Appendix 14 RCRA Feasibility Investigation (RFI) Report - 2003



Hazardous Waste Facility Investigation

Task I

Prepared For:

Mercury Waste Solutions, Inc. Administrative Offices 21211 Durand Avenue Union Grove, Wisconsin 53182-9711

Original: August 2, 2001

Revised: June 21, 2002

Revised: November 12, 2003

JN: 69048.00

Liesch Companies

Hydrogeologists • Engineers • Environmental Scientists Minneapolis, MN • Madison, WI • Scottsdale, AZ



Mercury Waste Solutions, Inc.



21211 Durand Avenue, Union Grove, Wisconsin 53182 Phone: 262-878-2599 Fax: 262-878-2699 www.mwsi.com

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This Hazardous-Waste Facility Investigation will be implemented as herein described.

Signature: _	Jul A	Dated:	11-17-03

I, <u>Brandon Nikolish</u>, hereby certify that I am a registered Professional Engineer in the State of Wisconsin in accordance with ch. A-E4, Wis. Adm. Code and the Code of the Veport has been prepared in accordance with the Rules of Professional Conduct in ch. A-E8, Wis. Adm. Code.

BRANDON C. * NIKQLISH Printed Name of Registered Professional Engineer: Brandon Signature of Registered Professional Engineer: Dated: 11/13/03 Registration No. 33996 State of Wisconsin

2.0 DESCRIPTION OF CURRENT CONDITIONS

Mercury Waste Solutions, Inc. (MWSI) is a metal recycler that processes various hazardous and universal wastes containing mercury. The wastes are processed utilizing a thermal retorting system. Metallic mercury is recovered and sold. MWSI also recycles fluorescent, incandescent lamps and lighting ballasts.

2.1 General Facility Information

Facility:

Mercury Waste Solutions, Inc. (MWSI) 21211 Durand Avenue Union Grove, Wisconsin 53182

Facility Contacts:

Owner:

Type of Facility:

Facility Location:

Consultant:

Joseph Carruth, Director of Environmental Affairs Union Grove Facility 262-878-2599

Patrick Baskfield, Facility General Manager Union Grove Facility 262-878-2599

Mercury Waste Solutions, Inc. 302 North Riverfront Drive Mankato, Minnesota 56001

Metal recycler processing various wastes containing mercury Primary Standard Industrial Classification (SIC) Code: 4953 Refuse Systems Secondary Standard Industrial Classification (SIC) Code: 3341 Smelting/refining of non-ferrous metals

NE ¼ of Section 36, Township 3 North, Range 20 East Town of Dover, Racine County, Wisconsin Total acreage: ~ 3.4 acres

Liesch Environmental Services, Inc. 6000 Gisholt Drive, Suite 203 Madison, Wisconsin 53713 Phone: 608-223-1532 Contact: Bob Juran

2.2 Land Use Information

The site is located on the south side of State Trunk Highway 11 (Durand Avenue) in the Town of Dover, Racine County, Wisconsin (see Figure 1, Appendix A).

The layout of the facility, along with the loading dock areas, processing room, supplies storage area, office area, and receiving areas are depicted in Figures 2A and 2B, Appendix A. Asphalt parking lots cover a significant portion of the facility grounds. The facility consists of three enclosed buildings each with a roof and brick/metal walls and concrete floors. The East and West Buildings are attached by an enclosed passageway with forklift and pedestrian traffic controlled by overhead doors on both the west and east ends.

The West Building was constructed in Stage 2 Construction (1994 - 8000 square feet) and Stage 3 Construction (1997 - 10,000 square feet) and has a total floor plan area of 18,000 square feet. 2,650-square feet comprise the offices and employee break/locker rooms. Additional footage is divided between a Continuous Flow Retort and Stationary Retort area (~5,600 square feet), a material preparation room (~1,150 square feet), a permitted hazardous waste storage area (~3,100 square feet), and a wastewater treatment area (~500 square feet). The remaining 4,800 square feet serve as universal waste storage, shipping, and receiving areas.

The East Building was completed in Stage 1 Construction (1940s) and has a floor plan area of approximately 7,200 square feet. The total area is divided among a lamp processing unit area (~1,500 square feet), a universal waste storage area (~4,000 square feet), a mercury purification room (~500 square feet), and a maintenance/machine shop (~1,000 square feet).

MWSI also occupies ~1,500 square feet of a building (South Building) located to the south of the main facility. The South Building was part of Stage 1 Construction (1940s) and is used entirely for lighting ballast recycling operations.

The MWSI administrative offices are located on the second floor of the M&W Shops at 21209 Durand Avenue. This building is located due east of the main facility.

The site is surrounded by agricultural land to the north, light industrial land to the south, and light industrial/residential land to the east and west. Adjacent site properties are depicted on Figure 3, Appendix A. Commercial development increases to the east along Durand Avenue toward Union Grove.

A letter from the Wisconsin Department of Natural Resources (WDNR) Bureau of Endangered Resources indicated the Natural Heritage Inventory data files contain no occurrence records of endangered, threatened or special concern species, natural communities, or State Natural Areas in proximity to the project location. A letter from the State Historical Society indicated that no known archaeological sites or historic structures were noted in the vicinity of the site. These letters are included in Appendix E.

In March 1997, EcoSearch Environmental Resources, Inc. (EcoSearch) conducted a file evaluation of the site address to determine if there were any identifiable environmental concerns on or within a one-mile radius of the site. No registered underground storage tank sites (USTs) were located within 0.25 miles of the site and no leaking underground storage tank sites (LUSTs) were located within 0.5 miles of the site. However, three (3) solid waste facilities (SWFs) were located within 1 mile of the site, two (2) small quantity hazardous material generators were reported adjacent to the site, and one (1) large quantity generator, MWSI, was reported on the site.

The three SWFs listed by EcoSearch are all located north of Highway 11 with the closest being 0.44 miles from the site. The sites were listed as being owned by Southern Wisconsin Colony, South Wisconsin Center, and Meeter Brothers & Company. As reported by EcoSearch, previous site assessment work by others indicated no apparent releases from these sites and no notations of environmental problems.

The adjacent small quantity hazardous material generators were listed as M&W Shops (21209 Durand Avenue) and Klein Corp. (21209 Durand Avenue). Neither of the generators were anticipated to cause a recognized environmental condition on the site.

2.3 Regional Information

In general, materials in the area consist of the Oak Creek Formation (Varna-Elliot-Ashkum association) characterized by well-drained to poorly drained silty clay loam to clay soils which occur over gently undulating to rolling soils of glaciated uplands. The soil is described as thin loess deposits and glacial till consisting of 12% sand, 44% silt and 44% clay. The soils have a high available moisture capacity, low to medium surface runoff, and a moderately slow permeability.

Bedrock in the area is a Silurian age dolomite located about 180 feet below the ground surface (bgs) and includes the Cayugan, Niagaran, and Alexandrian series. Also present in the area is bedrock from the Ordovician system with shale and dolomitic shale consisting of oolitic iron oxides and shale.

The Branch Root and Des Plaines Rivers are located more than 1 mile to the north and southeast of MWSI, respectively. No other surface waters or other sensitive areas including wetlands, floodplains, springs, etc. were noted near Union Grove or on a topographical map of the Union Grove area. The depth to the first groundwater aquifer, the Niagara aquifer, is approximately 80 feet bgs. There are no known aquifer recharge, discharge, or groundwater divides near the site.

The University of Wisconsin Geological and Natural History Survey State Well Database was reviewed to identify public and private wells within $\frac{1}{2}$ -mile of the facility. Well logs and a well location map are included in Appendix D. Due to the depth of the aquifer (>80 feet bgs) and low conductivity of overlying soils (silt and clay), the Niagara aquifer is minimally susceptible to contamination.

2.4 Site-Specific Information

2.4.1 Topography, Soils, and Groundwater

The site slopes gently upward from south to north and is characterized by relatively flat topography (see Figure 4, Appendix A). A surface water flow map is included as Figure 5, Appendix A. The elevation of the site is approximately 830 feet national geodetic vertical datum (NGVD).

Shallow surface soils from 0 to 2 feet bgs at the site have been classified by the Unified Soil Classification System as silt loam (ML-CL), silty clay (CH), and clay loam (CL). The uppermost bedrock at the site is a Silurian age dolomite located about 180 feet below the ground surface (bgs) and includes the Cayugan, Niagaran, and Alexandrian series.

Surface waters or other sensitive areas including wetlands, floodplains, springs, etc. were not noted near the site. The depth to groundwater at the site is estimated to be between 60 and 80 feet bgs with perched water occurring at depths between 40 and 60 feet bgs. There is one on-site groundwater supply well that supplies water for the office and break room areas. The 6-inch diameter well is cased down to 162 feet and is an open borehole to 200 feet. The well is located between the East and West buildings, 20 feet south and 5 feet east from the front of the West building. The well log is included in **Appendix D**. There have been no monitoring wells installed at the site; therefore, minimal site-specific information is known regarding groundwater flow directions, hydraulic conductivity, and gradients.

Surface (storm) water is drained from the site through a series of storm drains and natural infiltration. The southern storm drain transports water from the southern edge of the building to a ditch along the west side of the facility. The northern storm drain transports water from the northeast corner of the building to a shallow ditch northwest of the facility. Refer to Section 2.4.3 below for a detailed description of storm water control and flow patterns.

