DEPARTMENT OF ENVIRONMENTAL QUALITY
AIR QUALITY DIVISION
ACTIVITY REPORT: On-site Inspection

B617962655

FACILITY: LOCKHART CHEMICAL COMPANY		**SRN / ID:** B6179
LOCATION: 4302 JAMES P COLE BLVD, FLINT		**DISTRICT:** Lansing
CITY: FLINT		**COUNTY:** GENESEE
CONTACT: Raj Minhas , No longer with Lockhart Chemical		**ACTIVITY DATE:** 04/13/2022
STAFF: Daniel McGeen	**COMPLIANCE STATUS:** Non Compliance	**SOURCE CLASS:** SM OPT OUT
SUBJECT: Partial Compliance Evaluation (PCE) activities: Unannounced inspection by EPA Region 5 and AQD on 4/13/2022, unannounced return to site by AQD on 5/5/2022, and review of records. These were part of a Full Compliance Evaluation (FCE).		
RESOLVED COMPLAINTS:		

On April 13, 2022, the United States Environmental Protection Agency (EPA) and the Michigan Department of Environment, Great Lakes, and Energy (EGLE), Air Quality Division (AQD) conducted an unannounced, scheduled inspection of Lockhart Chemical Company. This was done as part of EPA's initiative to inspect facilities in the community of Flint in April 2022. Additionally, on May 5, 2022, the AQD returned to the site, to measure stack heights, as part of doing a complete inspection.

The above activities were done as Partial Compliance Evaluation (PCE) activities, part of a Full Compliance Evaluation (FCE). Review of facility recordkeeping is another PCE which was done, subsequent to the on-site activities.

Facility contacts:

- Raj Minhas, MS, MBA, President & Chief Operating Officer, 810-789-8330, Ext. 208; rminhas@lockhartchem.com
- James R. Clouse, Operations Assistant; 810-789-8330, Ext. 209; jclouse@lockhartchem.com

EPA Region 5 Air Enforcement and Compliance Assurance Branch contacts:

- Valeria Apolinario, Environmental Engineer; 312-886-6876; apolinario.valeria@epa.gov
- Brittany Cobb, Environmental Engineer; cobb.brittany@epa.gov

EGLE AQD Lansing District Office (LDO) contact:

- Dan McGeen (myself), Environmental Quality Analyst; 517-648-7547; mcgeend@michigan.gov

Facility description:

Lockhart Chemical Company creates materials used in the manufacturing of underbody and rust preventative coatings, metalworking additives, hydraulic fluids, and lubricants.

Emission units covered by opt-out Permit to Install No. 26-16:

Emission Unit* ID and Flexible Group** ID	Emission Unit Description (Process Equipment & Control Devices)

EUReactor304	**Reactor 304 has a capacity of 9.500 gallons and is used to manufacture rust preventative products, primarily esters and sulfonic acid salts. The salts typically involve barium, sodium, or calcium. Reactor 304 is also used to blend and neutralize, with weak bases such as calcium hydroxide, oxidized waxes and petrolatum. The emission unit also includes a water-cooled condenser and a condensate receiver. Previously covered by PTI No. 311-98.**
EUReactor310	**Reactor 310 has a capacity of 6,500 gallons and is used to produce alkyl benzene sulfonic acid salts o elements such as barium, calcium, magnesium, potassium, sodium, and zinc. The emission unit also incudes a water-cooled condenser, a condensate receiver, and an alcohol storage tank with a capacity of 13,000 gallons. Previously covered by PTI No. 366-94.**
EUReactor306; **FG306&307**	**Production of gelled calcium sulfonate. Process equipment includes a 2,800 gallon capacity reactor equipped with an air-cooled condenser and a 210-gallon condensate receiver. Previously covered by PTI No. 432-89.**
EUReactor307; **FG306&307**	**Production of gelled calcium sulfonate. Process equipment includes a 2,800 gallon capacity reactor equipped with an air-cooled condenser and a 210-gallon condensate receiver. Previously covered by PTI No. 432-89.**
EU305&325	**Production of calcium sulfonate/oxidate-based rust preventative coatings, using mineral spirits as a solvent. Process equipment includes two blend tanks with capacities of 12,000 gallons (T-305) and 9,000 gallons (T-325), a 1,000 gallon condensate collection tank, and a water-cooled**

	condenser. Previously covered by PTI No. 120-00.
EUOxidation216	**The emission unit consists of an air oxidation reactor (R-216, with a 2,500 gallon capacity, equipped with a thermal incinerator) and two finishing tanks (T-212 and T-215) with capacity of 14,000 gallons each. The reactor is subject to 40 CFR Part 60, Subpart III. Previously covered by PTI No. 110-91.**
EUPilotOxidation	**Pilot air oxidation reactor (18.8 gallon capacity) with caustic scrubber, used for research and development to support production in EUOxidation216. The scrubber is used to control emissions of organic acids from the reaction. The reactor is subject to limited portions of 40 CFR Part 60, Subpart III. Previously covered by PTI No. 714-92.**
EUCalcium	**Process to produce natural calcium sulfonate. Process equipment includes four process tanks (401, 402, 403, and 404) used as reactors, each with 7,300 gallon capacity; four process tanks (405, 406, 407, and 408) for product drying, each with capacity of 7,300 gallons, two blending tanks, one with capacity of 300 gallons and one with capacity of 500 gallons; and a bag filter to control particulate matter emissions from the blending tanks. Blending tanks and bag filter previously covered by PTI No. 433-89 and process tanks previously covered by PTO No. 855-80A.**
EULimeTank540; **FGLime540-541**	**Bulk lime storage tank with 4,200 gallon capacity. Previously covered by PTO No. 254-83.**
EULimeSlurry541; **FGLime540-541**	**Lime slurry tank with 6,000 gallon capacity for mixing lime and mineral spirits. Previously covered by PTO No. 254-83.**
EUBlending	**Blending materials in various tanks, primarily:**

	S-1, 322, BASF, M-1, M-2, M-3, Mini 304, 309, 701, 710, W2, 801, 802, 818, 806, 807, 808, 822, 845, 843, 855, 856, 857, UFO, or other drums, pails, or totes. Previously covered by PTO No. 855-80.
EUMeyers	**Mixer with bag filter collector used to mix coatings with powder clay. Previously covered by PTO No. 432-88.**
EUEclipse	**Natural gas-fired Eclipse boiler with 21 MMBTU/hr heat input rating. Previously covered by PTI No. 349-77.**

***An *emission unit* is any part of a stationary source that emits or has the potential to emit an air contaminant.**

****A *flexible group* is used in a permit to install (PTI) or Renewable Operating Permit (ROP) to combine two or more emission units that have common or identical requirements.**

Flexible Groups covered by opt-out PTI No. 26-16:

Flexible Group ID, and Associated Emission Unit IDs	Flexible Group Description
FG306&307; **EUReactor306, EUReactor307**	**Manufacture of calcium sulfonate coating in two reactors, each with a capacity of 2,800 gallons. Each reactor has a condenser and a 210-gallon condensate receiver, which vents to the atmosphere. Previously covered by PTI No. 432-89.**
FGLime540-541; **EULimeTank540, EULimeSlurry541**	**Manufacture of lime slurry to be used in other reactors and blend tanks. Equipment includes a 4,200 gallon capacity storage silo with bin vent filter and a 6,000 gallon capacity lime**

	slurry tank. Previously covered by Permit to Operate No. 254-83.
FGFACILITY	**All process equipment source-wide including equipment covered by other permits, grandfathered equipment and exempt equipment.**

Regulatory overview:

This facility has an opt-out permit, Permit to Install (PTI) No. 26-16, to limit the potential to emit (PTE) for hazardous air pollutants (HAPs). The facility is considered a minor source rather than major for criteria pollutants. *Criteria pollutants* are those for which a National Ambient Air Quality Standard (NAAQD) exists. these include carbon monoxide, nitrogen oxides, volatile organic compounds (VOCs), lead, particulate matter smaller than 10 microns (PM-10), and particulate matter smaller than 2.5 microns (PM2.5). A major source has the PTE of 100 tons per year (TPY) or more for any single criteria pollutant. Currently the criteria pollutant with the highest PTE is VOC, but this is far below the major source threshold, according to the engineering notes by the AQD Permit Engineer Paul Schleusener.

The facility previously had the PTE to be a major source for HAPs, so the facility applied for the current opt-out PTI, No. 26-16, to set enforceable restrictions to limit HAPs. It is now an *area source*, or minor source, for HAPs. This keeps it from becoming a major source which would require a Renewable Operating Permit. A major HAPs source has PTE of 10 TPY or more for a single HAP, and a PTE of 25 TPY or more for aggregate HAPs. The HAP with the highest PTE at the site is methanol, which is limited by the opt-out permit to 9 TPY. Prior to the opt-out permit, AQD's Nathan Hude calculated the methanol PTE as 19 TPY.

Opt-out PTI No. 26-16 also consolidated multiple existing permits, and addressed changes to permitted equipment and processes. For further details, see the section "History," later in this report.

The facility is subject to the following federal New Source Performance Standards (NSPS):

- 40 CFR Part 60, Subpart Dc, *Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units*.
- 40 CFR Part 60, Subpart III, *Standards of Performance for Volatile Organic Compound (VOC) Emissions from the Synthetic Organic Chemical Manufacturing Industry (SOCMI) Air Oxidation Unit Processes*.
- 40 CFR Part 60, Subpart Kb, *Standards of Performance for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) for Which Construction, Reconstruction, or Modification Commenced After July 23, 1984* was thought historically to apply for EUOxidation216, but now does not appear to apply.

There are no solvent-based parts washers onsite, I have been informed, so Lockhart Chemical is not subject to the AQD rules for cold cleaners or vapor degreasers.

The onsite boilers, including the boiler EUEclipse, are exempt from 40 CFR Part 63 Subpart DDDDD, *National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters*, because Lockhart Chemical is considered an area source. The boilers are exempt from 40 CFR Part 63, Subpart JJJJJJ, *National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers Area Sources*. This is pursuant to paragraph 63.11195(e) and the definition of "gas fired boiler."

Fee status:

This facility is considered category D fee-subject. Category D sources are subject to at least one federal NSPS standard, and lockhart Chemical is subjct to two.

The facility reports to the Michigan Air Emissions Reporting System (MAERS), on an annual basis.

Location:

Lockhart Chemical is in is located in an environmental justice (EJ) area, on the north side of Flint. The AQD staff evaluated the area, during the writing of this report, by using the United States Environmental Protection Agency's USEPA's EJScreen: Environmental Justice & Mapping Tool (Version 1.0). The surrounding area, within a 1-mile radius, ranks higher than state, EPA Region 5, and national averages on a number of criteria which are Environmental Justice indicators. Please see the attached report, "B6179 EJ Screen Report 1 0_2022_09_02.html."

Lockhart Chemical is within a heavily industrialized area of Flint. It is located at the northeast end of the former General Motors Buick City site. To the immediate west is an industrial site. To the immediate east is I-475, followed by industrial sites. To the immediate south are industrial sites, some of them closed. To the immediate north are I-475 and industrial areas. The nearest residences are approximately 900 feet to the northwest of the plant, in a large residential area.

History:

As mentioned above, the plant is located at the northeast end of the former Buick City site. It was originally built in the 1970s as a facility to receive waste oils from GM plants in the area, for recycling. It originally was operated as Major Oil Company. In 1980 it was purchased by Kimes Corporation, and in 1987 they changed their name to Lockhart Chemical (there was no apparent change in ownership with the name change).

Older air PTIs and permits to operate (PTOs) which were consolidated into the current opt-out PTI No. 26-16 include:

1. PTI 120-00, EU305&325
2. PTI 311-98, EUReactor304
3. PTI 366-94, EUReactor310
4. PTI 714-92, EUPilotOxidation
5. PTI 110-91, EUOxidation216
6. PTI 433-89, later became part of EUCalcium
7. PTI 432-89, FG306&307
8. PTO 432-88, EUMeyers
9. PTO 254-83, FGLime540-541
10. PTO 855-80A, later became part of EUCalcium
11. PTO 855-80, EUBlending
12. PTO 349-77, EUEclipse

The above permits were described by AQD's Nathan Hude as vague, and were said to not provide readily identifiable information that would allow for identification of emission units.

Polyfluorinated alkylated substances (PFAS) contamination at the site has been identified by EGLE and investigation activities are ongoing, as of the writing of this activity report..

Recent violations:

From the September 1, 2015 the AQD inspection activity report by AQD's Nathan Hude, the EU-CALCIUM scrubber required by PTI No. 855-80A was not being used for the current process EU-CALCIUM as required by

the PTI. The issuance of opt-out PTI No. 26-16 addressed this. Also, the EU-MYERS baghouse required by PTI No. 432-88 was in unsatisfactory condition.

Recent complaints:

No air pollution complaints are in the AQD Lansing District file on this facility, as far back as the year 2000. Files from previous years were sent to the State of Michigan records center, at some point in the past, for storage and handling in accordance with record retention policy.

