

**Region 2 Enforcement & Compliance Assurance Division
Air Compliance Branch**

Inspection Report

Inspection Date: March 1, 2023
Facility Name: Albany County Water Purification District - South Plant
Facility Address: 209 Church Street, Albany, NY 12204
ICIS-Air/RMP ID #: NY0000004010100020
Federal Facility: No
NCI: None
Facility size: Major
Activity: FCE
State Referral: No
EJ: Yes
NAICS code: 221310 Water Treatment Plant
EPA Lead Inspector: Joseph Cardile, 212-637-4054
EPA Asst. Inspector: Phillip Ritz, 212-637-4064
ERG Asst. Inspectors: Steve Rapp, ERG Inspector, 339-364-4264
Elizabeth Hubbard, ERG Inspector Trainee, 336-543-7326

State Inspector: Rahman Rafique, New York State Department of Environmental Conservation
("NYSDEC")

Facility Contact: Craig A. Hurteau, Permit Compliance Manager, 518-447-1619

Information Sources Consulted:

- ☐ ICIS-Air (Integrated Compliance Information System)
- ☒ ECHO (Enforcement and Compliance History Online)
- ☐ TRI (Toxic Release Inventory)
- ☒ CEDRI
- ☐ Dun & Bradstreet
- ☐ EnviroFacts
- ☒ State Contact
- ☒ State Website/Database
- ☒ File Review
- ☐ Google/Bing/Aerial Photographs/Maps/Diagrams
- ☐ Facility Website
- ☐ Previous Inspection Reports
- ☐ Information Collection Request
- ☒ Other

1. Plant Description:



Albany County Water Purification District (ACWPD) operates a wastewater treatment facility (“South Plant” or “facility”) that is permitted for an average flow of 29 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 flotation units, chemically conditioned for odor control and coagulation and flocculation, and then dewatered using a belt press. The cake from the belt press is incinerated in one of two multiple hearth incinerators, with only one incinerator in operation at any given time.

In its Clean Air Act (CAA) Title V permit, the South Plant is defined by the following emission unit(s): Emission unit 1SSISP - This emission unit consists of two seven-hearth furnaces (“MHF01” and “MHF02”) that incinerate sewage sludge generated from the treatment of municipal wastewater received at the South Plant. Each furnace is vented to an Envirocare VenturiPak™ Scrubber System consisting of a quench stage, condenser stage, venturi, and high efficiency mist eliminator. Emission unit 1SSISP is associated with the following emission points (EP): 00001, 00002. Incineration of sewage sludge in two multiple hearth furnaces (MHIs) is located at the Solids Building. Incinerator ash is managed in two on-site lagoons, where the ash is allowed to dry prior to being sent off site to the Albany landfill for use or disposal.

The MHIs are subject to 40 C.F.R. Part 60, Subpart M; 40 CFR Part 61, Subparts C and E; and 40 CFR Part 503, Subparts A and E. The contaminants regulated under 40 C.F.R. Part 60, Subpart M, “Emission Guidelines and Compliance Times for Existing Sewage Sludge Incineration Units” (“Subpart M”) are cadmium (Cd), lead (Pb), mercury (Hg), sulfur dioxide (SO₂), oxides of nitrogen (NO_x), carbon monoxide (CO), dioxan/furans (d/f), hydrogen chloride (HCl) and particulates (PM).

The South Plant includes a 1,250 kilowatt (kW) diesel fired stationary internal combustion engine that is primarily used for emergency backup purposes. The engine is subject to 40 CFR 63 Subpart ZZZZ. Diesel fuel for the engine is stored in a 4,000-gallon horizontal storage tank.

2. Compliance History:

Based on a review of EPA's Enforcement and Compliance History Online (ECHO) website, it appears the State has conducted 3 FCEs and 3 PCEs (including 1 stack test observation) on-site and EPA has conducted 1 FCE and 2 PCEs (including 1 stack test observation), on-site since 2018. There do not appear to be any formal or informal CAA federal enforcement actions taken at the facility over the past five years.

3. Facility Entry:

The representatives of the U.S. Environmental Protection Agency (EPA), Joseph Cardile and Phil Ritz, as well as Steve Rapp and Elizabeth Hubbard from Eastern Research Group (ERG), arrived at the South Plant at approximately 9:00 am. Shortly after, the representative from the New York State Department of Environmental Conservation (NYSDEC), Rahman Rafique, arrived. The EPA representatives ("the inspectors") were met at the administration building by: Craig Hurteau, Permit Compliance Manager, and Jacob O'Connor, Permit Compliance Technician ("the facility representatives") of the ACWPD. The inspectors and facility representatives met in a conference room for the opening conference. The inspectors presented their identification credentials and provided an overview and scope of the inspection, including a focus on the requirements of Subpart Mmmm.

