M4685
MANILA

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

M468550180

FACILITY: DETROIT SALT CO		**SRN / ID:** M4685
LOCATION: 12841 SANDERS, DETROIT		**DISTRICT:** Detroit
CITY: DETROIT		**COUNTY:** WAYNE
CONTACT: John Shook , Vice President of Operations		**ACTIVITY DATE:** 07/24/2019
STAFF: Stephen Weis	**COMPLIANCE STATUS:** Non Compliance	**SOURCE CLASS:** MINOR
SUBJECT: Compliance inspection of the Detroit Salt Company facility in Detroit. The Detroit Salt facility is scheduled for inspection in FY 2019.		
RESOLVED COMPLAINTS:		

Location:

Detroit Salt Company (SRN M4685)
12841 Sanders Street
Detroit

Date of Activity:

Wednesday, July 24, 2019

Personnel Present:

Steve Weis, EGLE-AQD Detroit Office
John Shook, Detroit Salt Company

Purpose of Activity

A self-initiated inspection of the Detroit Salt Company facility (hereinafter "Detroit Salt") was conducted on Wednesday, July 24, 2019. The Detroit Salt facility was on my list of sources targeted for an inspection during FY 2019. The purpose of this inspection was to determine compliance of operations at the Detroit Salt facility with applicable rules, regulations and standards as promulgated by Public Act 451 of 1994 (NREPA, Part 55 Air Pollution Control) and Federal standards. The facility is also subject to the terms and conditions of Permit to Install No. 318-98A.

Facility Site Description

The Detroit Salt facility represents the above-ground operations of the Detroit Salt Company's salt mine. The above-ground portion of the salt mine is located on a parcel of land that is just under 30 acres in area in the southwest portion of the City of Detroit. The Detroit Salt facility property is bounded by Oakwood Boulevard to the north, Sanders Street to the east, railroad tracks and associated right of way (Norfolk Southern and Consolidated Rail Corporation) to the south, and the Marathon Petroleum Corporation Detroit Refinery facility (SRN A9831) to the west.

The Detroit Salt facility consists of several building structures - the facility's office building is located at the far eastern end of the property along Sanders; there are maintenance buildings in the southeast corner of the property; a processed salt storage structure near the southern property line; and buildings at the north end of the property that house the facility's rock salt bagging operation, product storage, and warehousing. The hoist structure for the main mine shaft is located to the west of the facility office near the Sanders Street entrance. Large stockpiles of salt are located and stored in the western portion of the property.

Much of the land area immediately adjacent to the Detroit Salt facility contains some of the area's heavy industrial facilities. The operations of the aforementioned Marathon Detroit Refinery are located to the south and west of the facility, and the Marathon facility office is located to the north on the north side of Oakwood. The AK Steel facility (SRN A8640) is located just over ½ mile to the north of Detroit Salt. An Edward C. Levy slag processing facility, a Sunoco Terminal and Cadillac Asphalt are located between Detroit Salt and AK Steel. The closest residential neighborhood, called Oakwood Heights, is adjacent to the facility property, beginning on the

opposite side of Sanders Street. This neighborhood used to feature a dense concentration of residential properties, but as a result of buyout offers starting in 2011 from Marathon when the refinery expanded, Oakwood Heights has become sparsely populated over the past several years. The closest residential properties are located on the corner of Sanders and Dumfries Streets, and along Waring north of Sanders. There is also a denser residential neighborhood located on the east side of Interstate 75 with the closest residential properties located approximately ¼ mile from Detroit Salt's property line.

Facility Operations

Detroit Salt Company, LLC, which has operated as a subsidiary of The Kissner Group since 2010, owns and operates an underground salt mine and an associated salt processing operation that manufactures bulk rock salt products. These products include bulk rock salt, bagged rock salt, and specialty ice melting products. According to Kissner's website, Kissner Milling Company Ltd is a major salt and packaged ice melt manufacturer and distributor, and the company's products include ice melt salts and products, pool salt, water softening salt and animal feed mixing salt.

