

RCRA Inspection Report

1) EPA Inspectors and Authors of the Report

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2) Facility Information

Holcim (US) Inc./Geocycle LLC.
8677 Hwy 45 Alternate South
Artesia, Mississippi 39736
EPA ID# MSD077655876
Primary NAICS: 562211 – Hazardous Waste Treatment and Disposal

3) Responsible Official

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4) Inspection Participants

George Colvin, Facility Manager, Holcim (US) Inc./Geocycle LLC
Tammy Daniels, Customer Service Representative, Holcim (US) Inc./Geocycle LLC
Katherine Trainer, Lab Manager, Holcim (US) Inc./Geocycle LLC
Raj Aiyar, U.S. EPA Region 4, Inspector
Robert Nakamoto, U.S. EPA Region 4, Inspector
Brad Justice, Mississippi Department of Environmental Quality (MDEQ) Inspector,

5) Date of Inspection

December 13, 2022, at 9:12 a.m.

6) Applicable Regulations

Mississippi Hazardous Waste Management Regulations (MHWMR), 11 Miss. Admin. Code Pt. 3, R. 1.1-1.24 Section 17-17-1 *et seq.* of the Mississippi Code of 1972, Miss. Code Ann. § 17-17-1 *et seq.*

Section 17-17-27 of the Mississippi Code of 1972, Miss. Code Ann. § 17-17-27

Pursuant to 11 Miss. Admin. Code Pt. 3, R. 1.3 [40 C.F.R. § 262.10], a Large Quantity Generator (LQG) is a generator who generates greater than or equal to 1,000 kilograms (2200 lbs) of non-acute hazardous waste in a calendar month.

Pursuant to the Solid Waste Disposal Act, as amended by the Resource Conservation and Recovery Act (RCRA) of 1976, 42 USC Section 6901 et seq., and the Hazardous and Solid Waste Amendments (HSWA) of 1984, P.L. 98-616, and regulations promulgated thereunder by the U.S. Environmental Protection Agency (Codified and to be codified in Title 40 of the Code of Federal Regulations), a federal RCRA Permit was issued to Holcim (US) Inc./Geocycle LLC for the Artesia, Mississippi facility located at 8677 Hwy. 45 Alternate South, Artesia, Mississippi, 39736 (the RCRA Permit). The Permittee must comply with all terms and conditions of the RCRA Permit issued on September 21, 2017. This Permit consists of the applicable regulations contained in 40 C.F.R. Parts 260 through 264, 266, 268, 270 and 124 and the statutory requirements of RCRA as amended by HSWA. The permit is effective the Issued Date and shall remain in effect for ten (10) years until September 30, 2027, unless revoked and reissued, or terminated under 40 CFR § 2701.41 and § 270.43 or continued in accordance with 40 CFR §270.51(a).

Pursuant to 11 Miss. Admin. Code Pt. 3, R. 1.3 [40 C.F.R. § 262.15(a)], a generator may accumulate as much as 55 gallons of non-acute hazardous waste in containers at or near the point of generation where wastes initially accumulate, which is under the control of the operator of the process generating the waste, without a permit or without having interim status, as required by Section 17-17-27(4) of the Mississippi Code of 1972, Miss. Code Ann. § 17-17-27(4), and without complying with 11 Miss. Admin. Code Pt. 3, R. 1.3 [40 C.F.R. § 262.16(b) or § 262.17(a)], except as required in 11 Miss. Admin. Code Pt. 3, R. 1.3 [40 C.F.R. § 262.15(a)(7) and (8)], provided that the generator complies with the satellite accumulation area conditions listed in 11 Miss. Admin. Code Pt. 3, R. 1.3 [40 C.F.R. § 262.15(a)] (hereinafter referred to as the “SAA Permit Exemption”).