Contrary to previous reports the southern storm drain has not been blocked. Blocking the drain was not feasible as water backed up during rain events. However, the outfall from the southern

storm drain at the west ditch was covered with rock and sod in October 1999. Excavation and grading activities are discussed in detail in *Section 2.7.1*. The west ditch now serves as a permeable basin and allows water to discharge from the southern storm drain into the backfilled ditch. Excess water that accumulates in the south loading dock during heavy rain events is visually inspected to detect visible signs of contamination prior to being discharged into the southern storm drain (see **Photographs, Appendix C**).

All downspouts including those within the courtyard area between the East and West Buildings are disconnected from underground storm water conveyance lines and discharge directly onto the ground below each downspout (see Photographs, Appendix C). The location of all downspouts and underground storm water lines are depicted on Figure 5, Appendix A.

2.4.2 On-Going Site Monitoring

Annual Soil Retorting and Sampling

MWSI removes, retorts and replaces the rock and soil below the downspouts on an annual basis. Removal procedures call for rock and soil to be removed down to approximately 1 to 2-feet using a backhoe or other appropriate tools and the excavation filled with new, clean rock. Excavated rock and soil are placed into facility retort boxes and into a retort oven to recover mercury. A summary of soil/rock retorting activities is provided in **Table 4**, **Appendix B**. Retorted rock and soil are transported to Superior Emerald Park Landfill for disposal. Soil retorting documentation and disposal manifests are provided in **Appendix J**.

MWSI collects soils samples at the downspouts and in the courtyard on an annual basis. Soil samples are collected from the top few inches of soil at the base of the excavation described above using a clean shovel or similar device and placed into laboratory-approved containers for analysis of mercury by a certified laboratory. Soil sample locations and analytical results associated with these efforts are indicated on Figures 7A and 7B, Appendix A. Laboratory results are summarized in Table 1, Appendix B. Mercury levels above 1 ppm have been encountered in the courtyard and near downspouts on the west side of the facility.

Roof Top Inspections and Cleaning

The only source for mercury deposition on the roof is from the retort emission stack. There are no operating roof vents or other units that could contribute to mercury deposition on the roof. The MWSI emission stack is approximately 41 feet from ground level (raised from 26 feet in the summer of 2003). MWSI has gone to great lengths to minimize mercury emissions from the exhaust stack and new improved carbon and frequent equipment maintenance have minimized mercury emissions. Additionally, it is not economically or technologically feasible to completely eliminate emissions. MWSI changes out rooftop fabric filters associated with air handling equipment on a quarterly basis. During these change-outs, MWSI inspects the area surrounding the exhaust stack. This area is inspected for the deposition of particles and discoloration. Neither the deposition of particles nor any discoloration has been evident during the past several rooftop inspections. In the event significant deposition or discoloration is observed, the roof area near the emission stack and surrounding gutters would be cleaned using a power washer. Wash water would be collected and processed. This procedure has been successfully implemented in the past (refer to Section 2.5.2, Incident #1).

2.4.3 Site Storm Water

Overview of Site Drainage

All drainage from the MWSI site eventually flows to the Des Plains River. Most of the storm water flow from the MWSI site is directed via overland flow to the tile system that serves as the regional area drainage system. The tile system runs approximately southwest from MWSI site toward a trailer park located approximately one-third mile southwest of MWSI and then runs east by southeast through another tile system that eventually drains to the Des Plains River about one mile southeast of the MWSI site. A small portion of storm water from the MWSI site drains to the ditch system along Highway 11 that runs directly east from the site towards Union Grove. This flow drains to the Des Plains River about one mile east of the MWSI site.

Storm Water Engineering at MWSI

Storm water management infrastructure, other than grading to control overland flow, was first installed at MWSI in 1994 to accommodate Stage 2 Construction. Prior to 1994, all storm water drainage followed the contour of the land. Several engineered storm water pathways were installed when the 8,000 square foot Stage 2 Construction was completed in 1994. Additional storm water controls were installed when the 10,000 square foot Stage 3 Construction was completed in 1997. These systems are described below under the project in which they were completed and are illustrated in Figures 2A and 5, Appendix A. Supporting photographs are provided in Appendix C.

Stage 2 Construction

North Dock Drainage

System Description

The North Dock was in existence prior to 1994, but no drain was present. During Stage 2 Construction, a drain was installed at the down slope end of the concrete ramp on the North Dock. The drain (North Dock Drain) was designed to manage precipitation that fell on the approximately 500 square foot concrete ramp. The drain is approximately 2 feet deep.

A crock was installed approximately 8 feet north of the drain just off the ramp to provide some capacity for settling solids. The North Crock is 8 feet deep. The North Crock and the North Dock Drain are connected by a 3-inch underground steel pipe.

Precipitation from the North Dock flows from the North Dock Drain to the North Crock and is discharged through a 6-inch underground corrugated plastic line that runs north to the property line and then west to the western boundary of the site. The line discharges to the ditch on the western side of the west MWSI driveway.

Current Status

This system exists and operates today in the same manner in which it was designed and installed in 1994.

Downspouts between the East and West Buildings

System Description

Two roof downspouts located between the East and West Buildings were connected to underground conveyance lines in 1994. Both of the downspouts are located immediately south of the current tunnel connecting the East and West Buildings. The metal underground line was installed to convey storm water from these downspouts and prevent ponding problems. The underground line runs straight south for approximately 70 feet and then west for approximately 120 feet to the western side of the MWSI site.

When Stage 3 Construction was completed in 1997, the western flowing portion of this line was abandoned. The south flowing portion of the underground line was extended south to the South Dock Drain. Shortly after, the Receiving Yard was paved the two downspouts were disconnected from the underground conveyance line and the storm water from these downspouts was allowed to flow onto the Receiving Yard.

Current Status

The line between the downspouts and the South Dock Drain still exists, but is no longer used since the downspouts were disconnected. The western flowing portion of this line was abandoned and likely destroyed during the Stage 3 Construction project in 1997. A portion of the line was uncovered in October 2003 on the western side of the Stage 3 Construction building.

Former Loading Dock

System Description

A loading dock was installed on the southwest corner of the West Building in 1994. The loading dock included a loading dock crock which was used to collect and remove storm water ponding in the area. The location of the former loading dock crock is somewhere under the south wall of the existing Retort Room. A 6inch underground PVC pipe was used to convey storm water from the Former Loading Dock Crock to the west ditch where water flowed into a storm water retention pond on the adjacent Systematics site to the west.

Current Status

The loading dock crock was likely demolished during Stage 3 Construction in 1997. The underground line, however, exists on the western side of the West Building as was confirmed by excavation in October 2003.

Stage 3 Construction

South Dock Drainage

System Description

The Receiving Yard was paved in 1997 as part of the Stage 3 Construction project. The South Dock which includes the South Dock Drain and the South Crock were added at this time. Each of these units is described below.

The South Dock Drain receives precipitation from the approximately 1000-square foot concrete ramp at the South Dock. Precipitation from the South Dock Drain is conveyed through a 6-inch underground corrugated plastic line to the western side of the MWSI site.

The South Dock Drain is also connected to an underground line from the two downspouts described above. This underground line was operational for only a brief period of time in 1997 prior to completion of the Receiving Yard.

The South Crock is located just south of the South Dock and adjacent to the dock ramp. The South Crock is approximately four feet deep and was installed to manage precipitation from much of the Receiving Yard. Storm water flowing into the South Crock is conveyed through a 6-inch underground corrugated plastic line to the western side of the MWSI site.

The South Crock and the South Dock Drain are not directly connected. Storm

water received by both units, however, merges into the underground corrugated plastic line which conveys storm water to the western side of the MWSI. The two lines merge in the vicinity of the Southeast corner of the Stage 3 Construction Building. The outfall from the line is located in the ditch near the west property boundary. Water used to flow from the ditch into a storm water retention pond on the adjacent Systematics site to the west.

Current Status

Both the South Dock Drain and the South Crock still exist as described above. The South Dock Drain is normally covered. Storm water that accumulates in the South Dock is removed by pumping the water into the South Crock.

In response to a spill at the South Dock in March 1999 (Incident #4), MWSI excavated an area of soil on the western boundary of the site near the storm water outfall. During that excavation effort, the outfall from MWSI and the outfall to the pond on the adjacent Systematics property were buried. Burying of these outfalls may have, to some extent, mitigated the flow of storm water through the south underground drainage line. Gravel was used as backfill in the area excavated and it is thought to provide a flow path for storm water from this underground line.

South (Ballast) Building

System Description

The South Building Dock is located on the northeast corner of the South (Ballast) Building. The Ballast Building Dock drain is located at the bottom of the approximately 500 square foot concrete ramp. The drain was installed in 1997 as part of the Stage 3 Construction.

The Ballast Building Dock drain conveys storm water falling directly on the ramp through a 6-inch underground corrugated plastic line that runs southeast to an outfall on the adjacent property owned by Mr. Wally Haag. The underground line is approximately 300 feet long and discharges storm water to an outfall that also receives storm water from the adjacent Haag property.

Storm water discharged to the outfall is conveyed through ditches to a storm water retention pond located approximately 1000 feet south of the MWSI site. This pond discharges to the tile system that eventually drains to the Des Plains River.

Current Status

This system exists and operates today in the same manner in which it was designed and installed in 1994.

2.4.4 Facility History – Summary of Operations

The Property is owned by Durand Properties represented by Mr. Wally Haag and has been since 1983. M&W Shops, Grove Die Casting, and Klein Corporation (all metal fabrication shops) have all occupied portions of the Property since 1983. MWSI has occupied the western portion of the Property since 1995. Figure 2B, Appendix A highlights current process, treatment, storage and disposal areas at the MWSI facility. Figure 6, Appendix A highlights all known utilities near the MWSI facility.