The Detroit Salt facility mines salt from an extensive salt deposit/vein that lies approximately 1,000 feet below grade. According to information from the company's website (www.detroitsalt.com) and from other resources about the mining operations, the salt mine is located roughly 1,200 feet below grade, and encompasses an area of more than 1,500 acres beneath a portion of southwest Detroit, the north end of Allen Park, and portions of Dearborn and Melvindale. A couple of maps are attached to this report that show the areas under which the mine operates. The rock salt deposit was officially discovered in 1895, and the first mine shaft into the deposit was completed in 1910. A second, larger mine shaft was completed in 1925. The facility operated under the ownership of various companies until 1983, when the mining operation ceased. In 1997, Detroit Salt Company purchased the mine, began operating the mine and producing salt products in 1998, and have been operating the facility since that time.

Salt is extracted using what is referred to as the room and pillar system, which involves removing salt in a checkerboard pattern and leaving behind pillars which support the roof of the mine. Salt that is extracted from the salt deposit is transported to crushers in the mine that crush and size the salt, after which the crushed and sized salt, which is referred to as mine run, is carried to the surface via the hoist shaft. All of the initial crushing and sizing operations are performed in the mine. The hoist skips that carry salt to the surface are capable of carrying 10 ton loads of salt per skip.

Upon being brought to the surface, salt is directed via a system of conveyors to either the railcar loading area near the southern property line of the facility, to the facility's storage piles located in the western portion of the facility, and the undersized portion of the salt is directed to a framed fabric building used to store salt that is also located at the southern end of the property, from which it is sent to the facility's Bagging Plant operation. There are also plans for a second storage building for some of the salt/mine run just to the west of the hoist.

Salt is deposited onto the storage piles via a telescoping stacker conveyor that touches the peak of the storage pile. I was told during the site visit that the salt in the storage piles is classified as Bulk Governmental De-Icing Salt, that there is around a quarter million tons of salt stored in the piles, and that about 7,000 tons of salt is added to the piles each day that the hoist is moving mined salt to the surface. Information in the most recent Permit to Install application for the facility provides that the approximate maximum size of the storage pile area is nine acres. The faces of the storage piles that are not active are covered with tarps. There is a piece of equipment known as the re-crusher that is located along the conveyor between the storage piles and the fabric building. The re-crusher is used in the winter months to re-size large damp, frozen chunks of salt that are removed from a storage pile. The frozen salt chunks are resized in the re-crusher, blended with salt that is being conveyed from the mine (mine run), and conveyed back to the storage piles.

The salt that is sent to the Bagging Plant is taken from the storage building at the south end of the facility property. Salt is loaded onto material transfer trucks via front-end loaders and delivered to the Bagging Plant Operations building at the north end of the property. Salt is transferred via front-end loaders to hoppers, feeders and conveyors to the bagging lines. The facility's permit allows for two identical bagging lines, but there is currently one line in operation. Via the bagging line, solid additives and dye are added to the salt and mixed to produce the company's ice melt product. The ice melt product is packaged in 50-pound bags, and the bagging operation is capable of producing 26 bags per minute. The bags are closed and sealed via an electric heat source that essentially melts the opening of the plastic bag to form a seal. The bags of ice melt are placed on pallets; the Bagging Plant produces around 300 pallets of salt melt every 10 hours. The Bagging Plant operates from June through March, shutting down in April and May.

The bagging operation vents to a Donaldson Torit dust collector that pulls air from the discharge area, the scales, and the bag filling areas of the bagging line. The dust collector vents inside of the Bagging Plant building.

A couple of diagrams from the permit application for PTI No. 318-98A are attached to this report. One shows the facility plot plan with the locations of various buildings structures, salt conveyors, salt storage piles and paved areas of the facility property indicated, and one that provides a process flow diagram for the Bagging Plant Operations. Information about the dust collector from the manufacturer's website is also attached to this report for reference.

The Detroit Salt facility's Permit to Install (PTI) defines Emission Units and Flexible Groups that represent the various processes at the facility that are subject to the terms and conditions of the PTI. These are defined as follows:

- EU-SBIN – a surge bin transfer point from the mine hoist shaft to the at-grade conveyance system.
- EU-STACKER – storage pile stacker.
- EU-CONRAIL – the conveyor that is used to load rail cars.
- EU-CONTFR – this Emission Unit represents conveyor transfer points.
- EU-FLOADER – this Emission Unit represents fugitive emissions from the front loaders.
- EU-TRAF – this Emission Unit represents fugitive emissions from truck traffic.
- EU-STKPILE – the salt storage pile.
- EU-CRUSHER – the in-line breaker
- EU-BAGPLANT – this Emission Unit represents the operations associated with the Bagging Plant; the two identical bagging lines for ice melt salt product and the associated dust collector.