Protective attire needed:

Safety glasses with side shields, and hearing protection are required. Additionally, I was wearing a hard hat, steel-toed boots, and high visibility safety vest. Out of personal preference, I was wearing a disposable paper mask, during the ongoing Covid-19 pandemic.

Note: Hearing protection should be worn when inside the building where EUOxidation216 is located, due to a loud compressor nearby.

Potential site safety hazards:

- Noise in building for EUOxidation 216.
- Potential slip hazards, if there is water on any oily surface.

Facility operating schedule:

- Days of operation: Monday-Friday some Saturday mornings.
- Hours of operation: 7:00 AM to 4:00 PM for the plant, 7:00 AM to 5:00 PM for the office

Pre-arrival::

This was an unannounced, scheduled inspection.

EPA Region 5 committed to doing a number of inspections in the Flint area, as part of their Flint community initiative. EPA chose Lockhart Chemical for one of their inspections, and this source had already been selected by the AQD at the start of the 2022 fiscal year for an inspection. EPA staff and I agreed to meet at the McDonald's located at 1510 E. Stewart Avenue, just east of the intersection with N. Dort Highway. I met with EPA Air Enforcement and Compliance Assurance Branch Environmental Engineers Valeria Apolinario, and Brittany Cobb, shortly after 9:00 AM.

Odor evaluation:

Starting at 9:13 AM, we conducted an odor evaluation (please see attached odor survey form and map) in the area of Lockhart Chemical, driving to the east, north, west, and south of the plant in a counterclockwise fashion, as follows:

- North on N. Dort Highway,
- West on E. Pierson Road,
- South on Selby Street,
- East on E. Stewart Avenue, and
- North on James P. Cole Boulevard, to the plant itself.

Weather conditions were mostly cloudy, 65 degrees F, and humid, with winds out of the southwest at 10 miles per hour, by my estimate. Please see attached summary of weather data for 4/13/2022 from Weather Underground, as measured at Fliint's Bishop International Airport.

Odors were as follows:

- At 9:15 AM, I detected a level 1 odor of dampness, underneath an overpass on E. Pierson Road, north of the plant. There was a considerable amount of dampness on the concrete retaining walls under the freeway overpass.

The 0-5 odor scale used by the AQD is as follows:

0 - Non-Detect

1 - Just barely detectable

2 - Distinct and definite odor

3 - Distinct and definite objectionable odor

4 - Odor strong enough to cause a person to attempt to avoid it completely

5 - Odor so strong as to be overpowering and intolerable for any length of time

The damp odor detected at a level 1 did not appear to be associated with Lockhart Chemical. No instances of noncompliance were observed.

Arrival:

As previously described in this report, this was an unannounced inspection. EPA staff and I arrived in the plant parking lot at 9:20 AM, on 4/13/2022. I detected no odors in the parking lot. There was no opacity, only steam from a short, rusted stack atop the roof of the blending/boiler building. It was the northern of two stacks on the main building roof. Steam from a steam line on an overhead treste was visible.

We checked in at the office, and presented our credntials. Raj Minhas, MS, MBA, President & Chief Operating Officer was offsite at a conference today, we were told.

Pre-inspection conference:

Immediately following arrival, we met with James R. Clouse, Operations Assistant, in the absence of R. Minhas, who granted us access to the site. We were occasionally joined by Joe Tibbetts, Production Manager.

EPA staff explained that EPA was conducting community inspections, within the community of Flint. B. Cobb began warming up EPA's FLIR infrared camera, and the objectives of using it were explained. V. Apolinario explained that EPA would take photos, and they could share these photos with the company, or the company could take their own photographs of the same scenes, for their own documentation.

J. Clouse explained that they manufacture rust preventative additives, for domestic and international customers. He indicated that they do not make finished products, but instead make supplies for the suppliers to the suppliers of finished products.

He described the plant operational practices in which operators make materials up, receive batch tickets, and add appropriate materials into reactors to be mixed. More materials and/or heat are added as needed, we were told.

My understanding, from the previous AQD inspection in 2019, is that their main ingredients are waxes, hydrocarbon sulfonates, oil, and fatty acids (like "tall oil"), some of these are stored onsite in tanks. There are different grades of waxes and sulfonates, as I understand it, and some solvents.

From my previous inspection report, a second kind of product they sell is sulfonates themselves, which are salts or esters of a sulfonic acid that Lockhart creates using reaction chemistry.

A third type of product they make is emulsifier packages or "solution bases," as I understand it. For this kind of product, oil and water are mixed together, I was advised in 2019, and no solvents other than a small amount of glycol ether are added.

My understanding is that they sell a fourth kind of product, concentrated, gelled calcium sulfonate. This is said to be a very thick material, and not ready to be applied, but customers purchase it and customize it. Mineral spirits are said to be used by Lockhart to keep it in liquid form, but customers may add other solvents.

Lockhart Chemical is said to make a few intermediate products for their own use, such as oxydates from an oxidation process.

J. Clouse explained that the materials they work ith include pilot acid, solvents, canola oil, ime, lime product, xylene, glycols, amines, butyl alcool, and methanol. We were told that these are stored in tanks, drums, and totes, and are brought in by flatbed or bulk, with butyl alcohol in totes. We were told that they have not had a rail delivery of materials in 2 years.

It is my understanding that Lockhart Chemical considers their production records to be proprietary, as competitors might be able to glean information from them on how Lockhart Chemical makes its products.

EPA staff explained how they handle confidential business information, to address proprietary concerns. The AQD has an AQD Policy and Procedure Number AQD-010. This describes appropriate procedures for handling confidential materials, as well as Freedom of Information Act requests for confidential materials.

My notes reflect that we were told EUOxidation216 was not expected to run until April 18, 2022, but it was in operation later this day, we observed.

4/13/2022 inspection:

J. Clouse accompanied us throughout the plant. We did not inspect the warehouse building, and we did not inspect the filterpress building, which filters oily products. These are not regulated emission units under the PTI.

Please see the compliance check of PTI 62-16, which goes through each of the special conditions in the air permit, in the order that they appear.

Note: The inspection activity did not necessarily follow the order of the emission units as listed in the PTI.

On 5/2/2022, to follow up further on the inspection, I emailed a request for records to R. Minhas. Due to the voluminous nature of the request (56 items of information were requested), R. Minhas requested additional time to complete the request, and I approved the request. These records were reviewed while this inspection activity report was being written, and are discussed accordingly.

5/5/2022 return to site by the AQD:

On 5/5/2022, I returned to the site, for the purpose of measuring stack heights with the AQD Lansing District's laser range finder tool. The tool is easily able to measure stack hights where the stack starts at ground level and the stack is straight.

I arrived unannounced, at 1:05 or 1:06 PM, detecting no odors on James P. Cole Boulevard, or in the facility parking lot. Weather conditions were mostly sunny, humid, and 63 degrees F, with winds out of the southeast at 10 miles per hour.

I met with R. Minhas, MS, MBA, President & Chief Operating Officer. He accompanied me around the site, for purposes of measuring exhaust stacks, to check against permitted limits. Some exhaust stacks I was unable to measure, because of complex geometries with the emission units themselvs, or rooflines. I utilized the AQD Lansing District's Nikon Forestry Pro II Laser Rangefinder/Hypsometer, for measuring the following exhaust stacks, as follows:

1. EUOxidation216's stack, SV216Oxidizer (oxidizer vent): 51.8 feet, over the minimum required 50 feet
2. EUPilotOxidation's stack, SVScrubberPilot: 31.9 feet, over the minimum required 30 feet
3. FGLime540-541's vent, SVLime540 (storage silo vent): 35.2 feet, over the minimum required 35 feet:

The above and other compliance findings, from this visit and the 4/13/2022 inspection, are discussed in the review of compliance with permit to install special conditions, below.

COMPLIANCE CHECK OF SPECIAL CONDITIONS IN OPT-OUT PTI No. 26-16:

EUReactor 304; PTI No. 26-16:

EU description: Reactor 304 has a capacity of 9,500 gallons and is used to manufacture rust preventative products, primarily esters and sulfonic acid salts. The salts typically involve barium, sodium, or calcium. Reactor 304 is also used to blend and neutralize, with weak bases such as calcium hydroxide, oxidized waxes and petrolatum. The emission unit also includes a water-cooled condenser and a condensate receiver. Previously covered by PTI No. 311-98.

Pollution control equipment: condenser with cooling tower, with efficiency of 96%.

Inspection on 4/13/2022:

I was told that EUReactor304 was storing material, but not making any production, at the time of the inspection. EUREACTOR304 had no opacity, although there was steam near ground level, from a steam line or lines. The temperature gauge for EUREACTOR304 was about 12 feet above ground level. It read 150 degrees F, at 10:25 AM. I was told that a number of tanks on-site, and even some trucks, are heated with steam. The reactor was labeled with a sign "EUREACTOR304 REACTOR."

An operator, Collin, told me they had never taken the temperature of EUReactor304, but that does not appear to be a violation, as the permit does not require it. PTI No. 26-16 does require the EUReactor304 condenser's received condensate temperature be recorded. A temperature gauge for the condenser pot could not be located.

The AQD emailed the company on June 13, 2022, to ask when the temperature is taken of the received condensate, to see if it is taken at least one hour into the stripping stage of the process. The AQD also asked where the condensate temperature gauge is, as we could not see one. It is conceivable that the gauge is inside the tank, and a reading appears on a control panel somewhere. Per input from EPA, I also requested a photo of the gauge, to see if it was in working condition. This will also have the benefit of verifying the location of the display for the temperature gauge.

The EUReactor304 condenser unit was labeled, but the label was deteriorated, and the "304" part of the label was missing, so it read only "condenser pot". The illegible label is a violation of a PTI 26-16, please see FGFACILITY special condition (SC) IV.1.

A plastic tote near EUReactor304 had a lid that was askew, but a company employee advised me that the tote was being used at this time, and it was not actually being stored that way. From the tote's location, in the middle of a frequently traveled area onsite, it did not appear as if it was being stored. Totes are covered under PTI 26-16 under EUBlending.

Check of special conditions:

PTI 26-16 EUReactor304 Special Condition (SC) I. 1. limits methanol emissions to 13.6 lbs/hr, over a one-hour time period.

INSPECTION RESULT*: COMPLIANCE. In response to a 5/2/2022 email request for data, R. Minhas indicated in a document received on 5/17/2022 that there was no methanol use in Reactor 304, and therefore no methanol emissions.*

PTI 26-16 EUReactor304 SC I. 2. limits VOC emissions to 32.9 lbs/batch.

INSPECTION RESULT*: COMPLIANCE. In records received on 5/17/2022, it was shown that VOC emissions per batch ranged from 6.0 lbs to 9.0 lbs. There were always 6.0 lbs per batch of n-Butanol emissions, and occasionally 3.0 lbs of mineral spirits emissions, along with that. The reported emissions did not exceed 32.9 lbs VOC/batch.*

PTI 26-16 EUReactor304 SC I. 3. limits VOC emissions to 3.2 TPY.

INSPECTION RESULT*: COMPLIANCE. The records received on 5/17/2022 (attached) showed that during the 12-month period of 4/1/2021 through 3/31/2022, the months with the highest 12-month rolling value, November and December 2021, each were at 0.1 TPY VOC. This is far below the limit of 3.3 TPY VOC..*

PTI 26-16 EUReactor304 SC I. 4. limits n-Butanol emissions to 23.0 lbs/batch.

COMPLIANCE RESULT: COMPLIANCE. IThe attached records received on 5/17/2022 showed that n-Butanol emissions are always 6.0 lbs batch.

PTI 26-16 EUReactor304 SC II. 1. limits batch size to 70,000 lbs/batch.

INSPECTION RESULT*: COMPLIANCE.* The attached records received on 5/17/2022 showed that the maximum batch size during the 12-month rolling period I requested was 59,990 lbs, below the 70,000 lbs maximum limit.

PTI 26-16 EUReactor304 SC II. 2. limits the number of batches in this emission unit to 195 per year.

INSPECTION RESULT*: COMPLIANCE. The attached records received on 5/17/2022 showed that the highest number of batches made during the 12-month rolling time period was 23, as of December, 2021, well below the maximum allowed 195 per year.*

PTI 26-16 EUReactor304 SC III. 1. states that the permittee shall not conduct heating or stripping operations with methanol in EUReactor304 while heating or stripping operations with methanol are conducted in Reactor 306, 307, or 310.

INSPECTION RESULT*: COMPLIANCE. For the 12-month rolling time period, The attached records received on 5/17/2022 showed that there was no methanol use. Therefore, there were no heating or stripping operations with methanol in EUReactor304, regardless of Reactor 306, 307, or 310.*

PTI 26-16 EUReactor304 SC IV. 1. states that the permittee shall not operate EUReactor304 unless the condenser is installed, maintained, and operated in a satisfactory manner. Satisfactory operation of the condenser includes maintaining a received condensate temperature no greater than 110 degrees Fahrenheit as measured in the condensate collection tank at least one hour into the stripping stage of the process.