The buildings on the Property were reportedly constructed in 1944 as a hemp product manufacturing facility. The buildings were concrete block structures with concrete floor slabs and wood arch roofs. Records indicate the buildings were used as a hemp manufacturing facility from 1944 until 1948. Their use until 1959 is not documented. In 1959 the Property was occupied by the Car Carrier Equipment Company to fabricate car carrier trailers. In 1973 the buildings were occupied by a machine shop and have been occupied by several metal working facilities since then.

Liesch reviewed the collection of Directories at the Wisconsin Historical Society. These directories list occupants of addresses from the 1800's through the 1990's and generally cover urban and suburban areas. The Property was not covered in these directories. Liesch also reviewed Sanborn Fire Insurance Atlases. Sanborn Atlases were prepared for various area communities for selected years starting in the late 1800s. These atlases show addresses, structures, and improvements, such as utilities and storage tanks, for the areas covered. No Sanborn coverage was available for the area of the Property.

MWSI and Mr. Wally Haag were interviewed concerning past uses of the Property. A fire was reported on the Property in 1992 that destroyed a building on the Property (see Figure 2A, Appendix A). The Dover Township clerk Ms. Mary Dunske and building inspector, Mr. Rex Hencke, were contacted to determine if any local environmental issues were apparent at the Property. Neither party was aware of any concerns.

2.4.5 Facility Product and Waste Types

MWSI processes mercury-containing solid wastes (contaminated soil, metal, debris, etc.), universal wastes (lamps, switches, thermometers, batteries, elemental Hg), and hazardous wastes (industrial wastes, corrosive solutions, compounds, etc.). MWSI also disassembles lighting ballast.

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MWSI currently categorizes wastes received under 33 different RCRA waste codes that include both solid and liquid phase wastes that are stored in drums on site. The major categories of wastes received include fluorescent light tubes, metal switches, glass switches, contaminated soils, relays, thermocouples, ignition switches, mercury batteries, dental amalgams, telephone switches, mercuric oxide, PC boards, spill kits, rectifiers, thermometers, manometers, activated charcoal, and others.

2.4.6 Waste Treatment and Storage

CONFIDENTIAL INFORMATION

2.4.7 Waste Testing and Disposal

TCLP analysis is conducted on a composite sample of solid wastes generated in the retort ovens (retorted non-characteristic or non-listed wastes). TCLP results are typically 0.08 ppm or less and must meet 0.20 ppm. Material Safety Data Sheets (MSDSs) for manufactured materials stored and processed on-site are maintained in the MWSI file system. In addition, MWSI has immediate access to a large electronic library of MSDSs via the internet. MSDSs are frequently consulted when evaluating waste profile sheets for incoming materials.

Non-recyclable solid wastes (office waste, empty packages, plastic wrap, packing materials, etc.) are containerized and sent off site for disposal at a municipal landfill (Superior Emerald Park Landfill).

Recyclable solid wastes (glass from lamp processing, aluminum from lamp processing, cardboard from lamp processing and facility operations, scrap metal from ballast processing and retort operations, etc.) are segregated, bundled and transported off site to be recycled.

Hazardous wastes, retort residues with hazardous characteristics, or listed codes (other than D009, U151, D002, D001), are transported to licensed treatment and/or disposal facilities.

Low-level mercury wastewater generated from retort collection systems and floor washing is treated on site to reduce mercury levels to 2-10 ppm and transported to licensed treatment and/or disposal facilities.

A summary of final disposal and recycling facilities is included in Appendix F.

2.4.8 Approved Releases

MWSI emits a minor amount of mercury through one 41-foot retort emission stack as part of normal operating processes. (Note: the stack was raised from 26-feet in the summer of 2003.)

Approved releases from the exhaust stack are allowed by federal and state agencies and are low enough based on stack testing to not warrant an air operating permit (although MWSI has completed a permit). MWSI has confirmed low mercury stack emission levels through stack sampling and mercury dispersion modeling. MWSI performs routine inspections of the roof and has implemented annual procedures to remove, retort, and replace the rock/soil below the roof downspouts.

2.5 Solid Waste Management Units and Areas of Concern

MWSI has identified 18 Solid Waste Management Units (SWMUs) and 2 Areas of Concern (AOCs) at the Union Grove facility. The list of SWMUs provided below is based on a review of past and present operations at the facility. This list of units is different than the list developed by the WDNR in the RCRA Facility Assessment dated October 17, 2001.

For each unit listed below, information is presented in a format developed to provide pertinent information as requested by WDNR staff in the August 12, 2003, comment letter regarding the June 2002 Task I Report. The location of each unit described below is indicated on Figure 8, Appendix A.

2.5.1 Solid Waste Management Units

- 1. Stationary Mercury Retort Ovens
- 2. Continuous Flow Retort Oven
- 3. Lamp Crushing Operation
- 4. Lamp Glass-Roll-Off
- 5. Regulated Storage Area
- 6. Oven Batch Storage Area
- 7. Wastewater Treatment System
- 8. Generator / Universal Waste Storage Area
- 9. Outside Receiving Yard
- 10. Lighting Ballast Operations
- 11. South Loading Dock
- 12. South Underground Stormwater Line
- 13. South Outfall
- 14. North Loading Dock
- 15. North Underground Stormwater Line
- 16. North Outfall Pond
- 17. Courtyard /Downspouts
- 18. Former Loading Dock

SWMU 1 Stationary Mercury Retort Ovens (4)

a. <u>Unit Description</u>

The Stationary Mercury Retort Ovens are cylindrically shaped and are approximately 8 feet in diameter and 12 feet long. Waste is placed into the ovens on trays of various sizes and heated for an average period of about 36 hours. Temperatures in the ovens are ramped up slowly, peaking at between 800 and 1000 degrees Fahrenheit.

b. <u>Unit Location</u>

The Stationary Mercury Retort Ovens are located in the Retort Room near the north end of the West Building. See Figure 8 for the location of this unit.

c. <u>Regulatory Status</u>

The Stationary Mercury Retort Ovens operate as recycling units under the Legitimate Recovery and Reclamation Exemption of Wisconsin. Adm. Code (NR 625.06).

d. <u>Wastes Managed</u>

The ovens recover mercury from various hazardous and non-hazardous wastes including glass, soil, sludge, regulators, etc.

e. <u>History of Use and Operation</u>

MWSI began operation of the first oven in May 1996. Two additional ovens (numbers 2 and 3) were installed by April and May 1998. The fourth oven was installed in December 2000.

f. <u>Potential Migration Pathways / Release Controls</u>

Heated vapors from the oven chambers are pulled off the ovens and cooled in a collection tank. The ovens are operated under a vacuum. Condensed mercury is recovered in a cooled collection tank. The air is then filtered through treated carbon and vented to the atmosphere through a common stack. The Retort Room in which the ovens are located is a sealed room. Entrance to the room can be made through one of three overhead doors or through several man doors. Doors to the room are kept closed during operation and only opened when needed.

g. <u>History of Releases</u>

As described in the Section 2.5.2 titled Areas of Concern, several incidents have involved the Stationary Mercury Retort Ovens. Incidents #1, #2, #3, and #5 originated at these units (see AOC #1). A description of each of these incidents is provided in Section 2.5.2.

There have also been minor system failures that have resulted in mercury vapors being released to the Retort Room. The internal carbon filtration system is used to remove mercury vapors from this room when such events occur. As such, potential releases have been minimal.

SWMU 2 Continuous Flow Mercury Retort Oven

a. Unit Description

The Continuous Flow Mercury Retort Oven is approximately 25 feet long and 7 feet wide. The unit consists of a powder hopper, the retort oven, a mercury collection system, and two velocity-drop boxes.

b. Unit Location

The Continuous Flow Mercury Retort Oven is located inside on the north end of the West Building. The unit is located just outside the east wall of the Retort Room. See Figure 8, Appendix A for the location of this unit.

c. <u>Regulatory Status</u>

The Continuous Flow Mercury Retort Oven operates as a recycling unit under the Legitimate Recovery and Reclamation Exemption of Wisconsin. Adm. Code (NR 625.06).

d. Wastes Managed

The Continuous Flow Mercury Retort Oven processes phosphor powder from crushed fluorescent lamps. The powder is vacuumed from 55-gallon drums into a hopper located on the front-end of the system. The powder is metered into the oven chamber through an air-lock onto the oven auger conveyor. On the conveyor, the powder is heated and the mercury is vaporized. The vapor is pulled through a condenser in which the mercury vapors are converted to liquid mercury. The powder then passes through another air-lock on the downstream end of the oven. The powder is pneumatically conveyed through two velocity drop boxes designed to remove the powder from the air stream. The air is then discharged through a carbon filter.

e. History of Use and Operation

MWSI began operation of the Continuous Flow Mercury Retort Oven in 1996.

f. Potential Migration Pathways / Release Controls

Heated vapors from the oven chamber are pulled off the ovens and cooled in a collection tank. The ovens are operated under a vacuum. Condensed mercury is recovered in a cooled collection tank. The air is then filtered through treated carbon and vented to the atmosphere through a stack shared with the Stationary Mercury Retort Ovens.

Velocity drop boxes are used to capture the powder after the powder has been processed through the oven.

g. <u>History of Releases</u>

The Continuous Flow Mercury Retort Oven processes phosphor powder which is a fine material. The powder does escape in small amounts to the interior of the building in the vicinity of the unit when it is being vacuumed from the drums and when the powder is being collected at the base of the velocity drop boxes. Any spilled material is immediately recovered.