4. Entry Conference/Technical Discussion:

The facility representatives provided general background and history of the South Plant. The two sewage sludge incinerators (SSIs) were constructed in 1973. ACWPD generally incinerates sludge two to three days per week and only runs one unit at a time and currently, MHF01 has not operated since 2018 and would not be readily operational due to the use of some of its parts for maintaining MHF02. If MHF02 goes down, the facility representatives said that they would rebuild MHF01 to run.

ACWPD currently has approximately 60 employees that work at ACWPD's South Plant, and the North Plant, located on Canal Road, Menands, NY 12204. The water treatment portion of the facility runs five to six days per week and processes between 20 to 22 million gallons of wastewater per day. In 2022, the average sludge feed rate was 1.34 dry tons per hour (dtpH) and the high was 1.67 dtpH. The solids content of the sludge burned is typically in the mid-20's percent which is achieved using a belt press and is calculated daily based on analysis performed by ACWPD's laboratory. The inspectors noted that the facility's CAA Title V operating permit Item 34.1 sets a design capacity of each MHI as 4,626 tons of sewage sludge per year. The facility representatives explained that they take three grab samples of sludge per day but analyze one sample per day for moisture content.

The facility representatives explained that, based on a 2018 Consent Order with NYSDEC, in July 2022, the ACWPD developed a long-term sludge disposal study that includes an engineering plan with options for operational improvements and increased efficiencies at both the North Plant and South Plant facilities. They explained that the current draft study includes the possibility of rehabilitating the SSIs at both facilities or rehabilitating the North Plant SSI and piping wet sludge from the South Plant to the North Plant for processing and incineration. Of the

alternative scenarios evaluated in the study, ACWPD determined that consolidation of South Plant and North Plant sludge handling processes would be the most cost-effective and energy efficient means of long-term sludge disposal. In this scenario, un-thickened liquid sludge generated at the South Plant would be pumped to the North Plant via an approximately four-mile-long six-inch pipe. The study says that improvements would be made to the North Plant dewatering processes to accommodate the increased sludge volumes. The North Plant incinerators would also be rehabilitated and improved, and the incinerators will have adequate capacity to meet the projected maximum month combined sludge production condition. Consolidation of the solids handling processes would allow the ACWPD to decommission the South Plant incinerators, reducing operating and energy costs significantly. According to the July report, the estimated capital cost of the overall recommended consolidation project is \$46,350,000 and could take several years for permitting and construction. They explained that they are finalizing the report and expect to submit the final report to NYSDEC soon.

The inspectors asked if there had been any major equipment changes to the South Plant since its construction in 1973. The facility representatives said that the ACWPD had replaced the original rotary sludge dryers with belt presses. They also noted there had been some pump replacements and that the ID fans are noisy and need maintenance or replacement. The inspectors noted that the repairing and rebuilding of an SSI can be considered a “reconstruction” under section 129 of the CAA, as well as “modification” under New York’s New Source Review (NSR) permitting regulations. They noted that the section 129 reconstruction differs from a modification or reconstruction under either New Source Performance Standards (NSPS) under section 111, or NSR modification under section 110 of the CAA. They noted that for SSIs, the reconstruction applicability threshold is when a facility’s cumulative costs over the lifetime of the unit exceed 50% of the initial construction cost with some exclusions, like pollution control equipment. They noted that if the costs of rehabilitating the North plant were added to the changes made to the plant over the past 50 years, the plant could be considered reconstructed and therefore, could be subject to the NSPS SSI regulations under 40 C.F.R. Part 60, Subpart LLLL, “Standards of Performance for New Sewage Sludge Incineration Units.”

Sludge Incineration Process:

The facility representatives described the operation of the multi-hearth incinerators as follows. Activated sludge is sent to dissolved air flotation tanks, then to holding tanks, then to the belt press and the dewatered sludge travels by conveyor to the top of and into the MHI. The MHIs have 7 hearths. Hearths 1 and 2 dry the sludge. Hearths 3 and 4 are the combustion zone and MHF02 is permitted to operate at or above 1,353 degrees Fahrenheit (°F). Hearths 5 through 7 complete combustion and cool the ash.