INSPECTION RESULT*: COMPLIANCE. Records received on 5/17/2022 (attached) showed that the highest condensate temperature during the 12-month rolling time period was 90 degrees F. This temperature was reached in the months of June through September 2021.*

PTI 26-16 EUReactor304 SC IV. 2. requires the permittee to equip and maintain the condenser with a received condensate temperature indicator in the condensate collection tank.

INSPECTION RESULT: NONCOMPLIANCE. We could not identify a temperature gauge on the condenser, aka the condenser pot, but company recordkeeping (attached) shows that a temperature gauge is in use. On 6/13/2022, I emailed R. Minhas, to ask about the location of the temperature gauge, annd when the temperature is taken. I subsequently requested a photo of the gauge. On 6/17/2022, he replied by email. He stated, in part:

1. *The gauge on the Reactor304 pot was broken and had been taken off the condensate pot for replacement sometime between 3/31/22 and 4/13/22. I checked the production records and there was nothing made in Reactor 304 during this time period. Please see the broken gauge that was taken off prior to your arrival at Lockhart.*
2. *After your visit, a new gauge was put on the condensate pot. A picture of the new gauge is attached below for your reference. The new gauge is functioning properly.*
3. *Temperature reading on the condensate pot is taken after 1 hour of stripping.*

R. Minhas' 6/17/2022 email also included a photo of the broken temperature gauge, as well as a photo of the replacement, which was shown installed on the exterior of EUREACTOR304's condenser, which was now labled as the "304 CONDENSATE POT."

R. Minhas' email referenced above indicated no production occurred during the time period without the temperature gauge. My field notes from 4/13/2022 indicated no production was being done in EUReactor304 on 4/13, but it was storing products. Based on the reactor's own temperature gauge reading 150 degrees F, and steam visible from a line or lines it is possible that the products in the reactor were being heated. This would be consistent with the staement I heard that various tanks onsite are steam heated. A violation notice (VN) was sent on 6/27/2022, for the condenser not being equipped with a temperature gauge on 4/13/2022.

PTI 26-16 EUReactor304 SC V.

Not Applicable (NA)

PTI 26-16 EUReactor304 SC VI. 1. requires that the permittee complete all required calculations and records in a format acceptable to the AQD District Supervisor by the last day of the calendar month, for the previous calendar month, unless otherwise specified.

INSPECTION RESULT*: COMPLIANCE. Records were received in an acceptable format on 5/17/2022. On 7/8/2022, in response to my 6/22/2022 emailed question, R. Minhas indicated that they were done by the last day of the calendar month for the previous calendar month.*

PTI 26-16 EUReactor304 SC VI. 2. requires the permittee to monitor and record the received condensate temperature at least one hour into the stripping stage of the process on a per-batch basis.

INSPECTION RESULT*: COMPLIANCE. The attached records received on 5/17/2022 demonstrate that the condensate temperature is being monitored and recorded. The records do not note, however, at what point in the 4-hour process the condensate received temperature is measured.*

PTI 26-16 EUReactor304 SC VI. 3.

The permittee is required to keep a monthly record of the following batch data for EUReactor304:

a. Size of each batch in pounds.

INSPECTION RESULT: COMPLIANCE. The attached records received on 5/17/2022 document the maximum batch size made each month, in pounds..

b. The number of batches produced in the 12-month rolling time period ending that month.

INSPECTION RESULT: COMPLIANCE. The attached records received on 5/17/2022 document the number of batches per 12-month rolling time period at the end of each month. At the end of March 2022, the month prior to the inspection, 5 batches were shown to have been made during that month and the preceding 11 months.

c. The amount of methanol, VOC, and n-butanol emitted for each batch, based on the calculation menthod in Appendix A or alternative method acceptable to the AQD District Supervisor.

INSPECTION RESULT: COMPLIANCE. The attached records received on 5/17/2022 document the amount of methanol, VOC, and n-Butanol emitted for each batch. It should be noted that there were zero emissions of methanol during the 12-month time period, as reported.

PTI 26-16 EUReactor304 SC VI. 4. requires calculating VOC emission rate from EUReactor304 on a monthly basis, using batch data or another method acceptable to the AQD DS.

INSPECTION RESULT: COMPLIANCE. The attached records received on 5/17/2022 document VOC emissions on a monthly basis. The records indicate that this was done using methodology in Appendix 6 of PTI 26-16. The appendix indicates that calculations 1,2, and 4 through 6 are to be used for EUReactor304. The company notes that VOC emissions are equivalent to the solvent emitted per batch.

PTI 26-16 EUReactor304 SC VI 5. requires keeping a log of dates and time periods when heating or stripping operations are conducted with methanol in EUReactor304.

INSPECTION RESULT: COMPLIANCE. The attached records received on 5/17/2022 indicate that there were no heating or stripping operations conducted with methanol in EUREACTOR304, during the 12-month time period.

PTI 26-16 EUReactor304 SC VII.

NA

PTI 26-16 EUReactor304 SC VIII. requires the exhaust gases from the condenser vent be discharged unobstructed vertically upwards to the ambient air from a stack with maximum exhaust diameter of 2 inches and minimum height above ground of 30 feet.

INSPECTION RESULT: UNKNOWN. On 5/5/2022, I returned to the site with a laser range finder, subsequent to the 4/13 inspection. Because of the complex geometry of the emission unit, I was not able to utilize the laser tool to measure the stack height. To the unaided eye, however, the height visually looked to be approximately 30 feet. A violation is not suspected, at this time.

PTI 26-16 EUReactor304 SC IX.

NA

EUReactor 310, PTI No. 26-16:

EU description:Reactor 310 has a capacity of 6,500 gallons and is used to produce alkyl benzene sulfonic acid salts of elements such as barium, calcium, magnesium, potassium, sodium, and zinc. The emission unit also includes a water-cooled condenser, a condensate receiver, and an alcohol storage tank with a capacity of 13,000 gallons. Previously covered by PTI No. 366-94.

Pollution control equipment: water cooled condenser with efficiency of 99%.

Inspection on 4/13/2022:

It was not clear to me if EUReactor310 was running, at the time of the inspection. There were no visible emissions from the EUReactor310 cooling tower.

Check of special conditions:

PTI 26-16 EUReactor310 SC I. 1-10 sets the following emission limits:

1. VOC: 10.2 lbs/hr, *RESULT: COMPLIANCE. In the attached records received on 5/17/2022, methanol represents the worst case compounds for emissions of VOCs and HAPs, and the calculated theoretical maximum amount of VOC emissions possible while using methanol was 10.2 lbs/hr.*
2. VOC: 31.8 lbs/batch, *RESULT: COMPLIANCE. In the attached records received on 5/17/2022, the VOC emissions were calculated to be 20.6 lbs per batch.*
3. VOC: 6,496 lbs/yr, *RESULT: COMPLIANCE. In the attached records received on 5/17/2022, VOC emissions were 247 lbs for the 12-month rolling time period.*
4. Methanol: 10.2 lbs/hr, *RESULT: COMPLIANCE. In the attached records received on 5/17/2022, the maximum theoretical emissions of methanol possible were 10.2 lbs/hr, during the 12-month rolling time period.*
5. Methanol: 20.6 lbs/batch, *RESULT: COMPLIANCE. The attached records received on 5/17/2022 show that methanol emissions were 20.6 lbs/batch.*
6. Methanol: 4,204 lbs/yr, *RESULT: COMPLIANCE. The attached records received on 5/17/2022 show that methanol (the reported VOC)* emissions were 247 lbs/yr, for the 12-month rolling time period.
7. Mineral spirits: 0.50 lbs/hr, *RESULT: COMPLIANCE. The attached records received on 5/17/2022 show that no mineral spirits were used during the time period, so mineral spirit emissions were 0.0 lbs/hr.*
8. Mineral spirits: 2.00 lbs/batch, *RESULT: COMPLIANCE. The attached records received on 5/17/2022 show that no mineral spirits were used during the time period, so mineral spirit emissions were 0.0 lbs/batch.*
9. Mineral spirits: 408 lbs/yr, *RESULT: COMPLIANCE. The attached records received on 5/17/2022 show that no mineral spirits were used during the time period, so mineral spirit emissions were 0.0 lbs/yr.*

PTI 16-16 EUReactor310 SC II. 1. limits material produced to 50,000 lbs per batch.

INSPECTION RESULT*: COMPLIANCE. The attached records received on 5/17/2022 show that the maximum batch size during the 12-month period of 4/1/2021 through 3/31/2022 was 25,668 lbs in September 2021, well bwlow the allowed maximum.*

PTI 26-16 EUReactor310 SC II. 2. limits material produced to 204 batches/year.

INSPECTION RESULT: COMPLIANCE. The attached records received 5/17/2022 showed that 12 batches were produced during the 12-month period from 4/1/2021 through 3/31/2022. This is far below the allowed maximum of 204 batches per year.

PTI 26-16 EUReactor310 SC III. 1.

NA

PTI 26-16 EUReactor310 SC IV. 1. states that the permittee shall not operate EUReactor310 unless the condenser is installed, maintained, and operated in a satisfactory manner. Satisfactory operation of the condenser includes maintaining a received condensate temperature no greater than 110 degrees Fahrenheit as measured in the condensate collection tank at least one hour into the stripping stage of the process.

INSPECTION RESULT: COMPLIANCE. It was not clear to me if EUReactor310 was running on 4/13/2022. On 6/22/2022, i emailed the company to ask if EUReactor310 was running on 4/13/2022, and R. Minhas replied on 7/8/2022 that it was. he answered affirmatively that the temperature is taken of the received condensate at least one hour into the stripping process.

Additionally, records received on 5/17/2022 indicated the highest received condensate temperature value for each calendar month, during the requested 12-month time period. The maximum temperature reported was 100 degrees F, for condensate in the month of August 2021.

PTI 26-16 EUReactor310 SC IV. 2. requires the permittee to equip and maintain the condenser with a received condensate temperature indicator in the condensate collection tank.

INSPECTION RESULT: COMPLIANCE. I did not check for this during the inspection, but in response to my 6/22/2022 email requesting a photo of the temperature gauge, R. Minhas' 7/8/2022 email included a photo of it, on the Reactor 310 Condenser Pot. The photo appeared to show a temperature of approximately 75 degrees F on the temperature gauge.

PTI 26-16 EUReactor310 SC V.

NA

PTI 26-16 EUReactor310 SC VI. 1 requires that the permittee complete all required calculations and records in a format acceptable to the AQD District Supervisor (DS) by the last day of the calendar month, for the previous calendar month, unless otherwise specified.

INSPECTION RESULT: COMPLIANCE. Records were received on 5/17/2022 in an acceptable format. On 7/8/2022, in response to my 6/22/2022 email, R. Minhas indicated that the records are completed by the last day of the calendar month, for the previous calendar month.

PTI 26-16 EUReactor310 SC VI. 2. requires the permittee to monitor and record the received condensate temperature at least one hour into the stripping stage of the process on a per-batch basis.

INSPECTION RESULT: COMPLIANCE. In an email of 6/22/2022, I asked the company if the temperature of received condensate is measured at least one hour into the stripping process. In an emailed reply on 7/8/2022, R. Minhas answered affirmatively.

PTI 26-16 EUReactor310 SC VI. 3.

The permittee is required to keep a monthly record of the following batch data for EUReactor310:

a. Size of each batch in pounds.

INSPECTION RESULT: COMPLIANCE. They appear to be tracking batch size, as the attacehd records received on 5/17/2022 showed the largest batch size for each calendar month from 4/1/2021 through 3/31/2022. The largest reported batch was in November 2021, with a size of 24,813 lbs, well below the maximum allowed batch size of 50,000 lbs.

b. The number of batches produced in the 12-month rolling time period ending that month.

INSPECTION RESULT: COMPLIANCE. The attached records received on 5/17/2022 indicate that 12 batches were made during the time period 4/1/2021 through 3/31/2022.

c. The amount of methanol, VOC, and mineral spirits emitted for each batch, based on the calculation menthod in Appendix A or alternative method acceptable to the AQD District Supervisor.

INSPECTION RESULT: COMPLIANCE. The attached records received on 5/17/2022 show the amount of methanol, VOC, and mineral spirits emitted for each batch (zero, in the case of mineral spirits) during the time period 4/1/2021 through 3/31/2022. Furthermore, the records state that these values were calculated based on methodology in Appendix A of PTI 26-16.

PTI 26-16 EUReactor310 SC VI. 4. requires calculating VOC emission rate from EUReactor310 on a monthly basis, using mass balance or another method acceptable to the AQD DS.

INSPECTION RESULT: COMPLIANCE. Per the attached records received on 5/17/2022, it appears that this is being done based upon methodology in Appendix A of PTI 26-16, using calculations 1 through 6 in the appendix. The copany notes that VOC emissions are equivalent to the solvent emitted per batch.