Pursuant to 11 Miss. Admin. Code Pt. 3, R. 1.3 [40 C.F.R. § 262.17)], a Large Quantity Generator (LQG) of hazardous waste may accumulate hazardous waste on-site for 90 days or less without a permit or without having interim status, as required by Section 17-17-27(4) of the Mississippi Code of 1972, Miss. Code Ann. § 17-17-27(4) [Section 3005 of RCRA, 42 U.S.C. §6925], provided that the generator complies with the conditions listed in 11 Miss. Admin. Code Pt. 3, R. 1.3 [40 C.F.R. § 262.17] (hereinafter referred to as the “LQG Permit Exemption”).

7) Purpose of Inspection

The purpose of this inspection was to conduct an unannounced compliance evaluation inspection (CEI) to determine the facility’s compliance with the federal RCRA Permit, issued on September 21, 2017, and the applicable RCRA regulations. This was an EPA lead inspection along with MDEQ.

8) Facility Description

The EPA issued a RCRA Hazardous Waste Permit on September 21, 2017, to Holcim (US) Inc./Geocycle LLC, which owns and operates, respectively, a commercial hazardous waste management facility located at 8677 Hwy 45 Alternate South, in Artesia, Mississippi. Formerly, Holcim US Inc. had operated a cement kiln located adjacent to the present Geocycle facility. In the previous years, fuel blended hazardous waste from Geocycle was supplied to the adjacent cement kiln as an alternative to the conventional fuels. The cement kiln is no longer in operation. The RCRA Permit authorizes the management of hazardous waste in tanks, containers, and bulk containers, including the disposal of hazardous waste through fuel blending. In addition, the RCRA Permit addresses corrective action for releases of hazardous constituents and contains provisions restricting land disposal of hazardous waste and organic air emissions from tanks and containers, and provisions for waste minimization.

Geocycle is the only owned subsidiary of Holcim and continues to operate a permitted commercial hazardous waste treatment, storage, and disposal facility (TSDF) that blends hazardous waste to formulate hazardous waste derived fuel (HWDF) for shipment to Holcim's cement plant located in Holly Hill, South Carolina, and sometimes other facilities. In addition to HWDF production, various RCRA regulated hazardous wastes and non-RCRA regulated waste streams may be stored at the Geocycle facility for trans-shipment to other TSDFs or waste facilities.

The hazardous waste is delivered to Geocycle via bulk transport containers, tanker trucks, or railcars. The containers containing hazardous waste is received, sampled, unloaded, and processed in accordance with the facility's federal RCRA Permit. Before an incoming hazardous waste shipment is accepted, the waste is tested to verify that it matches the description of the waste in the manifest and the approved prequalification requirements. Once a waste shipment is tested and accepted, it is unloaded and pumped into a hazardous waste tank. The received hazardous waste shipments are sampled, per the facility's waste analysis plan, evaluated for compatibility, and mixed in accordance with the facility's fuel blending plan.

After blending the received hazardous waste into HWDF, the HWDF is shipped via tanker trucks or railcars for use as an alternative fuel. Hazardous waste generated on site is either blended into the HWDF process or shipped off-site as hazardous waste for disposal purposes.

The permitted tank storage limits are:

<u>Tank:</u>	<u>Capacity</u>
Blend Tank T-4101	39,000 gallons
Blend Tank T-4102	39,000 gallons
Blend Tank T-4103	39,000 gallons
Blend Tank T-4104	39,000 gallons
Burn Tank T-4105	90,000 gallons
Burn Tank T-4106	90,000 gallons

The permitted container storage limits are:

<u>Container Storage Area</u>	<u>Maximum Capacity</u>	<u>Maximum Container Per Container Storage Area (CSA)</u>
Railcar Bay 1, RB-1	52,000 gallons	2 Railcars
Truck Bay 1, TB-1	12,760 gallons	2 Tankers; or, 1 tanker and 6,380 gallons; or, 12,760 gallons
Truck Bay 2, TB-2	12,000 gallons	2 Tankers
Truck Bay 3, TB-3	12,000 gallons	2 Tankers

The facility was built in the late 1990's. The former cement kiln operated from 1974-2014. Used oil has been managed on site since 1993. The facility currently operates Monday through Friday.

