United States Environmental Protection Agency
Office of Enforcement and Compliance Assurance
Office of Criminal Enforcement, Forensics and Training

National Enforcement Investigations Center

NEIC

NEICVP1496E01

NEIC CIVIL INVESTIGATION REPORT
Chemical Waste Management, Inc.
Sulphur, Louisiana

Investigation Dates:
February 7-16, 2023

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INVESTIGATION OVERVIEW

PROJECT OBJECTIVE

At the request of U.S. Environmental Protection Agency (EPA) Region 6 (Region), EPA's National Enforcement Investigations Center (NEIC) conducted a Resource Conservation and Recovery Act (RCRA) compliance investigation of the Chemical Waste Management, Inc. – Lake Charles (CWM) facility located at 7170 John Brannon Road in Sulphur, Louisiana 70665. The investigation assessed CWM's compliance with federal environmental statutes and permit requirements.

This report presents NEIC's field observations during the February 7-16, 2023, on-site inspection of CWM, and the results of NEIC laboratory analyses of samples collected during the inspection. The information presented in this report was collected from background documentation, personnel interviews, direct observations, company-provided documentation, and state and federal government databases.

Table 1 lists the project team members.

Table 1. PROJECT TEAM MEMBERS		
Team Member	**Organization**	**Project Role**
Laura Kanopkin	NEIC	Project manager (PM)
Zach Schlachter	NEIC	Field team member
Jacquelyn Vega	NEIC	Field team member
Erick Zacher	NEIC	Analytical project manager (APM), laboratory team lead
REGIONAL AND OTHER CONTACTS		
John Penland	EPA Region 6	Primary regional contact
Jimbo Earles	Louisiana Department of Environmental Quality (LDEQ)	RCRA inspector

FACILITY CONTACT INFORMATION

Table 2 lists the primary facility contacts.

Table 2. FACILITY CONTACT INFORMATION		
Name, Title	**Phone No.**	**Email Address**
Judah Fontenot, Environmental Protection Manager	337-583-3631	jfonteno@wm.com
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David Michaelis, Senior District Manager	337-263-7849	dmichael@wm.com
Mark Noel, Director	225-305-5529	mnoel@wm.com

FACILITY OVERVIEW

CWM (EPA ID No. LAD000777201) is a treatment, storage, and disposal facility (TSDF) and a large quantity generator (LQG) of hazardous waste. CWM is permitted by the Louisiana Department of Environmental Quality (LDEQ) to receive, store, consolidate, treat, and dispose a variety of hazardous and non-hazardous waste streams. The facility's permit, hazardous waste permit No. LAD000777201, was renewed effective August 10, 2010. A Class 3 permit modification LAD000777201-OP-RN-MO-1 was issued on March 21, 2017 (**Appendix A**). A renewal application was submitted to LDEQ on February 11, 2020. According to the EPA Enforcement and Compliance History Online (ECHO), the facility was a significant noncomplier under RCRA for the three quarters prior to NEIC's inspection; a RCRA focused compliance inspection conducted by LDEQ in May 2022 identified several compliance issues.

According to the ECHO database, this facility has the following North American Industry Classification System (NAICS) code (**Table 3**):

Table 3. APPLICABLE NAICS CODES

NAICS Code	Description
562211	Hazardous Waste Treatment and Disposal

FACILITY OPERATIONS SUMMARY

CWM is a commercial hazardous and non-hazardous waste storage, treatment, and disposal facility. Waste treatment methods at the facility include bioremediation, stabilization, or macroencapsulation prior to disposal in an on-site landfill. The facility also accepts wastes for storage and subsequent shipment for disposal at other permitted facilities. A thermal desorption unit (TDU) is utilized for non-hazardous or RCRA-exempt waste treatment. The facility contains both active and closed hazardous waste disposal units. Four closed landfills have post-closure requirements under the current RCRA permit.

Operations at the facility are conducted during the daytime except for the TDU which operates 24 hours a day, seven days a week between two operating shifts.

CWM operates an on-site laboratory that is used for fingerprint testing of incoming waste shipments, bench-scale testing, and the development of treatment recipes. All analytical testing done for the purpose of complying with RCRA regulations is sent to off-site accredited laboratories, including analyses for compliance with land disposal restrictions (LDR).

Waste Receiving Process and Laboratory Fingerprint Analysis

According to CWM's Waste Analysis Plan (WAP) (**Appendix B**), potential waste materials to be brought on-site are first reviewed through a pre-acceptance procedure. A generator must submit a waste profile sheet with pertinent chemical and physical data about the waste as well

as LDR information and other supporting documentation such as a safety data sheet (SDS), product ingredients, or documentation of the generator's process knowledge. A sample of the candidate waste stream may also be required if CWM determines that the provided information is insufficient to assess what waste management practices will maintain compliance with permit and operational constraints. CWM decides whether to accept a particular waste based on limitations of the current operating permits, facility capabilities, and compatibility with other wastes stored at the facility.

Except for wastes that are generated on-site, waste received at the facility is typically delivered by truck. Trucks coming through the gate first pass by a Ludlum instrument to screen for radioactivity. A radiation printout is generated whenever the radioactivity of the waste exceeds CWM's established threshold. A sample will be sent for analytical testing to a laboratory off-site to determine if the radioactivity is low enough to treat at CWM. Otherwise, CWM will work with the generator to redirect the waste to an appropriate facility.

Incoming trucks are weighed, and the driver provides the waste profile and manifest to the receiving office for review. Information about the load is entered into CWM's tracking database, and a six-digit receiving ticket identification number is assigned. All accepted incoming loads have been classified as either a characteristic hazardous waste, a listed hazardous waste, or a material which is not a hazardous waste based on CWM's waste approval process.

Visual inspection and sampling are performed on incoming shipments of waste to confirm that it matches the accompanying manifest and pre-acceptance paperwork. The WAP states that all bulk waste shipments should be sampled and analyzed except as noted in Section 5.4. In the case of large volumes of a single waste stream received from a single generator or source, at least 10% of the loads will be sampled and analyzed on a daily basis. At least 10% of containers from a shipment of drums or portable tanks will be sampled and analyzed. Some of the incoming wastes that are not subject to sampling and analysis identified in Section 5.4 of the WAP include: laboratory packs, empty containers of waste materials, asbestos-containing waste, discarded commercial products, debris, medical waste, animal waste, sewage treatment plant sludge, site-generated waste from CWM and CWM subsidiary facilities that can be adequately characterized by process knowledge, and materials designated for storage and subsequent shipment off-site.

CWM's WAP (**Appendix B**) describes the mandatory analyses that are conducted on incoming waste shipments to confirm the waste matches the associated paperwork. These analyses are referred to as the fingerprint analyses and are also used to help ensure appropriate treatment and compatible storage based on the characteristics of the waste. The fingerprint screening analyses include cyanide, ignitability, pH, physical description, sulfides, water compatibility, and radiation. Supplemental analyses are performed as necessary.

Results of the fingerprint analyses are entered into a computer system where they are reviewed by senior chemists to identify any discrepancies with the waste profile. Any discrepancies will be noted in the tracking system. In this event, CWM will call the generator to discuss alternative management options while the truck containing the waste waits on-site for a resolution. An example of a discrepancy that occurred at the facility was the receipt of a load of waste debris that did not meet the definition of debris and could not be treated as originally intended with macroencapsulation. In this example, CWM and the generator arranged to ship the waste off-site for incineration instead.

Storage

The transportation staging building 801 is a permitted container storage area for roll-off boxes containing hazardous waste. The building is divided into 22 bays segregated by pillars, and each bay is further subdivided into four quadrants that can accommodate roughly one roll-off box per quadrant. The building is utilized for waste at any stage in CWM's operations: inbound loads pending treatment, post-treatment waste on hold pending analytical results, waste waiting for retreatment, waste cleared to be disposed in the landfill, waste waiting for off-site shipment, or waste pending resolution of a discrepancy. At the time of NEIC's inspection, CWM was conducting a special project to manage hazardous groundwater for a customer and had multiple portable tanks, or "frac" tanks, stored in building 801.

Containers of liquid and solid hazardous waste are also stored in the "decant" area, which includes buildings 201, 202, and 204. In the past, this area was used for acid neutralization and fuel blending. The area is currently only permitted for storage and macroencapsulation but CWM still uses the term "decant" to refer to this area. Fifty-five-gallon drums and totes are stored in this area and segregated by compatibility using a hazard classification assigned by CWM. When drums and totes are received, they are logged in a Microsoft Access database. Containers are labeled with their respective receiving ticket number assigned to the manifest followed by a line-item number for each waste. They are also labeled with a code indicating the management method (e.g., S01 for ship off-site, D81 for land disposal, etc.) as well as a hazard classification compatibility sticker. Containers are removed from the database when they leave the area for treatment or disposal or are shipped to another facility. CWM representatives estimated that roughly 20% of drums received are sent off-site for treatment, fuel blending, or incineration. CWM receives a significant amount of non-hazardous waste in drums for disposal in the facility's on-site landfill. According to CWM representatives, the tracking of waste is often hand-written and recorded in databases later. A physical inventory of the decant area is done once a month and an annual report is created once a year. The area is permitted to store hazardous waste for one year. However, CWM is seeking a variance to this one-year limit for wastes that are affected by a national incinerator backlog.

Stabilization and Confirmation Testing

Stabilization of hazardous waste is performed in an enclosed stabilization unit, building 302 (**Appendix C**, photos 39-55). Inside the building there are two pits permitted as mixing basin tanks: T-303 on the north side and T-304 on the south side. Both pits are used to treat batches of hazardous and non-hazardous waste. An excavator is used to mix material in the pits. Stabilization is performed to treat wastes by the addition of reagents that cause a chemical reaction to deactivate, immobilize, or reduce the toxicity of waste constituents prior to land disposal of the resultant mixture. CWM's WAP allows certain pre-treatment steps if necessary, such as using oxidizing or reducing agents to treat specific constituents, prior to the typical stabilization process. Solidification to remove free liquids is also performed in the stabilization unit.

The primary reagents used at CWM for stabilization are ferrous sulfate, sodium hydroxide, potassium permanganate, sodium permanganate, and sodium hypochlorite. All reagents used at CWM are chemical products. CWM representatives stated they do not utilize waste materials in their treatment processes. In addition to the chemical reagents, solidification agents such as portland cement or Dravo fly ash are added to the treatment pit through piping from silos located outside of the building. Batches solidified with fly ash have a larger exothermic reaction than batches with portland cement and will generate steam. To maintain a safe temperature, operators use water hoses to spray down the area with well water, and additional wastewater is piped directly into the pit as part of the batch recipe. The total amount of water added to each batch is recorded, including any water sprayed to wash out the bed of the truck that dumped the waste into the pit. Mixing time in the pit depends on the waste properties. CWM representatives estimated that mixing is typically done for 30 to 45 minutes. The mixing operator will determine if a batch has reached the point of thorough mixing based on the color and consistency of the waste, and quantity of dust emanating from the pit.