PTI 26-16 EUReactor310 SC VI 5. requires calculating methanol and mineral spirit emissions from EUReactor310:

INSPECTION RESULT: COMPLIANCE: COMPLIANCE. Per the attached records received on 5/17/2022, it appears that this is being done based upon methodology in Appendix A of PTI 26-16, using calculations 1 through 6 in the appendix.

PTI 26-16 EUReactor310 SC VII.

NA.

PTI 26-16 EUReactor310 SC VIII sets stack limits as follows:

1. SVD-310 (Distillate pot) maximum exhaust diameter 3 inches, minimum height above ground 35 feet.

INSPECTION RESULT: UNKNOWN. I brought the AQD range finder tool to measure the height, but because of the complex geometry of the reactor, was not able to measure it. However, from a visual standpoint, it looked to be approximately the right height. A violation is not suspected, at this time.

2. SVT-52 (storage tank) maximum exhaust diameter 3 inches, minimum height above ground 36 feet.

INSPECTION RESULT: UNKNOWN. I brought the AQD range finder tool to measure the height, but because of the complex geometry of the tank I was not able to measure it. However, from a visual standpoint, it looked to be approximately the right height. A violation is not suspected, at this time.

PTI 26-16 EUReactor310 SC IX.

NA.

EU305&325; PTI No. 26-16:

Emission unit description: Production of calcium sulfonate/oxidate-based rust preventative coatings, using mineral spirits as a solvent. Process equipment includes two blend tanks with capacities of 12,000 gallons (T-305) and 9,000 gallons (T-325), a 1,000 gallon condensate collection tank, and a water-cooled condenser. Previously covered by PTI No. 120-00.

Pollution control equipment: shared water cooled condenser with 99.5% efficiency.

Inspection on 4/13/2022:

There were no emissions visible from either tank. It was said that nothing was being made in T-325. ***The gauge on the shared water-cooled condenser read 50 degrees F.***

Check of special conditions:

PTI 26-16, EU305&325, SC I. 1 limits emissions of mineral spirits to 8.0 lbs/batch.

INSPECTION RESULT: COMPLIANCE. The attached records received on 5/17/2022 indicate emissions of mineral spirits were 1.6 lbs per batch, during the 12-month period from 4/1/2021 through 3/31/2022..

PTI 26-16, EU305&325, SC I. 2. limits emissions of mineral spirits to 2,000 lbs/yr.

INSPECTION RESULT: COMPLIANCE. The attached records received on 5/17/2022 indicate that the highest 12-month rolling time period mineral spirits emissions in the 12 month period requested were 19 lbs.

PTI 26-16, EU305&325, SC II. 1. limits material produced to 250 batches per year.

INSPECTION RESULT: COMPLIANCE. Their records indicate that they produced 12 batches in the requested 12 month period of 4/1/2021 through 3/31/2022, far below the limit.

PTI 26-16, EU305&325, SC IV. 1. states that the permittee shall not operate EUReactor305&325 unless the condenser is installed, maintained, and operated in a satisfactory manner. Satisfactory operation of the condenser includes maintaining a received condensate temperature no greater than 110 degrees Fahrenheit.

INSPECTION RESULT: COMPLIANCE. The condenser was running. The condensate pot was at 50 degrees F, below the permitted limit. There were no visible emissions from the condenser.

PTI 26-16 EU305&325 SC V.

NA.

PTI 26-16, EU305&325, SC VI.1 requires a monthly record of the following batch data:

a. The number of batches produced.

INSPECTION RESULT: COMPLIANCE. They are tracking this each month, as demonstrated in the attached records received on 5/17/2022. The provided spreadsheet appeared to show the months of January through March 2022 chronologically ahead of April through December 2021, the way it was formatted. The AQD will discuss this with the company.

b. The number of batches produced in the 12-month rolling period ending that month.

INSPECTION RESULT: COMPLIANCE. They are tracking this, as shown in the attached records received on 5/17/2022.

c. Mineral spirits emitted for each batch, based on the calculation method in Appendix A or other method acceptable to the AQD DS.

INSPECTION RESULT: COMPLIANCE. They are tracking this, as shown in the attached records received on 5/17/2022.

PTI 26-16 EU305&325 SC VII.

NA.

PTI 26-16 EU305&325 SC VIII. sets stack limits for SVCondense305325 (vent from condenser) to a maximum exhaust diameter of 2 inches and a minimum height above ground of 30 feet.

INSPECTION RESULT: UNKNOWN. I brought the AQD range finder tool to measure the height, but because of the complex geometry of EU305&325, I was not able to measure it. I could not see the exhaust vent from ground level, but from the height of the condenser itself, a height of 30 feet appears to be realistic. Being unable to see the exhaust vent, i could not estimate an exhaust diameter. A violation is not suspected, at this time.

EUOxidation216, PTI No. 26-16:

Emission unit description: The emission unit consists of an air oxidation reactor (R-216, with 2,500 gallon capacity, equipped with a thermal incinerator) and two finishing tanks (T-212 and T-215) with capacity of 14,000 gallons each. The reactor is subject to 40 CFR Part 60, Subpart III. Previously covered by PTI No. 110-91.

Pollution control equipment: John Zink thermal oxidizer/afterburner for Reactor R-216.

SAFETY NOTE: Hearing protection should be worn inside the building where the control room for EUOxidation216 is located, due to the presence of a loud compressor nearby.

Background on EUOxidation 216:

The permit evaluation document for PTI No. 26-16 was written by the AQD permit engineer Paul Schleusener (retired). The document has the following commentary on EUOxidation216 and its original PTI, No. 110-91, shown in italics below:

While the reactor itself could be considered an emission unit, based on the applicable NSPS for air oxidation, the reactor is designed and installed to work with other equipment as a chemical process unit. Focusing on the chemical process unit is another approach to designating emission units. There seemed to be little value in this instance to calling the reactor an emission unit and the overall process a flexible group. So the process unit is considered the emission unit for PTI No. 26-16.
The conditions for this emission unit were updated to specify the reactor (Reactor 216) for NSPS conditions and the emission unit for conditions related to the entire emission unit.
Due to changes in the NSPS for storage tanks, the two storage tanks in the emission unit are no longer subject to Subpart Kb, so the related condition in PTI No. 110-91 was removed.

Inspection on 4/13/2022:

My notes reflect that during the pre-inspection conference today, we were informed that EUOxidation216 was not expected to be running, until 4/18/2022. However, during the course of the inspection, we saw that EUOxidation216 was operating. It is my understanding that the thermal oxidizer was started up at 9:00 AM, and that the process itself began running about 10:00 AM.

At 10:59 AM, there were no visible emissions from the John Zink thermal oxidizer/afterburner exhaust stack, to the unaided eye. This complied with MAPC Rule 301, limiting visible emissions to no more than 20% opacity over a 6-minute average, except for one 6-minute average per hour not to exceed 27% opacity. However, EPA's B. Cobb indicated that the FLIR camera showed some VOCs being emitted from the stack.

There was steam from tanks T-212 and T-215, but no opacity. I was informed that these tanks are used for oxidized wax storage, and if the tanks were not heated, this material would solidify.

V. Apolinario, B. Cobb, and the operator, Jim Root, preceded me into the control room, which was small and somewhat crowded. I stood a short distance beind them, and in the noisy environment, with a nearby compressor running, I was unable to hear the discussion. I waited until they were done, to speak with J. Root, who updated me on their discussion. I was informed that the vent stream flow recorder had not worked in 2 years, which violates PTI 26-16, EUPilotOxidation, SC IV.3 and VI.3, discussed during the revoew of permit conditions below.

Additionally, EPA staff had photographed a control panel, on which was a circular temperature chart recorder for the thermal oxidizer, as well as a digital temperature gauge which displayed an instantaneous readout for the thermal oxidizer. EPA staff had seen the temperature on the digital display drop to 1,390 degrees F, shown in their photo IMG_0052.JPG, which is not reproduced in this EGLE AQD report. This value was below the 1,400 degrees F minimum required by PTI 26-16, EUOxidation216, SC IV.1, and therfore in violation of the permit.

Note: The digital temperature readout, at the time I was looking at it, showed that actual thermal oxidizer temperature varied from 1,404 to 1,406 degrees F. Although these values were above the minimum temperature, that does not prevent the 1,390 degrees F from earlier from constituting a violation. If a facility has knowledge that a temperature of a process or control device may occasionally dip below a minimum required level, they should raise their overall operating temperature setpoint, to compensate. A VN was subsequently sent for this, on 6/27/2022.

The under/over temperature controller, or at least its digital display, was not working right now, it appeared, as the setpoint or SP ranged fluctuated from as low as 1070 degrees F to as high as 1350 degrees F, while I watched. It is not identified in the PTI, and therefore this does not appear to be a violation. The AQD inquired as to the function/purpose of the under/over temperature controller, in the 8/18/2022 VN for issues related to review of recordkeeping.

FInishing tanks 212 and 215, which are part of EUOxidation216, had steam emitting from steam lines, but no opacity. We were told these tanks are used for storage of oxidized wax, and if they did not heat them, the product would solidiify.

On a 7/8/2022 email, R. Minhas replied to my 7/5/2022 email in which I asked what kind of chemicals are made in EUOxidation216. He stated, *The products produced in Reactor 216 are oxidized waxes or petrolatums. So, we start with Wax (similar to candle wax or petrolatum) and oxidize it by blowing air through it at certain temperature and pressure. When the wax is oxidized (even very slight amount), we call it oxidized wax. Normal wax peels off the metal quite easily but when it is oxidized, it has a tendency to stick to the metal better and therefore, it provides better rust protection on the metal.*

Check of special conditions:

PTI 26-16 EUOxidation216 SC I. 1. limits total organic compounds (TOC) emissions to whichever is less stringent:

- 20 ppmv on a dry basis, corrected to 3% oxygen, or
- 98 weight percent reduction.

INSPECTION RESULT: COMPLIANCE. I was advised that a stack test was conducted in 1991, to demonstrate compliance. It is my understanding that they use the value from this test in their MAERS reports.. However, since three decades have passed since that stack test, the AQD may pursue requiring a new stack test, under MAPC Rule 1003.

PTI 26-16 EUOxidation216 SC II.

NA

PTI 26-16 EUOxidation216 SC III.

NA

PTI 26-16 EUOxidation216 SC IV 1. requires Reactor R-216 shall not be operated unless the vent gases from the reactor are burned in a thermal oxidizer and the thermal oxidizer is installed, maintained, and operated in a satisfactory manner. Satisfactory operation of the thermal oxidizer includes maintaining a minimum temperature of 1,400 degrees F and a minimum retention time of 3.75 seconds in the thermal oxidizer.

INSPECTION RESULT: NONCOMPLIANCE. The unit's temperature varied from 1,400 to 1,420 degrees F, instantaneously, as I observed it today, but shortly before, EPA staff had photographed the digital temperature display reading at 1,390 degrees F, 10 degrees F below the allowed minimum. A Violation Notice (VN) was sent for this on 6/27/2022.

.

Additionally, a subsequent review of 195 temperature charts from the time period 4/1/2021 through 4/1/2022 showed that on 12/16/2021, the thermal oxidizer temperature briefly dropped to 1190 degrees F, 210 degrees F below the permitted minimum temperature of 1400 degrees F. The AQD included this in an 8/18/2022 VN.

PTI 26-16 EUOxidation216 SC IV 2. requires the permittee to install, calibrate, and maintain and operate according to manufacturer's specifications a device to monitor and record the temperature in the firebox of the thermal oxidizer on a continuous basis.

INSPECTION RESULT: COMPLIANCE. The temperature was being monitored on a continuous basis, on a circular temperature chart, at the time of the inspection. I was shown a stack of recent temperature charts, on a nearby table. Pursuant to an emailed request on 5/2/2022, the company mailed a stack of circular tempeature charts for the time period of 4/1/2021 through 4/1/2022. On 7/5/2022, I completed review of the charts. A Summary is in the Word document B6179 temp charts 2022_05_27.dotx. The review generated several questions, discussed below:

1. *On 5/6/2021, the thermal oxidizer or afterburner was operating in the range of 1400-1490 degrees F, for a short period of time, and then the temperature dropped off suddenly, and the operational cycle*

appeared to end. It was unknown if this was an upset condition, or simply a short production cycle for EUOxidation216. The AQD emailed the company on 7/5/2022, to inquire about this. The company's emailed response on 7/20 indicated that this was not an upset, but a case where the product had a short oxidation time of only 20-30 minutes, and then the process shut down normally.

