

N7359

MANILA

DEPARTMENT OF ENVIRONMENTAL QUALITY
AIR QUALITY DIVISION

ACTIVITY REPORT: Scheduled Inspection

N735936086

FACILITY: Aevitas Specialty Services Corp		SRN / ID: N7359
LOCATION: 663 LYCASTE, DETROIT		DISTRICT: Detroit
CITY: DETROIT		COUNTY: WAYNE
CONTACT:		ACTIVITY DATE: 08/12/2016
STAFF: Stephen Weis	COMPLIANCE STATUS: Non Compliance	SOURCE CLASS: MINOR
SUBJECT: Compliance inspection of the Aevitas Specialty Services Corporation facility in Detroit. The Aevitas facility is scheduled for inspection in FY 2016.		
RESOLVED COMPLAINTS:		

Location:

Aevitas Specialty Services Corporation
(SRN N7359)
663 Lyncaste
Detroit

Date of Activity:

Friday, August 12, 2016

Personnel Present:

Steve Weis, DEQ-AQD Detroit Office
Mary Peterson, EHS Specialist, Aevitas
Greg Reichard, Chief Executive Officer, Aevitas
Cynthia Ross, SEQ Consulting

Purpose of Activity

A self-initiated inspection of the Aevitas Specialty Services Corporation facility (hereinafter "Aevitas") was conducted on Friday, August 12, 2016. The Aevitas facility was on my list of sources targeted for an inspection during FY 2016. The purpose of this inspection was to determine compliance of operations at the Aevitas facility with applicable rules, regulations and standards as promulgated by Public Act 451 of 1994 (NREPA, Part 55 Air Pollution Control) and with applicable Federal standards. The facility is also subject to the terms and conditions of Permit to Install No. 10-12.

Facility Site Description

The Aevitas facility occupies the area at the southwest corner of Lyncaste and Edlie Streets. The facility is located in Detroit's Connor Creek Industrial neighborhood, which is located between Interstate 94 and the Detroit River, and is bounded by St. Jean Street and Connor Avenue/Clairpoint Street. Aevitas is south of Jefferson, and east of St. Jean. The area in the immediate vicinity of Aevitas (between Edlie and Freud Streets, and between Lyncaste and St. Jean Streets) consists of a variety of commercial and industrial properties, including Stericycle/PSC Nortru and ALCO Products. Fiat-Chrysler's Jefferson North Assembly Plant is located on the north side of Jefferson, just over ¼ mile north of Aevitas. There are residential areas to the south and west of the Aevitas facility, and the area to the east of Clairpoint St. (approximately 0.4 miles from Aevitas) consists almost entirely of residential properties. The closest residences to Aevitas are located about ¼ from the facility.

Aevitas began operating at this facility in 2012. On June 7, 2011, Aevitas Inc., a Canadian company that specializes in industrial waste management, purchased General Oil Company. General Oil was in the business of used oil and oily wastewater recycling, and they operated an oil product blending facility in Livonia, and a used oil and oily wastewater treatment facility at 12600 Beech-Daly Road in Redford Township. Aevitas purchased the property and facility at 663 Lyncaste; the facility had previously operated as Energis Detroit, LLC, a used oil processor, and previous entities owning/operating the facility included OmniChem, Apex Casting, and PSC-Nortru, Inc. Aevitas continued to operate the Redford Township facility until the used oil/oily wastewater treatment operations at the Lyncaste facility were installed. Aevitas ceased operating the Redford location on September 10, 2012, and all of the treatment business from the Redford site took place at the Lyncaste facility

from that point onward. The Redford facility is no longer operated by Aevitas, and the treatment process equipment at the Redford facility has been permanently removed from the site. During my site visit, I was told that the product blending operations from the Livonia facility (35796 Veronica St.) had been moved to the Lyncaste facility, and that the Livonia facility will be permanently shut down.

Facility Operations

As mentioned in the previous section of this report, Aevitas owns and operates a used oil and oily wastewater treatment and oil product blending facility on Lyncaste. The facility consists of an office area, an on-site laboratory, and various tanks that are part of the treatment and blending operations.