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SWMU 3 Lamp Crushing Operation

a. <u>Unit Description</u>

The Lamp Crushing Operation consists of a conveyor assembly, a crusher, and a rotating trammel screen assembly. The unit is designed to crush and separate fluorescent lamps into the following components – aluminum endcaps, glass, and phosphor powder. After the initial crushing, the lamps enter a trammel screen for separation by size through a screening device that consists of annular cylindrical screens that retain material of a design size.

Endcaps are dropped into a Gaylord box; the phosphor powder is dropped into any one of four 55-gallon accumulation drums, and the lamp glass is conveyed through the east wall of the East Building to the Lamp Glass-Roll-Off (SWMU 4). Prior to processing, lamps are stored throughout the East Building in designated areas.

b. <u>Unit Location</u>

The Lamp Crushing Operation is housed inside the East Building. It was formerly housed in the West Building. See Figure 8 for the current location of this unit.

c. <u>Regulatory Status</u>

The Lamp Crushing Operation operates as a recycling unit under the Legitimate Recovery and Reclamation Exemption of Wisconsin. Adm. Code (NR 625.06).

d. <u>Wastes Managed</u>

The Lamp Crushing Operation processes fluorescent lamps which are classified as Universal Wastes in the Wisconsin.

e. <u>History of Use and Operation</u>

MWSI began operation of the Lamp Crushing Operation in 1996. A unit was originally located in the West Building. Operation of a new unit in the East Building began in 1998.

f. <u>Potential Migration Pathways / Release Controls</u>

The Lamp Crushing Operation operates under a vacuum such that powder is substantially contained by the collection system. Air from the Lamp Crushing Operation is filtered through both HEPA and carbon filtration prior to being exhausted from the building.

g. <u>History of Releases</u>

The Lamp Crushing Operation creates dust in the immediate area of operation inside the East Building. The dust is cleaned up on a daily basis.

SWMU 4 Lamp Glass-Roll-Off

a. <u>Unit Description</u>

The Lamp Glass-Roll-Off is a 20 cubic yard steel roll-off container that receives crushed glass from the Lamp Crushing Operation (SWMU 3). The Lamp Glass-Roll-Off receives glass via a conveyor through the east wall of the East Building. The unit is covered by a tarp.

b. <u>Unit Location</u>

The Lamp Crushing Operation is located outside on the east wall of the East Building. See **Figure 8, Appendix A** for the location of this unit.

c. <u>Regulatory Status</u>

The Lamp Glass-Roll-Off is regulated as a solid waste accumulation unit.

d. <u>Wastes Managed</u>

The Lamp Glass-Roll-Off is used for the accumulation of crushed glass from the Lamp Crushing Operation (SWMU 3). The glass is a solid waste which is shipped off-site for recycling.

e. <u>History of Use and Operation</u>

MWSI began operation of the Lamp Glass-Roll-Off in the East Building in 1998.

f. Potential Migration Pathways / Release Controls

Dust created by the conveyance of glass into the Lamp Glass-Roll is minimized through the use a tarp.

g. <u>History of Releases</u>

Some glass dust, on occasion, is observed adjacent to the Lamp Glass-Roll-Off. Observed material is immediately cleaned up.

SWMU 5 Regulated Storage Area

a. <u>Unit Description</u>

The Regulated Storage Area is used to store hazardous waste received from off-site customers. The unit consists of a 60 feet by 40 feet concrete pad that is sealed with an epoxy coating. The storage configuration for the room is approved through the facility RCRA Permit which establishes the storage footprint for drums in the unit. There are two man doors that provide access to this unit on the external walls of the West Building. Another man door is located on the internal wall and provides access to the Oven Batch Storage Area (SWMU 6).

Containment for the unit is provided by a small berm at the entrance of the Regulated Storage Area and a curb that runs the perimeter of the area. Total secondary containment for the unit is calculated to be in excess of 5,000 gallons.

b. <u>Unit Location</u>

The Regulated Storage Area is located in the southwest corner of the West Building. See Figure 8, Appendix A for the location of this unit.

c. <u>Regulatory Status</u>

The Regulated Storage Area operates as a permitted container storage area under MWSI's RCRA Permit. Prior to receiving a RCRA Permit in 2000, the unit was operated under a variance by the WDNR.

d. <u>Wastes Managed</u>

The Regulated Storage Area is used to store a wide range of wastes including powder, sludge, liquids, and debris. All waste stored in this unit contain mercury at some level. The chemical nature of the stored waste is varied and includes acids, bases, and oxidizers.

e. <u>History of Use and Operation</u>

This unit was part of the 1997 Stage 3 Construction project and was put into use in 1998.

f. Potential Migration Pathways / Release Controls

Secondary containment for the Regulated Storage Area exceeds the capacity required by RCRA by a significant margin.

g. <u>History of Releases</u>

Some minor spillage has occurred at this unit. There have been no significant releases at this unit.

SWMU 6 Oven Batch Storage Area

a. <u>Unit Description</u>

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The Oven Batch Storage Area comprises a small room used to stage retort trays prior to placing the material in the Stationary Mercury Retort Ovens (SWMU 1) for processing. The unit consists of a 25 feet by 25 feet concrete pad that is sealed with an epoxy coating. There is one man door that provides access to the Regulated Storage Area.

Containment for the unit is provided by a small berm at the entrance of the Oven Batch Storage Area and a 6-inch curb that runs the perimeter of the area. Total secondary containment for the unit is calculated to be in excess of 1250 gallons. Based on the 137 drum capacity of this unit, only 750 gallons of containment capacity is required.

b. <u>Unit Location</u>

The Oven Batch Storage Area is a small room located between the Retort Room and the Regulated Storage Area (SWMU 5) along the west wall of the West Building. See Figure 8, Appendix A for the location of this unit.

c. <u>Regulatory Status</u>

The Oven Batch Storage Area operates as a permitted container storage area under MWSI's RCRA Permit. Prior to receiving a RCRA Permit in 2000, the unit was operated under a variance by the WDNR.

d. Wastes Managed

The Oven Batch Storage Area is used to store most of the same materials that are stored in the Regulated Storage Area (SWMU 5). Such materials include a wide range of wastes including powder, sludge, liquids, and debris. All waste stored in this unit contain mercury at some level. The chemical nature of the stored waste is varied and includes acids, bases, and oxidizers.

e. <u>History of Use and Operation</u>

This unit was installed as part of the 1997 Stage 3 Construction project and was put into service in 1998.

f. <u>Potential Migration Pathways / Release Controls</u>

Secondary containment for the Oven Batch Storage Area exceeds the capacity required by RCRA by a significant margin.

g. <u>History of Releases</u>

Some minor spillage has occurred at this unit. There have been no significant releases at this unit.

SWMU 7 Wastewater Treatment System

a. <u>Unit Description</u>

The Wastewater Treatment System is comprised of four above-ground polypropylene storage tanks. The four tanks are located in a 25 feet by 13 feet diked area. Two of the tanks have capacities of 3,000 gallons and two tanks have capacities of 500 gallons. The tanks are situated on steel platforms within the dike wall.

The two 500-gallon tanks serve as treatment tanks. The Wastewater Treatment System is designed to precipitate and filter the wastewater to reduce mercury concentrations. Precipitation is accomplished through the addition of sodium hydroxide. Filtration is provided through a series of filters that include micron bag filters, OMZ filtration, and carbon. When treatment is complete, wastewater is pumped into one of the two 3,000 gallon holding tanks and is eventually pumped into a tanker truck for off-site shipment. Refer to Section 2.4.6 for additional information on the Wastewater Treatment System.

b. <u>Unit Location</u>

The Wastewater Treatment System is located on the east wall of the West Building just north and adjacent to the Universal / Generator Waste Storage Area (SWMU 8). See Figure 8, Appendix A for the location of this unit.

c. <u>Regulatory Status</u>

The Wastewater Treatment System operates as a permitted tank system under MWSI's RCRA Permit. The tank system was not operated prior to receiving a RCRA Permit in 2000.

d. <u>Wastes Managed</u>

The Wastewater Treatment System is used to process facility floor washwater and the aqueous fraction of condensate liquids derived from the Stationary Mercury Retort Ovens (SWMU 1). These wastes are hazardous wastes. After treatment, the waste is transported off-site to a TSD for further processing.

e. <u>History of Use and Operation</u>

This unit was constructed in September 1999 and put into service after the RCRA Permit was issued in July 2000.

f. Potential Migration Pathways / Release Controls

Containment for the Wastewater Treatment System is provided by a 3-foot high dike wall that surrounds the treatment system. The dike wall is 8-inches thick and is a poured concrete wall. Total containment provided is 7,000 gallons, well in excess of the 5,000 gallons required.

g. <u>History of Releases</u>

Some minor spillage has occurred at this unit. There have been no significant releases at this unit.