Air Pollution Control Bypass:

The inspectors asked if the SSI had an emergency bypass stack and if so, how often it was used. The facility representatives said that there was a bypass, and it was used frequently but for short durations due to power outages that temporarily knocked out the induction (ID) fan. They estimated that the total for the year was fewer than 10 hours. They added the facility does not currently have an automated monitoring system for the bypass events but uses visual monitoring to determine when the damper is open or closed, as well as for opacity at the stack which would be very visible if the bypass was open.

Ash Handling:

The facility representatives described the ash handling at the facility. Ash from the SSIs falls from the lowest hearth to a hopper where it is combined with scrubber effluent and then pumped by pipes to outdoor lagoons. Each of the ash lagoons has a storage capacity of approximately one year after which they are drained, piled, put into trucks, and hauled away by truck to a landfill or composting operation. The inspectors asked what steps the facility takes during the ash handling process at the outdoor lagoons to minimize fugitive emissions, particularly during the process of emptying one of the lagoons. The representatives explained that the superintendent checks progress periodically, including sampling the material. The inspectors expressed concern that the current ash handling plan, which appears to consist of section 4, “Bag Leak Detection” in the site-specific monitoring plan (SSMP) and section 5, “Ash Handling System Description” of the SSMP Appendices, does not discuss how the facility will minimize fugitive emissions from the outdoor aspects of the ash handling and, therefore, the plan should be updated to include any standard operating procedures used to minimize fugitive ash emissions from the lagoons, including the periods of time when one of the lagoons is being emptied.

Air Pollution Control System:

The inspectors asked if the facility had a final control plan (FCP) that described how each of the nine pollutants regulated by Subpart Mmmm is controlled as required by the regulations (Subpart Mmmm, section 60.5110) and Item 56.2 of the facility’s Title V permit. The facility representatives said they did not have a control plan but described the air pollution control systems of the incinerators. They explained the flue gas exhaust from the SSI first goes through the EnviroCare scrubber system, installed in 2003, that includes several stages or types of scrubbing units in the same housing, including a quench section, a venturi scrubber section, two impingement tray scrubbers, and a mist eliminator section. They said the scrubber system controls PM, metals, HCl, and SO₂. The representatives explained that the water used in the scrubbers is the treated effluent from the wastewater treatment at the facility. However, they noted that pH of the effluent is not typically adjusted. To control products of combustion, the facility representatives said that the operators rely on adjustment to the sludge feed rate, combustion temperature, and excess air. They said excess air is controlled by monitoring and adjusting the return air fan by tracking the fan speed as percent of maximum. The gas goes from the scrubber unit out the stack on the roof of the solids building.

Petition to EPA and Site-Specific Monitoring Plan

The inspectors expressed concern that for NO_x, Hg, and d/f, it appeared that the facility had not yet established monitoring parameters, set limits for those operating parameters during stack tests, or demonstrated continuous compliance. They explained that section 60.5175 of Subpart Mmmm requires an SSI to submit a petition to EPA if an air pollution control device other than a wet scrubber, fabric filter, electrostatic precipitator, activated carbon injection, or afterburner is used, or if an SSI limits emissions in some other manner (e.g., materials balance), to comply with the emission limits in section 60.5165 and Table 3. The inspectors explained that section 60.5175 requires the petition to identify, among other requirements, the specific parameters that would be monitored, including a discussion of the relationship of the parameters and emissions and how minimum or maximum values will be established and averaging times for the monitoring. The inspectors explained that where a petition is required, EPA must approve the petition prior to the facility conducting initial performance testing or finalizing its SSMP under section 60.5200 of

Subpart M MMMM. The inspectors indicated that without an approved petition, it appears that the initial testing and current SSMP were incomplete. The facility representatives said that they had not submitted a petition to EPA regarding control and monitoring of Hg, d/f, or NO_x, because they believed NO_x was controlled by the amount of excess air in the combustion chamber, Hg by the scrubber, and d/f by temperature.