Ventilation near each of the pits draws off particulate emissions to a two-baghouse system, with one baghouse on each side of the building (north and south). The baghouses are agitated to drop collected dust out of the system and the dust is funneled back into the same pit where it originated.

According to the senior laboratory technician at CWM, chemists typically rely on historical knowledge of similar wastes to develop treatment recipes. A bench-scale test to develop a recipe may be performed during the approval process for new wastes. The acceptable range for implementation of a stabilization recipe is within ±3% of reagent or stabilization material quantity; water is not included in the ±3% range. If a batch is outside of the ±3% range, then CWM will hold the treated waste in roll-off boxes and conduct post-treatment analysis before the waste can be disposed of in the landfill. Repeat loads from regular customers are included

in an annual testing program. After confirming that a recipe has worked three times in a row, CWM will no longer test treated batches of these waste streams except for an annual test to confirm that the recipe is still effective in meeting LDR standards.

When a completed stabilization batch is sampled, an operator will collect a three-point post-treatment sample from an excavator bucket while the waste is still in the pit. CWM always uses a third-party laboratory for any compliance-related testing, including LDR analyses. The treated batch is put in roll-off boxes for storage in building 801 until analytical results are received.

If a treated batch fails to meet regulatory standards, CWM will retreat the batch by increasing the amount of reagent used by 5%. The batch will be retreated with the intent of meeting LDR standards to finish disposal. The recipe that failed to initially meet LDR standards will not be used in recipe formulations for similar wastes in the future. Batches of the same waste will be treated and analyzed individually to ensure that each container of the waste meets LDR treatment standards. The first treatment is referred to as a "treatment" and any subsequent treatments are referred to as the "first retreatment," "second retreatment," etc. At least two batches must pass regulatory standards in order to approve a new treatment recipe under the annual testing program. Three batches must pass to use a recipe for a waste stream that has previously failed under the annual testing program.

Waste loads from drums that are treated in the stabilization unit are combined into a treatment batch based on similar concentrations of the constituents being treated. The laboratory will determine what loads can be treated together and assembles a packet of receiving tickets. Operators will either dump the contents of the drums directly into the pit, or because drum unloading is a time-consuming process, they will first empty the drums into a roll-off container. A roll-off container filled in this way is referred to as a "mix box" and is typically staged behind the stabilization building. After the contents of the drums are removed and the drums are considered RCRA empty, the drums are disposed of in the on-site landfill. CWM attempts to accumulate between 15,000 and 20,000 pounds of drum waste to treat in a single batch so that the treated waste will fit into one roll-off box following treatment.

Macroencapsulation

CWM offers macroencapsulation treatment services for customers with hazardous debris. Two technologies are utilized to macroencapsulate hazardous waste debris: a high-density polyethylene (HDPE) containment vault and a soft polyethylene bag (**Appendix C**, photos 66-68). The use of the vault or the soft bag depends on the physical characteristics of the waste, and the ability of the materials to conform to the shape of the treatment container without compromising the integrity of the container. A summary of the two macroencapsulation treatment technologies is below:

- HDPE Containment Vault: This vault is proprietary to CWM and fits similar to a liner inside of a 20-cubic-yard roll-off box. The vault is used for more rigid pieces of debris like pipes or refractory brick. Each vault has a unique identification number written on it. It is constructed of thick HDPE and sealed with a separate HDPE lid that is secured with screws. CWM uses roofing-type screws to affix the HDPE lid (lag screws with washer), and the screws are secured in the lid at 4-inch intervals. It takes an estimated 150 to 200 screws to secure a lid in place on one vault. The vault is designed to maintain its shape when placed in the landfill. CWM uses sand to fill void spaces within the vault. To place a filled and sealed vault on the landfill, an operator will open the back door of the roll-off and the vault slides out onto the ground. CWM representatives stated that CWM has performed substantial amounts of testing and research to demonstrate that the vaults effectively contain waste constituents after disposal in a landfill.
- Polyethylene bag for soft debris: Unlike the vault, the polyethylene bag is not proprietary to CWM and is used by others in the hazardous debris treatment industry. The bags are used to encapsulate soft debris, such as contaminated PPE, where it is unlikely that the material inside will puncture the liner. The bag is fitted and shaped to be placed inside a roll-off box with tie flaps hanging over the sides. It is then filled with debris and subsequently tied off with multiple flaps at the front, rear, and sides. The inner portion of the bag has a second layer of clear plastic to assist in containing the waste materials inside. After the bag is tied off, it is taken directly to the landfill for disposal. CWM does not use a sand filler for soft bags because the malleable nature of the soft debris limits the amount of void space.

Biotreatment at the Biopad

CWM operates a building for the storage and biological treatment of waste piles referred to as the Biopad (**Appendix C**, photos 56, 57, 90-96). The Biopad is constructed of two equally sized pads which are referred to as Biopad Phase I and Biopad Phase II. A map of the Biopad is in **Appendix D**. CWM began using the Biopad in the early 2000s. The Biopad facility is permitted to receive a maximum of 685 tons of waste per day. In a 2017 Class 1 Modification to the permit (**Appendix E**), CWM calculated that the maximum capacity of material that can be placed on the Biopad for both storage and treatment is 60,000 tons each for Phase I and Phase II, for a total of 120,000 tons. Due to operational constraints and closure costs, the 2017 permit modification further specified that no more than 15,000 tons of material will be stored at the Biopad; the remaining capacity will continue to be used for biological treatment of waste.

Biological treatment is utilized to treat organic constituents in waste materials using microbes that degrade contaminants into less toxic or non-toxic materials. Reagents are added to the

piles to promote the growth of the microbes and facilitate treatment. CWM's permit allows for biotreatment of the following wastes:

- Pesticides
- Petroleum hydrocarbons
- Nitroaromatics
- Wood treating wastes
- Chlorinated hydrocarbons
- Refinery-related materials
- Other similar wastes that have been demonstrated in industry and/or literature to be amenable to biological treatment and/or scientifically evaluated to be amenable to biological treatment

CWM representatives stated that outside consultants are hired to assist the biotreatment process. The consultants determine which reagents are to be used in biotreatment, calculate the duration of treatment, and determine whether treatment will be anaerobic or aerobic and how often to aerate. The consultants will also suggest sampling frequencies to monitor treatment progress. Grass and other plant-based materials are used to help bring microbial activity to the pile and enhance biological activity. CWM also started using equestrian waste to help feed bacteria in the fall of 2022. CWM representatives indicated to NEIC that they have made arrangements with a new consultant and plan to bring in new mixing equipment to help improve the effectiveness of the biological treatment process.

Due to the variability of the treatment process, biotreatment is not conducted on a set schedule. CWM will periodically sample a given pile and send the sample to an off-site laboratory to determine if the pile meets organic treatment standards. Hazardous wastes that undergo biotreatment to remove organics are subsequently treated with stabilization to address any remaining hazardous constituents.

Waste piles are segregated on the Biopad by concrete berms or open space on the floor. An excavator is used to move and aerate the piles as part of the treatment process. Waste is tracked by pile instead of each individual waste that goes into the pile. At the time of NEIC's inspection, CWM was treating approximately eight to 10 piles on the Biopad. The piles are separated by waste constituents, whether metals treatment is required, whether they are benzene/NESHAP controlled, and by the estimated time it will take to treat. CWM maintains a waste tracking database to identify each pile and to track the specific wastes in each pile. A review by NEIC of some of the Biopad tracking documents indicated that wastes have been in the piles since as early as 2004. CWM representatives stated that if a waste pile does not

appear to be responding to biological treatment, CWM will cut its losses on attempting the treatment method and will instead send the waste off-site for incineration.

Reclamation of Hazardous Secondary Material through the Thermal Desorption Unit and the Oil Recovery Unit

In January 2019, LDEQ approved a Class 1 Permit Modification (**Appendix F**) allowing CWM to accept oil-bearing hazardous secondary materials (HSM) for the purpose of reclamation. The HSM is managed under LDEQ's Verified Reclamation Exclusion (VRE) as codified in Louisiana Administrative Code (LAC) 33:V.105.D.1.y.

In April 2019, CWM began processing oil-bearing HSM through a thermal desorption unit (TDU) and an oil recovery unit (ORU) to recover organics. The recovered organics are then returned to petroleum refineries for reintroduction into the refining process or sold on the residual fuels market where the recovered organics are burned for energy recovery, used as a fuel, or used to produce a fuel. The TDU is the only process at CWM that operates 24 hours a day, 7 days a week. The TDU is operated in two shifts per day. CWM does not mix hazardous waste with HSM in either the TDU or the ORU. A decontamination plan is to be followed if hazardous waste is managed in either unit before reclamation of HSM can resume.

Incoming shipments of HSM are first reviewed to ensure they contain sufficient recoverable organics. A portion of the HSM may be placed on the Biopad prior to processing in the TDU or ORU. CWM began placing HSM on the Biopad in April 2019 when the TDU came online.

CWM is permitted to operate two TDUs with a daily maximum processing capacity of 165 tons each. However, CWM has constructed and currently operates only one TDU. Four in-ground tanks, T-701, T-702, T-703, T-704, are used for off-loading incoming HSM. The tanks are located inside an enclosed building in the TDU area. All four tanks are open-top pits with a design capacity of approximately 53,000 gallons each. Tanks T-701 and T-702 receive HSM that has been stored on the Biopad. T-703 and T-704 receive incoming shipments of HSM that arrive ready for processing. An excavator is used to transfer material out of the pits and place it in the TDU.

The TDU operates similar to a rotary kiln. The unit is approximately seven feet in diameter and 60 feet in length. The unit uses four natural gas burners to provide indirect heat. The TDU is positioned on a slight decline and has internal baffle units to maintain a set residence time to process the HSM. When the TDU operates, organics in the HSM are volatilized, routed through a recovery loop, and condensed down to a liquid state. The TDU area is permitted to have four recovered organics storage tanks. Currently, tanks T-720, T-721, and T-722 are completed and a planned tank T-223 is not yet constructed. Before selling the recovered organics to customers, CWM checks the water and organics content of the product to ensure it meets customer

specifications. Condensed oils are collected in an oil/water separator. Non-condensable gases are routed to a thermal oxidizer for destruction. Recovered water is either reused or will undergo periodic waste characterization to determine if it is hazardous prior to disposal.