SWMU 8 Universal / Generator Waste Storage Area

a. <u>Unit Description</u>

The Universal / Generator Waste Storage Area is comprised of an approximately 80 feet by 20 feet concrete pad that is sealed with an epoxy coating. Drums and other types of containers of waste (e.g. pallets of batteries, Gaylord boxes of scrap electronics, etc.) are stored in this area. Hazardous wastes generated by MWSI can be stored for up to 90 days. Universal wastes received from off-site can be stored for up to one year.

b. <u>Unit Location</u>

The Universal / Generator Waste Storage Area is located between the Wastewater Treatment System (SWMU 7) and the Receiving Area along the east wall of the West Building. See Figure 8, Appendix A for the location of this unit.

c. <u>Regulatory Status</u>

Wastes stored in the Universal / Generator Waste Storage Area are regulated by the applicable generator standards or universal waste standards of Wisconsin. Adm. Code.

d. <u>Wastes Managed</u>

The Universal / Generator Waste Storage Area is used to store a wide range of wastes. Examples of wastes generated by MWSI include retort liquids which represent the liquids drained from the Stationary Mercury Retort Ovens (SWMU 1), floor washwater, and the oily fraction of the condenser liquids. Examples of wastes stored as universal wastes include batteries, regulators, ignitrons, and mercury switches.

e. <u>History of Use and Operation</u>

This unit was installed as part of the 1997 Stage 3 Construction project and was put into service in 1998.

f. Potential Migration Pathways / Release Controls

There is no secondary containment provided for the drums at this unit. The concrete surface is coated with an epoxy sealant.

g. <u>History of Releases</u>

There have been no known releases at this unit.

SWMU 9 Outside Receiving Yard

a. <u>Unit Description</u>

The Outside Receiving Yard comprises an area of approximately 160 feet by 80 feet. The surface of the Outside Receiving Yard is both concrete pad and asphalt. The area is used for multiple purposes:

- Several roll-offs of outgoing process residuals are stored at this unit (e.g. process, ash, processed powder, scrap steel, etc.).
- Retort trays, after initial cooling and covering with plastic, are stored at this unit pending residual confirmation prior to dumping into a roll-off.
- The South Dock is located within the unit. The South Dock is used for receiving most of the wastes delivered to the MWSI facility.
- Trailers storing equipment, drums, and chemicals are located in this unit.

b. <u>Unit Location</u>

The Outside Receiving Yard is located between the South Building (SWMU 10) and the Maintenance Shop. See Figure 8, Appendix A for the location of this unit.

c. <u>Regulatory Status</u>

Wastes stored in the Outside Receiving Yard are regulated by the applicable generator standards for materials that are hazardous wastes. Most of the materials stored at this unit are not hazardous wastes.

d. <u>Wastes Managed</u>

The Outside Receiving Yard is used to store a wide range of materials. The following outgoing residuals are stored in roll-offs or other containers within this unit.

Material	Container Size	Waste
	(roll-off)	Class
Retorted Ash	20 yard	NHW
Phosphor Powder	20 yard	NHW
Low-level Mercury Debris	20 yard	HW
Potting Material	20 yard	HW
Scrap Steel	30 yard	NHW
Scrap Copper	6 yard	NHW
Lamp Endcaps	Gaylord boxes	NHW
Retorted Ash	Retort Trays	NHW

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Retort Trays awaiting analytical results are also stored at this unit prior to dumping into the ash roll-off.

e. <u>History of Use and Operation</u>

This unit was installed as part of the 1997 Stage 3 Construction and was put into service in 1998.

f. Potential Migration Pathways / Release Controls

Containment is provided for at this unit by a paved surface. The concrete is severely cracked, has been patched substantially, and needs replacing. Most of the storm water from this unit and from the downspouts that run across this unit is directed to either the South Dock Drain or the South Dock Crock and is eventually discharged to the South Dock Outfall. (SWMU 10). Each of these units has some settling capacity for solids.

g. <u>History of Releases</u>

A spill occurred at this unit in 1999 at the South Dock Drain. This spill is described in Areas of Concern as Incident #4.

This UNIT represents an area where material handling operations present an opportunity for spilled or blown materials to enter the storm water drainage system. The ongoing transfer of materials from smaller containers into roll-offs at this unit causes some dusting and spillage on a regular basis. This material, if not cleaned up, is pushed by storm water into either the South Dock Drain or the South Dock Crock which both convey storm water into the South Underground Stormwater Line (SWMU 13).

SWMU 10 Lighting Ballast Operation

a. <u>Unit Description</u>

The Lighting Ballast Operation is housed in the South Building and consists of a receiving/loading dock, a container storage area, a freezer, and a ballast disassembly area. The building is approximately 100 feet by 60 feet. MWSI ballast operations are housed in the north half of the building.

The concrete pad in the building is sealed with an epoxy coating. Containers of lighting ballast are stored in a storage area in the southeast portion of the building occupied by MWSI. A large industrial freezer located in the central portion of the building is used to prepare ballast prior to disassembly by freezing the ballast so that the potting material is brittle. This makes for easier disassembly.

A large steel table serves as the disassembly surface in which frozen ballast are cut open and broken apart by hammers. Ballasts are separated into four components: steel casing, copper coils, potting material, and the capacitor.

b. <u>Unit Location</u>

The Lighting Ballast Operation is located in the north half of the South Building on the southeast corner of the parcel leased by MWSI. See Figure 8, Appendix A for the location of this unit.

c. <u>Regulatory Status</u>

The Lighting Ballast Operation operates under an exemption issued by the WDNR in March 1999.

d. <u>Wastes Managed</u>

The Lighting Ballast Operation processes both PCB and non-PCB lighting ballast. PCBs that may be contained in some of the capacitors are the primary chemicals of concern.

e. <u>History of Use and Operation</u>

This unit began operations in 1999 shortly after the exemption was received.

f. Potential Migration Pathways / Release Controls

Secondary containment is not provided for the container storage area at this unit. The concrete surface is coated with an epoxy sealant.

g. <u>History of Releases</u>

There have been no known releases at this unit.

SWMU 11 South Loading Dock

a. <u>Unit Description</u>

The South Loading Dock comprises an area of approximately 50 feet by 20 feet. The unit is concrete pad and serves as a loading and unloading dock for incoming and outgoing wastes. The South Loading Dock is sloped to the building and has a drain at the lower end adjacent to the building.

b. <u>Unit Location</u>

The South Loading Dock is located at the southwest corner of the West Building. See Figure 8, Appendix A for the location of this unit.

c. <u>Regulatory Status</u>

This unit is not regulated.

d. <u>Wastes Managed</u>

All wastes processed at the MWSI facility are handled at the South Loading Dock.

e. <u>History of Use and Operation</u>

This unit was installed as part of the 1997 Stage 3 Construction and was put into service in 1998.

f. <u>Potential Migration Pathways / Release Controls</u>

The concrete pad is in very good condition but does have a few cracks. A drain at the base of this unit (South Dock Drain) does have some solids settling capacity. This unit conveys storm water to the South Underground Stormwater Line (SWMU 12).

g. <u>History of Releases</u>

Incident #4, described in Section 2.5.2 in AOC #2, occurred at this unit 1999.

Precipitation falling on this unit is likely to transport dust and particles from Outside Receiving Yard (SWMU 9) operations into the South Underground Stormwater Line (SWMU 12).

SWMU 12 South Underground Stormwater Line

a. <u>Unit Description</u>

The South Underground Stormwater Line is a six-inch corrugated plastic line that runs underground from the South Loading Dock (SWMU 11) to the South Outfall (SWMU 13).

b. <u>Unit Location</u>

The South Underground Stormwater Line runs from east to west along the south end of the West Building and then runs northwest toward the South Outfall, which is located near the western property boundary. See Figure 8, Appendix A for the location of this unit.

c. <u>Regulatory Status</u>

This unit is not regulated.

d. <u>Wastes Managed</u>

All wastes processed at the MWSI facility can be handled at the South Loading Dock (SWMU 11) at the eastern end of this unit and thus are subject for concern at this unit.

e. <u>History of Use and Operation</u>

This unit was installed as part of the 1997 Stage 3 Construction.

f. Potential Migration Pathways / Release Controls

The South Underground Stormwater Line is a solid plastic line that conveys stormwater to the South Outfall (SWMU 13).

g. <u>History of Releases</u>

Incident #4, described in Section 2.5.2 in AOC #1, occurred at the South Dock in 1999.

Precipitation falling on the South Dock (SWMU 11) may transport dust and particles from Outside Receiving Yard (SWMU 9) operations into this unit.

SWMU 13 South Outfall

a. <u>Unit Description</u>

The South Outfall is the buried end of the South Underground Stormwater Line (SWMU 12).

b. <u>Unit Location</u>

The South Outfall is located near the western property line approximately one foot below grade. See Figure 8, Appendix A for the location of this unit.

c. <u>Regulatory Status</u>

This unit is not regulated.

d. <u>Wastes Managed</u>

All wastes processed at the MWSI facility can be handled at the South Loading Dock (SWMU 11) at the eastern end of this unit and thus are subject for concern at this unit.

e. <u>History of Use and Operation</u>

This unit was installed as part of the 1997 Stage 3 Construction. It formerly discharged storm water to the ditch in the vicinity of this unit. The ditch was filled in during excavation work associated with a 1999 spill.

f. Potential Migration Pathways / Release Controls

The South Outfall discharges into the soil. There is some solids settling capacity at the South Dock Crock and at the South Dock Drain.

g. <u>History of Releases</u>

Incident #4, described in Section 2.5.2 in AOC #1, occurred at the South Dock in 1999.

Precipitation falling on the South Dock (SWMU 11) may transport dust and particles from Outside Receiving Yard (SWMU 9) operations through the South Underground Stormwater Line (SWMU 12) to this unit.