The inspectors explained that other MHIs have developed, and EPA has approved, petitions regarding Hg, d/f, and NO_x because the presumptive control for Hg and d/f in Subpart M MMMM is an activated carbon (or other sorbent) injection system. Regarding Hg, other MHI's petitions have included periodic comparison of the metals analysis of sludge to a maximum theoretical emission concentration (MTEC) of Hg calculated using the Subpart M MMMM emission limit and the stack gas flow rate for the specific SSI. The representatives said it was their understanding that Hg sticks to PM and therefore, believed that it would be controlled in the scrubber or be removed as ash. Regarding d/f, the inspectors said similar facilities were able to demonstrate that it was controlled using a combination of temperature and oxygen. Regarding NO_x, the inspectors noted that similar facilities demonstrated control of NO_x using a combination of controlling for maximum combustion temperature, feed rate, and oxygen.

The inspectors noted that the SSMP and Appendices was the same for both the North and South Plants. They said the current SSMP should be revised to provide additional detail regarding the specific locations of the monitors and how the monitors meet the performance criteria required by Section 60.5200 of Subpart M MMMM at each facility. The facility representatives said that they use standardized equipment at both the North and South Plants and the pH monitors were the same and very likely that the flow, pressure, and temperature monitors were also. The inspectors asked if ACWPD conducted performance evaluations of its parameter monitoring devices around the time of the emissions testing. The facility representatives explained that the performance testing of the monitors is typically done prior to testing.

Emissions Testing:

Based on a review of the South Plant's emissions test reports, the inspectors noted several concerns with the emissions testing, including ambiguity as to whether tests had been conducted at more than 85% of the maximum capacity as required by Subpart M MMMM (section 60.5220(a)(11)). They noted that Item 34.1 of the permit authorized a design capacity of 4,626 tons per year of sludge per MHI, but it was not clear whether the feed rate during testing represented 85% of the hourly or 4-hour maximum of the unit. The facility representatives said that typically, MHF02 ran at or below 5.5 wet tons per hour (wtph). The inspectors noted that the average feed rate indicated in the 2022 test report was 4.58 wtph, which would be approximately 83% of the typical rate. The inspectors recommended that prior to future testing, ACWPD look at historical hourly and 4-hour average wet and dry feed rates records to determine what the operational short-term maximum feed rates had been, to develop a test plan that reflected conditions representative of the upper range of operation.

They expressed concern that several of the tests, including 2017 and 2018 consisted of only three one-hour runs for O₂, CO₂, and NO_x. Similarly, the test report from 2022 indicates that testing for O₂, CO₂, CO, NO_x, and SO₂ consisted of three one-hour runs. They noted that Section 60.5190(e) of Subpart M MMMM requires SSIs to set a parameter limit for minimum temperature

equal to the lowest 4-hour average combustion chamber operating temperature (or afterburner temperature) which is important for pollutants controlled by a minimum combustion temperature.

The facility representatives noted that the next emissions test at the South Plant is scheduled for June or July 2023 only for NO_x. The inspectors noted that while ACWPD had not yet specified parameters for ensuring continuous compliance with the NO_x emission limit, testing conditions will need to be comprehensive enough for setting parameters limits for all the combustion related pollutants which may need opposite values of the same parameters, for example, a maximum combustion oxygen and temperature for NO_x but a minimum combustion oxygen and temperature for d/f, CO, and PM.

Regarding reporting of testing reports, the inspectors noted that although NYSDEC may require reports be submitted through a state system, ACWPD is required by Subpart Mmmm (section 60.5235) to submit test reports to EPA through its “Compliance and Emissions Data Reporting Interface” (CEDRI), specifically the electronic reporting tool (ERT) accessed through EPA’s central data exchange (CDX). They noted that ACWPD likely currently submits discharge monitoring reports (DMRs) under the Clean Water Act through CDX which should facilitate the process.

Operating Parameter Limits (OPLs) and Deviation Reports:

The inspectors expressed a concern that based on the facility’s emissions testing and deviation reports, it appeared that the deviations reported for scrubber flow, scrubber pressure drop, and combustion temperature appeared to be based on values from various historic tests, rather than the last required test for the pollutants controlled by those parameters, as required by Subpart Mmmm, section 60.5210(d)(1). For example, for pH, it appeared that deviations were determined using the permit limit of 4.5, based on the July 2018 Order on Consent with NYSDEC, rather than on the most recent test for SO₂ in 2022 or HCl in 2021. The facility representatives said that their understanding was Subpart Mmmm required re-establishing parameter limits only when emissions testing was required for “all” of the pollutants simultaneously. The inspectors expressed concern with that interpretation of the regulations and again noted sections 60.5210(d)(1) and 60.5205(a). Additionally, the inspectors pointed out that section 60.5210(d)(1) requires operating limits be based on operating data recorded during any performance test required in Section 60.5205(a) and that new values for the operating limits be applied from that point forward. The inspectors expressed concern that based on review of deviation reports and hourly data, it appeared the facility would have difficulty meeting the OPLs for pH, temperature, scrubber pressure drop, scrubber flow, continuously if they were set based on recent test data for applicable pollutants.