Solids generated in the TDU pass through a series of augers and are collected in roll-off boxes. The solids are considered newly generated wastes, and samples are collected and sent off-site to be analyzed for applicable RCRA characteristics. CWM has established a statistical program for characterizing the TDU solids waste stream. If the waste meets certain parameters based on the feed rate and discharge temperature of the solids, then CWM will not analyze every box. CWM representatives stated they have never had an analytical result that approached a RCRA hazardous waste characteristic. The solids are disposed in the on-site landfill as non-hazardous waste.

A scrubber for air emissions from the TDU is not currently connected and is not required to be as the HSM being processed are not considered hazardous wastes under the LAC exclusion. CWM representatives stated the facility is looking into modifications for the scrubber to improve its functionality for future use.

CWM is permitted to operate two ORUs with daily maximum capacities of 126,000 gallons each. One unit was constructed and is currently operated by Dolphin, a subsidiary of CWM. Dolphin is considered a separate legal entity from CWM, but their operations on-site are conducted under CWM's permit. HSM feed material is separated by the portable three-phase centrifuge ORU into oil, water, and solids. Oil is considered a recovered product and stored in a Dolphin oil tank prior to resale. Solids from the centrifuge are fed through the TDU. Water from the process is held in recovered water tanks, circulated through system as cooling water, and ultimately sent out with leachate from the on-site landfill for disposal.

Land Disposal in the Landfill

CWM is currently permitted to operate one active disposal cell in its hazardous waste landfill, designated as Cell 8. Cell 5 is the original landfill cell that operated between 1980 and 1985 and was closed in 1988. Cell 14 operated from 1985 to 1987 and was also closed in 1988. Cell 6 operated from 1987 until it was closed in 1998. Cell 7 began accepting waste in 1998 and is also now closed. The map in **Appendix G** shows the locations of the landfill cells throughout the facility.

The active landfill disposal Cell 8 began operation in 2008. It is subdivided into 10 modules. Modules 1 and 2 are under a temporary cap and have additional space remaining should CWM decide to add to the cells prior to permanent closure. Modules 3 and 4 are also under temporary caps. Module 5 is active. Module 6 is being prepped for use at a later date. Module 7 is being actively used, but CWM representatives indicated they plan to install a temporary cap

on the cell in March 2023 while retaining the capacity to expand it much higher in the future. At the time of NEIC's inspection, CWM had recently completed construction on Module 8 and received certification to begin disposing waste within it. Modules 9 and 10 are undeveloped and are being saved future use. CWM representatives predicted that Cell 8 has approximately 15 additional years of capacity remaining.

Waste is typically transferred to the landfill on an articulating dump truck. The truck first stops at a shack to log data including the time, profile number, receiving ticket number, and any associated treatment information. The operator determines where loads will be dumped that day, and the coordinates for the dump are logged. A hand-written hardcopy of the log sheet is entered into the operating record. After the truck has dumped the load in the designated landfill location, it drives out through a truck wash station where facility personnel use hoses to rinse the tires.

Each module within Cell 8 is required by CWM's operating permit to have a composite liner system that is designed, constructed, and maintained to prevent the discharge of any wastes from the landfill into the underlying groundwater. Leachate and stormwater runoff from the landfill is conveyed through a series of pipes to satellite collection tanks T-903, T-904, T-905, T-906, and T-907. These tanks are pumped to two 75,000-gallon leachate tanks, T-504A and T-504B, and four one-million-gallon leachate tanks, T-502, T-503, T-505, and T-506. The leachate in these tanks is sent off-site for disposal as F039 hazardous waste.

Sludge generated in the leachate tanks has been characterized by CWM as F039 hazardous waste. The F039 hazardous waste leachate sludge from the tanks is cleaned out into vacuum boxes, treated at the stabilization unit, placed in open-top roll-off boxes, and covered with a tarp. The treated sludge is then analyzed to determine if it meets the parameters to be disposed in the landfill.

Forty-five groundwater monitoring wells are installed around the CWM facility (**Appendix H**, page 23). The wells are sampled and analyzed annually. Twelve of these wells are downgradient from Cell 8 and these wells are sampled twice per year. A third-party consultant is hired to conduct the groundwater sampling events. CWM's Groundwater Monitoring Plan was last updated in 2018.

FIELD ACTIVITIES SUMMARY

The NEIC field team was joined by John Penland, Elizabeth Pham, Adolphus Talton, and Erin Young-Dahl of EPA Region 6, and Terry Dedon, Jimbo Earles, and Heather Harrison of LDEQ during the inspection. Not all participants were present for each day of the inspection. On February 7, 2023, NEIC inspectors conducted an opening meeting and presented credentials to David Michaelis, CWM's Senior District Manager.

With the participation of EPA Region 6 and LDEQ, NEIC performed the following activities to accomplish the investigation objectives:

- Met with facility personnel to discuss process operations, including waste acceptance and tracking, screening, treatment and storage practices, verification testing, and treated waste characterization procedures.
- Conducted a walk-through tour of the facility to observe process operations, waste acceptance procedures, treatment procedures, compliance sampling, analysis, and disposal procedures.
- Performed an inspection of the on-site laboratory to evaluate sampling and analysis of incoming wastes, stabilized wastes, and other waste streams to assist in determining compliance with RCRA.
- Reviewed and copied (as appropriate) facility documents, including operating plans, procedures, and records. Specifically, NEIC reviewed CWM procedures or protocols and discussed them with the facility personnel responsible for implementing the plans and procedures.
- Collected samples of stabilized waste certified for disposal to determine compliance with LDR treatment standards. Split samples were provided to CWM.
- Analyzed collected samples at the NEIC laboratory in Denver, Colorado.

Measurement and Sampling Activities

The NEIC field team provided support to this investigation by collecting samples of stabilized waste for LDR treatment verification purposes. **Table 4** summarizes field measurement and field sampling activities. A copy of the chain of custody record is provided in **Appendix I**.

All environmental measurement activities were performed in accordance with the NEIC quality system. All field sampling, field measurements/monitoring, and/or laboratory measurements described in this report are within the scope of NEIC's ISO/IEC 17025 accreditation issued by the ANSI National Accreditation Board (certificate No. FT-0303).

Table 4. FIELD MEASUREMENT AND FIELD SAMPLING ACTIVITIES

Location	Dates	Procedure[1] and Equipment	Measurer Name
MEASUREMENTS[2]			
Landfill Cell 8, Module 7; truck sample rack; CWM laboratory	February 13 and 14, 2023	**NEIC procedure:** *Safety and Sample Screening Instruments,* NEICPROC/17-002 **Instrument guides:** • *MSA Altair 5X Multi-Gas Monitoring Equipment* • *RadEye B20-ER – Radiation Detection Equipment* **Equipment:** • MSA Altair 5X multiple gas meter, SN2420 • RadEye survey meter, SN34416	Zach Schlachter

Station No.	Sample Location	Appendix C Photo Nos.	Dates and Time	Sampling Technique	Method, Procedure[1], and Equipment	Sampler Name
SAMPLING						
S01	Landfill Cell 8, Heritage batch No. RT770782	73, 74, 81, 82, 83	February 13, 2023, 1:54 p.m.	Grab sample	**Method:** ASTM D5633: Standard Practice for Sampling with a Scoop **NEIC procedure:** *Soil and Solid Sampling/Scoops*, NEICPROC/00-052 **Equipment:** Pre-cleaned single-use plastic disposable scoops, appropriately sized	Laura Kanopkin
S02	Landfill Cell 8, Heritage batch No. RT770782	75, 76, 81, 84, 85	February 13, 2023, 2:01 p.m.			
S03	Landfill Cell 8, Heritage batch No. RT770782	77, 78, 81, 86, 87	February 13, 2023, 2:05 p.m.			
S04	Landfill Cell 8, Heritage batch No. RT770782	79, 80, 81, 88, 89	February 13, 2023, 2:09 p.m.			
S05	Truck sample rack, Western Extrusions batch No. RT770668	97, 98, 100, 101	February 14, 2023, 2:46 p.m.			
S06	Truck sample rack, Western Extrusions batch No. RT770668	97, 99, 102, 103	February 14, 2023, 2:54 p.m.			

[1] The current version of each procedure, at the time of the investigation, was followed.
[2] Field measurements not included in this report may be found in the project file.

Activities were documented in field records, and field photographs are attached as **Appendix C**. Samples collected during the field activities were shipped via FedEx to the NEIC laboratory in Denver, Colorado, for analysis.

LABORATORY ACTIVITIES SUMMARY

Analytical project manager (APM) Erick Zacher (Zacher) received the samples in a locked hard-sided case at the NEIC laboratory via FedEx (tracking No. 5906 5276 4602) from Jackie Vega's custody on February 16, 2023. On February 22, 2023, APM Zacher retrieved the samples, verified the contents, and assumed custody. A copy of the chain of custody (COC) is provided in **Appendix I.** On February 23-24, 2023, APM Zacher performed sample physical descriptions following NEIC operating procedure *Physical Description/Phase Separation*, NEICPROC/00-045. To prepare the samples for laboratory technical support, APM Zacher reduced the particle size of the entire sample so that it could be passed through a 9.5-millimeter (0.375-inch) sieve. The samples were then systematically subsampled by taking approximately 144-incremental aliquots to generate an approximately 100-gram subsample for extraction by EPA *Test Methods for Evaluating Solid Waste: Physical/Chemical Methods* (SW-846) Method 1311: Toxicity Characteristic Leaching Procedure (TCLP).

Analytical methods were selected to achieve data quality objectives for determining the concentration of metal constituents identified in the universal treatment standards (UTS) table for non-wastewaters at 40 Code of Federal Regulations (CFR) § 268.48(a)[1]. **Table 5** summarizes analytical objectives, techniques, and methods utilized to achieve the data quality objectives. Based on the UTS table for non-wastewaters, the concentration of the following metals was determined: antimony (Sb), arsenic (As), barium (Ba), beryllium (Be), chromium (Cr), cadmium (Cd), lead (Pb), mercury (Hg), nickel (Ni), selenium (Se), silver (Ag), thallium (Tl), vanadium (V), and Zinc (Zn). The TCLP extracts were digested following EPA Method 3015A: Microwave Assisted Acid Digestion of Aqueous Samples and Extracts. Following digestion, metals concentrations, except mercury, were determined following EPA Method 6010D: Inductively Coupled Plasma-Optical Emission Spectrometry (ICP-OES). Mercury in the TCLP extracts, was digested and analyzed following EPA Method 245.1: Determination of Mercury in Water by Cold Vapor Atomic Absorption Spectrometry.

Quality control samples for these preparations and analyses are available in the associated laboratory data packages. Uncertainty was calculated based on quality requirements and those calculations are available in the associated data package. The units reported are as milligrams

[1] See 40 Code of Federal Regulations (CFR) § 268.48 (a).

per liter TCLP (mg/L TCLP) according to the UTS table for non-wastewaters at 40 CFR § 268.48(a).