SWMU 14 North Loading Dock

a. <u>Unit Description</u>

The North Loading Dock comprises an area of approximately 50 feet by 10 feet. The unit is a concrete pad and serves as a unloading dock for fluorescent lamps. The North Loading Dock is sloped to the building and has a drain at the lower end adjacent to the building.

b. <u>Unit Location</u>

The North Loading Dock is located on the northeast corner of the East Building. See Figure 8, Appendix A for the location of this unit.

c. <u>Regulatory Status</u>

This unit is not regulated.

d. <u>Wastes Managed</u>

Only fluorescent lamps are received at this unit.

e. <u>History of Use and Operation</u>

This unit was originally installed in 1947 as part of the original East Building. The concrete ramp was extended as part of the Stage 2 Construction in 1994.

f. Potential Migration Pathways / Release Controls

The concrete pad is in very good condition but does have a few cracks. A drain at the base of this unit does have some solids settling capacity. This unit conveys storm water to the North Underground Stormwater Line (SWMU 15).

g. <u>History of Releases</u>

Precipitation falling on this unit may transport dust and particles into the North Underground Stormwater Line (SWMU 15).

SWMU 15 South Underground Stormwater Line

a. <u>Unit Description</u>

The North Underground Stormwater Line is a six-inch corrugated plastic line that runs underground from the North Dock (SWMU 14) to the North Outfall (SWMU 16). The line actually originates at the North Crock which is tied to the North Loading Dock drain.

b. <u>Unit Location</u>

The North Underground Stormwater Line runs north to the property line and then runs straight west to the culvert under the western MWSI driveway. See Figure 8, Appendix A for the location of this unit.

c. <u>Regulatory Status</u>

This unit is not regulated.

d. <u>Wastes Managed</u>

Only fluorescent lamps are received at the North Loading Dock (SWMU 14).

e. <u>History of Use and Operation</u>

This unit was installed as part of the 1994 Stage 2 Construction.

f. <u>Potential Migration Pathways / Release Controls</u>

The North Underground Stormwater Line is a solid plastic line that conveys storm water to the North Outfall (SWMU 16).

g. <u>History of Releases</u>

Precipitation falling on the North Loading Dock (SWMU 14) may transport dust and particles into this unit.
SWMU 16 North Outfall

a. <u>Unit Description</u>

The North Outfall is the westerly flowing ditch at the end of the end of the North Underground Stormwater Line (SWMU 15).

b. <u>Unit Location</u>

The North Outfall is located near the western property line immediately west of the MWSI western driveway. See Figure 8, Appendix A for the location of this unit.

c. <u>Regulatory Status</u>

This unit is not regulated.

d. <u>Wastes Managed</u>

Only fluorescent lamps are received at the North Loading Dock (SWMU 14), which drains through the North Underground Stormwater Line (SWMU 15) to this unit.

e. <u>History of Use and Operation</u>

This unit was installed as part of the 1994 Stage 2 Construction.

f. <u>Potential Migration Pathways / Release Controls</u>

The North Outfall is a culvert under the western MWSI driveway. There is some solids settling capacity at the North Dock Drain and at the North Crock.

g. <u>History of Releases</u>

Precipitation falling on the North Loading Dock (SWMU 14) may transport dust and particles through the North Underground Stormwater Line (SWMU 12) to this unit.

SWMU 17 Courtyard/Downspouts

a. <u>Unit Description</u>

The Courtyard / Downspouts have been combined as one SWMU since the source and management activities associated these units are essentially the same. The Downspouts discharge precipitation from the roof onto the ground. The Courtyard is an area in which 6 downspouts discharge.

Past soil sampling efforts have identified elevated levels of mercury in the soil at the Downspouts and in the Courtyard. The Downspouts and the Courtyard have been covered with gravel since approximately 1999. Gravel was added at this unit to facilitate the annual testing and removal to mitigate the accumulation of mercury levels in area. The downspouts are covered with an area of gravel approximately 2 feet by 2 feet and 2 feet deep. The Courtyard is an area measuring approximately 40 feet by 20 feet. On an annual basis, the gravel from these areas has been excavated, retorted, and disposed off-site with new clean gravel installed in place of the removed material. Annual testing of the underlying soils has been conducted to monitor the mercury levels in the soil.

b. <u>Unit Location</u>

Downspouts are located along the periphery of the East and West Buildings. The Courtyard is an area in which 6 downspouts discharge located between the East and West Buildings. See Figure 8, Appendix A for location of unit.

c. <u>Regulatory Status</u>

This unit is not regulated.

d. <u>Wastes Managed</u>

No wastes are managed at this unit. The Downspouts and the Courtyard have received storm water from the roof since 1994. In addition, both the main stack and the vent from the Continuous Flow Mercury Retort Oven (SWMU 2) are located in or above the Courtyard.

e. <u>History of Use and Operation</u>

The downspouts were installed on both the East and West Buildings as part of the 1994 Stage 2 Construction. The Courtyard was formed at this time as well.

f. <u>Potential Migration Pathways / Release Controls</u>

It is postulated that the source of the mercury levels in the soil in both the Courtyard and at the Downspouts was from mercury condensing on the facility roof. The Retort Room was vented up until 2000. This unit has no release controls other than the impermeable nature of the underlying soils.

g. <u>History of Releases</u>

Incidents #1, 2, 3 and 5 occurred in the Retort Room. Since the Retort Rom was vented prior to 2000, it is possible that Incidents #1, 2, and 3 contributed to the mercury levels in the soil at this unit. It is also possible that the day-to-day venting of the Retort Room also served as a source of mercury.

Soil sampling efforts in past years have shown a clear decline in the soil mercury concentrations for this unit. It is suspected that the removal of vents from the Retort Room has contributed to this decline.

SWMU 18 Former Loading Dock

a. <u>Unit Description</u>

The Former Loading Dock comprised an area of approximately 50 feet by 10 feet and was constructed in much the same manner as the two present docks at the MWSI facility. The unit was constructed of concrete and served as the main dock for MWSI from 1995 through 1997. The Former Loading Dock was sloped to the building and had a drain at the lower end adjacent to the building.

b. <u>Unit Location</u>

The Former Loading Dock was located on the southwest corner of the West Building (pre Stage 3 construction). See Figure 8, Appendix A for location of unit.

c. <u>Regulatory Status</u>

This unit was not regulated.

d. <u>Wastes Managed</u>

All wastes processed at the MWSI facility were handled at the Former Loading Dock

e. <u>History of Use and Operation</u>

This unit was constructed in 1994 as part of the Stage 2 Construction.

f. <u>Potential Migration Pathways / Release Controls</u>

This unit was not observed and thus comments on integrity can be provided. The drain located at this unit conveyed storm water to the culvert on western property line.

g. <u>History of Releases</u>

There are no known releases from this unit.

2.5.2 Areas of Concern

Based on past process operations and documented releases and/or spills, MWSI has identified two Areas of Concern (AOCs) at the MWSI facility, which encompass five separate incidents. The first AOC includes the retort room; specifically the Stationary Mercury Retort Ovens (SWMU 1). Four incidents (#1, #2, #3, and #5) have been documented in this AOC.

The second AOC is the South Loading Dock (SWMU 11) where all waste materials are loaded and unloaded. One incident (#4) has occurred in this AOC. Incidents and AOCs are discussed below:

Incident #1 in AOC #1

a. <u>Unit Description</u>

Refer to the August 3, 1998, letter from MWSI to WDNR for more information (Appendix G).

On Thursday evening, July 30, 1998, MWSI received a call stating there appeared to be excessive smoke coming out of the exhaust stack at the facility. MWSI responded immediately to the plant and assessed the situation. MWSI had emergency and personnel protective equipment necessary to respond to an emergency situation on-site. As such, the Kansasville Fire Department and MWSI agreed that MWSI staff should enter the facility and assess the situation.

Upon entering the facility, MWSI staff confirmed a partially blocked vacuum on retort oven #3 due to a partially plugged condenser tank. This condition caused an increase in pressure in the oven and forced smoke out of the exhaust stack and out through an air intake valve on the retort oven. Mercury readings were taken with a Jerome Mercury Vapor Analyzer around the facility during the malfunction and no readings of concern were obtained. Exhaust stack smoke passed through carbon filters/canisters prior to discharge from the facility.

The County Haz Mat Team from Racine arrived and asked MWSI what happened and what it was doing to address the situation. By that time MSWI staff had hooked up a hose to divert exhaust and pressure from retort oven #3 to another collection system and cooled the oven from approximately 1300 degrees to less than 640 degrees using liquid nitrogen. Both the Haz Mat team and the Fire Department were satisfied with the how the situation was handled and turned the facility back over to MWSI for normal operations when the oven temperature dropped to 500 degrees a short time later.

MWSI staff took mercury readings outside of the facility the following morning. Again, no mercury readings of concern were observed. MWSI took readings inside the facility and found mercury level readings necessitated the use of personal protective equipment (PPE). MWSI personnel in PPE inspected the retort oven #3 and confirmed that no damage had been done to

any equipment. Mr. Tim Kennedy from the WDNR visited the site on Friday morning, July 31, 1998.

b. <u>Facility Clean-Up</u>

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All clean-up operations were conducted by MWSI staff. All employees wore respirators during clean-up operations on Friday, Saturday and Sunday. Power washers were used to clean up the dusty residue that was released through the valve on the door of retort oven #3. All water generated from clean-up operations, including roof-top cleaning, was recovered and retorted in one of MWSI's retort ovens. All MWSI staff needing to perform work in the processing area wore respirators until August 2, 1998.

c. <u>Analysis of Potential Release</u>

MWSI personnel used a Jerome Mercury Vapor Analyzer to monitor ambient air conditions surrounding the facility. Readings ranged from 0.022 to 0.027 mg/m³, well below regulatory standards. On Tuesday, August 4th, Mr. Tom Anderson of the Wisconsin Dept. of Health & Family Services conducted soil and wipe samples on the properties neighboring the facility. Duplicate samples were analyzed by an independent environmental consulting firm. Laboratory samples were extremely low and did not exceed regulatory levels (see Table 1, Appendix B and Appendix H).