9) Previous Inspection/Compliance History

On March 11, 2021, MDEQ and EPA inspected Holcim and identified violations related to failure to mark containers with indication of hazard, failure to tag all Subpart BB equipment with unique identification numbers, failure to maintain secondary containment of the tanks free of cracks or gaps, failure to provide copies of the contingency plan to the emergency responders including police, fire department and hospitals, failure to maintain all Leak Detection and Repair (LDAR) records for Subpart BB equipment, and failure to properly calibrate Subpart BB monitoring equipment reference the calibration gas selected. The facility was documented as fully returning to compliance on September 15, 2021.

10) Findings

Opening Conference

On December 13, 2022, the EPA and MDEQ inspectors arrived at the facility at 9:12 a.m. and met with George Colvin, Facility Manager. The inspectors presented their credentials to George Colvin and stated the purpose of the visit. George Colvin requested the inspectors to watch a short 20-minute safety video prior to the site visit as required by the facility's safety procedure and protocol. After the inspectors finished watching the facility's safety video, George Colvin gave the inspectors a brief history of the site and an overview of the facility's operation and the fuel blending process at the facility. As part of the site history, George Colvin mentioned that there was a cement kiln adjacent to the present Geocycle facility. However, the former Holcim cement kiln facility is no longer present since it was scrapped and removed.

As part of the fuel blending process, George Colvin stated that Geocycle can utilize its historic knowledge of the incoming loads, waste profile and waste analysis plan (WAP) to blend those loads into a waste derived fuel which is primarily shipped to a Geocycle facility in Holly Hill, South Carolina. According to George Colvin, Geocycle has a fleet of dedicated railcars that it leases for waste (waste fuel) shipments. Most of the incoming waste shipments arrive by tanker trucks and most of the outgoing hazardous waste derived fuel is shipped by rail.

The facility has British Thermal Unit (BTU) and water content targets that the facility is required to meet for the purpose of having a viable fuel for the cement kilns. Wastes that do not meet the

BTU and the water content standards are blended with compatible wastes that exceed the minimum standards for achieving a homogeneous blend that meets the customer specifications. The laboratory chemist plays a key role in determining a blend plan which is provided to the site technicians responsible for managing the waste in the tanks. Monitoring pH is a critical part of the fuel blending plan. Used oil is also for the purpose of fuel blending as needed. The inspectors later discussed the scope of the inspection and the records to be reviewed as part of the inspection.

George Colvin stated that Geocycle does not have a Title V Air Permit but has a synthetic minor operating permit (SMOP)—Air Reference No. 1680-00025 issued by MDEQ. According to George Colvin, the operation of the facility and the tank and the container requirements are covered by SMOP under 40 CFR Subpart FF which contains more stringent requirements than Subpart CC and thus, the facility is exempt from complying with the requirement of 40 CFR Subpart CC. However, the tank's ancillary equipment is covered under the 40 CFR 264, Subpart BB in accordance with the facility's RCRA permit. George Colvin further stated that some of the ancillary equipment associated with the Subpart BB requirements are monitored monthly, while others are monitored either quarterly and/or annually. According to George Colvin, all the hazardous waste tanks are inspected annually, and the annual monitoring logs are maintained onsite.

Tank Farm Surrounding Area

The inspection team first inspected the tank farm and the surrounding area. The facility has a nitrogen tank that is utilized for keeping a nitrogen blanket in the overall tank system. The facility also has a 250,000-gallon water tank with a water cannon (Photograph 1) that can be utilized in event of an emergency. Quarterly tests are conducted of the fire system.