The materials that are processed or stored at the facility arrive via tanker truck, with a small percentage of material delivered in drums or totes. According to the permit application that was submitted for PTI No.10-12, the industrial liquid waste that is accepted and treated by Aevitas at this facility is classified in one of three categories – straight oil, which contains over 90% oil (and less than 10% water); oily waste, which contains between 10 and 90% oil (the rest, between 11 and 89%, would be water and sludge); and oily water, which contains less than 10% oil, with the remainder consisting of water and sludge.

When straight oil arrives at the Aevitas facility, it is unloaded from the tanker/drum/tote into one of six vertical fixed roof storage tanks identified in PTI No. 10-12 as the FG3 flexible group; this flexible group consists of tank 31 through 36, which are identified in the permit as EU-Tank31 through EU-Tank36. Tanks 31, 32, 35 and 36 have a working capacity of 19,500 gallons, while Tanks 33 and 34 have a working capacity of 6,000 gallons. These six tanks are located outside of and adjacent to the building on the north side, and they vent to the scrubber system. Oil is heated in these tanks to 210°F to separate the oil and water from each other. After this treatment, the oil product is transferred to one of six petroleum product storage tanks with a storage capacity of 19,500 gallons. These tanks, identified as Tanks 41 through 46, are located outside of the building on the south side.

Oily waste and oily water are treated using essentially the same procedure in the same process equipment; the main difference would be the amount of treatment (and treatment chemicals) that would be needed to separate the water and sludge from the oil. In this process, the oily waste/water is unloaded from the tanker/drum/tote into one of six storage tanks identified in the permit as FG1; these vertical fixed roof tanks are identified in the permit as EU-Tank11 through EU-Tank16. Oily waste is heated to 160°F, and then transferred to one of the two exterior tanks in the FG2 flexible group, both of which vent to the scrubber system. Within these tanks, identified as Tanks 21 and 22 and having a working capacity of 16,000 gallons, the oily waste is heated to between 150° and 200°F, its pH is adjusted via the addition of sulfuric acid and sodium hydroxide, and, if necessary, polymers are added, all to further separate the oil, water and sludge in the waste material. The oil that is separated is transferred to one of the FG3 tanks (Tanks 31 through 36), and processed as straight oil, as described in the last paragraph. The sludge is also transferred to one of the FG3 tanks, where it is dried by heating the material to between 180° and 200°F. The sludge is shipped offsite for sale as a fuel.

The water phase produced as a result of the treatment process (i.e. during the oil/sludge/water phase separation) is treated by Aevitas in on-site wastewater treatment tanks. The water is adjusted for pH and further treated with precipitating and flocculating agents to remove solids. The water is discharged to the POTW (Publicly Owned Treatment Works, which is essentially the sewer pipe that directs the water to the Great Lakes Water Authority Wastewater Treatment Plant), and the discharge is subject to permitted effluent discharge limits. The solids generated by the wastewater treatment process are removed via a filter press, and sent offsite for disposal.

The heated treatment tanks are heated via heating coils, which are heated by steam produced by a boiler identified as EU-Boiler. The boiler has a heat input rating of 5 MMBTU/hour, and is exempt from AQD permitting requirements per the provisions of Michigan Administrative Rule 282(b)(i). Accordingly, while the boiler is identified in the Emission Unit Summary Table, its operation is not further addressed in the permit.

A facility site map is attached to this report that shows the location of the tanks.

Inspection Narrative

I arrived at the facility at 10:20am. I was met by Mary Peterson and Cindy Ross. We began the site visit by meeting in the facility's conference room for an initial discussion. Greg Reichard joined us for this pre-walkthrough meeting, as well.

We discussed current operations at the facility. I was told that the facility currently employs 12-14 staff, plus Mary and Cindy, who are on-call. The facility is currently operating Monday through Friday from 6am until 8pm; the facility rarely operates on Saturdays. Due to waste minimization efforts from the generators of the materials accepted for treatment at the Aevitas facility, the waste stream has changed since the facility opened for business. There is a lower volume of material coming into the facility for treatment – I was told that the facility takes 40 loads of material for treatment, whereas when the facility operated in Redford Township, they received 20-30 loads per day. The primary generators of the material sent to the Aevitas facility are utilities, such as Consumers Energy, who send wastewaters from some of their sites, and auto-related facilities, such as powertrain production facilities, who send the facility process rinse water having a low oil content.