The degree and extent of impacts were limited to the interior of the MWSI facility, which was thoroughly cleaned by MWSI staff. Potential migration pathways include indirect transportation of mercury outside of the facility via ventilation systems, equipment, employee clothing, solutions/water used for cleaning, etc. However, there is no indication that the environment was impacted through any of these contaminant migration pathways.

d. <u>Investigation of Cause</u>

As indicated above, a partially plugged condenser tank blocked the vacuum on retort oven #3 and led to an increase in oven pressures and the eventual release of excessive smoke.

e. Operational & Procedural Improvements

In response to this incident, MWSI moved to a three shift, 24-hour work day. The intent was to have operating equipment monitored by personnel at all times, thereby greatly reducing response times to potential equipment malfunctions. Existing retort ovens were fitted with an emergency bypass valve that will, in the event of a similar sudden increase in oven pressure, automatically redirect air flow to an alternate collection system.

It was the general opinion of MWSI and Mr. Jeff Bratz, Chief of the Kansasville Fire Department, that emergency response procedures implemented during this incident were effective and complete.

Incident #2 in AOC #1

a. <u>Unit Description</u>

Refer to the Sept. 24, 1998, letter from MWSI to WDNR for more information (Appendix G).

On Sunday morning, August 30, 1998, a call was placed to the Kansasville Fire Department indicating that visible smoke was coming out of roof vents at MWSI. The Kansasville Fire Department and MWSI personnel responded to the call to find a small quantity of smoke exiting through the carbon-filtered vents in the roof. MWSI staff entered the facility in SCBA equipment to assess the situation. There was minimal smoke within the facility and Jerome meter readings were less than 0.250 mg/m³. MWSI staff engaged the emergency bypass to an alternate collection system and the smoke exiting the building immediately ceased as facility air was again drawn through the oven.

b. <u>Facility Clean-Up</u>

At no time was there an actual or potential release of mercury nor was control of the facility removed from MWSI personnel. Clean-up activities were not required.

c. <u>Analysis of Potential Release</u>

As indicated above, there was minimal smoke within the facility and Jerome meter readings were less than 0.250 mg/m^3 . In addition, smoke released from the roof vents first passed through carbon filters.

d. <u>Investigation of Cause</u>

During the evening of Thursday, August 27th, several false alarms were sent by the computer monitoring system to MWSI personnel indicating loss of air flow through the collection systems. On Friday, August 28th, the system programmer was called to correct this problem. The monitoring system was taken off-line while the programmer evaluated the system. A defective heat element was also replaced and tested by increasing the oven up to 750 degrees during this time. Two boxes of batteries and a box of personal protective equipment (PPE) were in the oven during the test. Although MWSI monitored the oven as it cooled, MWSI later determined from observations of smoke and materials in the oven that the PPE had begun to smolder after the oven was shut down. Because the collection system was still off-line, smoke was gradually released from the air intake valve into the facility and through the carbon filters and roof vents.

e. <u>Operational & Procedural Improvements</u>

Computer monitoring and emergency response systems were being inspected during this incident and were off-line. When manually activated, the emergency bypass collection system functioned properly. Additionally, the facility remained under MWSI control and no disruption of operations occurred. When on-line, the computer monitoring and emergency response systems would have prevented and/or notified MWSI personnel directly of this incident. In the future, additional precautions will be taken when simultaneously inspecting and testing monitoring and response systems.

Incident #3 in AOC #1

a. <u>Unit Description</u>

Refer to the October 28, 1998, letter report from Environmental Monitoring and Technologies, Inc. (EMT) to MWSI and the December 14, 1998, letter from MWSI to WDNR for more information (Appendix G).

On Wednesday morning, October 14, 1998, MWSI personnel heard a thunder-like noise emanating from the stationary retort oven area of the facility. One stationary retort oven had been forced open due to a sudden build-up of pressure within the oven. There were no employees in the retort oven area at the time of the incident. MWSI personnel used portable fire suppression equipment on the material within the oven to reduce oven temperature. The Kansasville Fire Department was contacted for assistance per procedures outlined in the facility's Emergency Response and Contingency Plan. The Fire Department placed foam in the oven to further suppress and prevent additional hazards.

MWSI personnel used a Jerome Mercury Vapor Analyzer to monitor ambient air conditions surrounding the facility. Mercury levels were well below levels that would pose any immediate danger to human health or the environment. On Thursday morning the Fire Department investigation team entered the facility in SCBA gear to inspect the physical condition of the facility. Control of the facility was returned to MWSI shortly after noon on Thursday.

MWSI then acted to 1) determine and address facility clean-up, 2) analyze any actual and potential off-site releases, 3) investigate the cause of the reaction, and 4) document all operational and procedural improvements made to prevent the recurrence of such an incident.

b. Facility Clean-Up

MWSI retained the services of North Shore Environmental Construction, Inc. (North Shore) to conduct the facility clean-up. North Shore utilized a 6% sodium thiosulfate solution in water to reduce the mercury vapor concentrations inside the facility to levels at which air purifying respiratory protection could be used by MWSI personnel in completing the cleaning.

c. <u>Analysis of Potential Release</u>

In order to determine the extent of potential mercury vapor release as a result of this incident, MWSI retained the services of Liesch Environmental Services, Inc. (Liesch) to conduct soil and air sampling around the facility. During the incident, winds were generally from the north. For that reason, one soil sample was taken due north of the facility and four others were taken to the south of, and at varying distances from, the facility. The maximum mercury level found in the soil was 0.96 mg/kg (ppm). This level is only slightly above background levels established at upgradient monitoring points and below regulatory levels. Air monitoring was conducted by Environmental Monitoring & Technologies, Inc. (EMT) for a 5-day period following the incident. Monitoring stations were set up at seven locations surrounding the facility; four immediately adjacent to the facility and three closer to the site perimeter.

Review of the data by Liesch indicated that the mercury emissions from the facility following the incident caused a detectable increase in ambient mercury concentrations, but not to a level that exceeded Wisconsin's NR 445 or NR 446 acceptable limits of $1 \mu g/m^3$.

The degree and extent of impacts were limited to the interior of the MWSI facility as demonstrated by the EMT ambient mercury concentration test program. In addition, the interior of the MWSI facility was thoroughly cleaned by North Shore Environmental Construction. Potential migration pathways include indirect transportation of mercury outside of the facility via ventilation systems, equipment, employee clothing, solutions/water used for cleaning, etc. However, there is no indication that the environment was impacted through any of these contaminant migration pathways.

d. <u>Investigation of Cause</u>

A thorough review of shipping, inventory, and process documentation, led MWSI to conclude that a quantity of lithium batteries were inadvertently included in a stationary retort oven run. Lithium batteries were not manifested as they are non-regulated universal waste. Lithium batteries, when exposed to elevated temperatures, can be highly reactive leaving lithium, sulfur, and sulfate residue and liberating oxygen. In order to validate that conclusion, MWSI collected and analyzed residual materials from the involved run for lithium reaction residues. Analysis confirmed the occurrence of lithium reaction residuals.

e. <u>Operational & Procedural Improvements</u>

MWSI has developed and implemented a number of operational and procedural improvements, with particular attention to materials inspection, sorting, and handling. These documents have been reviewed by, and are on file with, the WDNR. MWSI independently continues to seek more protective and efficient means of handling/processing hazardous materials. Materials being placed within retort boxes will be given additional scrutiny to ensure that no incompatible materials are loaded.

Incident #4 in AOC #2

a. <u>Unit Description</u>

Refer to the July 27, 1999, letter from MWSI to Philips Services Corporation and the October 5, 1999, letter from MWSI to WDNR for more information (Appendix G).

On March 11, 1999, a mercury spill occurred at the facility from a truck operated by Allwaste Transportation & Remediation, Inc. that contained hazardous waste from Burlington Environmental, Inc. (Burlington). It was eventually determined that over 250 pounds of mercury were unaccounted for between the original shipping weight and the final weight of the faulty mercury container.

b. <u>Facility Clean-Up</u>

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MWSI personnel constructed berms of absorbent material around the spill to prevent further migration and notified appropriate agencies. Superior Environmental Services, Inc. was retained by Burlington to recover spilled mercury and decontaminate the loading dock and truck trailer.

c. <u>Analysis of Potential Release</u>

Mercury impacts were documented in the back half of the tractor trailer where the spill originated, near the south loading dock area at MWSI, on the paved driveway leading up to the loading dock, in the loading dock drain, and in the west ditch that receives drainage from the loading dock. The loading dock and surrounding areas were thoroughly cleaned by Superior Special Services and impacted soil and water were collected by MWSI and retorted. As evidenced by elevated mercury concentrations, the primary migration pathway was the storm water drain and piping leading from the loading dock area. Other potential migration pathways include indirect transportation of mercury outside of the facility via ventilation systems, equipment, employee clothing, solutions/water used for cleaning, etc.