I was told during the site visit that the Detroit Salt facility currently operates 7 days per week – 6 days of production, with shaft and hoist maintenance being performed in Sundays. I was also told that there are 76 employees at the facility – 49 that work in mine production (mining, salt processing), 9 that work at the Bagging Plant, 15 that work in the facility's office, and 3 that work at the facility's rail and truck terminals.

Inspection Narrative

I arrived at the facility at 2:00pm. I drove around the perimeter of the facility along Oakwood Blvd. and Sanders Street, and I entered the facility via the Sanders Street entrance. I checked in at the facility's office at around 2:10pm, and I was met by John Shook of Detroit Salt. We went to John's office where we discussed the operations at the facility.

John described some of the history of the mine, stating that the last shaft into the mine was completed in the 1920's by International Salt Company. He described how the mine was idle between 1983 and 1997, and that Detroit Salt Company purchased the mine and processing facility in 1997 and re-started operations in 1998. John told me that the facility's above-ground property is 29-30 acres in area, and that the mine is about 1,100 feet below grade. John provided the operating schedule of the facility – it operates 7 days per week, with 6 days of production, and shaft and hoist maintenance being performed on Sundays.

We then walked outside to walk through the facility's operations as John described them. Our first stop was the hoist shaft. John pointed out the wheel mechanism at the top of the hoist house. He explained that if the wheel is turning, then the hoist is operational, moving skips filled with salt/mine run from the mine to the surface. He said that all of the salt that is brought to the surface has already been crushed and sized underground in the mine. We next followed the conveyor from the hoist house to the large framed fabric building at the south end of the property. John referred to the building as the Specialty Storage Fabric Building and said that it is used to store undersized portions of the salt. He said that the salt is loaded and trucked to the Bagging Plant.

We walked along the conveyor towards the storage piles. John told me that during a recent shutdown of

operations, about 300 feet of conveyors were replaced, and the conveyor covers and their corresponding hoop structures were re-installed. John pointed out the paved areas around the plant grounds, and he told me that in 2014, the company spent around $750,000 on paving areas of the facility grounds.

As we got closer to the storage area, we looked at the re-crusher (also referred to as the in-line breaker). John explained that the re-crusher is used in the cold weather months to break up and crush to size damp, frozen chunks of salt from the storage piles. The material that is run through the re-crusher is blended with salt/mine run from the conveyor and is conveyed back to the storage pile.

We walked around the east, active face of the storage pile. John pointed out that the exposed back face of the pile is covered with tarps. He provided me with information about the size of and the amount of material stored in the piles.

We then walked to the Bagging Plant building. We walked into the building via the open side through which salt is brought from the Specialty Storage Fabric Building. John pointed out the hopper onto which salt is placed via front-end loader, the Z-conveyor, and the surge bin that feeds the bagging operation. John said that salt is packed into 50 -pound bags, and that some is also loaded into larger bulk packs. We watched 50-pound bags being filled, and filled bags being loaded onto pallets. I noted that the bags being loaded were labeled "Enviro Thaw". John provided the amount of salt that is produced on the bagging line (26 bags per minute, roughly 250 tons per day, 300 pallets every 10 hours). He told me that the Bagging Plant operates from June through March and that it is shut down during April and May each year.

John described that visible emissions are evaluated at points along the conveyor, at the point where the surge bin feeds the bagging operation (which is close to the ceiling of the building), and along the bagging line. The bagging area is closed off to other areas of the building. During the time that we observed the bagging operation, I observed light visible emissions (~5%) at the point where the surge bin feeds the bagging line. I did not observe any visible emissions along the Z-conveyor or at the bagging operation.

We looked at the dust collector that controls potential particulate emissions from the bagging line. John explained that the bagging lines are piped and vent to the Donaldson Torit dust collector. He said that the dust collector pulls air from the discharge of the surge bin, the scales, and the bag filing area. I looked at the labels on the dust collector, which indicate that the unit is a Donaldson Torit Down Flo Evolution unit, model DFE 3-6, with a serial number of 11705148-L1-1. The area of the Bagging Plant building in which the dust collector is located is also used to store materials used in the process. I asked if the facility has any cold cleaners. John replied that there are no cold cleaners, and that no bulk cleaning chemicals are used at the facility. He showed me a cabinet that contains retail-sized cleaning products that are used for the facility's cleaning and maintenance needs. While we were in this part of the building, John introduced me to the Bagging Plant Manager, Brian Defreitas.