Table 5. ANALYTICAL OBJECTIVE, TECHNIQUE, AND METHOD; ANALYST; AND DATE PERFORMED			
Analytical Objective, Technique, and Method[1]	**NEIC Analyst**	**Samples Analyzed by Method (Station Nos.)**	**Dates Performed**
Sample physical description: *Physical Description/Phase Separation* (NEICPROC/00-045	Erick Zacher	S01-S06	February 22-24, 2023
Preparatory method: • SW-846 Test Method 1311: Toxicity Characteristic Leaching Procedure • EPA Method 3015A: Microwave Assisted Acid Digestion of Aqueous Samples and Extracts **Metals:** • Inductively Coupled Plasma-Optical Emission Spectrometry, Method 6010D modified, Revision 5, July 2018, Update VI to the Third Edition of the *Test Methods for Evaluating Solid Waste, Physical/Chemical Methods,* EPA publication SW-846 • *Elemental Analyses*, NEICGUID/18-001, *ICP-OES Instrument Guide*	Erick Zacher	S01-S06	February 28 – March 20, 2023
Mercury: • Cold vapor atomic absorption by EPA Method 245.1: Determination of Mercury in Water by Cold Vapor Atomic Absorption Spectrometry • *Elemental Analyses,* NEICGUID/18-001 • *RA-4500 Mercury Analyzer, Cold Vapor Atomic Absorption* instrument guide	Erick Zacher	S01-S06	March 16-17, 2023
[1] Data quality summaries, including uncertainty measurements, for all laboratory measurements are maintained in the project file.			

All environmental measurement activities were performed in accordance with the NEIC quality system. All laboratory measurements described in this report are within the scope of NEIC's ISO/IEC 17025 accreditation issued by the ANSI National Accreditation Board (certificate No. FT-0303).

ANALYTICAL RESULTS

Laboratory observations are summarized in **Table 6**. The TCLP results and 40 CFR § 268.48 universal treatment standards for non-wastewater samples are reported in **Table 7**. Laboratory observations, method modifications, and other information are documented in the project file. Laboratory photographs showing the TCLP sample preparation process are found in **Appendix J**.

Table 6. SUMMARY OF LABORATORY OBSERVATIONS				
Station No.	**Station Location/ Description of Sample Location**	**Appendix J Photo Nos.**	**Laboratory Sample Physical Description**	**Final TCLP Extraction pH**
S01	Landfill cell 8, Heritage Batch No. RT770782	IMG_0874.JPG IMG_0875.JPG IMG_0887.JPG IMG_0888.JPG IMG_0889.JPG IMG_0890.JPG IMG_0891.JPG IMG_0892.JPG IMG_0908.JPG IMG_0909.JPG	Brown solids with some rust-colored chunks and pieces with smaller pieces of white-to-gray material scattered throughout sample. Wide variety of solid forms from sand and finer particles to larger monolithic pieces and larger chunks of 2-4" irregular pieces and several gray chunks noted. Larger chunks required mechanical particle size reduction.	6.64
S02		IMG_0876.JPG IMG_0877.JPG IMG_0893.JPG IMG_0894.JPG IMG_0895.JPG IMG_0896.JPG IMG_0910.JPG	Brown solids with some rust-colored chunks and pieces with smaller pieces of white-to-gray material scattered throughout sample. Wide variety of solid forms from sand and finer particles to larger monolithic pieces and larger chunks of 2-4" irregular pieces and smaller. Noted several gray chunks of material. Noted a piece of a clear plastic bag with several pieces of brown-paper-bag-like material with red lettering on the paper. Several larger chunks required mechanical particle size reduction.	6.49
S03		IMG_0878.JPG IMG_0879.JPG IMG_0897.JPG IMG_0898.JPG IMG_0899.JPG IMG_0911.JPG IMG_0912.JPG	Brown solids with some rust-colored chunks, several gray pieces of material, and smaller pieces of white-to-gray material scattered throughout sample. Wide variety of solid forms from sand and finer particles to larger monolithic pieces of 2-3" pieces and larger chunks of 3-5". Noted 3-4 smaller pieces of brown-paper-bag-like material with red lettering and sample chunks mixed in with and/or stuck to the paper-bag material and several pieces of clear plastic material. Several larger chunks required mechanical particle size reduction.	6.74
S04		IMG_0880.JPG IMG_0881.JPG IMG_0900.JPG IMG_0901.JPG IMG_0902.JPG IMG_0913.JPG IMG_0914.JPG	Brown solids with some rust-colored chunks and gray pieces with smaller pieces of white-to-gray material scattered throughout sample. Wide variety of solid forms from sand and finer particles to larger monolithic pieces 2-4" of material, several larger irregular pieces of 3-5" chunks, and smaller. Noted smaller pieces of brown-paper-bag-like material with red lettering and sample chunks mixed in with the paper-bag material and several pieces of clear plastic material. Several larger chunks required mechanical particle size reduction.	7.10
S05	Truck sample rack, Western Extrusions No. RT770668	IMG_0882.JPG IMG_0883.JPG IMG_0903.JPG IMG_0904.JPG IMG_0915.JPG IMG_0916.JPG	Gray solids fine grained sand sized and smaller; with several agglomerated or aggregated chunks ½-1" and smaller with white specks of material scattered throughout sample. Several pieces of rust-colored material agglomerated together that broke apart easily. Several moist pieces of ½-1" chunks of a green-to-teal colored material that broke apart easily. Only very light particle size reduction required of sample.	11.46

Table 6. SUMMARY OF LABORATORY OBSERVATIONS				
Station No.	**Station Location/ Description of Sample Location**	**Appendix J Photo Nos.**	**Laboratory Sample Physical Description**	**Final TCLP Extraction pH**
S06	Truck sample rack, Western Extrusions No. RT770668	IMG_0884.JPG IMG_0885.JPG IMG_0905.JPG IMG_0906.JPG IMG_0917.JPG	Gray solids fine grained sand sized and smaller; with several agglomerated or aggregated chunks 1-2" and smaller with white specks of material scattered throughout sample. Several pieces of rust-colored material agglomerated together that broke apart easily. Several moist pieces of ½-1" chunks of a green-to-teal colored material that broke apart easily. Only very light particle size reduction required of sample.	9.94

Table 7. SUMMARY OF ANALYTICAL RESULTS

Station No.[1,2]	TCLP (milligrams per liter [mg/L])[3]													
	Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Lead	Mercury	Nickel	Silver	Selenium	Thallium	Vanadium	Zinc
S01	< 0.080	< 0.175	< 0.500	< 0.010	< 0.005	0.017	< 0.230	< 0.005	91.8	< 0.020	< 0.130	<0.015	< 0.150	73.6
S02						0.018			116					84.4
S03						0.021			103					66.4
S04						0.025			77.3					29.3
S05						0.052			0.033					< 0.365
S06						0.030			0.037					< 0.365
Universal Treatment Standards	1.15	5	21	1.22	0.11	0.6	0.75	0.025[4]	11	0.14	5.7	0.2	1.6	4.3

[1] Values for these samples are an average of Method 3015A digestion duplicates (n=4-8).
[2] Values for these samples are an average of measurement replicates (n=4-8).
[3] Data quality summaries, including uncertainty measurements are maintained in the project file.
[4] Standard is for "Mercury – All Others".

INVESTIGATION OBSERVATIONS

NEIC made the following observations during the RCRA compliance inspection. NEIC field team members discussed all observations with facility representatives during the closeout meeting unless otherwise noted in the observation description below.

These observations are not final compliance determinations. Region 6 will make the final compliance determinations based on its review of this report and other technical, regulatory, and facility information.

Louisiana has adopted the provisions of the RCRA Subtitle C Code of Federal Regulations in Part V of Louisiana Administrative Code (LAC) Title 33. RCRA observations in this report cite the current Louisiana regulations along with the corresponding CFR citation. Conditions included in CWM Permit No. LAD000777201-OP-RN-MO-1 are also cited in the observations.

Observation 1

Observation Summary: CWM's sampling frequency for treated hazardous wastes, as described by facility representatives, does not ensure that treated waste meets the universal treatment standards. NEIC collected and analyzed four grab samples (S01-S04) of a treated waste batch that was on CWM's annual sampling schedule to determine compliance with the LDR treatment standards. The results of NEIC's analysis indicate that the treated batch exceeded the LDR universal treatment standard (UTS) for nickel. All four grab samples collected from treated waste batch No. RT770782 had TCLP concentrations of nickel that exceeded the UTS of 11 mg/L.

Citation:

LAC 33:V.1519.A. General Waste Analysis [40 CFR § 264.13(a)]

A. Hazardous Waste Chemical and Physical Analysis

> *1. Before an owner or operator treats, stores, or disposes of any hazardous waste, or non-hazardous wastes if applicable under LAC 33:V.3513.D, he or she must obtain a detailed chemical and physical analysis of a representative sample of the waste. At a minimum, this analysis must contain all the information which must be known to treat, store, or dispose of the waste in accordance with all requirements of LAC 33:V.Chapters 15 and 22…*
>
> *3. The analysis must be repeated as necessary to ensure that it is accurate and up to date…*

LAC 33:V.2223.E. General Waste Analysis [40 CFR § 268.40(e)]

E. For characteristic wastes (D001-D043) that are subject to treatment standards in LAC 33:V.2299.Appendix, Table 2, Treatment Standards for Hazardous Wastes, and are not managed in a wastewater treatment system that is regulated under the Clean Water Act (CWA), that is CWA-equivalent, or that is injected into a Class I nonhazardous deep injection well, all underlying hazardous constituents (as defined in LAC 33:V.2203) must meet Universal

Observation 1

Treatment Standards, found in LAC 33:V.2299.Appendix, Table 7, prior to land disposal as defined in LAC 33:V.2203.

CWM WAP: 6.2.1.2 Pre-Treatment and Stabilization of Land Disposal Restricted Waste
*The treatment guidelines, established through the above procedures, will be used to treat each shipment of that LDR waste. A posttreatment analysis is conducted **as needed** to assure that the process continues to be effective in meeting the treatment standards.*

Evidence:
Appendix B – CWM Waste Analysis Plan, September 2015
Appendix C – Field Photographs
Appendix K – Documentation for RT770782, Batch Sampled by NEIC
Appendix L – Documentation for RT769144, Annual Recipe Recertification Batch
Appendix M – Waste Profile LA956105 for RT770782

Description of Observation:
CWM's waste analysis plan (WAP) allows the use of analytical results from one sample of a treated batch of a specific waste stream as justification that all treated batches of that waste stream will meet LDR treatment standards for an entire year. As required by LAC 33:V.1519, CWM is responsible for developing a sampling protocol that will ensure that treatment of the waste is adequate to meet LDR treatment standards. CWM's WAP states that post-treatment analysis for stabilized wastes will be conducted "as needed" to assure the process continues to be effective in meeting the treatment standards (**Appendix B**, page 25). The failure of a treated waste batch to meet the LDR UTS, as demonstrated by NEIC, indicates that the sampling of treated waste once a year does not adequately ensure that the waste meets LDR treatment standards before disposal.