Truck Waste Drop-Off and Process Pad

The facility operates a process that allows trucks to drive in and empty hazardous waste in one of two available truck bays (Photographs 2 and 3). Samples are taken and retained for 90-days. At the time of the inspection, there were two satellite accumulation areas (SAAs) at each truck bay. One SAA is used to accumulate personal protective equipment (PPE) solids, and the other is used to accumulate hazardous waste liquids. The inspectors observed one 55-gallon drum in each of the four SAAs. Each container was closed, labeled as "Hazardous Waste," and with an indication of hazard.

This area also contained a hazardous waste central accumulation area (CAA) for storage of 55-gallon containers. At the time of the inspection, the inspectors observed three 55-gallon containers in the CAA (Photograph 4). All the containers were observed to be closed, labeled as "Hazardous Waste," marked with a hazard indication and dated (two drums were dated July 11, 2022, and one was dated September 15, 2022). Based on the facility's response to the inspector's enquiry regarding the dating of these containers, it appeared that the facility was, at the time of the inspection, marking containers with an accumulation start date when each container first began accumulating hazardous waste in the SAA. Pursuant to 11 Miss. Admin. Code Pt. 3, R. 1.3 [40 C.F.R. § 262.15(a)(6)(iii)] small and large quantity generators who accumulate hazardous waste in excess of the amounts listed in the SAA Permit Exemption must mark or label the container(s) holding the excess accumulation of hazardous waste with the date the access amount

began accumulating. The facility documented that they had shipped facility generated wastes on August 5, 2022, which supports the facility's claim that containers in the CAA should have been dated on or after August 5, 2022. Therefore, it appears that the two drums that were marked with accumulation start dates which exceeded the 90-day accumulation time limit allowable under the LQG Permit Exemption were marked with erroneous accumulation start dates.

Pursuant to 11 Miss. Admin. Code Pt. 3, R. 1.3 [40 C.F.R. § 262.17(a)(5)(i)(C)], which is a condition of the LQG Permit Exemption, a generator must mark or label its containers with the date upon which each period of accumulation begins clearly visible for inspection on each container.

Tank Treatment and Storage Area

At the time of the inspection, there were six hazardous waste fuel tanks. There were two (2) 90,000-gallon "burn" tanks (#4105 and #4106) and four (4) 40,000-gallon fuel-blend tanks (#4101, #4102, #4103, #4104). George Colvin stated during the walk-through in the tank farm that the load out of outgoing waste is normally through the former burn feed tanks (#4105 and #4106). George Colvin also mentioned some tank repairs had been recently done in September and October 2022. The inspectors observed that Tank 4105 was not in service at the time of the inspection. The tank was cleaned out in either July or August of last year.

During the walk-through around the base of the tanks in the tank farm area, the inspectors observed that some of the cracks and gaps on the floor of the secondary containment appeared to have been repaired. Some areas of patching could be observed. The overall state of the containment system, concrete, and coating appeared to be generally good, but some limited areas needed repair before the issues became a major issue. At the time of the inspection, the secondary containment floor and wall appeared to have a small hairline crack in the concrete wall and some limited cracks or peeling in the coating for the tank farm (Photographs 10, 11, and 12). After the inspection the facility repaired some of the areas. Some repairs may have been delayed due to the weather conditions during winter (Figures 4, 5, and 6).

Pursuant to the RCRA Permit, Part IX. Tanks [40 C.F.R. § 264 Subpart J], which incorporates Section I.X.D.1. Design and Construction [40 C.F.R. § 264.193(e)(1)(iii)], a facility using a tank system for storing or treating hazardous waste must provide secondary containment with an external liner system that is free of cracks or gaps. The secondary containment system must be constructed or lined with materials that are compatible with the wastes to be placed in the tank system and must have sufficient strength and thickness to prevent failure.