We left the Bagging Plant, and we walked back to the facility's office area by walking past the back side of the salt storage pile. John pointed out the tarping and described how material is taken from the pile and loaded for off-site delivery.

After completing our walking tour of the facility, we returned to John's office to discuss the facility's permit, and how Detroit Salt determines compliance with the requirements of the PTI. The facility's compliance with the terms and conditions of PTI No. 318-98A is discussed in further detail in the next section of this report.

After a discussion to summarize the site visit, I left the facility at 5:35pm.

Permits/Orders/Regulations

Permits

Permit to Install No. 318-98A was issued to Detroit Salt on June 2, 2017. The permit addresses a modification to facility operations, as described in PTI No. 318-98, to increase the allowed processing capacity of the facility to 2.5 million tons per year from 1.7 million tons per year (the maximum hourly rate of 600 tons remained the same), as well as the commencement of operations of the Bagging Plant.

The permit includes the EU-BAGPLANT Emission Unit, which addresses two bagging lines. It also includes two Flexible Groups - FG-ROCKSALTPLANT, and FGFACILITY, which addresses "All process equipment source-wide including equipment covered by other permits, grand-fathered equipment and exempt equipment."

The following provides a description of the Detroit Salt facility's compliance with the Special Conditions put forth by Permit to Install No. 318-98A.

EU-BAGPLANT

This Emission Unit addresses the Bagging Plant, which is identified in the permit as two identical lines to package rock salt into bags. I was told during the site visit that the bagging operation started operating on July 17, 2017.

I. Emission Limits

Special Condition (SC) I.1 limits visible emissions from the openings of the Bagging Plant building to 7 percent opacity. Detroit Salt staff observe opacity inside of the building at points along the conveyor, at the point where the surge bin feeds the bagging operation (which is close to the ceiling of the building), and along the bagging line. The bagging area is closed off to other areas of the building, and there are no vents or ductwork in that area of the building that vent to the ambient air. I was also told that facility staff make note of and are mindful of visible emissions associated with the portion of the Bagging Plant building where salt is brought in from the Specialty Storage Fabric Building. The facility appears to be complying with the requirements of this condition.

II. Material Limits

SC II.1 puts forth a limit of 200,000 tons of rock salt processed in the Bagging Plant per 12-month rolling time period. The facility compiles monthly records of the amount of salt that is processed in the building. During the site visit, John showed me records providing that in 2018, 43,921 tons of salt was processed in the Bagging Plant. The facility is demonstrating compliance with this requirement.

III. Process/Operational Restrictions

There are no process/operational restrictions associated with this Emission Unit.

IV. Design/Equipment Parameters

SC IV.1 requires that the facility keep all doors and building openings closed with the Bagging Plant is in operation, except as necessary for building access. The only opening associated with the building that is essentially permanently open is the area where the salt is brought in from the Specialty Storage Fabric Building. The bagging operation takes place in a separate part of the building, and the door opening between these two parts of the building was closed during my site visit. There are also bay doors that lead out to Oakwood. During my site visit, I was told that these doors are kept closed, and they were during the visit. The facility is demonstrating compliance with the requirements of this condition.

V. Testing/Sampling

SC V.1 addresses the visible emissions evaluation that is required by 40 CFR Part 60, Subpart OOO (Standards of Performance for Nonmetallic Mineral Processing Plants). Subpart OOO and this permit condition require that within 60 days after achieving the maximum production rate, but no later than 180 days after commencement of trial operation, the visible emissions from EU-BAGPLANT are to be evaluated in accordance with the requirements of Subpart OOO.

This requirement was satisfied. Visible emissions were evaluated in accordance with Subpart OOO on October 19-20, 2017 by Derenzo and Associates, and a report of the opacity observations was submitted to AQD via correspondence dated November 14, 2017. The facility has satisfied the requirements of this condition.

VI. Monitoring/Recordkeeping

SC VI.1 – This condition requires that all required calculations are submitted to the AQD District Supervisor. There are not specific calculations that are required to be submitted.