2. *On 5/25/2021, there was a brief event, where it was difficult to tell when the operational cycle began, as the thermal oxidizer temperature peaked at 1440 degrees F, and sharply dropped off, with no further operations that day. It was unknown if this was an upset condition. The AQD emailed the company on 7/5/2022, to inquire. The company's emailed response on 7/20 indicated that this was the same product as made on 5/6/2021, above, and the wax product had an oxidation time of 20+ minutes.*
3. *On 7/6/2021, and to a lesser degree on previous charts going back to 6/16/2021, the red ink used on the paper bled across the paper, as if there had been a problem with the ink pen used by the recorder, or as if liquid had been spilled on a stack of charts. The AQD emailed the company on 7/5/2022, to inquire. The company's written response, on 7/20, was the following: "Looking at that the chart, the incineration temp during the oxidation process was above 1400 F from 10:15 AM to about 3:45 PM. The system was shut down around 3:45 PM, however, the chart recorder was NOT turned off so it continued to record the temperature of the incinerator unit even after the system was shutdown. That is why you have inner circles appearing on the chart. My second question to the Operator was smudging, and he cannot recall why but perhaps, suggested it was due to water leak on his desk that made it to the drawer."*
4. *On one temperature chart, a date was not written down, but the chart was in between Thursday, 11/11, and Monday, 11/15/2021. The AQD emailed the company on 7/5/2022, to inquire. The company's written response was that the date for that chart should have been 11/12/2021.*
5. *On 12/16/2021, the temperature had been between 1420 and 1480 degrees F for a little over an hour, and then shortly before 10:45 AM, it went steeply downwards. It reached a low of just under 1190 degrees F, after 10:45 AM, and then climbed steeply upwards. It settled into a range of roughly 1440 to 1480 degrees F, before 11:00 AM. It then ran at normal temperatures, and shut down later, in what appeared to be a normal manner. The AQD emailed the company on 7/5/2022, to inquire about this. The company's response on 7/20/2022 was: "Operator cannot recall this particular batch but his input is that if you lose power, the whole process will shut down and he will have to re-start the system when the power comes back again and that is something that may have happened." The AQD sent an 8/18/2022 VN for the temperature being 210 degrees F below the required 1400 degrees F minimum of EUOxidation216 SC IV.1, but the company was in fact meeting the EUOxidtion216 SC VI.2 permit requirement, to monitor and record the temperature of the thermal oxidizer.*

PTI 26-16 EUOxidation216 SC IV 3. requires the permittee to install, calibrate, maintain and operate in a satisfactory manner a device to monitor and record the vent stream flow on an hourly basis.

INSPECTION RESULT: NONCOMPLIANCE. A digital display was operating, but it was not recording on paper. As EPA staff and subsequentky AQD were told, the recorder had not been working for the past 2 years. This was cited as a violation in the AQD's 6/27/2022 VN.

PTI 26-16 EUOxidation216 SC V.

NA

PTI 26-16 EUOxidation216 SC VI. 1 requires all records to be completed in a format acceptable to the AQD District Supervisor by the last day of the calendar month, for the previous calendar month, unless otherwise specified.

INSPECTION RESULT: COMPLIANCE. Records were received in an acceptable format on May 17, 2022. On July 8, 2022, in response to my June 22, 2022 emailed question, R. Minhas indicated that they were done by the last day of the calendar month for the previous calendar

PTI 26-16 EUOxidation216 SC VI. 2 requires the permittee to monitor and record in a satisfactory manner, the temperature of the firebox of the thermal oxidizer or afterburner on a continuous basis.

INSPECTION RESULT: COMPLIANCE: I observed the monitoring of the temperature of the thermal oxidizer, on a continuous basis. On May 17, 2022, AQD received, per my request, all of the circular temperature chart

recordings from April 1, 2021 through April 1, 2022. The circular chart recordings appear to be done in a satisfactory manner.

PTI 26-16 EUOxidation216 SC VI. 3 requires the permittee to monitor and record in a satisfactory manner the vent stream flow from the reactor to the thermal oxidizer or afterburner.

INSPECTION RESULT: NONCOMPLIANCE. EPA and then the AQD were told the recorder has not been functioning for the past 2 years. This was cited in the AQD's June 27, 2022 VN.

PTI 26-16 EUOxidation216 SC VI. 4. requires the permittee to monitor emissions and operating information for Reactor R-216 in a accordance with 40 CFR Part 60, Subparts A and III.

INSPECTION RESULT: UNKNOWN. The AQD is referring Subpart III compliance determinations on Lockhart to EPA at this time, as EPA staff V. Apolinario and B. Cobb already possess a working knowledge of this New Source Performance Standard (NSPS).

The attached records received on 5/17/2022 show calculated emissions of total organic compounds (TOC) and HAPs from EUOxidtion216, for the 12-month period from 4/1/2021 through 3/31/2022. The records include an NSPS compliance summary, which references PTI 26-16, EUOxidation216 SC VI.2, 3, 4, and SC IX.1, and associated monitoring requirements, as follows:

- *SC VI.2: temperature at the firebox of the afterburner; must be greater than or equal to 1400 degrees F, but was briefly observed today at 1390 degrees F*
- *SC VI.3: vent stream flow from the reactor to the afterburner; must be monitored hourly; monitor was working but recording was not being done*
- *SC VI.4 and SC IX.1 : keep records of stack tests and data, (irebox temperature and % TOC reduction or concentration), keep records of any semi-annual reports required to be submitted under Subpart III of the NSPS, containing exceedances of monitored parameters and all periods when the vent stream is diverted from the control device or has no flow rate.*

Note: AQD's N. Hude entered the following comments about Reactor R-216 in his 9/1/2015 inspection activity report:

This NSR Permit # 110-91 was considered significant enough at the time of issuance, to be entered in the national RACT-BACT-LAER Clearinghouse, RBLC.
If significant changes/modification/amendments are eventually made, especially if the emission limits are change or relaxed, it is important that the Michigan RBLC Administrator be advised to make appropriate changes or new entries into the National RBLC database. The entire country places some reliance on the validity of the RBLC database.
This NSR Permit is filed in the RBLC as # MI-0189.
Further information can be found at: http://cfpub.epa.gov/rblc/index.cfm?action=Search.BasicSearch&lang=en

PTI 26-16 SC EUOxidation216 VII.

NA.

PTI 26-16 SC EUOxidation216 VIII. requires the stack dimensions for SV216Oxidizer, the oxidizer vent, to be a maximum exhaust diameter of 30 inches and a minimum height above ground of 50 feet.

INSPECTION RESULT: COMPLIANCE. With the AQD laser range finder tool, I was able to determine a stack height of 51.8 feet, above the 50 foot minimum required height.

PTI 26-16 EUOxidation216 SC IX. requires compliance with 40 CFR Parts A and III as they apply to Reactor R-216.

INSPECTION RESULT: UNKNOWN. The AQD is referring Subpart III compliance determinations on Lockhart to EPA at this time, as EPA staff V. Apolinario and B. Cobb already possess a working knowledge of this NSPS.

Note: AQD's N. Hude entered the following comments about Reactor R-216 in his 9/1/2015 inspection activity report:

> This NSR Permit # 110-91 was considered significant enough at the time of issuance, to be entered in the national RACT-BACT-LAER Clearinghouse, RBLC.
> If significant changes/modification/amendments are eventually made, especially if the emission limits are change or relaxed, it is important that the Michigan RBLC Administrator be advised to make appropriate changes or new entries into the National RBLC database. The entire country places some reliance on the validity of the RBLC database.
> This NSR Permit is filed in the RBLC as # MI-0189.
> Further information can be found at: http://cfpub.epa.gov/rblc/index.cfm?action=Search.BasicSearch&lang=en

EUPilotOxidation; PTI No. 26-16:

Emission unit description: Pilot air oxidation reactor (18.8 gallon capacity) with caustic scrubber, used for research and development to support production in EUOxidation216. The scrubber is used to control emissions of organic acids from the reaction. The reactor is subject to limited portions of 40 CFR Part 60, Subpart III> Previously covered by PTI No. 714-92.

Pollution control equipment: caustic scrubber.

Background on EUPilotOxidation:

The AQD permit engineer Paul Schleusener (retired) wrote a permit evaluation for the current PTI, 26-16. It has the following discussion (text in italics) on EUPilotOxidation:

This reactor is an air oxidation reactor, like Reactor 216. The permit engineer's evaluation for the original PTI for this emission unit suggested the unit is exempt from the NSPS for air oxidation. This is not correct. While the reactor is exempt from most provisions Subpart III, it is subject to some provisions. The permit conditions for PTI No. 26-16 include the relevant provisions that apply and the emission unit description notes the reactor "is subject to limited portions of 40 CFR Part 60, Subpart III."

PTI No. 26-16 adds a limit on the number of batches per year to make the emission limit enforceable as a practical matter.

NSPS provisions

Since the "Total Resource Effectiveness index value" is greater than 4.0, only a few Subpart III requirements apply to the unit. The relevant requirements appear in 40 CFR 60.610(c), which reads as follows[:]

(c) Each affected facility that has a total resource effectiveness (TRE) index value greater than 4.0 is exempt from all provisions of this subpart except for §§60.612, 60.614(f), 60.615(h), and 60.615(l).
During the review of application No. 714-92, the applicant submitted a TRE index value calculation demonstrating a TRE of 49. The submittal also addressed variability of some of the assumptions, citing a "worst-case" value of 5.2. This worst-case value still exceeds the value of 4.0, triggering the limited applicability of Subpart III.

The four regulations cited in §60.610(c) require the following:

§60.612 establishes three options for emission standards. One option, in §60.612(c), requires maintaining "a TRE index value greater than 1.0 without use of VOC emission control devices."

§60.614(f) describes how the TRE index value is to be calculated for compliance with §60.612(c).

§60.615(h) lists records a facility complying with §60.612(c) must keep.

§60.615(l) states that the Administrator "will specify appropriate reporting and recordkeeping requirements where the owner or operator of an affected facility seeks to demonstrate compliance with the standards specified under §60.612 other than as provided under §60.613(a), (b), (c), and (d)." Since the facility is not following an alternate approach to demonstrating compliance, there are no conditions reflecting this requirement.

The permit conditions address these requirements as follows:

A condition requires compliance with Subparts A and III.

Since the facility demonstrated its exemption from much of Subpart III by having a value greater than 4.0, the permit conditions include a TRE index value greater 4.0 for the pilot oxidation reactor as an operation restriction.

Another operational restriction specifies the requirement of a TRE index value greater than 1.0 without use of emission control.

The permit conditions require the records listed in §60.615(h).

Wet scrubber control

The use of a wet scrubber for VOC emission control is somewhat unusual. As documented in the EVALFORM (permit engineer's evaluation summary) for the original PTI, the VOC emissions consist mainly of organic acids such as formic, acetic, and propionic acids. These compounds are quite water-soluble, so a wet scrubber is a reasonable control technology choice for this emission unit.

Inspection on 4/13/2022:

EUPilotOxidation was not running at the time of the 4/13 inspection, or during the May 5, 2022 return to the site by the AQD, On 5/5, R. Minhas indicated that it has not run in years. He said that it is for research and development (R&D) only. He said they have no plans to use it in the forseeable future, and may consider selling the unit. The records received by the AQD on May 17, 2022 indicated that it did not run in 2021 or 2022.

Check of special conditions:

PTI 26-16 EUPilotOxidation. SC I. 1. limits VOC to 0.4 lbs/hr.

INSPECTION RESULT: COMPLIANCE. The attached records received on 5/17/2022 indicate that VOC emissions were 0.0 lbs/hr during the 12-month period of 4/1/2021 through 3/31/2022, because EUPilotOxidtion did not operate during that time frame.

PTI 26-16 EUPilotOxidation. SC I. 2 limits VOC to 100 lbs/year.

INSPECTION RESULT: COMPLIANCE. The attached records received on 5/17/2022 indicate that VOC emissions were 0.0 lbs/year during the 12-month period of 4/1/2021 through 3/31/2022, because EUPilotOxidtion did not operate during that time frame.

PTI 26-16 EUPilotOxidation. SC II. 1. limits material processed in the unit to 50 batches per year.

INSPECTION RESULT: COMPLIANCE. The attached records received on 5/17/2022 indicate that there were no batches during the 12-month period of 4/1/2021 through 3/31/2022, because EUPilotOxidtion did not operate during that time frame.

PTI 26-16 EUPilotOxidation.SC III. 1. requires the permittee to maintain a Total Resource Effectiveness (TRE) index value greater than 4.0 for EUPilotOxidation, pursuant to Section 40 CFR 60.610(c).

INSPECTION RESULT: UNKNOWN. The AQD is referring Subpart III compliance determinations on Lockhart to EPA at this time, as EPA staff V. Apolinario and B. Cobb already possess a working knowledge of this New Source Performance Standard (NSPS).

PTI 26-16 EUPilotOxidation SC III. 2. requires the permittee to maintain a Total Resource Effectiveness (TRE) index value greater than 4.0 for EUPilotOxidation without use of VOC emission control, pursuant to Section 40 CFR 60.612(c).

INSPECTION RESULT: UNKNOWN. The AQD is referring Subpart III compliance determinations on Lockhart to EPA at this time, as EPA staff V. Apolinario and B. Cobb already possess a working knowledge of this New Source Performance Standard (NSPS).