In addition, the inspectors observed some limited areas of paint peeling on a hazardous waste tank and signs of corrosion on several ancillary equipment pieces associated with the tank system. The inspectors observed that the exposed areas were not coated with paint or similar weather resistance coating and/or either were showing signs of corrosion or lacked corrosion protection. We inspected the top of Waste Tank 4105. Waste Tank 4105 was not in service. The inspection team was able to utilize the stairs to view the top of Tank 4105. The tank appeared to be in good condition excepting areas under maintenance work, and no issues of concern were identified with the top area of the tank, and other tanks, excepting some areas of limited corrosion on some of the valves and tank closure devices. (Photographs 16, 17, 18, and 19).

The tagging system for the pumps, valves, connectors, and other ancillary equipment were inspected. Some of the identification number tags were illegible (Photographs 13, 14, and 15). Following the inspection, the facility replaced numerous tags (Figures 1, 2, and 3).

Pursuant to the RCRA Permit, Part VI. Organic Air Emission Standards for Tanks, Containers, Miscellaneous Units, and Equipment [40 C.F.R. § 264.1050] and [40 C.F.R. § 264.1080], which incorporates Section VI.A.2. Equipment Standards [40 C.F.R. § 264.1052 through 264.1058, 264.1060 through 264.1062, & 264.1064(b)], each piece of equipment subject to 40 C.F.R. Part 264 Subpart BB shall be tagged with a unique identification number.

Control Room

The inspection team visited the control room for the fuel blending operations. The operators Bo Harris, Audie Pettit, and Terry Cunningham were present during the visit to the control room. The operators, including George Colvin, explained to the inspectors the fuel blending operations. The technicians demonstrated the screen controls and explained the blending procedures from the display monitor. The facility has a software package that facilitate in the fuel blending operation. George Colvin mentioned that the technicians are provided with a daily blend plan that shows the waste load distribution and blend plan in the tank farm.

Laboratory

The inspectors visited the on-site laboratory and were briefed on lab operations by Katherine Trainer, the laboratory manager (Photographs 5 and 6). According to Katherine Trainer, before an incoming shipment of hazardous waste is accepted, the chemist ensures that the waste received at the facility matches the waste designated on the manifest and the approved prequalification waste profile. Once a shipment has been tested and accepted, it is unloaded. Before blending the incoming waste with other wastes, the compatibility of the mixture is verified. Received hazardous waste shipments are sampled, per the facility's waste analysis plan (WAP), evaluated, and included into the facility's fuel blending plan. The facility tests retain samples to ensure wastes and products meet the specifications of requirements in its lab per the facility's waste analysis plan. The inspection team observed the room where sample retains are stored.

Records

At the time of the inspection, the EPA and MDEQ reviewed inbound and outbound hazardous waste manifests for September 2021 and September 2022. The hazardous waste manifests were well organized and complete.

Geocycle is issuing "Certificates of Thermal Destruction" to customers. Records are also kept of the load summary sheet, inbound analysis sheet, Inbound HW Manifests, LDR notices, any manifest discrepancy issues, a benzene checklist, a special handling checklist, an incoming truck form, and load receipts.

Annual hazardous waste operations training documentation was provided for applicable staff. A waste analysis plan was provided. The Contingency plan was provided and reviewed. The former compliance issue with arrangements with local authorities had been corrected.

Method 21 inspection documentation for ancillary equipment showed that the equipment associated with the transfer of hazardous waste contained a chemical composition of at least 10% by weight of organic constituents that were in light liquid service. George Colvin, Facility Manager, stated that Method 21 monitoring is conducted on the pumps and agitators monthly, valves were monitored quarterly, and the connectors annually. The Leak Detection and Repair (LDAR) records were reviewed for completeness and accuracy. During the LDAR logs review it was determined that monitoring issues identified during the last year's inspection had been corrected. The facility is calibrating its LDAR monitoring equipment on the same day that it conducts LDAR monitoring.

At the time of the inspection, the facility did possess recordkeeping information as part of the facility operating records for each piece of equipment to which 40 CFR Part 264 Subpart BB applies. Specifically, the records for 2022 which included monthly monitoring (February, March, May, June, August, September, and November) quarterly monitoring (April, July, and October) and annual monitoring record (January 13, 2022) were reviewed for completeness and accuracy.