SC VI.2 and VI.3 – These conditions require that the facility conduct quarterly 30-minute visible emissions inspections of each EU-BAGPLANT baghouse using EPA Method 22. The facility is required to keep records of the visible emissions inspections, and any corrective actions taken based on the results of the inspections. Detroit Salt has contracted with Derenzo and Associates and Impact (which was formerly Derenzo). As of the date of my site visit, these requirements appear to have been met in the time since the

permit was issued.

SC VI.4 – This condition requires that the facility keep daily and monthly records of the amount of material that is processed in the Bagging Plant. John told me that every Monday, records of the previous week's production are compiled. John provided me with an example from 2018, which shows how the number of truck loads of salt product from the Bagging Plant is tracked for each day. A copy of this information is attached to this report for reference. The amount of salt in a truck load is known by the company, so this tracking translates into an amount of salt that has been processed in the Bagging Plant. John showed me a spreadsheet on his computer that is used to track the amount of salt that is processed in the Bagging Plant. He showed that 8,344 tons of salt as processed in the Bagging Plant from January 1 through February 12, 2018, and 35,577 tons from May through December of 2018 (I was told that the Bagging Plant did not operate from February 12 until starting back up in May). The total amount of salt that was recorded as being processed in the Bagging Plant in 2018 was 43,921 tons, which is below the permit limit of 200,000 tons.

The facility's records track the monthly totals, and while 12 month rolling totals can be calculated based on this information, there is not a specific record being kept of the 12 month rolling amount of salt that was processed at the Bagging Plant at the end of each month. This was communicated to John, and we discussed adding such a field to the recordkeeping spreadsheet.

VII. Reporting

SCs VII.1 and VII.2 are notification requirements. SC VII.1 requires that the company notify the AQD District Supervisor of the completion of the installation of EU-BAGPLANT within 30 days, and SC VII.2 requires that written notification of the construction and operation of EU-BAGPLANT also be sent to the AQD District Supervisor in accordance with the requirements of Subpart OOO.

I was not able to find any separate, stand alone notification documents in accordance with these two permit conditions. However, the test plan that addressed the initial visible emissions testing that was required by SC V.1 and Subpart OOO, which was submitted to AQD via correspondence dated October 12, 2017, included statements notifying that the bagging operation had been installed and placed in operation. This would seem to meet the notification requirement in SC VII.2. Regarding the notification requirement of SC VII.1, there does not appear to be a proper notification on file to satisfy this requirement. As refenced in the description foe EU-BAGPLANT, the bagging operation started operation on July 17, 2017, but the report from the last site visit that was performed at the site by AQD in September of 2017 states that the facility was still in trial operation at that time leading up to the Subpart OOO test. Conceivably, with the VE testing being performed on October 19-20, 2017, the notification required by SC VII.1 should have been submitted sometime around November 20, 2017. The facility did not meet this requirement.

VIII. Stack/Vent Restrictions

SC VIII.1 states that the exhaust gases from EU-BAGPLANT shall not be discharged to the ambient air through a vent, as defined in Subpart OOO. 40 CFR 60.671 defines a vent as "...an opening through which there is mechanically induced air flow for the purpose of exhausting from a building air carrying particulate matter emissions from one or more affected facilities." The exhaust from the bagging lines in the Bagging Plant building are not vented in such a way. The facility is in compliance with this requirement.

IX. Other Requirements

SC IX.1 requires the facility to comply with the provisions of 40 CFR Part 60 Subpart OOO as they apply to EU-BAGPLANT. The facility appears to be in compliance with this requirement.

FG-ROCKSALTPLANT

This Flexible Group addresses the requirements for the rock salt production process, including conveyors, the stockpile and vehicle loading.

I. Emission Limits

The conditions in this section limit visible emissions from various salt processing operations. SC I.1 limits the visible emissions from each bucket elevator, conveyor belt transfer point, truck loading station, railcar loading station, or any other affected facility defined in 40 CFR 60.670 and 60.671 to 7 percent opacity. SC I.2 limits visible emissions from all wheel loaders, truck traffic, and the stockpile to a six-minute average of 5 percent

opacity. SC I.3 limits visible emissions from EU-CRUSHER, which is the in-line breaker crusher that operates in the winter months, to 15 percent opacity.

I was told that facility staff monitor the visible emissions from these operations. Due to the hygroscopic property of salt (it attracts and holds water molecules), salt does not have a high potential to produce fugitive dust/particulate emissions. During the site visit, there were no visible emissions observed from the conveyor belts, which were in operation, nor from truck traffic, wheel loaders and the stockpile. EU-CRUSHER was idle, and I did not observe the truck or railcar loading stations in operation during the time of my site visit.