PTI 26-16 EUPilotOxidation SC IV. 1. requires that the permittee shall not operate EUPilotOxidation unless the caustic scrubber is installed, maintained, and operated in a satisfactory manner. Satisfactory operation includes maintaining a pH of at least 9.0 in the scrubber liquid.

INSPECTION RESULT: COMPLIANCE. The unit has reportedly not operated in years, and so it is not operating without the scrubber. It is my understanding that because the Pilot air oxidation reactor is used so rarely, there is no liquid in the scrubber, except when they have occasion to use the reactor because the liquid is corrosive, with a pH of 9.0 or higher.

PTI 26-16 EUPilotOxidation SC V.

NA.

PTI 26-16 EUPilotOxidation SC VI. 1. requires all required calculations be completed in a format acceptable to the AQD DS by the last day of the calendar month, for the previous calendar month.

INSPECTION RESULT: COMPLIANCE. The process is said to have not operated for years, and there are no calculations to be made. The attached records received on 5/17/2022 indicate that no operations with the unit occurred during the 12-month period from 4/12021 through 3/31/2022.

PTI 26-16 EUPilotOxidation SCVI. 2 requires the facility to document the number of batches processed in EUPilotOxidation monthly, for the preceding 12-month rolling time period.

COMPLIANCE RESULT: COMPLIANCE. *The attached records received on 5/17/2022 indicate that no batches were made during the 12-month period from 4/12021 through 3/31/2022.*

PTI 26-16 UPilotOxidation SC VI. 3. requires the permittee to calculate the VOC emission rate from EUPilotOxidation monthly, for the preceding 12-month rolling time period.

COMPLIANCE RESULT: COMPLIANCE. The attached records received on 5/17/2022 indicate that no operations with the unit occurred during the 12-month period from 4/12021 through 3/31/2022, and there were 0.0 VOC emissions during this period.

PTI 26-16 EUPilotOxidation SC VI. 4. requires the permittee to monitor and record the pH of the scrubber solution before starting each batch.

INSPECTION RESULT: NA. This is considered nonapplicable, beacuse no batches have reportedly been made in years. The attached records received on 5/17/2022 indicate that no operations with the unit occurred during the 12-month period from 4/12021 through 3/31/2022.

PTI 26-16 EUPilotOxidation SC VI. 5. requires the permittee to recalculate the TRE index value whenever process changes are made, as required by 40 CFR 60.614(). Examples of process changes requiring recalculation include, but are not limited to, changes in production capacity, feedstock type, or catalyst type.

INSPECTION RESULT: UNKNOWN. The AQD is referring Subpart III compliance determinations on Lockhart to EPA at this time, as EPA staff V. Apolinario and B. Cobb already possess a working knowledge of this New Source Performance Standard (NSPS).

PTI 26-16 EUPilotOxidation SC VI. 6.requires the permittee to keep up-to-date, readily accessible records of the following:

a. Any changes in production capacity, feedstock type, or catalyst type, or of any replacement, removal, or addition of recovery equipment or air oxidation reactors.

b. Any recalculation of the TRE index value performed pursuant to 40 CFR 60.614(f).

c. The results of any performance test performed pursuant to the methods and procedures required by 40 CFR 60.614(d).

The above records are required to be kept for five years after the action taken which requires the record, kept in an acceptable format and made available upon request.

INSPECTION RESULT: UNKNOWN. The unit has reportedly not operated in years, and the company has no plans to operate it in the forseeable future, I was told by R. Minhas on 5/5/2022. If the unit operates in the future, it will have to keep records of any changes to production capacity, feedstock type, catalyst type, or of any replacement, removal, or addition of recovery equipment or air oxidation reactors, any reclaculation of the TRE index value pursuant to 40 CFR 60.6149f), and the results of any performance test performe dpursuant to the methods and procedures required by 40 CFR 60.614(d).

PTI 26-16 EUPilotOxidation SC VII.

NA

PTI 26-16 EUPilotOxidation SC VIII. 1 requires SVScrubberPilot to be exhausted from a stack with a maximum exhaust diameter of 1 inch and a minimum height above ground level of 30 feet.

INSPECTION RESULT: COMPLIANCE. The EUPilotOxidation exhaust point is a narrow exhaust pipe, which exhausts at a 45 degree angle, a few feet above the roofline of the concrete block structure which houses EUPilotoxidation, please see attached photo 004, taken on 5/5/2022. With the AQD laser rangefinder tool on 5/5, I determined a height for the roof line of the building of 31.9 feet, and the exhaust outlet was a few feet taller still, cleary above the 30 foot minimum height requirement.

PTI 26-16 EUPilotOxidation SC IX. 1 requires compliance with 40 CFR Parts A and III as they apply to EUPilotOxidation.

INSPECTION RESULT: UNKNOWN. The AQD is referring Subpart III compliance determinations on Lockhart to EPA at this time, as EPA staff V. Apolinario and B. Cobb already possess a working knowledge of this NSPS.

EUCalcium, PTI No. 26-16:

Emission unit description: Process to produce natural calcium sulfonate. Process equipment includes four process tanks (401, 402, 403, and 404) used as reactors, each with 7,300 gallon capacity; four process tanks (405, 406, 407, and 408) for product drying, each with capacity of 7,300 gallons; two blending tanks, one with capacity of 300 gallons and one with capacity of 500 gallons; and a bag filter to control particulate matter emissions from the blending tanks. Blending tanks and bag filter previously covered by PTI No. 433-89 and process tanks previously covered by PTO No. 855-80A.

Pollution control equipment: bag filter for blending tanks.

Inspection on 4/13/2022:

EUCalcium was not operating at the time of the joint EPA and the AQD April 13, 2022 inspection, or the AQD's May 5, 2022 return to the site. EPA staff identified a non-working pressure drop gauge on the bag filter, discussed below, in the review of special conditions.

Note: During AQD's May 5, 2022 return to the site, R. Minhas informed me that this bag filter is not actually for cleaning air, but for cleaning their liquid product, to remove particulate for product quality purposes. He explained that it therefore may be inappropriate to have this bagfilter written into PTI 26

-16, to begin with. He explained that at the time PTI 26-16 was issued, there had been a rush to issue the permit, to resolve compliance concerns, and that with pressure to issue it as soon as possible, he ad just agreed to the permit, the way it was written. Changing the permit language to be more accurate would require a revision to the PTI.

Check of special conditions:

PTI 26-16 EUCalcium SC I. 1. sets a particulate matter (PM) limit of 0.10 lb per 1,000 lbs exhaust gas, calculated on a dry gas basis, for the blending tanks in EUCalcium.

INSPECTION RESULT: COMPLIANCE. A stack test would be necessary to confirm compliance, but there are no known problems with particulate emissions from this emission unit.

PTI 26-16 EUCalcium SC II.

NA.

PTI 26-16 EUCalcium SC III.

NA.

PTI 26-16 EUCalcium SC IV. 1. states the permittee shall not operate EUCalcium unless the bag filter is installed, maintained, and operated properly.

INSPECTION RESULT: NONCOMPLIANCE. The pressure drop gauge was not in operable condition. The needle was stuck at just under 11 inches water colun (w.c.), and the face of the gauge appeared to be half-filled with a clear liquid. The needle looked as if it was potentially in a horizontal position, because it was floating on the liquid. A VN was sent for this, on 6/27/2022. This has aso been cited as a violation of MAPC Rule 901, which requires that an air cleaning device shall be installed, maintained, and operated in a satisfactory manner. Having a non-operable pressure drop gauge is not considered to be maintaining an air cleaning device in an acceptable manner.

PTI 26-16 EUCalcium SC IV. 2. requires the permittee to equip and maintain the bagfilter with a pressure drop indicator.

INSPECTION RESULT: NONCOMPLIANCE. The pressure drop gauge was visibly not in an operable condition. A VN was sent for this, on 6/27/2022.

PTI 26-16 EUCalcium SC V.

NA.

PTI 26-16 EUCalcium SC VI. 1 requires the permittee to monitor and record the pressure drop for the bag filter once during each batch.

INSPECTION RESULT: NONCOMPLIANCE. I emailed the company to request a copy of pressure drop records, on 6/22/2022 On 7/8, R. Minhas replied by email that because the permit does not require this, no records are being kept. In my emailed response on 7/8, I drew his attention to this permit condition. The AQD included this in an 8/18/2022 VN, following completion of the review of recordkeeping.

PTI 26-16 EUCalcium SC VII.

NA.

PTI 26-16 EUCalcium SC IX.

NA.

EUBLENDING, PTI No. 26-16:

Emission unit description: Blending materials in various tanks, primarily: S-1, 322, BASF, M-1, M-2, M-3, Mini 304, 309, 701, 710, W2, 801, 802, 818, 806, 807, 808, 822, 845, 843, 855, 856, 857, UFO, or other drums, pails, or totes. Previously covered by PTO No. 855-80.

Pollution control equipment: NA.

Inspection on 4/13/2022:

It is my understanding that the tanks, totes, and pails associated with EUBlending are geographically distributed throughout the plant. The BASF tank was at ground level, and was labeled. It had no visble emissions, and did not appear to be in use, at the time of the inspection.

A plastic tote near EUReactor304 had a lid that was askew, but a company employee advised me that the tote was being used at this time, and it was not actually being stored that way. The tote's location was in the middle of a frequently traveled area onsite, and so it did not appear as if it was being stored. This was discussed earlier in this report, in the section dedcated to EUReactor304.

We were shown a series of what looked to be 8 elevated tanks grouped together. There was no opacity from the tanks. I could not locate labels on the 8 elevated tanks, but labels appeared to be on the conical hoppers beneath the tanks.

Check of special conditions:

PTI 26-16 EUBLENDING SC I.

NA, no emission limits.

PTI 26-16 EUBLENDING SC II.1. Material processed is limited to 4,000,000 lbs per month.

INSPECTION RESULT: COMPLIANCE. The attached records received on 5/17/2022 showed that during the 12-month period from 4/1/2021 through 3/31/2022, the month with the highest material throughput was November 2021, with 1,998,773 lbs, below the maximum allowed 4,000,000 lbs/month.

PTI 26-16 EUBLENDING SC II.2. prohibits the permittee from processing any used or waste materials in EUBlending.

INSPECTION RESULT: COMPLIANCE. The AQD emailed the company to inquire, on 6/22/2022, and the company's response the same day was that they do not use any waste materials in EUBLENDING.

PTI 26-16 EUBLENDING SC III.

NA.

PTI 26-16 EUBLENDING SC IV.

NA.

PTI 26-16 EUBLENDING SC V.

NA.

PTI 26-16 EUBLENDING SC VI.1. requires all calculations to be completed in a format acceptable to the AQD DS by the last day of the calendar month for the previous calendar month.

INSPECTION RESULT: COMPLIANCE. Records were received in an acceptable format on 5/17/2022. On 7/8/2022, in response to my 6/22/2022 emailed question, R. Minhas indicated that they were done by the last day of the calendar month for the previous calendar month.

PTI 26-16 EUBLENDING SC VI.2.requires the permittee to keep records of all source operating data for EUBlending.

INSPECTION RESULT: COMPLIANCE. While it was clear that the company keeps some records, as evidenced by the records received on 5/17/2022, it was not known if they keep all source operating data for EUBlending. The AQD emailed the company on 6/22/2022, to inquire further. The reply that same day was, "Yes, records pertaining to the amount of metarial processed are available from monthly production records."

PTI 26-16 EUBLENDING SC VI.3 requires the permittee to keep a record of the identity and amount of material processed in EUBlending during each calendar month.

INSPECTION RESULT: COMPLIANCE. The attached records received on 5/17/2022 indicate the amount of material processed in EUBlending during each calendar month from April 2021 though March 2022. It is my understanding that they keep detailed records of products made.

PTI 26-16 EUBLENDING SC VII.

NA.

PTI 26-16 EUBLENDING SC VIII.

NA, as no stack or vent restrictions.

PTI 26-16 EUBLENDING SC IX.

NA.

EUEclipse; PTI No. 26-16:

Emission unit description: Natural gas-fired Eclipse boiler with 21 MMBTU/hr heat input rating. Previously covered by PTI No. 349-77

Pollution control equipment: NA.

Inspection on 4/13/2022:

I was told that steam is used to heat products, and even trucks. It is my understanding that without heat, some of their products would solidify.

I observed no visible emissions from the boiler stack, which is shared between EUEclipse and a permit-exempt Johnson boiler.*

***There is also a 10 million Btu/hr natural gas-fired boiler in the same boiler room, made by the Johnston Boiler Co. This boiler is not in the permit, being considered permit exempt. Please refer to MAPC Rule 282(b), or the Rule 282(2)(b) which replaced it, on 12/20/2016, for fuel burning equipment used for space heating or service water heating which burns sweet natural gas and has a rated heat input capacity of not more than 50 million Btu/hr. It is used as a standby unit, should the Eclipse boiler be unavailable, and vice versa.**

Return to site on 5/5/2022:

R. Minhas showed me the Eclipse boiler, EUEclipse. It was down for maintenance at that time, so the permit-exempt Johnson boiler was running, instead. I was shown the natural gas lines for both boilers. There were no provisions for firing any unapproved fuels. There were no visible emissions from the shared exhaust stack

Check of special conditions:

PTI 26-16 EUEclipse SC !.