The facility representatives explained that in the past, they requested changes to the OPLs as minor permit modifications. They said they checked with NYSDEC before each test to determine which pollutants needed to be tested and which parameters would be considered. For example, if Pb, Cd, and PM required testing, they would request a permit modification for scrubber pressure drop based on the test. Further, they believe that for some parameters, they believed they would have fewer deviations if they used the test results and not the current permit values.

Regarding temperature, the inspectors noted that ACWPD's documents, including the "Biosolids Furnace Operator Certification Technical Reference Document" and SSMP Appendices, stated that ACWPD relies on Hearth 1 temperatures as a means of pollutant control, yet the permit required a minimum temperature only for Hearths 3 and 4. The facility representatives explained that initially, ACWPD had monitored Hearth 1 temperatures. However, they now believe that combustion temperature measured in Hearths 3 and 4 are the critical parameters and are monitoring them as required by the permit.

Regarding visible emissions, the inspectors noted that the deviation reports showed deviations from the permit requirement to conduct visual observations of the stack. The inspectors asked if anyone at the ACWPD was a certified smoke reader for conducting EPA reference method 9 opacity observations or reference method 22 visible emissions readings. The facility representatives replied that none of the staff were certified to conduct reference method 9 or 22 observations but that they had a protocol for staff to take informal readings three times per day. The inspectors expressed concern that without a certified smoke reader, the facility could not determine compliance with the permit conditions, such as Item 23.1, which prohibits emissions with an opacity equal to or greater than 20 percent (six minute average) except for one continuous six-minute period per hour of not more than 57 percent opacity.

pH Data:

Regarding pH, the facility representatives noted that the scrubbers used effluent from the wastewater treatment process and that the water discharge permit included a pH limit as a range from 6 to 9. They said that the pH of the wastewater was sampled six times per day. They explained that the scrubber does not use any chemical adjustment of pH and they rely on flow through the scrubber for acid gas control. They said they had analyzed parameter and test data to determine a correlation between other operating conditions, such as sludge feed rate and combustion temperature, but had not found any strong correlation. They believe that because the SO₂ and HCl emission rates during testing were well below the emission limits of Subpart Mmmm, the variability of the ongoing 3-hour averages of the pH was not likely to cause those pollutant emissions to go above the emissions limits. The inspectors noted that because of the range allowed by the discharge permit pH limit, the pH of the water flowing to the inlet of the scrubber could fluctuate significantly and that ACWPD could check the scrubber inlet pH more frequently than every 4 hours to help determine the effect of that variable on pH at scrubber outlet.

The inspectors noted that several other MHIs had analyzed historical parameter data for sludge solids and feed rate, temperature, oxygen or excess combustion air, and scrubber flow, to develop emissions testing plans that were representative of typical operating conditions to set parameters that would allow continuous compliance with Subpart Mmmm. They related that some facilities conducted additional testing and monitoring of SO₂ and HCl emissions to investigate correlations between typical operating parameters and emissions, for example, around testing events when the testing companies would already be at the site. The facility representatives said that they would be concerned about costs of additional testing or monitoring. The inspectors said that where this was not possible or did not produce parameter values that could be met continuously, several MHIs had installed systems to adjust chemically the pH of

the liquid going into the scrubber, for example, by adding a caustic like sodium hydroxide to the inlet of the scrubber.

The facility representatives said that they were currently considering moving the pH probe from the current position at the bottom of the scrubber, just prior to the mixing of scrubber effluent and bottom ash, to a position near the exit of the second impingement tray scrubber. The inspectors noted that such a change would need to be submitted to, and approved by, EPA as an alternative monitoring plan request under Subpart MMMM, section 60.5200(e), including information regarding why the change would be more representative than the monitoring required by Subpart MMMM.