II. Material Limits

SC II.1 puts forth a limit of 200,000 tons of rock salt processed by EU-CRUSHER per 12-month rolling time period. John told me that the in-line breaker does not have a scale associated with it to allow for weighing the amount of material that is directed to it for processing. According to John, salt is fed to the feeder breaker, and is screened prior to being directed back to the conveyor. John said that the amount of salt can be estimated by the amount on the screen, with a cubic foot of salt corresponding to 95 pounds. The exact amount of salt that is being processed in EU-CRUSHER cannot be monitored and recorded at this time.

John provided an explanation to me to describe that the amount of salt that is processed in the in-line breaker/EU-CRUSHER is well below 200,000 tons per 12-month rolling time period. He explained that every day that the facility operates, there is underground product, which is the amount of salt that is removed from the salt deposit over the course of the work day; hoisted product, which is the amount of salt/mine run that is brought from the mine to the surface; shipments, which is the amount of salt that is either directly loaded onto rail cars, and/or the amount the is loaded onto trucks from the stockpile; and inventory, which is the amount of salt/mine run that is conveyed to the stockpile, or to the Specialty Storage Fabric Building. The in-line breaker crusher is only used during the winter months, and John estimated that 1% or less of the total salt production is processed by this crusher. In 2018, the facility provided that 1.8 million tons of salt was produced by the mine and hoisted to the surface. Approximately 700,000 tons were loaded to rail cars, and 40-50,000 tons was sent to the Specialty Storage Fabric Building. If 1% of the total amount of salt that was removed from the mine, then it can be assumed that an estimated 18,000 tons of salt was processed in EU-CRUSHING.

III. Process/Operational Restrictions

There are no process/operational restrictions associated with this Emission Unit.

IV. Design/Equipment Parameters

SC IV.1 requires that all above ground material conveyor belts and stackers are 180° enclosed and equipped with belt wipers and hoppers of proper size to prevent excessive spills. The facility meets this requirement.

V. Testing/Sampling

SC V.1 addresses the visible emissions evaluation that is required by 40 CFR Part 60, Subpart OOO.

This requirement was satisfied by the visible emissions evaluation that was performed in accordance with Subpart OOO on October 19-20, 2017 by Derenzo and Associates. A report of the opacity observations was submitted to AQD via correspondence dated November 14, 2017. The facility has satisfied the requirements of this condition.

VI. Monitoring/Recordkeeping

SC VI.1 requires that the facility keep daily, monthly and 12-month rolling time period records of the amount of salt that is processed in EU-CRUSHER. As mentioned in the discussion for SC II.1, the in-line breaker that makes up EU-CRUSHER does not have a scale associated with it to allow for weighing the amount of material that is directed to it for processing, As such, the facility does not currently have a way to directly track the amount of salt that is processed using this crusher. The facility does have records of the total amount of salt that is produced by the mine, and tracks the amount of salt that is directed to the various places in the facility's operations (i.e. rail car loading, stockpiles, inventory), so the amount of salt that is processed in EU-CRUSHER can be estimated.

While compliance with the material limit 200,000 tons of salt per 12-month rolling time period for EU-CRUSHER can be assumed, with production estimates providing that the amount of material processed by this crusher is

well below the allowable limit, Detroit Salt does not currently have a practical way to demonstrate compliance with the recordkeeping requirements put forth in SC VI.1. Thus, the facility is not complying with the requirements of this condition.

VII. Reporting

SCs VII.1 and VII.2 are notification requirements. SC VII.1 requires that the company notify the AQD District Supervisor of the completion of the installation of EU-BAGPLANT within 30 days, and SC VII.2 requires that written notification of the construction and operation of EU-BAGPLANT also be sent to the AQD District Supervisor in accordance with the requirements of Subpart OOO.

The processes associated with the Flexible Group are not new to the facility; the process equipment included in this Flexible Group was addressed in the original permit, PTI No. 318-98. The requirements have remained the same in PTI No. 318-98A. As such, the notification requirements do not seem to apply to this Flexible Group.

VIII. Stack/Vent Restrictions

There are no stack-vent restrictions associated with this Flexible Group.