I was informed that Aevitas has closed the Livonia facility, which was located on Veronica Street, and used for blending oil to product a final product. The blending operations have been moved to this facility, with some of the tanks from the Livonia facility being moved here; 5 unheated tanks were moved to this facility to store finished product, with one of them used to store virgin oil material. The blending operation occurs at the south side of the processing building. Aevitas will provide me with a list of the equipment moved to the Detroit facility. In PTI No. 10-12, there are some blending tanks included in the Emission Unit Summary Table, but they were not otherwise included in the permit.

We also discussed the scrubber system. The scrubber system consists of a vertical scrubber upstream of a horizontal scrubber. I was told that the vertical scrubber is operating fine, but that the horizontal scrubber is not operating. Aevitas' corporate staff have been told that the horizontal scrubber may not be necessary. The equipment that monitors the ORP and scrubber flow rate are connected the horizontal scrubber; with this equipment not being operational, the monitors are not providing readings. The pH is taken manually, and the ORP and scrubber liquid flow rate also need to be taken manually. I was told that the ORP and flow rates are not always being taken, to which I replied that this is a violation of the facility's Permit to Install.

Mary, Cindy and I then walked around the facility. We walked around the facility grounds, and walked through the process. We observed the outside processing tanks, and we walked through the blending area. Inside of the building, we observed the "pan" area in the northwest corner of the building, where all incoming and outbound materials are accepted/moved via separate lines. We viewed Tanks 51-56, which are used to store and treat wastewaters, and Tanks D1 and D2, which discharge to the POTW. We observed the acid and caustic tanks, and toured the on-site laboratory.

We returned to the conference room, and were met by Jeff Wheeler of Aevitas. He was brought in to further discuss the issue with the scrubber system. According to Jeff, the vertical scrubber is currently operational, but there is a leak inside of it. Regarding the horizontal scrubber, the PLC (programmable logic controller), which is a data logger that also adjusts scrubber operating parameters and the motors, is not currently working. I was told that facility staff are working with Aevitas corporate staff to get the PLC fixed, and to get the entire scrubber system analyzed and repaired.

I left the facility at around 1:20pm.

Permits/Regulations/Orders/Other

Permits

The Aevitas facility was issued DEQ-AQD Permit to Install (PTI) No.10-12 on April 3, 2012. This permit addresses the various process and storage tanks associated with the oil and oily wastewater treatment process. The permit includes an Emission Unit Summary Table that lists all of the pieces of process equipment that were included in the permit application and considered during the permit review process. Some of this equipment is exempt from permitting requirements, and is only listed in the Emission Unit Summary Table, with no corresponding permit requirements. This equipment includes:

- The six fixed-roof storage tanks with a storage capacity of 19,500 gallons that receive oily liquid industrial waste. These tanks, which make up FG1, are identified as EU-Tank11, EU-Tank12, EU-Tank13, EU-Tank14, EU-Tank15 and EU-Tank16.
- The six fixed-roof petroleum product storage tanks with a storage capacity of 19,500 gallons. These tanks, identified as EU-Tank41 through EU-Tank46, are used to store the recycled oil product.
- Eight fixed-roof storage tanks located inside of the building that are used to store and process the wastewater generated during the treatment processes. These tanks, designated as EU-Tank51 through EU-Tank56 and EU-TankD1 and EU-TankD2, have a working capacity of 11,000 gallons.

- Two fixed-roof storage tanks located inside of the building that are used to store sodium hydroxide, which is used in the oily waste/oily water treatment process. These tanks, identified as EU-TankC1 and EU-TankC2, have a working capacity of 11,000 gallons.
- One fixed-roof tank that is used to store acid (sulfonic and sulfuric), which is used in the oily waste/oily water treatment process. This tank, identified as EU-TankA1, has a working capacity of 3,500 gallons.
- EU-Boiler, a natural gas-fired boiler with a heat input rating of 5 MMBTU/hour that is used to produce steam to heat the heating coils associated with the heated treatment tanks.

There is a flexible group, FGFACILITY that applies to all process equipment at the entire facility, including equipment that is exempt and/or grandfathered from permitting requirements.