Tank and container inspection logs and Personnel Training records were also reviewed for completeness. Annual training is conducted on-site. Records also indicated that the facility was conducting on-site inspection as required by their Permit. There were no missing records identified during the records review.

Daily inspections logs record inspections of the following areas are: 1) Unloading Area, 2) Pump/Grinder Area, 3) Container Storage Area, 4) Tank Farm, 5) Overall Facility, 6) Maintenance Areas, and the 7) Fuels Laboratory. Areas inspected in the Unloading Area included trucks, railcars, drip pans, buckets, roof, piping pumps, and hoses. The Container Storage Area inspection included drums, tote tanks, satellite areas, carbon canisters, and the quantity and volume of hazardous and non-hazardous waste in storage. The inspection in the Pump/Grinder Area included inspecting the grinders (used in place of filters), the fuel blends sample closet, the emergency shower, and the eyewash station. Areas inspected in the Tank Farm included tanks, tank ladders, tank supports, tank grounding, flanges, manways, agitators, high level alarms, piping, and the pumps. The Facility fence line inspection included fences enclosing the property, gates, unloading area, and building entry exits and the signs.

Additional records revised included the annual wall thickness inspection reports for the six hazardous waste tanks. Thickness measurements are taken at the bottom, sides, and top of all six hazardous waste tanks. Annual visual inspections are also conducted of all the six tanks which includes observing the tank roofs, vapor recovery piping, agitator flange/seal, rupture disc, associated valves, flanges, and the connectors.

Financial Assurance information obtained from the facility was reviewed by EPA Region 4's Financial Analyst. The financial assurance appeared to be in compliance with the facility's Permit requirement. The facility is currently adjusting the financial assurance annually to account for inflation. Based on the review of the records, the records appeared to be complete.

Post-Inspection Records Review

The issue of Subpart CC compliance for the hazardous waste tanks was reviewed. Section VI.B.2 of the RCRA Permit notes an exemption from Subpart CC requirements for the hazardous waste tanks associated with the Clean Air Act exemption for tanks covered under an air permit that have emission controls for the tanks. The hazardous waste tanks are covered under a MDEQ Synthetic Minor Air Permit, issued on October 23, 2019. Geocycle provided air monitoring records on February 23, 2023, confirming that air monitoring is performed annually on numerous points on the top of the tanks as well as the associated ancillary equipment (some equipment is monitored quarterly or monthly). In addition, Geocycle provided records of visual inspection of the tanks on a monthly basis.

11. Summary

An exit briefing was conducted at the conclusion of the inspection. George Colvin, Facility Manager, participated in the exit briefing. The observations made during the inspection were discussed and the inspection was concluded.

12) Signed

**RAJAGOPAL
AIYAR**

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RAJAGOPAL AIYAR
Date: 2023.03.15 19:56:02
-04'00'

Raj Aiyar
Environmental Engineer

**ROBERT
NAKAMOTO**

Digitally signed by ROBERT
NAKAMOTO
Date: 2023.03.15 16:27:47 -04'00'

Robert S. Nakamoto
Environmental Engineer

13) Concurrence

ARACELI CHAVEZ

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CHAVEZ
Date: 2023.03.16 08:42:42 -04'00'

Araceli B. Chavez
Chief
RCRA Enforcement Section

Photographs of Holcim (US) Inc./Geocycle LLC
8677 Hwy 45 Alternate South
Artesia, Mississippi 39736
EPA ID# MSD077655876
Camera Model: Samsung WB250F
By: Raj Aiyar