IX. Other Requirements

SC IX.1 requires the facility to comply with the provisions of 40 CFR Part 60 Subpart OOO as they apply to FG-ROCKSALTPLANT. The facility appears to be in compliance with this requirement.

FGFACILITY

This Flexible Group serves to put operating limits and restrictions on all of the Emission Units associated with the salt processing operations at the Detroit Salt facility.

I. Emission Limits

There are no emission limits associated with FGFACILITY.

II. Material Limits

SC II.1 puts forth that the facility shall not process any asbestos tailings or asbestos containing waste materials in FGFACILITY. The Detroit Salt facility only processes salt that is extracted from their salt mine, and no asbestos is processed at the facility.

SC II.2 limits the facility to no more than 600 tons of salt per hour, nor more than 2,500,000 tons of salt per 12-month rolling time period. John told me that salt production numbers are kept on a daily basis. Regarding the hourly limit, John provided that the hoist is limited to lifting 35-40 skips per hour, with each skip having a maximum load capacity of 9.3 tons of salt/mine run. Thus, the maximum capacity of the hoist is 372 tons per hour, which is less than the 600 ton per hour limit. Thus, the facility is compliant with the hourly limit by virtue of the operational limits of the hoist.

The facility reported 1.8 million tons of salt processed from the mine on 2018. John added that the hoist operates 20 hours per day maximum, 6 days per week. Given the maximum hourly operating capacity of the hoist (372 tons per hour), this operating schedule corresponds to a maximum annual total amount of salt moved from the mine of 2,321,280 tons. The facility is demonstrating compliance this the annual limit.

III. Process/Operational Restrictions

SC. III.1 limits the number of 50-ton rock salt transportation trucks leaving the facility to a maximum of 34,000 per 12-month rolling time period. John showed me how the facility records the amount of rock salt truck shipments on a daily basis. The facility maintains files under the name “Production Reporting Files”, and the information about the truck transport is kept under the “Shipments” tab. John did not provide me with a copy of the spreadsheet, as he felt that some of the information presented in it is company confidential. He transcribed the monthly totals for 2018 on a sheet of paper, which is attached to this report. His summary shows that in 2018, 1,040,600 tons of salt was transported via 50-ton trucks, and that 20,812 trucks left the facility in 2018. The facility spreadsheet allows for monthly totals to be summed up so as to include the previous 11 months. Compliance.

SC III.2 limits the number of 25-ton palletized rock salt trucks leaving the facility to a maximum of 8,000 per 12-month rolling time period. The palletized rock salt is produced by the facility's Bagging Plant, which operates from June through March. John provided me with the total number of palletized rock salt transportation trucks that left the facility from June 2017 through March 2018 as 2,614, and from June 2018 through March 2019 as 2,355. The facility's records allow for 12-month rolling records to be kept, as well. Compliance.

SC III.3 requires that Detroit Salt implement and maintain a fugitive dust management program at the facility. The company is in compliance with this requirement. The fugitive dust plan will be discussed later in this section.

SC III.4 states that the facility shall maintain a single stockpile for outdoor salt storage. The facility is in compliance with this requirement.

IV. Design/Equipment Parameters

SC IV.1 requires that the company pave the plant roadways. The company had $750,000 worth of paving done at the facility to comply with this requirement.

V. Testing/Sampling

There are no testing/sampling requirements associated with this Flexible Group.

VI. Monitoring/Recordkeeping

SC VI.1 requires that the facility keep monthly and 12-month rolling time period records of the amount of salt that is processed at the facility. These records are being maintained.

SCs VI.2 and VI.3 require that the facility keep daily, monthly and 12-month rolling time period records of the amount of 50-ton rock salt transportation trucks and 25-ton pelletized rock salt trucks entering and leaving the facility. The facility is maintaining adequate records to meet the requirements of these conditions.

VII. Reporting

SC VII.1 requires that the company provide written notification of construction and operation to complaint with 40 CFR Part 60 Subpart OOO. The facility appears to be complying with the requirements of Subpart OOO.

VIII. Stack/Vent Restrictions

There are no stack-vent restrictions associated with this Flexible Group.

IX. Other Requirements

SC IX.1 requires the facility to label all equipment at the facility in accordance with the list of equipment and associated labeling specified in Appendix B of the PTI. We did not look at all of the labeling during the course of my site visit, but John and I did look at some of the labels, which are compliant with the requirements of this condition.