NA, as no emission limits.

PTI 26-16 EUEclipse SC II 1. prohibits the permittee from burning any fuel other than natural gas.

INSPECTION RESULT: COMPLIANCE. During my 5/5/2022 return to the site, R. Minhas showed me the natural gas line goingto EUEclipse. I did not see a means of delivering an alternate fuel.

PTI 26-16 EUEclipse SC III.

NA.

PTI 26-16 EUEclipse SC IV.

NA.

PTI 26-16 EUEclipse SC V.

NA.

PTI 26-16 EUEclipse SC VI.

NA.

PTI 26-16 EUEclipse SC VII.

NA.

PTI 26-16 EUEclipse SC VIII. 1. requires SVEclipse, the stack for the Eclipse boiler, to have maximum diameter of 28 inches and a minimum height above ground of 43 feet.

INSPECTION RESULT: COMPLIANCE. The building was said to be 34.2 feet high, and the stack coming from the roof appeared to be over 10 feet tall, so it appeared the requirement for a minimum stack height of 43 feet was met. Due to the stack coming out of the roof, I was not able to use the AQD laser range finder tool from ground level.

PTI 26-16 UEclipse SC IX.

NA.

EUMeyers, PTI No. 26-16

Emission unit description: Mixer with bag filter collector used to mix coatings with powder clay. Previously covered by PTO No. 432-88

Pollution control equipment: Pulse-jet bin vent dust collector.

Inspection on 4/13/2022:

EUMeyers was running, with no fugitive emissions from the mixer, and with no visible emissions from the bag filter collector's exhaust stack. The bag filter collector is located outdoors, and has a square, vertical stack with a rain cap. The PTI does not prohibit the use of a rain cap. A 55 gallon drum with a lid on it served as a hopper to contain collected particulate. A duct delivered particulte into the drum. No spillage of particulate was observed around the drum.

Check of special conditions:

PTI 26-16 SC EUMeyers 1.1 limits particulate matter emissions to 0.10 lbs per 1,000 lbs on a dry gas basis.

INSPECTION RESULT: COMPLIANCE. A stack test would be required in order to verify this, but based upon observing the process running on April 13, 2022, the AQD has no evidence of the process emitting excessively.

PTI 26-16 SC EUMeyers II.

NA, as no material limits.

PTI 26-16 SC EUMeyers III

NA, as no process/operational resttrictions.

PTI 26-16 SC EUMeyers IV. states the permittee shall not operate EUMeyers unless the dust collector is installed, maintained, and operated properly.

INSPECTION RESULT: COMPLIANCE. The dust collector appeared to be installed, maintained, and operated properly. It has a square stack with a rain cap. the AQD prohibits rain caps in many permits, as they can interfere with dispersion, using the language "...shall be discharged unobstructed vertically upwards." That language is not in PTI No. 26-16, however, and so does not appear to be a violation. As the exhaust stack had no visible emissions on April 13, 2022, the AQD is not pursuing this, at this time.

PTI 26-16 SC EUMeyers V.

NA, as no testing/sampling is required.

PTI 26-16 SC EUMeyers VI.1. requires visual inspections of the dust collector exhaust to verify it is operating properly, once per batch.

INSPECTION RESULT: PENDING. The attached records received on 5/17/2022 indicate that visual emission checks were done once per batch, and that no visible emissions were detected, multiple times during the 12-month period from 4/1/2021 though 3/31/2022. Some dates in the visual inspection log were as recent as 1/10, 3/2, 3/7, and 3/22/2022. The AQD has concerns about the potential validity of this log, because EPA staff were told by an operator that they could not recall doing a visual inspection. When I shared this recordkeeping with EPA staff as a concern, I was informed that the operator whose name was associated with the records was the operator who had made the comment to EPA. My notes reflect being told to talk with R. Minhas, for questions on visual inspections. This matter is being reviewed, with a compliance determination pending.

PTI 26-16 SC EUMeyers VI.2. requires the permittee to keep records of all visual inspections of the dust collector.

INSPECTION RESULT: PENDING. The attached records received on 5/17/2022 indicate that visual emission checks were done once per batch, and that no visible emissions were detected, multiple times during the 12-month period from 4/1/2021 though 3/31/2022. Some dates in the visual inspection log were as recent as 1/10, 3/2, 3/7, and 3/22/2022. The AQD has concerns about the potential validity of this log, because EPA staff were told by an operator that they could not recall doing a visual inspection. When I shared this recordkeeping with EPA staff as a concern, I was informed that the operator whose name was associated with the records was the operator who had made the comment to EPA. My notes reflect being told to talk with R. Minhas, for questions on visual inspections. This matter is being reviewed, with a compliance determination pending.

PTI 26-16 SC EUMeyers VII.

NA, as no reporting.

PTI 26-16 SC EUMeyers VIII.

NA, as no stack/vent restrictions.

PTI 26-16 SC EUMeyers IX.

NA, as no other requirements.

Flexible Group requirements:

FG306&307; PTI No. 26-16:

Flexible Group description:

Manufacture of calcium sulfonate coating in two reactors, each with capacity of 2,800 gallons. Each reactor has a condenser and a 210-gallon condensate receiver, which vents to the atmosphere. Previously covered by PTI No. 432-89.

Emission units within flexible group: EUReactor306 and EUReactor307.

Pollution control equipment: Two air-cooled condensers, one for each reactor. Each is rated at 714,300 Btu/hr, with 99.9% efficiency for the type of process permitted.

Inspection on 4/13/2022:

Reactors 306 and 307 appeared to be running. There were no fugitive emissions.

Safety note: where petroleum-based liquid and water were both on the concrete floor near the condensers, there was a potential slip hazard.

Check of special conditions:

PTI 26-16 SC FG306&307 I. 1 limits methanol to 13.7 lbs/hr.

INSPECTION RESULT: COMPLIANCE. It is my understanding that 13.7 lbs/hr methanol is the maximum that could be emitted by a batch; therefore, there should be no exceedances. The attached records received on 5/17/2022 show that maximum methanol emissions were 15.1 lbs, over a 4-hour batch, with fugitive emissions taking place over 4 hours, and maximum condenser vent emissions taking place over 2 hours. The theoretical maximum methanol lbs/hr emission rate was identified in the calculations as 11.9 lbs/hr, below the maximum allowed 13.7 lbs/hr.

PTI 26-16 SC FG306&307 I. 2 limits VOC to 54.9 lbs/batch.

INSPECTION RESULT: COMPLIANCE. The attached records received on 5/17/2022 show that during the 12-month time period from 4/1/2021 through 3/31/2022, the maximum VOC emissions were 15.1 lbs/batch when methanol was used, and 1.5 lbs/batch, when mineral spirits were used.

PTI 26-16 SC FG306&307 I. 3. limits VOC to 3.4 TPY.

INSPECTION RESULT: COMPLIANCE. The attached records received on 5/17/2022 indicate that VOC emissions during the 12-month period from 4/1/2021 through 3/31/2022 reached a maximum of 0.5 TPY.

PTI 26-16 SC FG306&307 II. 1. limits material processed to 2,000 tons per year.

INSPECTION RESULT: COMPLIANCE. The attached records received on 5/17/2022 indicated that for the 12 -month period from 4/1/2021 through 3/31/2022, the material processed was 748 TPY, at its highest.

PTI 26-16 SC FG306&307 II. 2. limits material produced to 122 batches per year.

INSPECTION RESULT: COMPLIANCE. The attached records received on 5/17/2022 indicated that during the 12-month period from 4/1/2021 through 3/31/2022, they produced 110 batches, below the maximum allowed 122 batches/yr.

PTI 26-16 SC FG306&307 III.

NA., as no process/operational restrictions.

PTI 26-16 SC FG306&307 IV. 1. states that the permittee shall not operate FG306&307 unless the associated condenser is installed, maintained, and operated in a satisfactory manner. Satisfactory operation of each condenser includes maintaining a received condensate temperature no greater than 110 degrees Fahrenheit as measured in the condensate collection tank at least one hour into the stripping stage of the process.

INSPECTION RESULT: COMPLIANCE. The condensers associated with Reactors 306 and 307 were each at 72 degrees F, below the maximum allowed temperature of 110 degrees F. The attached records received on 5/17/2022 indicate that during the 12-month period of 4/1/2021 through 3/31/2022, the highest batch temperatures were 90 degrees F, during July and August of 2021.

PTI 26-16 SC FG306&307 V.

NA, as no testing /sampling requirements.

PTI 26-16 SC FG306&307 VI. 1 requires the permittee to complete all required calculations, in a format acceptable to the AQD DS by the last day of the calendar month for the preceding calendar month.

INSPECTION RESULT: COMPLIANCE. Records were received in an acceptable format on 5/17/2022. On 7/8/2022, in response to my 6/22/2022 emailed question, R. Minhas indicated that they were done by the last day of the calendar month for the previous calendar month.

PTI 26-16 SC FG306&307 VI. 2. requires the permittee to monitor and record the received condensate temperature at least 1 hour into the stripping stage of the process, on a per-batch basis.

INSPECTION RESULT. COMPLIANCE. The attached records received on 5/17/2022 indicate that they are keeping records of received condensate temperature.

PTI 26-16 SC FG306&307 VI. 3. requires the permittee to keep a record of the amount of material processed in FG306&307 in tons, and of the number of batches produced, on a calendar month and 12 -month rolling basis.

INSPECTION RESULT: COMPLIANCE. The attached records received on 5/17/2022 show that the amount of metrial processed in tons, and the number of batches, are being recorded on a monthly and 12-month rolling basis.

PTI 26-16 SC FG306&307 VI. 4 requires the permittee to keep the following batch data:

a. The amount of VOC emitted for each batch, using the calculation method in Appendix A or an alternative method acceptable to the AQD DS.

INSPECTION RESULT: COMPLIANCE. The attached records received on 5/17/2022 show that the amount of VOC emitted for each batch is being calculated, using the calculation method in Appendix A.

PTI 26-16 SC FG306&307 VI. 5. requires the facility to calculate the VOC emission rate from the process from the preceding 12-month rolling time period, using the batch data required by SC VI. 3 and VI. 4 or another method acceptable to the DS.

INSPECTION RESULT: COMPLIANCE. The facility appears to be calculating the VOC emissions from the process on a 12-month rolling basis, but the AQD has a question about their approach to organizing their tables ina chronological manner, to follow up on.

PTI 26-16 SC FG306&307 VII.

NA, as no reporting requirements.

PTI 26-16 SC FG306&307 VIII.

NA, as no stack/vent requirements.

PTI 26-16 SC FG306&307 IX.

NA, as no other requirements.

FGLime540-541, PTI No. 26-16:

Flexible Group description: manufacture of lime slurry to be used in other reactors and blend tanks. Equipment includes a 4,200 gallon capacity storage silo with bin vent filter and a 6,000 gallon capacity lime slurry tank. Previously covered by Permit to Operate No. 254-83.

Emission units: EULimeTank540, EULimeSlurry541

Pollution control equipment: bin vent filter for storage silo.

Inspection on 4/13/2022:

This emission unit was not running, at the time of the inspection. The silo to the left was EULimeTank540, please see attached photo 003. A short tank to its right was EULimeSlurry541, please see attached photo 002.

I asked when the last time was that maintenance on the bagfilter was done. I was told that it had been a couple years since maintenance was done. This was a violation of the PTI 26-16, which requires the bagfilter to be maintained properly, as well as a violation of MAPC Rule 910, which requires that an air pollution control device be installed, maintained, and operated properly.

J. Clouse offered to go to the top of the silo and photograph the bagfilter for us. The stairs looked to be structurally sound, so V. Apolinario and I climbed up the stairs and a short ladder, to the small platform where the bagfilter cabinet is. Because of the small size of the platform, J. Clouse stayed on the landing below us, at the base of the ladder.

Please see attached photograph No. 001 of the bagfilter cabinet. What looked like it might be a panel on the side of the cabinet would not open, so I undid latches at the top of the cabinet, and lifted the cabinet lid. Inside, the cabinet was almost completely packed with caked up lime, and the bagfilter was not visible. V. Apolinario photographed the clogged interior of the cabinet, as I held the lid up. Her photograph is EPA photo IMG_0080.JPG, which is not reproduced in this EGLE AQD inspection report.