NEIC collected grab samples from two batches of waste treated by CWM to meet the applicable LDR treatment standards. A bulk batch (batch No. RT770782) (**Appendix K**) and a drum batch (batch No. RT770668) were selected for sampling. The waste in bulk batch RT770782 was on an annual post-treatment testing schedule, as established by CWM. The last time CWM had sampled and analyzed a treated batch from this waste stream was in September 2022. Documentation for the September 2022 batch, referred to as an annual recipe recertification batch, is attached in **Appendix L**. On February 13, 2023, CWM disposed treated waste batch RT770782 onto the active portion of the landfill. NEIC collected four grab samples from this location (S01-S04) (**Appendix C**, photos 73-81). The batch would normally have been "cleared" to remain in the landfill for final disposal by CWM without any post-treatment sampling. However, because NEIC sampled the treated batch after disposal, CWM removed the disposed waste from the landfill to store in roll-off boxes pending the results of their own analysis of samples. NEIC provided splits of samples S01-S04 to CWM.

NEIC analyzed the samples for select inorganic RCRA toxicity characteristic constituents (as specified in the UTS list) with the toxicity characteristic leaching procedure (TCLP). Analytical results from the NEIC laboratory (**Table 7** in the **Analytical Results** section above) indicate that all four grab samples collected from treatment batch RT770782 exceeded the LDR universal treatment standard for nickel. In accordance with CWM's annual sampling program, the batch was cleared for disposal and would have remained in the landfill for final disposal without retreatment to meet the UTS.

Observation 1

After NEIC's inspection, documentation shows that CWM sent the split samples of treated waste batch RT770782 to a third-party contract laboratory for analysis. Results of this analysis are included in **Appendix K** and indicate that the TCLP concentration of nickel in the treated waste exceeded the UTS of 11 mg/L.

Collecting and analyzing a single annual sample of a treated waste to justify the subsequent approval of all treated batches of that waste assumes that the waste stream is from a single source and is homogeneous. The waste profile information for treated batch RT770782 indicates that the waste is incinerator ash (with assigned EPA hazardous waste Nos. D002, D004-D011, F001-F012, F019, F024, F025, F034, F035, F037-F039, K001-K011, K013-K024, K028-K038, K040-K042, K046-K052, K060, K062, K071, K073, K083, K084, K086, K087, K093-K098, K100-K105, K111, K117, K118, K131, K132, K136, K142-K145, K147, K148, K156-K158, P001, P066, P069, P105, P106, P120, P194, U002-U005, U007, U009, U012, U018, U019, U022, U024, U025, U028-U032, U036, U037, U039, U043-U045, U047, U048, U050-U052, U056, U057, U063, U066-U072, U075-U084, U088, U095, U101, U102, U105-U107, U111-U113, U117, U118, U120-U123, U127-U131, U135-U138, U140-U142, U144-U147, U152, U154, U155, U157-U159, U161, U162, U165, U169, U170, U172, U174, U179-U181, U183-U185, U187, U188, U190-U192, U196, U197, U201, U203-U205, U207-U211, U213, U218-U220, U225-U228, U235, U239, U243, U247, U271, U372), and the generator is Heritage Thermal of Texas (**Appendix M**). Heritage Thermal of Texas treats wastes from a wide variety of outside commercial sources. Because the waste characteristics of the incinerator ash would vary depending on the materials incinerated during a given period, it is unlikely that the incinerator ash waste would be consistent or homogenous over the course of a year. This is consistent with the heterogeneity observed in the NEIC analytical results. The results from grab samples S01-S04 show that the treated batch was heterogeneous:

Nickel Results

Sample No.	TCLP (mg/L)
S01	91.8
S02	116
S03	91.3
S04	70.1

When the LDR treatment standards were designed, EPA took into account the variability of hazardous waste streams and established treatment standards that are expected to be achievable 99 percent of the time (June 23, 1989 Federal Register [54 FR 26605]). Furthermore, a WAP should ensure that the treatment standards have been met, and the strict adherence to a WAP does not shield a facility from having to meet the standard. As stated in the June 1, 1990, Federal Register (55 FR 22539):

> "[A] disposal facility might violate the land disposal restrictions while at the same time comply with the provisions of its waste analysis plan…In any case, enforcement of the land disposal restrictions is based on grab samples …and analysis of all constituents regulated by the applicable treatment standards, not on the facility's waste analysis plan."

Observation 2

Observation Summary: A large volume of oil-bearing hazardous secondary material (HSM) was observed stored on the Biopad during the NEIC inspection. Inventory records reviewed by NEIC indicate the HSM has been speculatively accumulated and, therefore, does not meet the solid waste verified reclamation exclusion. Waste profiles for the HSM indicate that, when not otherwise excluded, the material would be characterized as hazardous waste.

Citation:

Permit LAD00077201-OP-MO-02, Activity No. PER20180013, Class 1 Permit Modification, HSM Management under the VRE

All management of HSM must be legitimate and in conformance with LAC 33:V.105.D.1.y and LAC 33:V.105.R.

LAC 33:V.105.D. Exclusions [40 CFR § 261.4(a)(24)(i)]

1. Materials that are not Solid Wastes. The following materials are not solid wastes for the purpose of this Subpart:

y. hazardous secondary material that is generated and then transferred to a verified reclamation facility for the purpose of reclamation is not a solid waste, provided that:

i. the material is not speculatively accumulated, as defined in LAC 33:V.109, accumulated speculatively;

LAC 33:V.109. Definitions [40 CFR § 261.1(c)(8)]

Accumulated Speculatively—a material is accumulated speculatively if it is accumulated before being recycled. A material is not accumulated speculatively, however, if the person accumulating it can show that the material is potentially recyclable and has a feasible means of being recycled; and that, during the calendar year (commencing on January 1), the amount of material that is recycled, or transferred to a different site for recycling, equals at least 75 percent by weight or volume of the amount of that material accumulated at the beginning of the period…

Evidence:

Appendix N – HSM Inventory Tracking 2019-2023
Appendix F – Class 1 Permit Modification, Hazardous Secondary Material Management Under the Verified Reclamation Exclusion
Appendix O – Philadelphia Energy Profile 969843LA
Appendix P – Pasadena Refining Profile 995071TX
Appendix Q – Pasadena Refining Profile 991275TX
Appendix R – Pasadena Refining Profile 972901LA
Appendix S – Pasadena Refining Profile 971424LA

Description of Observation:

CWM has been speculatively accumulating HSM on their Biopad during the years of 2021 and 2022. The inventory of HSM on the Biopad (**Appendix N**) at the beginning of the calendar year and the amount of HSM removed for treatment in the TDU each year is summarized below:

Observation 2

Period	HSM in Inventory on Biopad on Jan. 1 (tons)	HSM removed from Biopad for treatment in TDU (tons)	Percentage of HSM recycled during the year
2021	7,615.2	3,307.5	43.4 %
2022	22,930.8	5,360.2	23.4 %

Because CWM did not process at least 75% of its HSM inventory at the beginning of January during calendar years 2021 or 2022, the HSM has been speculatively accumulated and meets the definition of a solid waste. Additionally, CWM is not in compliance with the conditions of their Class 1 permit modification allowing them to accept HSM. The permit modification requires that all management of HSM must be legitimate and in conformance with the speculative accumulation requirements (**Appendix F**).

The HSM accepted by CWM is generated by Philadelphia Energy Solutions (as characterized in one waste profile) and Pasadena Refining (as characterized in four waste profiles). A summary of the waste profile information for the oil-bearing HSM is below:

Profile No.	Process and Constituent Information	Waste Information
Philadelphia Energy Solutions		
969843LA **(Appendix O)**	Oil bearing contaminated material & catalyst Benzene 7.6-59 ppm Arsenic 18 mg/l Barium 1.3 mg/l Mercury 0.074 mg/kg	Process generating material: K172 Excluded waste numbers will include D001, D002, D004-D011, D018-D043, F037, F038, K048-K052, K169-K171
Pasadena Refining		
995071TX **(Appendix P)**	Oil bearing contaminated material generated as a result of tank 830 cleaning Fly Ash 5-30%	Excluded waste number K169
991275TX **(Appendix Q)**	Petroleum contaminated material generated as a result of tank 51 cleaning	Excluded waste number K170
972901LA **(Appendix R)**	Petroleum contaminated oil-bearing sludge	Excluded waste numbers will include D001, D002, D004-D011, D018-D043, F037, F038, K048-K052, K169-K171
971424LA **(Appendix S)**	Contaminated oil-bearing sludge	Process generating material: K172 Excluded waste numbers will include D001, D002, D004-D011, D018-D043, F037, F038, K048-K052, K169-K171

The information provided in the waste profiles for the HSM received by CWM indicates that the material would be a hazardous waste when it doesn't meet the solid waste exclusion.

Observation 3

Observation Summary: CWM's inventory shows that the volume of material stored in waste piles on the Biopad exceeds the limit allowed under the permit modification.

Observation 3

Citation:

Permit LAD00077201-OP-RN-MO-2, Activity No. PER20170006, Class 1 Permit Modification, Biopad Storage

As previously stated, the Biopad has an operational maximum capacity of 120,000 tons. For storage of waste in waste piles and/or containers, CWMLC only requires a limited amount of space from the Biopad. Because of fixed operational needs and the increased closure cost requirements for waste in waste piles and/or containers CWMLC is proposing that no more than 15,000 tons of material will be stored in waste piles and/or containers on the Biopad. The remaining capacity of the Biopad will continue to be used for biological treatment of waste.