The following provides a description of Aevitas' compliance with the Special Conditions put forth by Permit to Install No. 10-12; the conditions are grouped under two Flexible Groups, FG-Process Tanks, and FGFACILITY:

FG-Process Tanks

Condition II.1 and 2 (Material Limits) – These conditions limit the amount of material that can be received for treatment at the facility with an oil content greater than 10% (SC II.1), and greater than 90% (SC II.2). Records of materials accepted are kept in a company database. I was provided with a printout of the log of material accepted at the facility from July 2015 through June 2016. This information shows that during this 12 month rolling time period, 1,870,847 gallons of material was accepted with an oil content greater than 10%, and 247,582 gallons of material was accepted for treatment at Aevitas with an oil content greater than 90%. Aevitas is **in compliance** with this requirement. A copy of the printout that I received is attached to this report for reference.

Condition II.3 (Material Limits) – Aevitas is **in compliance** with this condition, which limits the amount of batches that can be treated on a daily and monthly basis that contain an organic halide concentration of 100 ppmw or greater. During my site visit, I was told that Aevitas does not deal with much waste with a halide content this high; the types of oily material that they get from their customers doesn't contain this high of a halide content. The last column of the printout referenced for SC II.1 and 2 shows how many loads were "halide positive", which is based on a lower threshold. This column indicates that 14 loads were "halide positive" in the 12 month rolling time period from July 2015 through June 2016.

Condition III.1 (Process/Operational Restrictions) – Aevitas is **in compliance** with this condition. Aevitas has submitted a Malfunction Abatement Plan (MAP), as required by the permit, for the scrubber system and the processing operations that vent to the scrubber.

Condition IV.1 (Design/Equipment Parameters) – This condition requires that the scrubber be equipped with devices to continuously monitor the redox potential of the scrubber solution, and the liquid flow rate of scrubber solution being circulated to the scrubber packing. During the site visit, I was told that such devices are not currently operational, and that these parameters are not being monitored as required in the permit. Aevitas is in **non-compliance** with this condition.

Condition IV.2 (Design/Equipment Parameters) – The temperature of the tank contents for the heated tanks is being monitored via a device. **Compliance.**

Condition IV.3 (Design/Equipment Parameters) – Material is being transferred to processing tanks, which requires that the scrubber be maintained and operated in a satisfactory manner. As cited for SC IV.1, the liquid flow rate and redox potential of the scrubber are not currently being adequately monitored in order to ensure that these scrubber operating parameters are being maintained in a satisfactory range. Aevitas is in **non-compliance** with this condition.

Condition IV.4 – Material is being treated in the processing tanks, which requires that the scrubber be maintained and operated in a satisfactory manner. The liquid flow rate and redox potential of the scrubber are not currently being adequately monitored in order to ensure that these scrubber operating parameters are being maintained in a satisfactory range. Aevitas is in **non-compliance** with this condition.

Condition VI.1 (Monitoring/Recordkeeping) – This condition puts forth the recordkeeping requirements related to the material limits in SC II.1 and 2. As mentioned in the entry for that SC above, these records are kept in a company database, which I was shown, and I was provided a printout that summarizes the type (by oil content)

and amount of material accepted at the facility from July 2015 through June 2016. Aevitas is **in compliance** with this requirement. A copy of the printout that I received is attached to this report for reference.

Condition VI.2 (Monitoring/Recordkeeping) – Aevitas is **in compliance** with this condition, which puts forth the recordkeeping requirements related to the material limits in SC II.3. The same printout referenced in write-up for the last condition also includes a sample of the records required by this condition.

Condition VI.3 (Monitoring/Recordkeeping) – Aevitas is in **non-compliance** with paragraphs b. and c. of this condition. Paragraph a. requires that the pH of the scrubber solution be monitored once per shift, which is being done. Paragraphs b. and c. require that the redox potential and flow rate of the scrubber solution be monitored and recorded, which is not being done at this time due to the lack of operational devices to monitor these parameters, as mentioned in the entry for SC IV.1.

Condition VI.4 (Monitoring/Recordkeeping) – Aevitas is **in compliance** with this condition, which requires that the maximum temperature of the contents of each tank be monitored and recorded, on a batch basis. I was provided with some examples of Shift Reports that show this information being kept.

Condition VI.5 (Monitoring/Recordkeeping) – Aevitas is **in compliance** with this condition. Per paragraphs a. and b., the identification of each waste generator and the amount of material received for treatment for each generator is being maintained. I was told during my site visit that this information is kept in database, and that the information is part of the facility's billing system.