The failure to imaintain the bagfilter properly is a violation of the following requirements, discussed in the reviw of permit special conditions below:

- PTI 26-16 FGLime540-541, SC IV, which requires the permittee to not operate the silo unles the vent filter is installed, maintained, and operated properly. It was clear that it had not been maintained properly, and it had been operated long enough for the bag filter cabinet to become clogged with lime material.
- MAPC Rule 910, for failing to install, maintain, and operate an air pollution control device properly.

Return to site on 5/5/2022:

On 5/5/2022, when I returned to the site, R. Minhas indicated that the lime storage silo and lime tank could probably be removed from PTI 26-16 as exempt from needing a permit to install. However, when I subsequently reviewed the MAPC Rule 284 permit exemptions, I saw that an exemption commonly used for storage silos would not work, in this instance.

MAPC Rule 284(2) (k) exempts the following:

(k) Storage containers and transfer operations of noncarcinogenic solid material, including silos, that only emit particulate matter and that are controlled with an appropriately designed and operated fabric filter collector system or an equivalent control system.

The above exemption is not appropriate for the above process, because VOCs from mineral spirits would be emitted, in addition to particulate matter, and the exemption criteria do not allow for emissions other than particulate matter.

Check of special conditions:

PTI 26-16 SC FGLime540-541 I. 1. limits PM emissions to 0.1 lbs per 1,000 lbs dry gas basis.

This would not work for the storage silo, because it emits not just particulate matter but also VOCs, from mineral spirits, and fails to satisfy the exemption criteria.

INSPECTION RESULT: UNKNOWN. A stack test would be required in order to verify this. Because the process was not operating at the time of the inspection, the AQD could not take a visible emission reading of exhaust.

PTI 26-16 SC FGLime540-541 I. 2. limits VOC emissions to 1.10 TPY.

INSPECTION RESULT: COMPLIANCE. The attached records received on 5/17/2022 indicate that the VOC emissions during the 12-month period 4/1/2021 through 3/31/2022 were 0.10 TPY, below the 1.10 TPY limit.

PTI 26-16 SC FGLime540-541 I. 3. limits sulfonic acid emissions to 300 mg per cubic meter, corrected to 70 degrees F and 29.92 mm Hg.

INSPECTION RESULT: UNKNOWN. Testing would be required in order to verify this.

PTI 26-16 SC FGLime540-541 II. 1. limits mineral spirits used to 329,341 gallons per year.

INSPECTION RESULT: COMPLIANCE. The attached records received on 5/17/2022 indicate that during the 12-month period from 4/1/2021 through 3/31/2022, 29,057.33 gallons of mineral spirits were use, far below the maximum allowed 329,341 gallons per year.

PTI 26-16 SC FGLime540-541 III. requires the permittee to not operate the lime storage silo unless the preventative maintenance program has been implemented and is maintained.

INSPECTION RESULT: NONCOMPLIANCE. I was told that the bag filter had not undergone maintenance in 2 years. The silo appears to have operated in the past with the bag filter cabinet filling up with lime. This is a violation of the permit requirement. Furthermore, the bag filter cabinet being almost filled with lime demonstrates that a preventative maintenance program is not being maintained. A copy of the preventative maintenance program was received by the AQD, along with other records, on 5/17/2022. The VN for failure to maintain the program was sent on 6/27/2022.

PTI 26-16 SC FGLime540-541 IV. requires the permittee to not operate the lime storage silo unless the bin vent filter is installed, maintained, and operated in a satisfactory manner.

INSPECTION RESULT: NONCOMPLIANCE. The bag filter cabinet being almosy filled with lime demonstrates that the lime storage silo has been operated in the past, while the bin vent filter was not installed, maintained, and operated in a satisfactory manner. This was included in the VN sent on 6/27/2022.

PTI 26-16 SC FGLime540-541 V.

NA, as no testing/sampling is required.

PTI 26-16 SC FGLime540-541 VI. 1. requires the permittee to complete all required calculations, in a format acceptable to the AQD DS by the last day of the calendar month for the preceding calendar month.

INSPECTION RESULT: COMPLIANCE. Records were received in an acceptable format on 5/17/2022. On 7/8/2022, in response to my 6/22/2022 emailed question, R. Minhas indicated that they were done by the last day of the calendar month for the previous calendar month.

PTI 26-16 SC FGLime540-541 VI. 2.requires the permittee to keep a record of the amount of mineral spirits processed in EULimeSlurry541 on a calendar month and 12-month rolling time period basis.

INSPECTION RESULT: COMPLIANCE. The attached records received on 5/17/2022 demonstrate that facility is recording the mineral spirits used on a 12-month rolling basis and on a monthly basis.

PTI 26-16 SC FGLime540-541 VI. 3. requires the facility to calculate the VOC emission rate from the process from the preceding 12-month rolling time period, using mass balance or another acceptable method.

INSPECTION RESULT: COMPLIANCE. The attached records received on 5/17/2022 indicate that the VOC emissions during the 12-month period 4/1/2021 through 3/31/2022 were 0.10 TPY, below the 1.10 TPY limit.

PTI 26-16 SC FGLime540-541 VI. 4. requires the permittee to keep a record of actions taken under the lime storage silo preventative maintenance program.

INSPECTION RESULT: NONCOMPLIANCE. The AQD received on 5/17/2022 a record indicating that maintenance was done on 4/25/2022. In the VN sent on 6/27/2022, the AQD requested the past 5 years' worth of preventative maintenance records. The company's response, received on 8/5, indicated that records had not been kept in the past, but they stated that records would be available, moving forward. The AQD's 8/18/2022 VN identifies this as a violation but acknowledges that the written commitment to keep the record has resolved it, and it does not need to be addressed in their response to the 8/18 VN.

PTI 26-16 SC FGLime540-541 VII.

NA, as no reporting required.

PTI 26-16 SC FGLime540-541 VIII.1. requires SVLime540, the storage silo vent, to exhaust at a minimum height above ground of 35 feet.

INSPECTION RESULT: COMPLIANCE. With the laser range finder tool, I measured a height of 35.2 feet, above the 35 foot minimum.

PTI 26-16 SC FGLime540-541 IX.

NA, as no other requirements.

FGFACILITY, PTI No. 26-16:

Flexible Group description: all process equipment source-wide including equipment covered by other permits, grand-fathered equipment and exempt equipment.

Emission units: All emission units at the plant.

Pollution control equipment: various.

Check of special conditions:

PTI 26-16 FGFACILITY I. 1. limits methanol emissions to less than 9 TPY.

INSPECTION RESULT: COMPLIANCE. The attached records received on 5/17/2022 indicated FGFACILITY methanol emissions over the 12-month time period from 4/1/2021 through 3/31/2022 were 0.53 TPY methanol, rounded up to 1 TPY methanol.

PTI 26-16 FGFACILITY I. 2. limits aggregate HAPs to less than 22.5 TPY.

INSPECTION RESULT: COMPLIANCE. The attached records received on 5/17/2022 indicated FGFACILITY HAP emissions over the 12-month time period from 4/1/2021 through 3/31/2022 were 1 TPY.

PTI 26-16 FGFACILITY II.

NA, as no material limits.

PTI 26-16 FGFACILITY III.

NA, as no process/operational restrictions.

PTI 26-16 FGFACILITY IV. requires the permitted equipment to be labeled with permanent labels that correspond with the AQD PTI No. 26-16, and additionally to label equipment that is not in use as not in use.

INSPECTION RESULT: NONCOMPLIANCE. Some labels throughout the plant had deteriorated. One label, that for EUREACTOR304's condenser, had weathered to the point that "EUREACTOR304" was missing.

PTI 26-16 FGFACILITY V. requires records to be maintained for a period of 5 years.

NA

PTI 26-16 FGFACILITY VI. 1. requires the completion of all required calculations in a format acceptable to the AQD DS by the last day of the calendar month, for the preceding calendar month.

INSPECTION RESULT: COMPLIANCE. Records were received in an acceptable format on 5/17/2022. On 7/8/2022, in response to my 6/22/2022 emailed question, R. Minhas indicated that they were done by the last day of the calendar month for the previous calendar month.

PTI 26-16 FGFACILITY VI. 2. requires the permittee to calculate the methanol and aggregate HAP emission rates from FGFACILITY monthly, on a 12-month rolling basis.

INSPECTION RESULT: COMPLIANCE. The attached records received on 5/17/2022 indicated FGFACILITY methanol and HAP emissions were being tracked on a 12-month period.

PTI 26-16 FGFACILITY VII.

NA, as no reporting requirements.

PTI 26-16 FGFACILITY VIII.

NA, as no FGFACILITY stack/vent restrictions.

PTI 26-16 FGFACILITY IX.

NA, as no other requirements.

(END OF COMPLIANCE CHECK OF OPT-OUT PTI NO. 26-16 SPECIAL CONDITIONS)

MAERS reporting:

Lockhart Chemical reports emissions annually, through MAERS. The MAERS report for the 2021 operating year was audited on 6/3/2022, and passed the audit.

Violations identified from 4/13/2022 inspection:

1. PTI 26-16, EUReactor304, Special Condition (SC) IV.2, Rule 910,; a temperature gauge for Reactor 304's condensate tank was not in place, during the inspection.
2. PTI 26-16, EUCALCIUM, Special Condition (SC) IV.1, Rule 910; the bag filter was not maintained in a satisfactory manner, per the inoperable pressure drop gauge.
3. PTI 26-16, EUCALCIUM, SC IV.2, Rule 910; the pressure drop indicator was not being maintained.
4. PTI 26-16, EUOxidation216, SC IV.1, Rule 910; the thermal oxidizer temperature was not being maintained above 1400 degrees F at all times.
5. PTI 26-16, EUOxidation216, SC IV.3, Rule 910; Failure to satisfactorily maintain and operate a device to monitor and record the vent stream flow from the reactor to the thermal oxidizer.
6. PTI 26-16, EUOxidation216, SC VI. 3, Rule 910; failure to monitor and record, in a satisfactory manner, the vent stream flow from the reactor to the thermal oxidizer or afterburner on an hourly basis.
7. PTI 26-16, FGLime540-541, SC III.1; The lime storage silo's preventative maintenance program was not being maintained.
8. PTI 26-16, FGLime540-541, SC IV.1, Rule 910; the bin vent filter was not maintained in a satisfactory manner.
9. PTI 26-16, FGFACILITY, SC IV.1; some identifying labels on equipment were deteriorated enough to be illegible or were missing.

A VN was sent to the company on 6/27/2022 identifying the violations, requiring a response with a corrective action program. The company sent an 8/2/2022 response to the violation noice, which was received on 8/5. The AQD is reviewing their response, af the time this activity report is being written.

Additional compliance concerns:

1. PTI 26-16, EUOxidation216, SC IV.1, and Rule 910: The thermal oxidizer temperature was not being maintained above 1400 degrees F at all times, for record of 12/16/2021, when temperature suddenly dropped well below the permitted minimum. This record showed what potentially may have been an upset condition. The AQD is preparing an additional VN.
2. Record accuracy for the required visual inspections of the EUMeyers baghouse: Inspections and recordkeeping are required by PTI 26-16 SC EUMeyers VI.1 and 2, respectively. The AQD identified a concern about a record reporting a number of visiual emission checks being done on the baghouse in 2021 and 2022.
3. The AQD requested EUCalcium pressure drop records for 4/1/2021-3/31/2022, and was told that because the permit does not require these records, they don't exist. However, a review of the permit confirms that PTI 26-16 EUCalcium SC VI.1 requires records to be kept of pressure drop. The AQD advised the company of this by email on 7/8/2022. The AQD is preparing an additional VN.
4. The EUOxidation216 under/over temperature controller, or at least its display, was not working on 4/13/2022, it appeared, as the setpoint or SP ranged fluctuated from as low as 1070 degrees F to as high as 1350 degrees F, while I watched. This does not appear to be a MAPC Rule 910 violation at this time, but The AQD is requesting in the pending VN that the company provide an explanation of the function of this controller.

Items 1 and 3 above were included in an 8/18/2022 VN to the company. The AQD inquired about item 4, in the letter, but did not cite it as a violation. Item 2 is under review.

Conclusion:

A number of instances of noncompliance were identified by the EPA and the AQD. A Violation Notice (VN) was sent by the AQD on June 27, 2022, and the company's response was received on 8/5. Additional compliance concerns were identified in a review of records, and the AQD sent a VN for those on August 18, 2022. EPA's V. Apolinario sent the company a Section 114 Information Request Letter on August 26, 2022. The EPA reserves the right to take enforcement actions, as well.

Image 1(001) : Bag filter cabinet atop lime storage silo, EULimeTank540 on 4/13/2022.

Image 2(002) : Lime slurry tank EULimeSlurry541; housekeeping issue on 4/13/2022.

Image 3(003) : Lime storage silo EULimeTank540 on 4/13/2022.

Image 4(004) : Exhaust vent for EUPilotOxidation is pipe at 45 degree angle above roofline, as seen on 5/5/2022.

Image 5(005) : EULimeSlurry541 on 5/5/2022, after cleanup.

NAME  DATE 5/16/2024 SUPERVISOR RB