Evidence:

Appendix C – Field Photographs
Appendix E – Class 1 Permit Modification, Biopad Storage
Appendix N – HSM Inventory Tracking 2019-2023

Description of Observation:

In the Class 1 permit modification to include the storage of waste not undergoing treatment on the Biopad, CWM limited their storage to 15,000 tons on the pad because of fixed operational needs and increased closure costs (**Appendix E**). CWM has been storing HSM on the Biopad since 2019. According to the inventory of HSM stored on the Biopad, over 15,000 tons of HSM have been stored on the pad since September 1, 2021 (**Appendix N**). CWM submitted the HSM inventory to NEIC after the inspection on March 17, 2023. The following amounts of HSM were recorded as being stored on the pad:

Month	HSM Inventory on the Biopad on the 1st of the month (tons)
September 2021	16,613.3
October 2021	19,417.5
November 2021	20,811.6
December 2021	20,799.4
January 2022	22,930.8
February 2022	25,483.8
March 2022	26,744.5
April 2022	29,521.5
May 2022	31,572.1
June 2022	33,030.5
July 2022	35,280.4
August 2022	37,312.8
September 2022	39,327.7
October 2022	41,035.3
November 2022	41,870.1
December 2022	41,649.3
January 2023	41,720.9
February 2023	41,597.4
March 2023	41,430.5

Due to the speculative accumulation of HSM as noted in **Observation 2**, the material in these piles does not qualify for the verified reclamation exclusion and is a hazardous waste. Therefore, the quantity of material stored in waste piles on the Biopad is exceeding the limit of 15,000 tons.

Observation 4

Observation Summary: The large volume of material and the management procedures for piles on the Biopad may be causing mixing and dispersal of hazardous waste or hazardous constituents. NEIC inspectors observed intermingling of hazardous waste with HSM through the use of shared equipment and the staging of piles in close proximity to each other. Additionally, some of the waste piles were uncovered which may allow wind dispersal or the volatilization of organics.

Citation:

Permit LAD00077201-OP-MO-02, Activity No. PER20180013, Class 1 Permit Modification, HSM Management under the VRE

CWMLC will begin managing excluded Hazardous Secondary Materials (HSM) in accordance with the verified reclamation exclusion (VRE) provided in LAC 33:V.105.D.1.y.

LAC 33:V.105.D.1 Exclusions, Materials that are not Solid Wastes [40 CFR § 261.4(a)(24)(vi)(D)]

y. hazardous secondary material that is generated and then transferred to a verified reclamation facility for the purpose of reclamation is not a solid waste, provided that:

vi. reclaimers of hazardous secondary material excluded from regulation under this exclusion…shall satisfy all of the following conditions:

(d). the reclaimer…shall manage the hazardous secondary material in a manner that is at least as protective as that employed for analogous raw material and shall be contained.

CWM Permit No. LAD000777201-OP-RN-MO-1: Biopad, Design and Operating Requirements

V.D.3.g. The biopiles must be covered or otherwise managed to control wind dispersal.

Permit LAD00077201-OP-RN-MO-2, Activity No. PER20170006, Class 1 Permit Modification, Biopad Storage

Materials stored in waste piles will be managed similarly to materials stored in piles undergoing biological treatment:

- *waste piles will either remain wetted, be covered with tarps or with sprayed-on gypsum mulch to assist with control of wind-blown particles and to reduce any potential amount of volatile organic compounds (VOCs) from being released to the air.*

Evidence:

Appendix C – Field Photographs

Appendix F – Class 1 Permit Modification, Hazardous Secondary Material Management Under the Verified Reclamation Exclusion

Appendix E – Class 1 Permit Modification, Biopad Storage

Description of Observation:

Piles of oil-bearing HSM and bioremediation wastes were stored on the Biopad at the time of the NEIC inspection. The waste piles were not well delineated or separated, and piles of different wastes appeared to be mixing together. NEIC inspectors observed the tracking of wastes throughout the Biopad, especially along the pathway where heavy equipment is used. NEIC inspectors observed that the same track-hoe was used to move both HSM and bioremediation hazardous wastes. Photographs showing these activities on the Biopad are included in **Appendix C**, photos 91 through 95.

Observation 4

The Class 1 permit modification which granted approval for the management of HSM on-site (**Appendix F**) states that CWM will manage HSM in accordance with the VRE in the LAC. The LAC specifies that HSM must be managed in a manner at least a protective as that used for raw materials and shall be contained. The practices observed by NEIC inspectors do not protect the HSM from mixing with hazardous waste and are not conducive to containment of the HSM.

Additionally, most waste piles on the Biopad were not covered or managed to reduce wind dispersal and may allow hazardous organic constituents in the materials to volatilize. CWM's permit requires that biopiles be managed to reduce wind dispersal. The Class 1 permit modification for storage on the Biopad (**Appendix E**) further describes the requirement to reduce VOCs from being released to the air. Practices such as wetting the piles, covering with tarps, or spraying with gypsum mulch were not observed during the NEIC inspection.

Observation 5

Observation Summary: CWM did not remove accumulated rainfall from the landfill in a timely manner as required by the permit. NEIC inspectors observed standing water in three modules of the active cell of the landfill. CWM representatives stated that the water had been present since Hurricane Harvey impacted the area in 2017.

Citation:

CWM Permit No. LAD000777201-OP-RN-MO-1: Landfill, General Operating Conditions

V.E.2.a.viii. Accumulated rainfall and groundwater must be removed from the active portions of the landfill in a timely manner.

LAC 33:V.2503.F. Landfills, Design and Operating Requirements [40 CFR § 264.301(i)]

F. Collection and holding facilities (e.g., tanks or basins) associated with run-on and run-off control systems must be emptied or otherwise managed expeditiously after storms to maintain the design capacity of the system. Collected material must be disposed of properly.

Evidence:

Appendix C – Field Photographs
Appendix T – LDEQ May 2022 Inspection Report
Interviews with facility personnel

Description of Observation:

During a tour of the landfill at CWM, NEIC inspectors observed standing water in portions of the active landfill Cell 8:

- The newly constructed Module 8 contained noncontact stormwater (**Appendix C**, photo 69)
- Active Module 6 contained contact stormwater (**Appendix C**, photo 69)
- Module 7 contained contact stormwater and leachate (**Appendix C**, photos 33, 36, and 71)

An inspection performed by LDEQ in May 2022 (**Appendix T,** pages 6 and 115) noted the standing water in these portions of the landfill, indicating that the water had been present

Observation 5

for an extended time. CWM representatives stated that the stormwater had collected in these modules during Hurricane Harvey in August 2017, and that CWM had not yet finished removing the excess water.

CWM's permit requires that landfill collection systems associated with run-on and run-off control systems must be emptied expeditiously after storms to maintain capacity of the system. Accumulated rainfall must be removed from the active portions of the landfill in a timely manner. Photographs taken by NEIC inspectors demonstrate that collection systems were not emptied expeditiously, and that accumulated rainfall was not removed from the active Cell 8 in a timely manner.

Observation 6

Observation Summary: CWM did not meet the secondary containment requirements for pressurized leachate pipes that convey F039 hazardous waste leachate to the leachate collection tanks.

Citation:

CWM Permit No. LAD000777201-OP-RN-MO-1: Tanks, Secondary Containment, Prevention of Migration

V.A.3.b.ii. Ancillary equipment must be provided with secondary containment, except as excluded by LAC 33:V.1907.F.

LAC 33:V.1907.F. Tanks, Containment and Detection of Releases [40 CFR § 264.193(f)]

Ancillary equipment must be provided with secondary containment (e.g., trench, jacketing, double-walled piping) that meets the requirements of Subsections B and C of this Section, except for:

1. aboveground piping (exclusive of flanges, joints, valves and other connections) that are visually inspected for leaks on a daily basis;

2. welded flanges, welded joints, and welded connections, that are visually inspected for leaks on a daily basis;

3. sealless or magnetic coupling pumps and sealless valves that are visually inspected for leaks daily; and

4. pressurized aboveground piping systems with automatic shut-off devices (e.g., excess flow check valves, flow metering shutdown devices, loss of pressure actuated shut-off devices) that are visually inspected for leaks on a daily basis.

Evidence:

Appendix C – Field Photographs
Appendix T – LDEQ May 2022 Inspection Report
Interviews with facility personnel

Description of Observation:

NEIC inspectors observed leachate piping in the landfill area and noted that the pipes were directly laying on top of the ground or suspended by raised bars and were not equipped with any type of secondary containment (**Appendix C**, photos 33-36, 72). The piping carries F039 hazardous waste to storage tanks. CWM representatives described the leachate conveyance system as a pressurized system because pumps are used to move leachate through the pipes to the leachate storage tanks. CWM representatives further stated that the pipes are single-

Observation 6

walled, and the piping system does not have automatic shut-off valves. In correspondence between CWM and LDEQ following a 2022 state inspection, CWM clarified that automatic shut-off devices are present on the leachate storage tanks and will shut-off flow if the tank reaches a certain capacity (**Appendix T**, page 122), but automatic shut-off devices are not present on the pipes themselves to shut off flow should a pressure drop from a leak occur in the system.

CWM representatives stated that daily inspections are performed on the pressurized leachate pipes. However, LAC regulations require that if the ancillary equipment (i.e., pressurized piping) is not provided with secondary containment, such piping must be equipped with additional safeguards such as automatic shut-off devices, in addition to being visually inspected for leaks on a daily basis. NEIC inspectors did not observe automatic shut-off devices on the leachate pipes during the inspection and were informed by CWM representatives that the system does not have such devices.

Observation 7

Observation Summary: Samples of incoming waste are collected on a sample cart in the laboratory after the fingerprint analysis is completed. At the time of NEIC's inspection, this area was not being treated as a hazardous waste satellite accumulation area and the containers were not meeting satellite accumulation area labeling requirements.

Citation:

LAC 33:V.1011.A. Generators of Hazardous Waste, Satellite Accumulation Area Regulations for Small Quantity Generators and Large Quantity Generators [40 CFR § 262.15(a)]

A. A generator may accumulate as much as 55 gallons of nonacute hazardous waste and/or either one quart of liquid acute hazardous waste listed in LAC 33:V.4901.B or E, or 1 kg (2.2 lbs.) of solid acute hazardous waste listed in LAC 33:V.4901.B or E in containers at or near any point of generation where waste initially accumulate which is under the control of the operator of the process generating the waste, without a permit or interim status and without complying with the requirements of LAC 33:V.Subpart 1, provided that all of the conditions for exemption in this Section are met.

5. A generator shall mark or label its container with:
a. the words "Hazardous Waste"; and
b. an indication of the hazards of the contents…

Evidence:

Appendix C – Field Photographs
Appendix U – Photographs Submitted by CWM of Corrective Actions
Interviews with facility personnel

Description of Observation:

On February 15 and 16, 2023, the NEIC inspection team toured CWM's on-site laboratory where fingerprint samples of incoming waste loads are analyzed. NEIC inspectors observed a cart in the washroom area that was filled with glass jars containing these samples (**Appendix C**, photo 104). Most of the jars observed were labeled with the name of the generator, receiving ticket number, profile number, hazardous waste numbers, time, date, and pH.

Observation 7

According to interviews with CWM laboratory personnel, the analysis of the samples observed in the cart had been completed. The standard practice in the laboratory was to place the jars on the cart for eventual disposal in the less-than-90-day hazardous waste blue poly drums located outside the laboratory. CWM representatives stated that the cart is emptied in this manner approximately once a week or whenever the cart is full.