Systems Controls and Data:

The facility representatives showed the inspectors how operating parameter data was monitored and recorded. They explained that parameters are monitored by the SSI operator in the control room who records the data first manually on a clipboard and then electronically in a Microsoft Excel spreadsheet. They showed the spreadsheet color-codes short-term values that are not above or below the required limit, allowing the operator to make corrections before the 12-hour average value becomes a deviation. For example, on the spreadsheet for February 28, 2023, scrubber pressure drop and combustion zone temperatures were highlighted yellow for several hours starting at midnight which was likely caused by startup of the unit. They noted that the oxygen (O₂) and total hydrocarbon (THC) continuous monitors were not tied into the SCADA but that the displays for those parameters were in the control room as well.

Feed Rate:

The facility representatives expressed concern with the requirement to test and set operating parameter limits at a minimum of 85% of the facility's maximum permitted feed rate capacity. They said they did not believe that the permitted design capacity should be considered limiting the plant's hourly feed rate. The inspectors asked how many days of sludge storage capacity the facility has. The facility representatives explained that they currently have four tanks with capacity of approximately 250,000 gallons per tank.

The inspectors noted that Subpart MMMM, section 60.5220(a)(2), requires SSIs to document that the dry sludge burned during the performance test is representative of the sludge burned under normal operating conditions by maintaining a log of sewage sludge burned during the performance test by continuously monitoring and recording the average hourly rate that sewage sludge is fed to the incinerator. Additionally, they noted that even if an SSI typically only monitors its hourly wet feed rate, Subpart MMMM, section 60.5220(a)(2)(ii) requires SSIs to monitor and record moisture content. The inspectors suggested that given the four hours of parameter data needed to set operating parameters, the facility could look at its historical one-hour and four-hour average maximum feed rates to determine a maximum feed rate for future emissions testing that was representative of the upper range of the facility's operation.

The inspectors related that several other SSIs looked at historical feed rate data on an hourly and four-hour average basis to determine a representative feed rate for emissions testing, as is required in section 60.5220(a)(2). They noted that other SSIs had then limited their feed rates to below 115% of the average rate during testing or had to retest if the feed rate went above the

115%. The facility representatives showed the inspectors a spreadsheet that displayed the emissions testing results and average parameter values from 2015 to 2022 for both North and South Plants. The inspectors noted that on February 28, 2023, the wet sludge feed rates were between 1.49 and 2.7 wtph, and the rates on November 22, 2022, were between 3.25 and 3.9 wtph, but the average was 4.58 during emissions testing in 2022. They also looked at a report indicating the daily percent solids of the sludge feed. For example, the report showed from January 4 - 7, 2023, the percent solids were: 26.6, 25.6, 26.4, and 25.3.

The inspectors related that several MHIs had also conducted additional emissions monitoring and testing to gather data on how emissions of pollutants, such as NO_x, CO, and SO₂, varied with changes to operating parameters such as feed rate, combustion temperature, combustion oxygen (excess air), scrubber flow, and scrubber pressure drop.

The facility representatives noted the potential presence of perfluorooctanoic acid (PFOA) and perfluorooctane sulfonic acid (PFOS) in sewage sludge and that ACWPD is currently testing some of its sludge cake and ash for those materials. The inspectors noted that some scientific reports have discussed burning the sludge at temperatures above 2000 °F in order to destroy those chemicals. They noted that some MHIs have thermal oxidizers as the last step in the control train of the exhaust gases.

Operator Training:

The inspectors asked about the facility's operator training program. The facility representatives described the initial and refresher training program and explained that they had nine operators and staff that had taken the initial training as well as the annual refresher training.

Emergency Engines:

The inspectors asked if the facility had any stationary internal combustion engines. The facility representatives explained that there is one diesel-fired 1,250 kW engine at the site that serves as backup power in an emergency. Further, although the engine had been nominally part of a demand-management program with the power utility previously, they never ran as part of that program and have since discontinued their contract to participate in the program.

At approximately 12:40 p.m., the group went to lunch and returned at approximately 1:40 p.m.

5. Facility Tour/Walkthrough:

At approximately 2:00 p.m., facility representatives, joined by incinerator operator, Jason Stevens, led the inspectors on a walk through the facility. The walk through started at the wastewater headworks, followed the water flow along the aerated channel to primary treatment, and then to the grease building. The group then observed the aeration basins and activated treatment areas, the clarifiers, the ultraviolet disinfection station, and discharge point. They then went to the solids handling and processing areas, including the dissolved air flotation (DAF) tanks, sludge storage, belt press, and conveyors to the top of the MHIs. They then proceeded from incineration to ash handling and the ash lagoons.

