous calendar month, unless otherwise specified in any recordkeeping, reporting or notification special condition. (R 336.1224, R 336.1225, R 336.1901)

Compliance- Inspection logs were posted.

2. The permittee shall keep, in a satisfactory manner, monthly records of the type and physical properties of the materials stored in FG-OP2M. The permittee shall keep all records on file at the facility and make them available to the Department upon request. (R 336.1205, R 336.1224, R 336.1225, R 336.1702(a), R 336.1901)

Compliance- MSDS were received.

**VII. REPORTING**

NA

**VIII. STACK/VENT RESTRICTIONS**

The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted:

NA

**IX. OTHER REQUIREMENTS**

NA

**Footnotes:**

<sup>1</sup>This condition is state only enforceable and was established pursuant to Rule 201(1)(b).

**The following conditions apply to: FG-MAP**

**DESCRIPTION:** Flexible group for requiring a malfunction abatement plan for each of the control devices associated with the processes.

**Emission Units:** EU-MAN1R, EU-OP1R, EU-OP2R, EU-OP5R, EU-OP6R, EU-OP11R, EU-MAN2R, EU-OP1A, EU-OP2A, EU-OP4A, EU-OP5A, EU-OP1P, EU-OP1C, EU-OP2C, EU-OP6C, EU-OP7C, EU-OP3M, FG-OP2M

**POLLUTION CONTROL EQUIPMENT:** See Emission Unit Descriptions

**I. EMISSION LIMITS**

NA

**II. MATERIAL LIMITS**

NA

**III. PROCESS/OPERATIONAL RESTRICTIONS**

1. The permittee shall not operate the emission units specified in FG-MAP unless a malfunction abatement plan (MAP) as described in Rule 911(2), for the air-cleaning devices, has been submitted within 180 days of permit issuance, and is implemented and maintained. The MAP shall, at a minimum, specify the following:

- a) A complete preventative maintenance program including identification of the supervisory personnel responsible for overseeing the inspection, maintenance, and repair of air-cleaning devices, a description of the items or conditions that shall be inspected, the frequency of the inspections or repairs, and an identification of the major replacement parts that shall be maintained in inventory for quick replacement.
- b) An identification of the source and air-cleaning device operating variables that shall be monitored to detect a malfunction or failure, the normal operating range of these variables, and a description of the method of monitoring or surveillance procedures.
- c) A description of the corrective procedures or operational changes that shall be taken in the event of a malfunction or failure to achieve compliance with the applicable emission limits.

If at any time the MAP fails to address or inadequately addresses an event that meets the characteristics of a malfunction, the permittee shall amend the MAP within 45 days after such an event occurs. The permittee shall also amend the MAP within 45 days, if new equipment is installed or upon request from the District Supervisor. The permittee shall submit the MAP and any amendments to the MAP to the AQD District Supervisor for review and approval. If the AQD does not notify the permittee within 90 days of submittal, the MAP or amended MAP shall be considered approved. Until an amended plan is approved, the permittee shall implement corrective procedures or operational changes to achieve compliance with all applicable emission limits. (R 336.1224, R 336.1225, R 336.1331, R 336.1910, R 336.1911, R 336.2803, R 336.2804, 40 CFR 52.21(c) and (d))

Compliance- MAP is written and on file.

**IV. DESIGN/EQUIPMENT PARAMETERS**

NA

**V. TESTING/SAMPLING**

Records shall be maintained on file for a period of five years. (R 336.1201(3))

NA

**VI. MONITORING/RECORDKEEPING**

Records shall be maintained on file for a period of five years. (R 336.1201(3))

NA

**VII. REPORTING**

NA

**VIII. STACK/VENT RESTRICTIONS**

The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted:

NA

**IX. OTHER REQUIREMENTS**

NA

**Footnotes:**

<sup>1</sup>This condition is state only enforceable and was established pursuant to Rule 201(1)(b).

Applicable Fugitive Dust Control Plan Conditions:

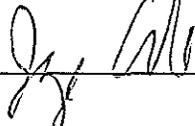
N/A

MAERS REPORT REVIEW:

Pollutant	2014 Emissions(TPY)
PM10	5.5

FINAL COMPLIANCE DETERMINATION

Kerr is operating in compliance with all applicable requirements.

NAME 

DATE 9-25-15

SUPERVISOR W.M.