At the time of NEIC's inspection, CWM representatives did not consider the sample cart to be a hazardous waste satellite accumulation area. The samples were no longer being used for analysis and therefore should be considered a waste. Many of the jars were identified with hazardous waste numbers, and the pH marked on some of the jars indicated the contents met the hazardous waste characteristic of corrosivity, indicating that the contents were hazardous waste. None of the jars observed on the cart were marked with the words "Hazardous Waste," nor were they labeled with an indication of the hazards of the contents.

On March 21, 2023, CWM submitted photographs to NEIC of corrective actions taken by the facility to address this issue (**Appendix U**). Photograph 7 shows the cart labeled with the words "Hazardous Waste." Individual jars still lack the required labeling of the words "hazardous waste" as well as the indication of the hazards of the contents. Photographs 8 and 9 show a separate area in the laboratory clearly labeled "Samples on Hold" to distinguish in-process samples from samples that are considered wastes. The changes observed in the photographs submitted by CWM appear to clarify what containers are wastes, however each jar of hazardous waste on the sample cart is required to meet the SAA labeling requirements.

Observation 8

Observation Summary: CWM accumulated greater than 55 gallons of hazardous waste in the laboratory satellite accumulation area.

Citation:

LAC 33:V.1011.A. Generators of Hazardous Waste, Satellite Accumulation Area Regulations for Small Quantity Generators and Large Quantity Generators [40 CFR § 262.15(a)]

A. A generator may accumulate as much as 55 gallons of nonacute hazardous waste and/or either one quart of liquid acute hazardous waste listed in LAC 33:V.4901.B or E, or 1 kg (2.2 lbs.) of solid acute hazardous waste listed in LAC 33:V.4901.B or E in containers at or near any point of generation where waste initially accumulate which is under the control of the operator of the process generating the waste, without a permit or interim status and without complying with the requirements of LAC 33:V.Subpart 1, provided that all of the conditions for exemption in this Section are met.

> *6. A generator who accumulates either acute hazardous waste listed in LAC 33:V.4901.B or E or nonacute hazardous waste in excess of the amounts listed in Subsection A of this Section at or near any point of generation shall do the following:*
>
> > *a. comply within three consecutive calendar days with the applicable central accumulation area regulations in LAC 33:V.1013.C or 1015.B, or*
> >
> > *b. remove the excess from the satellite accumulation area within three consecutive calendar days…*

Evidence:

Observation 8
Appendix C – Field Photographs **Appendix U** – Photographs Submitted by CWM of Corrective Actions Interview with facility personnel
Description of Observation: On February 16, 2023, NEIC inspectors observed seven satellite accumulation containers in CWM's laboratory that were accumulating the same hazardous waste stream consisting of contaminated personnel protective equipment and various laboratory wastes (**Appendix C**, photos 108, 112, 113). CWM representatives estimated that the size of six of these containers is approximately 20 gallons. The seventh container was smaller than the 20-gallon containers and was marked as out of service. The size of the smaller container was estimated by CWM representatives to be 10 gallons. The containers were being managed by CWM as hazardous waste satellite accumulation containers and emptied when full. The cumulative capacity of the cans allows for the potential for the lab to accumulate more than 55 gallons of this waste stream at one time. During the inspection, NEIC inspectors noted that one of the 20-gallon containers appeared to be overfilled (**Appendix C**, photo 113). Upon opening, NEIC inspectors noted that another 20-gallon container was almost full (**Appendix C**, photo 112). The smaller 10-gallon container marked as out of service was also overfilled. The remaining four containers were less than half full. At the time of the NEIC inspection, CWM accumulated greater than 55 gallons of hazardous waste in this satellite accumulation area. On March 21, 2023, CWM submitted photographs to NEIC of corrective actions taken by the facility to address this issue (**Appendix U**). Photographs 10 and 11 show that only two red containers remain in the satellite accumulation area, which reduces the total volume of accumulated hazardous waste generated in the laboratory to less than 55 gallons.

Observation 9
Observation Summary: CWM does not collect a representative sample for fingerprint analysis from incoming shipments of hazardous waste contained in roll-off boxes.
Citation: **CWM Permit No. LAD000777201-OP-RN-MO-1: Container Storage Areas, Conditions and Operations, Operations, Unloading, Loading and Receiving/Staging** *V.B.1.c.ii.(1) All trucks containing hazardous waste shall be managed in accordance with LAC 33:V.1527 and in accordance with the approved Waste Analysis Plan.* *V.B.1.c.ii.(5) A representative sample of the waste for each waste stream to be treated or disposed at the facility must be analyzed to verify the information on the manifest when required by, and in the manner specified by, the approved Waste Analysis Plan.* **CWM Waste Analysis Plan: 3.0 Sampling Methodology** *Access to any type of container will influence the location within the container from which samples can be taken Where possible, samples will be taken to address vertical variations in the waste because there is a much greater tendency for wastes to be heterogeneous in a vertical rather than a horizontal direction and horizontal variations are generally easier to detect. If*

Observation 9

examination indicates significant strata which would cause non-conformance in a waste, then each layer may be analyzed separately.

3.2.1 Containerized Waste

A container is any portable device in which a material is stored, transported, treated, disposed of, or otherwise handled. Vertical compositing of the waste will yield an appropriate sample in most cases. A single vertical axis sample will be taken where possible (i.e., tanks where depth allows for the use of a Coliwasa). Where a single vertical axis sample is not possible, alternate sampling equipment appropriate for the waste matrix will be utilized to obtain the best vertical representation of the waste. These samples will be composited in equal volume. If examination indicates significant strata which would cause non-conformance in a waste, then each layer may be analyzed separately…

Large containers and tanks for flowable materials and bulk containers for solid materials may be either stationary or mobile…Light, dry powders, granules and heavy solids are sampled by trier, shovel, scoop, or by coring with heavy tubing.

CWM Waste Analysis Plan: 7.0 Quality Assurance/Quality Control, 7.2 Sampling Program
Sampling is performed for each waste stream in a manner that ensures the samples are as representative as possible under the conditions of the sampling event.

Evidence:
Appendix B – CWM Waste Analysis Plan, September 2015
Appendix C – Field Photographs
Interviews with facility personnel

Description of Observation:
CWM's permit and the LAC require that a representative sample of an incoming hazardous waste shipment must be collected and analyzed to verify the information contained on the manifest. Section 3 of CWM's WAP (**Appendix B**) describes the sampling methodology used to confirm that incoming shipments of hazardous waste are consistent with pre-approval paperwork and the associated manifest for that waste. The WAP states that a single vertical axis sample will be taken where possible. Section 3 of the WAP also states that solids may be sampled with a trier, shovel, scoop, or by coring with heavy tubing.

On February 16, 2023, NEIC inspectors observed a CWM operator collect a sample from an incoming roll-off box containing hazardous waste electric arc furnace dust (**Appendix C**, photos 109-111). From an elevated platform referred to as the truck rack, the operator used a trowel attached to a longer pole to collect a scoop off the top surface of the waste in three different locations: front, middle, and rear of the container. The three scoops of waste were deposited into a single jar which was then delivered to the laboratory for a fingerprint analysis. According to interviews with CWM representatives, this is the typical procedure performed to collect a fingerprint sample from roll-off boxes containing bulk hazardous waste. Operators do not dig deeper into the waste than about six inches to collect a sample. A significant portion of hazardous waste received and treated at CWM arrives as bulk hazardous waste contained in roll-off boxes.

Observation 9
While the sampling methodology in the WAP allows for collection of a sample with a scoop, the method of collecting a three-point sample along the surface of the roll-off does not meet the requirement in the WAP for a representative sample of the vertical axis. The WAP requires a vertical axis sample where possible. CWM did not demonstrate that a vertical axis sample is not possible for roll-off boxes containing solids. CWM's current practice does not provide a representative sample and may lead to improper characterization of a hazardous waste shipment.

Observation 10
Observation Summary: CWM labeled roll-off containers of waste generated from the TDU with non-hazardous waste labels while the hazardous waste analysis was still pending.
Citation: **LAC 33:V.1005.A. Generators of Hazardous Waste, Hazardous Waste Determinations and Recordkeeping [40 CFR § 262.11]** *A person who generates a solid waste, as defined in LAC 33:V.109, shall determine if that waste is a hazardous waste in order to ensure the wastes are properly managed according to applicable RCRA regulations.*
Evidence: **Appendix C** – Field Photographs Interviews with facility personnel
Description of Observation: NEIC inspectors observed three roll-off boxes containing wastes generated from the TDU behind the TDU building (**Appendix C**, photos 64, 65). According to CWM representatives, not every roll-off box of waste solids generated from the TDU is sampled and analyzed for hazardous waste determinations. The waste is only sampled and analyzed if certain TDU parameters for feed rate and discharge temperatures are not met. The three containers observed by NEIC during the inspection had been identified CWM representatives as requiring sampling and analysis. The containers were preemptively marked with a non-hazardous waste label before the analytical testing confirmed the waste was non-hazardous. The non-hazardous determination and label should only be applied to the containers once the analytical results of the waste have been received and it is confirmed that that waste is non-hazardous. The containers should be managed as hazardous waste until the analytical results are received.

Observation 11
Observation Summary: CWM did not remove accumulated precipitation from the container storage area in building 801 in a timely manner. NEIC inspectors observed that water had overflowed the collection system, containers of hazardous waste were in direct contact with standing water, and solid materials were present on the ground.
Citation: **CWM Permit No. LAD000777201-OP-RN-MO-1: General Facility Conditions, Design and Operation of All Facilities** *III.A.1. The Permittee must maintain and operate all facilities to minimize the possibility of a fire, explosion, or any unauthorized sudden or non-sudden release of hazardous waste or*

Observation 11

hazardous waste constituents to air, soil, or water that could threaten human health or the environment.

CWM Permit No. LAD000777201-OP-RN-MO-1: Container Storage Areas, Secondary Containment

V.B.3.b. Container storage systems must have a containment system that is designed and operated in accordance with LAC 33:V.2111.B. The containment system must be designed and operated as follows:

> *V.B.3.b.iv. …accumulated precipitation must be removed from the sump or collection area in as timely a manner as is necessary to prevent overflow of the collection system;*

Evidence:

Appendix V – Transportation Staging Building Unit No. 801 Drawing
Appendix C – Field Photographs

Description of Observation:

On February 7, 2023, the NEIC inspection team toured building 801. The building is used for permitted storage of hazardous waste roll-off containers. The building is divided into bays that are open on the west side, and the floor is constructed with a slope towards the eastern wall (**Appendix V**). Secondary containment sumps are constructed along the eastern wall to contain spills or other liquids that may enter the building.