During the walk through, the inspectors observed the control screens for the scrubbers and noted the following readings. At approximately 2:20 p.m., they observed instantaneous readings of pH between 5.37 and 5.40. At approximately 2:25 p.m., the instantaneous scrubber flow fluctuated between 554 and 556 gallons per minute. The pressure drop across the scrubber system varied between 23.0 and 23.2 inches of water column. The flow through the venturi section of the scrubber unit varied between 43.5 and 43.6 gallons per minute, and the pressure drop across the venturi section varied between 15.0 and 15.1 inches of water column.

In the control room, the inspectors observed there was a screen displaying the total hydrocarbon (THC) and oxygen (O₂) readings. They observed O₂ readings between 1:54 p.m. and 2:17 p.m. varied between 7.5 and 10% and THC readings, corrected to 7% O₂, between 30 and 65 parts per million (ppm). They also observed instantaneous temperature readings for Hearth 1 of 987 F, Hearth 2 of 1010 °F, Hearth 3 of 1249 °F, Hearth 4 of 1336 °F, and Hearth 5 of 1336 °F.

When the group was at the top of MHF02, they noted visible emissions of smoke being emitted out of the opening in Hearth 1 where the sludge is fed into the incinerator. They observed a noticeable haze in the air. The inspectors expressed concern to the facility representatives who informed the incinerator operator in the control room. The facility representatives indicated that they believe that the smoky condition was caused by the ID fan pressure being too low, and in response, the operator adjusted the combustion air intake flow to increase flow through Hearth 1. The inspectors expressed concern that it appeared that the plant personnel did not appear to have sufficient information available in the control room for ensuring good combustion was occurring continuously which required balancing temperatures, oxygen levels, and feed rates. Outside the solids building, they observed visible emissions from the stack but were not able to take an official reading.

Outside at the ash lagoons, the inspectors observed that not all of the ash material was covered by water and there were areas like islands above the water line. They expressed concern that during summer months, such material above the waterline could dry out and cause visible emissions. The facility representatives said that operators checked the lagoons daily to make sure there were no visible emissions.

The inspectors asked to see the backup engine but the housing to the equipment was locked.

6. Exit Conference:

At approximately 3:15 p.m., group returned to the conference room for a closing conference. The inspectors explained that they would recap areas of concern as noted during the inspection and that they would be writing an inspection report within the next 60 days that they would share with the facility.

Areas of Concern:

The inspectors noted the following areas of concern that were discussed during the inspection, including but not limited to:

- Visible emissions from MHF02's Hearth 1 feed chute observed during the plant walk through.
- The lack of a petition to EPA regarding control of Hg, d/f, and NOx, and associated ongoing compliance monitoring.
- An incomplete SSMP due to the lack of an approved petition specifying monitoring parameters and devices for Hg, d/f, and NOx, as well as the facility's changes to temperature monitoring locations.
- The need for a comprehensive test for all pollutants after the petition and revised SSMP have been approved.
- Ongoing pH deviations at the scrubber.
- Insufficient data from testing combustion related pollutants in 2017, 2018, and 2022, needed to establish a minimum combustion temperature operating parameter based on a four-hour average.
- The lack of re-established operating parameter limits after annual or triennial performance tests for applicable pollutants.
- The lack of clarity regarding maximum feed rates and whether initial compliance and subsequent performance tests have been conducted above 85% of the maximum.
- The lack of test reports submitted to CEDRI/ERT from 2015 to 2022.
- The need for an ash handling fugitive emissions plan that includes how fugitive emissions are minimized and monitored at the ash lagoons, including during periods when lagoons are being emptied.
- The lack of a monitoring system for bypass events.

The inspectors thanked the facility representatives for their time and assistance in understanding the operation of the facility. The inspectors departed the facility at approximately 4:30 p.m.

Inspection Plan Sign-Off

Assisting Inspector's Name: Steve Rapp, ERG

X **Steve Rapp** Digitally signed by
Steve Rapp
Date: 2023.03.30
16:30:44 -04'00'

Assisting Inspector

EPA Lead Inspector's Name: Joseph Cardile

X **JOSEPH
CARDILE** Digitally signed by JOSEPH
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Lead Inspector

EPA Assisting Inspector's Name: Phillip Ritz

X **PHILLIP
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Phillip Ritz
Assisting Inspector

Supervisor's Name: Harish Patel

X **HARISH PATEL** Digitally signed by HARISH PATEL
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Supervisor