Condition VI.6 (Monitoring/Recordkeeping) – Aevitas is **in compliance** with this condition, which requires information to be monitored and recorded for each batch treated at the facility. I was shown Shift Reports that show that a. the amount of material processed in the batch, b. the tank in which processing occurs, c. the amount and type of chemicals used during the processing of the batch and d. the time period over which processing occurs are being kept.

Conditions VIII.1 – This special condition puts forth the parameters (minimum height above ground, maximum exhaust diameter) for the scrubber stack. The dimensions in the permit condition were provided during the permit review. I did not verify these dimensions with the facility; I am assuming that they are compliant with the dimensions in the permit conditions

FGFACILITY

Condition II.1 (Material Limits) – This condition limits the maximum organic halide concentration in used oil received for treatment to 1,000 ppm by weight. During the site visit, I was told that none of the loads that Aevitas accepts for treatment at this facility have organic halide concentrations anywhere near 1,000 ppm by weight. Aevitas is **in compliance** with this condition.

Condition II.2 (Material Limits) – Aevitas is **in compliance** with this condition, which prevents the facility from accepting material regulated as a hazardous waste, and limits the PCB content of incoming materials to less than 50 parts per million, by weight (ppmw). Aevitas does not accept material that is regulated as a hazardous waste per state or Federal laws and regulations. Also, all loads accepted at the facility are analyzed for PCB content; any load having a PCB content greater than 2 ppmw is not accepted at the facility.

Condition III.1 (Process/Operational Restrictions) – Aevitas is **in compliance** with this condition. Aevitas has submitted an Odor Management Plan (OMP), as required by the permit, for all process operations at the facility. The OMP is maintained on file at the facility, and there is a copy kept in the facility file for the Aevitas facility in the AQD-Detroit Office.

Condition III.2 (Process/Operational Restrictions) – Aevitas is **in compliance** with this condition. Aevitas has submitted a Fugitive Dust Control Plan. During the site visit, we discussed the measures taken by the facility to control dust. There is not as much vehicle traffic on unpaved areas as anticipated when the permit and the dust plan were written. Aevitas utilizes steam to clean the grates in the loading and offloading areas of any accumulated dirt and oil residue to prevent track out.

As a result of the compliance issues described associated with some of the permit special conditions in the FG-Process Tanks flexible group, a Violation Notice was issued to Aevitas, dated August 17, 2016.

Odor Complaints

In 2016, Aevitas has received a complaint from a neighboring property early in the year, and they received three

complaints from DTE in July through which DTE contacted Aevitas regarding odor complaints that DTE had received reported natural gas odors in the area. During their investigation of the natural gas odor, DTE contacted Aevitas as a potential source of the odor. I was told during the site visit that Aevitas worked with DTE to address the odor complaints, including suspending operations at the facility during a couple of the complaint events in case facility operations were causing any odor downwind of the facility. The AQD-Detroit Office has not received any complaints about the Aevitas facility in 2016.

Compliance Determination

Based upon the results of the August 12, 2016 site visit and subsequent review of facility records, the Aevitas Specialty Services facility in Detroit is currently **not in compliance** with some of the terms and conditions of Permit to Install No. 10-12, as identified in the section of this report titled "Permits/Regulations/Orders/Other". As a result, a Violation Notice was issued to Aevitas in correspondence dated August 17, 2016.

During my site visit, Aevitas staff and I discussed the company's plans to repair and upgrade the scrubber and its associated parametric monitors/gauges (e.g. scrubber liquid flow rate monitor, ORP monitor). Aevitas' response to the Violation Notice is due by September 7, 2016. Aevitas will be expected to present a compliance plan that adequately addresses the issues with their scrubber going forward.

Attachments to this report: Information from Aevitas with a cover letter dated August 17, 2016 that contains a map of the Aevitas facility; monthly and 12 month rolling time period records of the amount of material received for treatment at the facility from July 2015 through June 2016; a monthly for April 2016 showing the number of batches containing an organic halide concentration of greater than 100 ppmw; examples of Shift Reports that are kept by facility staff that show, among other items, the maximum temperature of the contents of heated tanks for a batch; and maintenance work records for the odor control system and fugitive dust management for July 2016.

NAME Steelman DATE 8/24/16 SUPERVISOR JK