During the tour of the building, NEIC inspectors observed that the sump located in the rear of Bays 1 and 2 was filled with liquid and was surrounded by an accumulation of dried, mud-like material (**Appendix C**, photo 4). Additionally, the rear of Bays 3 through 12 contained standing water, and many roll-off containers of hazardous waste were sitting in the water (**Appendix C**, photos 8, 10, 12).

CWM's permit requires that the facility be maintained to minimize the possibility of any release of hazardous waste or hazardous waste constituents to the environment. The accumulated solids on the floor of the container storage area as well as the filled sumps do not reflect practices that minimize the potential for releases of hazardous waste. Additionally, the permit requires that accumulated precipitation be removed from the sump or collection area in a timely manner. The sump system cannot operate properly if it is filled with liquids or debris.

Observation 12

Observation Summary: CWM did not maintain containers of hazardous waste in good condition. NEIC inspectors observed a leaking roll-off container of hazardous waste in building 801 and three corroded drums of hazardous waste in building 201.

Citation:

CWM Permit No. LAD000777201-OP-RN-MO-1: Container Storage Areas, Conditions and Operations, Conditions of Containers

V.B.1.a.i. The Permittee shall be in compliance with all appropriate conditions set forth in LAC 33:V.Chapter 21.

Observation 12

V.B.1.a.ii. The Permittee shall maintain the condition of all containers in accordance with LAC 33:V.2103. If a container holding hazardous waste is not in good condition (e.g., severe rusting, apparent structural defects) or if it begins to leak, the owner or operator must transfer the hazardous waste to a container that is in good condition or manage the waste in some other way that complies with the requirements of LAC 33:V.Chapter 21.

Evidence:

Appendix C – Field Photographs
Appendix W – Manifest for Waste Contained in Leaking Roll-off Box
Appendix U – Photographs Submitted by CWM of Corrective Actions
Appendix X – Building 801 Inventory Sheet (February 7, 2023)

Description of Observation:

During a tour of building 801 on February 7, 2023, NEIC inspectors observed a roll-off box in Bay 4NW that was rusted on the bottom and actively dripping liquid onto the concrete floor (**Appendix C**, photo 6 and 7). The label on the roll-off container was marked as hazardous waste, and the associated manifest for the container indicated the contents were corrosive liquids (EPA hazardous waste No. D002) (**Appendix W**). The inventory sheet for building 801 had the container marked as "WTSB" which is CWM's code for "waiting treatment at stabilization," indicating that the waste had not yet been treated and still carried the D002 hazardous waste number (**Appendix X**).

NEIC inspectors toured the drum storage area in building 201 on February 8, 2023 and noted three drums in deteriorated condition. A drum labeled 77053802 was corroded and contained D001 hazardous waste (**Appendix C**, photo 30). A second drum labeled 77053801 had a lid with a partially cracked lid and contained D018 hazardous waste (**Appendix C**, photo 31). A third drum labeled 77052701 was rusted, bulging, and contained D001 hazardous waste (**Appendix C**, photo 32).

CWM's permit and the LAC require that containers of hazardous waste be maintained in good condition. Containers must not be rusting or have structural defects, and hazardous waste leaking from containers must be transferred to a container that is in good condition.

Upon identification of these issues, CWM transferred the contents of the leaking roll-off box in building 801 to a new roll-off box. NEIC inspectors observed this correction occur the same day while on-site. On February 9, 2023, CWM informed NEIC inspectors that facility personnel had replaced the corroded lids on two of the identified drums in building 201 and placed the third drum into an overpack. After the inspection, CWM submitted photographs of the drum corrections to NEIC, which are included in **Appendix U**.

Observation 13

Observation Summary: CWM may not have sufficient controls in place to prevent dust from the stabilization process from migrating outside of the stabilization building. As observed by NEIC inspectors, the doors on the stabilization building were not completely closed during the stabilization process.

Citation:

Observation 13

CWM Permit No. LAD000777201-OP-RN-MO-1: Air Emission Standards, Standards for Tanks, Existing Hazardous Waste Treatment Tanks

V.H.2.c.ii. Building 302, which houses Tanks T-303, T-304, and T-306, shall be maintained closed when treatment operations are being conducted.

Containment Buildings, Applicability LAC 33:V.1801 [40 CFR § 264.1100]

A. The requirements of this Section apply to owners or operators who store or treat hazardous waste in units designed and operated under LAC 33:V.1802…

Containment Buildings, Design and Operating Standards LAC 33:V.1802 [40 CFR § 264.1101]

A. All containment buildings must comply with the following design standards.

1. The containment building must be completely enclosed with a floor, walls, and a roof to prevent exposure to the elements, (e.g., precipitation, wind, run-on) and to ensure containment of managed wastes.

C. Owners or operators of all containment buildings must:

1. use controls and practices to ensure containment of the hazardous waste within the unit; and, at a minimum:

a. maintain the primary barrier to be free of significant cracks, gaps, corrosion, or other deterioration that could cause hazardous waste to be released from the primary barrier;

Evidence:

Appendix C – Field Photographs
Appendix T – LDEQ May 2022 Inspection Report
Interviews with facility personnel

Description of Observation:

On February 9, 2023, NEIC inspectors observed CWM conduct hazardous waste stabilization in the mixing pits in the stabilization building, building 302. According to CWM's permit and the LAC, this building is required to be completely enclosed and free from any significant cracks or gaps. The opening that allows trucks to enter and exit the building was not closed completely and had a gap between the two door panels (**Appendix C**, photos 39, 40, 47, 50, 53). According to CWM representatives, the building had been significantly damaged by Hurricane Laura in 2020. Additionally, an LDEQ inspection in May 2022 noted that the doors to the building were completely open during treatment operations at the time of that inspection (**Appendix T**). CWM representatives stated that repairs to the stabilization building have been contingent on insurance negotiations, supply chain disturbances, and construction availability, and as a result repairs are still ongoing. At the time of the NEIC inspection, the doors to the building had been repaired but were still experiencing operational issues. CWM representatives stated that maintenance personnel were looking into further repairs.

Observation 14

Observation Summary: CWM may not have sufficient controls in place to prevent dust from the stabilization process from migrating outside of the stabilization building. CWM representatives stated that roll-off boxes containing treated waste are driven out of the building without a tarp to prevent dust from escaping the containers.

Observation 14

Citation:

CWM Permit No. LAD000777201-OP-RN-MO-1: General Facility Conditions, Design and Operation of All Facilities

III.A.1. The Permittee must maintain and operate all facilities to minimize the possibility of a fire, explosion, or any unauthorized sudden or non-sudden release of hazardous waste or hazardous waste constituents to air, soil, or water that could threaten human health or the environment.

Containment Buildings, Applicability LAC 33:V.1801 [40 CFR § 264.1100]

A. The requirements of this Section apply to owners or operators who store or treat hazardous waste in units designed and operated under LAC 33:V.1802…

Containment Buildings, Design and Operating Standards LAC 33:V.1802 [40 CFR § 264.1101]

C. Owners or operators of all containment buildings must:

1. use controls and practices to ensure containment of the hazardous waste within the unit; and, at a minimum:

c. take measures to prevent the tracking of hazardous waste out of the unit by personnel or by equipment used in handling the waste.

Evidence:

Interviews with facility personnel

Description of Observation:

CWM representatives described to NEIC inspectors the process by which treated stabilization batches are unloaded from the mixing pits into roll-off containers and then driven over to building 801 for storage. The treated waste placed in the roll-off containers is often hot due to the stabilization reactions, and tarps are not used to cover the containers until they have cooled off in a different location. This practice may allow fugitive dust from the roll-off containers to be released into the environment while the waste is transported over to building 801.

The LAC requires that measures must be taken to prevent the tracking of hazardous waste outside of the stabilization containment building. CWM's permit further requires that the facility must be operated to minimize the release of hazardous waste or hazardous waste constituents. CWM representatives reported that this practice is currently under review for the development of alternative procedures to address the potential release of hazardous waste to the air while driving trucks of treated waste from the stabilization building to building 801.

Observation 15

Observation Summary: Containers of hazardous waste were not closed during storage. NEIC inspectors observed open roll-off boxes of hazardous waste in building 801.

Citation:

CWM Permit No. LAD000777201-OP-RN-MO-1: Container Storage Areas, Conditions and Operations, Management of Containers

V.B.1.b.v. Containers holding hazardous waste must always be closed during storage, except when it is necessary to add or remove waste.

Observation 15

Evidence:
Appendix C – Field Photographs
Appendix M – Waste Profile LA956105 for RT770782

Description of Observation:
During a tour of building 801 on February 7, 2023, NEIC inspectors observed the following containers that were open:

- On a roll-off box containing hazardous waste solids from the CWM Biopad, a portion of tarp was not completely covering the container and the wastes inside were visible (**Appendix C**, photos 1-3).

- On a roll-off box containing D029 and D043 hazardous waste solids, a portion of the tarp covering the container was propped open with a can (**Appendix C**, photos 13 and 14).

- On two frac tanks containing D029 and D043 hazardous waste liquids, the hatches on top of both tanks were not latched and secured in the closed position (**Appendix C**, photos 16-21).

- On a vacuum box containing hazardous waste incinerator ash, a connection point was open (**Appendix C**, photos 22-23) (**Appendix M**).

- On a vacuum box containing D004 hazardous waste solids, a hatch on top of the box was not latched and secured in the closed position (**Appendix C**, photos 24-25).

After identification of these open containers, NEIC inspectors observed CWM facility personnel make corrections to close the openings on the roll-off box tarps and to secure the hatches on the vacuum boxes.

Observation 16

Observation Summary: Contaminated water from the landfill vehicle wash station may drain outside of the landfill area and into the environment.

Citation:
CWM Permit No. LAD000777201-OP-RN-MO-1: General Facility Conditions, Design and Operation of All Facilities
III.A.1. The Permittee must maintain and operate all facilities to minimize the possibility of a fire, explosion, or any unauthorized sudden or non-sudden release of hazardous waste or hazardous waste constituents to air, soil, or water that could threaten human health or the environment.

Evidence:
Appendix C – Field Photographs

Description of Observation:
CWM operates a vehicle wash station located at the entry and exit point to the active portion of the landfill. All vehicles that exit the landfill stop at this wash station where operators rinse the tires off with hoses (**Appendix C**, photos 37 and 38).

Observation 16
NEIC inspectors observed a lack of a berm or other barrier that could prevent runoff wash water from draining into the roadway that leads away from the landfill. The wash station concrete pad slopes down towards the roadway and could potentially allow contaminated water to drain outside of the landfill area into the environment.