



Region 2 Enforcement & Compliance Assurance Division
Air Compliance Branch
CAA Inspection Report

Inspection Date: 7/15/2021
Facility Name: Albany County Water Purification District - NORTH PLANT
Facility Address: 1 CANAL RD S OFF JONES RD MENANDS, NY 12204
ICIS-Air ID #: NY0000004012600138
Facility Contact: Craig Hurteau, Permit Compliance Manager
EPA Lead Inspector: Phillip Ritz
EPA Asst. Inspector: Julian Velez
State Inspector(s): Mark Lanza fame
Other Inspector(s): Other inspector name, title, phone number.

Pertinent Regulatory Requirements

Albany County Water Purification District (ACWPD) operates a wastewater treatment facility (North Plant) that is designed for an average flow of 35 million gallons per day (MGD). Primary components of the wastewater treatment process consist of preliminary treatment (grit screens), primary clarifiers, aeration tanks, final clarifier, sludge holding tanks, and chlorination tanks. Sludge removed during the wastewater treatment process is thickened using dissolved air floatation units, chemically conditioned for odor control and coagulation/flocculation, and then dewatered using a belt press. The cake from the belt press is incinerated in one of two multiple hearth incinerators, each of which vents to a VenturiPak™ scrubber system, with only one incinerator in operation at any given time. Incinerator ash is managed in two on-site lagoons, where the ash is allowed to dry prior to being sent off site for use (under a Beneficial Use Determination) or disposal.

The North Plant includes two 1214 horsepower Caterpillar C27 diesel-fired emergency engines, which are exempt from permitting as described at 6 NYCRR 201-3.2(c)(6). The facility must comply with the applicable portions of 40 CFR 60 Subpart IIII.

Diesel fuel for the generator engines is stored in an 8,000-gallon horizontal above ground storage tank that is exempt from permitting in accordance with 6 NYCRR 201-3.2(c)(26). A 60 kW natural gas-fired emergency generator also is subject to the RICE MACT, but is not used in a demand response program and is exempt from permitting in accordance with 6 NYCRR 201-3.2(c)(3)(ii).

A gasoline dispensing facility, which is exempt from permitting in accordance with 6 NYCRR 201-3.2(c)(16), is used to fuel ACWPD vehicles and equipment with gasoline and diesel fuel, which are stored in vertical tanks. The diesel tank is exempt from permitting in accordance with 6 NYCRR 201-3.2(c)(21).

Summary of Observations

The EPA and NYSDEC inspectors arrived at facility at 10 AM. In a brief meeting, Facility representatives stated that the plant was built in the 1970s. The plant takes wastewater from approximately eight (8) municipalities, about 10% of the City of Albany, and industrial discharges. Many of these municipalities still have septic tanks. This plant uses chlorine disinfection. The facility operates Monday to Friday because of low sludge generation during the weekend. North Plant representatives collect sludge samples every 2 months for metals analysis and receives and retains paperwork from dental offices on site (for mercury tracking).

The facility tour started at the preliminary treatment building. Inspectors observed 5 pumps (there is expansion room for one more pump). There are separation grid channels for organic settlements and conveyer belts. The water looked greasy (due to the restaurant discharges).

Tanks with bubble diffusers (4 separation tanks) slow down the velocity of the water before blending primary effluent with some final effluent (for microbial activity). There are 4 gates for secondary treatment. Activated sludge enters the aeration tanks with ceramic diffusers for better transfer of oxygen (these ceramic diffusers were installed in early 2000s). The residence time through the aeration tanks is approximately 8 to 9 days.

Distribution channels transfer the wastewater to six (6) clarifier tanks. At the outflow area after wastewater treatment there is chlorine disinfection using sodium hypochlorite. During the inspection, inspectors noticed some suspended particulates, which the facility representatives stated was due to storm runoff.

In the incinerator building there is a belt press to remove excess water from the wastewater sludge. Incinerator exhaust is monitored for oxygen and heat levels through the hearths. The facility used to have a power generation system running on the waste heat from the incinerator but there were problems with the heat exchanger and its associated costs. The power generation system has not been used since 2017. The scrubber system contains condenser and mist. The temperature exiting the exhaust stack is approximately 60 °F.

There is a cooling air fan for ash handling. Venturi scrubber water is sometimes combined with the ash. If repairs are needed, they can be done in 2-days shutdown during weekend. The incinerator can take 2 days to cool off. We noticed a small amount of leaking water at the base of incinerator #2 where ash was conveyed out with scrubber water.

The facility is currently repairing the interior of the other incinerator (Incinerator #1). Incinerator #1 has been OFF since 2016.

The final part of the walk-through was at the ash lagoon. We finished the inspection at approximately 1pm.

We returned the following day, on July 16, for a discussion of the stack test. On August 6, 2020, the unit operated at 7.65 tons per hour. The stack test on May 28, 2020 had three runs, the lowest of which was 4.16 tons per hour.

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9/2/2021

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Lead Inspector

Signed by: PHILLIP RITZ

Assisting Inspector's Name: Julian Velez

9/2/2021

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9/2/2021

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Supervisor

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