SC IX.2 requires the facility to comply with the provisions of 40 CFR Part 60 Subpart OOO as they apply to FGFACILITY. The facility appears to be in compliance with this requirement.

Appendix A to the PTI – Nuisance Management Plan for Fugitive Dust

We discussed the facility's compliance with the fugitive dust plan, which is attached to their PTI as Appendix A.

Section I of the fugitive dust plan addresses the site roadways and the plant yard. John told me that records (some in the form of invoices) for surface sweeping and dust suppressant applications are kept, and he showed me some examples. He told me that material that is spilled on roads is picked up as quickly as possible. I inquired about speed limit signs; I.D in the fugitive dust plan requires that the maximum vehicle speed limit of 10 mph be posted, and that there be a minimum of three speed limit signs on the facility grounds. I mentioned to John that I did not recall seeing speed limit signs. He told me that the speed limit on facility grounds has been communicated to employees, as well as to companies that send trucks to the facility. John said that Detroit Salt has speed limit signs, and he committed to checking the requirements of the fugitive dust plan and ensuring that speed limit signs are put up in accordance with the requirements of the dust plan.

Section II addresses the material storage pile. There is a requirement that the maximum drop distance be limited to 3 feet or less. I observed that the stacker conveyor operated such that that was essentially no drop height. John said that the stacker conveyor is operated in this way. There is a requirement in this section that spilled materials be removed immediately, which is being done. John said that a landscape company that Detroit Salt contracts with cleans up the spilled material.

Section III addresses truck traffic. According to John, the facility operates in compliance with the provisions of this section. Trucks are loaded in a way so as to avoid material spilling, leaking, or otherwise escaping. Trucks are tarped prior to leaving the site, they enter and leave the facility using the designated route, and the wheels and body of trucks leaving the facility are properly cleaned.

Section IV addresses the conveyors at the facility. The facility appears to be in compliance with the requirements of this section. The aboveground (grade level) conveyors are 180° enclosed. John said that the drop distance of salt into rail cars is 3 feet or less (I did not observe any rail cars being loaded during my site visit). There is a requirement that all material that is spilled from the ground under the conveyors be cleaned and removed in a reasonable time. John told me that the contract landscape crew is responsible for this cleaning, which is done on Sundays when the mine hoist, and thus the conveyors, are not in operation.

The Detroit Salt facility appears to be complying with the requirements put forth in the Nuisance Minimization Plan for Fugitive Dust. As mentioned previously in this report, salt is a hygroscopic material, and it does not have a high potential to produce fugitive dust/particulate emissions.

Federal Regulations

Some of the operations at the Detroit Salt facility are subject to requirements in 40 CFR Part 60, Subpart OOO (Standards of Performance for Nonmetallic Mineral Processing Plants). Detroit Salt looks to be in substantial compliance with the requirements and provisions of Subpart OOO that apply to operations of the facility.

Compliance Determination

Based upon the results of the July 24, 2019 site visit, the Detroit Salt Company facility in Detroit appears to be in compliance with most of the terms and conditions of the facility's Permit to Install, as well as applicable State and Federal regulations. However, there are a few permit requirements for which the company did not demonstrated compliance. For EU-BAGPLANT, the facility is not actively tracking the 12-month rolling amount of salt processed in the bagging operation, and it is not apparent that the 30 day notification of the completion of installation/construction of EU-BAGPLANT, as required by SC VII.1, was submitted. For FG-ROCKSALTPLANT, there is not a practical way for the company to track and record the amount of salt that is processed using EU-CRUSHER, although the facility can estimate that the amount of salt processed using this equipment is well below the permitted limit put forth in SC II.1 in this Flexible Group.

These issues have been communicated to Detroit Salt, and they will be discussed during the next site visit in FY 2020.

Attachments to this report: copies of a couple of maps that show the extent of the underground mine relative to the surrounding area; maps from the PTI application, one that shows the area at the facility that became the location of the Bagging Plant, the other showing a facility plot plan that provides a full facility layout; a diagram from the PTI application that provides a process flow diagram for the Bagging Plant; information about the dust collector serving the bagging operation from the manufacturer's website; a copy of daily and monthly records of Bagging Plant truck shipments; a handwritten record of the number of 50-ton salt trucks that left the facility during each month in 2018.

NAME Ted Wells DATE 1/31/20 SUPERVISOR JK