Photograph 1: Water Cannon and 250,000-gallon Water Tank



Photograph 2: Permitted Truck Bay



Photograph 3: Permitted Truck Bay



Photograph 4: Three 55-gallon Hazardous Waste Drums in Central Accumulation Area



Photograph 5: Satellite Accumulation Container in Fume Hood



Photograph 6: SAA Container with HW Label and Hazard Marking



Photograph 7: Hazardous Waste Tank Farm



Photograph 8: Nitrogen Tank for Hazardous Waste Tank Farm and Piping



Photograph 9: Picture of Bottom Impellar in Tank 4105



Photograph 10: Missing Coating in Tank Farm



Photograph 11: Some Minor Cracking in Coating



Photograph 12: Hairline Crack in Containment Wall and Missing Coating



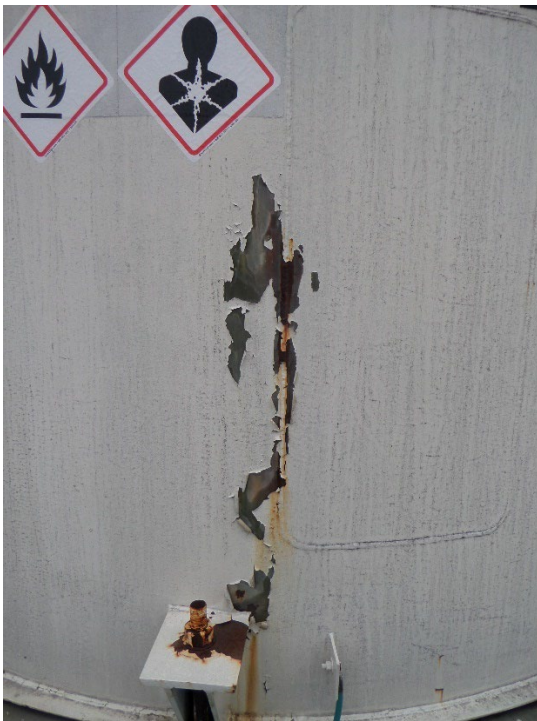
Photograph 13: Missing Coating & Corrosion and Obscured LDAR (Subpart BB) Tags



Photograph 14: Illegible LDAR Tags on Ancillary Equipment Subject to Subpart BB



Photograph 15: Illegible LDAR Tags on Ancillary Equipment Subject to Subpart BB



Photograph 16: Peeling Paint and Corrosion on HW Tank



Photograph 17: Corrosion on Connector & Bolts



Photograph 18: Missing Coating and Corrosion on Top of Tank 4105



Photograph 19: Impeller Motor, Some Corrosion Visible on Tank Around Impeller Motor Base

Post-Inspection Photographs Provided by Geocycle on Corrections Progress



Geocycle Figure 1



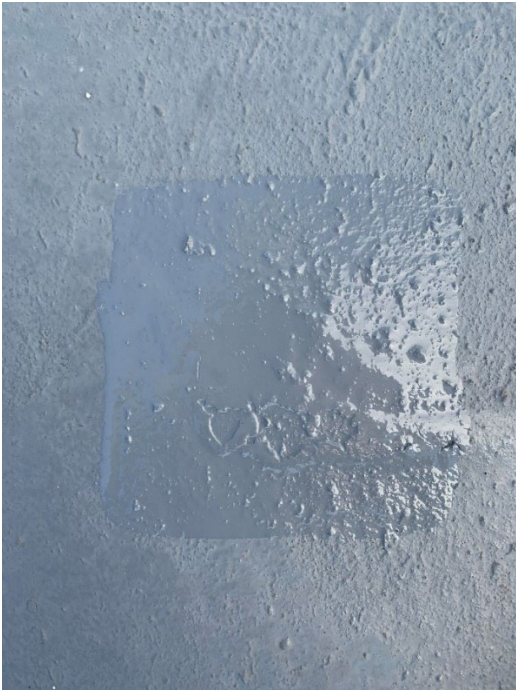
Geocycle Figure 2



Geocycle Figure 3



Geocycle Figure 4



Geocycle Figure 5



Geocycle Figure 6