Laboratory results from a May 14, 1999, soil sampling event indicated elevated mercury levels near a drainage ditch to the west of the facility. It was concluded by MWSI that mercury from the March spill had unknowingly entered a ground drain and dock drain and migrated to the drainage ditch. MWSI cleaned both drains, removed and retorted gravel around the drains, and removed and retorted all of the soils in the drainage area that were impacted. Approximately 24 cubic yards of gravel and soil were removed, retorted and replaced with new drainage rock and soil. MWSI has received a 'no further action' letter from the WDNR in regard to this release.

d. <u>Operational & Procedural Improvements</u>

To eliminate future recurrences, MWSI places a cover over the drain in the loading dock area during deliveries. The loading dock area would provide containment in the event of a mercury spill. The connection between the south storm drain and the storm drain's outfall at the west ditch remains although the outfall is now covered with rock. Water that accumulates in the south loading dock is first inspected before being discharged into the south storm drain.

Incident #5 in AOC #1

a. <u>Unit Description</u>

Refer to the August 30, 2001, letter from WDNR to MWSI for a summary of this incident (Appendix G).

On January 20, 2001, an over pressurization release occurred from an oven that had inadvertently been loaded with silver oxide powder from Rayovac. A call was placed to Racine County Emergency Management who notified the WDNR of the release.

MWSI responded immediately to the release and assessed the situation. MWSI had emergency and personnel protective equipment necessary to respond to the situation. MWSI took readings with a Jerome Mercury Vapor Analyzer and found mercury level readings necessitated the use of personal protective equipment (PPE). MWSI staff entered the facility in PPE and SCBA equipment to assess the situation. There was minimal smoke within the facility. MWSI personnel in PPE inspected the retort oven and confirmed that no damage had been done to any equipment.

Mercury readings were taken with the Jerome Analyzer around the facility and no readings of concern were obtained. Exhaust stack smoke had passed through carbon filters/canisters prior to being discharged from the facility.

b. <u>Facility Clean-Up</u>

All clean-up operations were conducted by MWSI staff. Power washers and sodium thiosulfate were used to clean up the dusty residue that was released within the retort room. All water generated from clean-up operations was recovered and retorted in one of the MWSI retort ovens. All MWSI staff needing to perform work in the processing area wore respirators.

c. <u>Analysis of Potential Release</u>

MWSI personnel used a Jerome Analyzer to monitor ambient air conditions surrounding the facility. Readings were well below regulatory standards.

The degree and extent of impacts were limited to the interior of the MWSI facility, which was thoroughly cleaned by MWSI staff. Potential migration pathways include indirect transportation of mercury outside of the facility via ventilation systems, equipment, employee clothing, solutions/water used for cleaning, etc. However, there is no indication that the environment was impacted through any of these contaminant migration pathways.

d. <u>Investigation of Cause</u>

As indicated above, the inclusion of silver oxide powder, unlisted on the manifest from Rayovac, led to an increase in oven pressures and the eventual release of excessive smoke.

e. Operational & Procedural Improvements

In response to this incident, MWSI revisited manifest and material inspection procedures and notified Rayovac of the manifest discrepancy and subsequent release.

It is the general opinion of MWSI that emergency response procedures implemented during this incident were effective and complete.

2.6 Nature and Extent of Potential Contamination

Materials of concern that could contaminate soil, surface water, groundwater, and/or air include:

- 1) Materials to be recycled (fluorescent lamps, mercury switches, batteries, etc.);
- 2) Process and treatment system by-products (VOCs, carbon monoxide, heavy metals, lighting ballasts, solid wastes, hazardous wastes, etc.);
- 3) Recycled mercury;

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- 4) Incidental releases associated with trucks and automobiles (oil and grease, diesel fuel, gasoline, hydraulic oils, transmission fluids, brake fluids, and engine coolants);
- 5) Storm water contact with exposed (uncovered) materials stored outside;
- 6) Electrical transformers and HVAC support equipment located outside the building; and
- 7) Two 100-gal petroleum storage tanks located outside of the facility. A 100-gal diesel AST is located on the west side of the building and is associated with a back-up power generator. The other AST is a portable 100-gal diesel tank.

There are no reported environmental conditions associated with the transformers, HVAC equipment, ASTs, or incidental releases associated with trucks and automobiles in parking areas.

Potential migration pathways for contamination at the site include utility corridors, native permeable lenses within low permeability materials, and the single potable well. Utility corridors, specifically storm drains, have served as conduits for contamination in the past (refer to Incident #4). However, MWSI has taken precautionary measures to prevent releases from occurring, reaching, and traveling through utility corridors.

While surface contamination has been documented at the site, shallow soils are comprised of silt and clay that inhibits migration. In addition, the contaminant of concern, mercury, is not highly mobile.

There is no evidence that the on-site potable well, used exclusively for washing (drinking water coolers are provided by MWSI), has been impacted by mercury or serves as a conduit for groundwater contamination. However, MWSI sampled the well for mercury contamination and the results are discussed below.

2.6.1 Potential Soil Contamination

Soil contamination can occur directly through material spills or indirectly from rooftop emissions. MWSI has implemented policies and procedures to minimize material spills and reduce rooftop emissions. To characterize potential soil contamination, approximately 120 soil samples have been collected and analyzed for mercury since August 1998. See Table 1, Appendix B for a summary of results.

2.6.2 Potential Air Contamination

Emission stack testing was performed in February 1998, June 2000, and November 2000 to determine the quantity and quality of discharge air from the facility. Existing process filters and carbon adsorbers remove air-borne contaminants (particulate matter, VOCs, mercury, etc.) during the mercury recovery process while a packed tower scrubber removes most of the remaining contaminants from the exhaust air.

Calculations of the Maximum Theoretical Emissions, Potential Emissions, and actual emissions for VOCs, particulate matter, mercury, carbon monoxide, and formaldehyde emissions were developed based on stack test results. Stack test summaries were submitted to the WDNR in the November 2000 Operation Permit Application and LACT Analysis.

Only the maximum theoretical emission of carbon monoxide (CO) and maximum theoretical emission of VOCs were high enough to be considered for inclusion within the operation permit application. VOC emissions only triggered the need for permitting based on the use of the June 2000 test data. This data is not considered to be representative of normal operating ranges as VOC concentrations measured at the time exceeded upper-end calibration range specifications for the EPA methodology. MWSI included in the permit application VOC emissions at a level that may, for short times, at some point in the future approach an emission rate of 5.7 lb/hr.

Mercury emissions never exceeded the NR 445 threshold values (called out in the construction permit exemption criteria) or the $1\mu g/m^3$ ambient 30-day average concentration for NR 446 compliance (as verified by Liesch's April 1999 modeling study). The June 2000 test did not have any emissions that exceeded the NR 407 inclusion levels for mercury. However, for documentation purposes mercury was included in the permit application.

In addition, using conservative stack parameters and technical modeling procedures, a MWSI emission modeling study predicted the concentration of mercury would not exceed 0.0786 μ g/cubic meter. This concentration is less than 8% of the 1.0 μ g/cubic meter NR 446 30-day average limitation. The study factored the available emission rates occurring at the time of the 1998 test (with one of the retort ovens operating) upward to represent three ovens in operation,

then factored this estimated emission rate for three furnaces upward by a factor of two to account for typical operational variability. The estimate of the potential-to-emit mercury from the retort oven of 0.00438 lb/hr was used throughout the modeling analysis.

Other emissions, such as particulate matter and formaldehyde were emitted at significantly lower emission rates than the permit application inclusion levels and were not listed as being significant in the permit application.

Based on stack test data and emission calculations, potential VOC emissions were estimated to be 21.2 ton/yr. These results indicate that potential emissions should not exceed 25 ton/yr (emission limit for ozone non-attainment areas). No special permit limitations are needed to restrict operations to meet this emission rate. These emissions identify the source as being a true minor source under federal Title V (Part 70) operation permit rules and Wisconsin's NR 407 rules. Based on test results and relevant regulations, other existing sources at MWSI are exempt from additional control requirements. As noted above, a minor source permit operation application was submitted to the WDNR in November of 2000.

MWSI provided a LACT analysis to the WDNR containing an evaluation of potential add-on controls. The analysis showed that the current use of a packed tower scrubber and other VOC recovery practices meet the LACT. Cost estimates for this control technique are somewhat higher than that typically used to define acceptable LACT installations. Based on cost estimates this control approach is not necessarily required.

In the spring of 2002, the WDNR completed a 30-day ambient air monitoring program at MWSI. A portable laboratory was located immediately northwest from MWSI and continuously analyzed and recorded ambient concentrations of mercury in the air. Our summary of the ambient air monitoring results showed the 30-day concentration was a mere 4.7% of the current limit in NR 446 ($1\mu g/m^3$) and the 24-hr concentration was 14.2% of the NR 445 current value (if it is applicable). Ambient air concentrations of mercury at MWSI are not significant.

The amount of mercury has been minimized through improved technologies, through the use of carbon, and through approved maintenance of equipment (wet scrubber, etc.).

2.6.3 Potential Surface Waters/Groundwater Contamination

Chemical spills and storm water contact with on-site materials may impact surface waters and groundwater. MWSI has designed and implemented structures and procedures, such as enclosed storage areas with secondary containment and a Storm Water Pollution Prevention Plan (SWPPP), to prevent contact between process materials and surface water / groundwater.

As part of the MWSI SWPPP to minimize potential surface water / groundwater contamination, storm water is visibly inspected on a quarterly basis and samples have been collected and analyzed. See Table 2, Appendix B for a summary of results.

The MWSI groundwater well was sampled in April 2003 for total mercury. The sample was taken inside the MWSI plant facility from a facet. The faucet was allowed to run for approximately one hour prior to collecting the sample. The sample was collected in a plastic container and submitted for analysis. The result from the analysis was 1 part per billion total mercury. The analytical laboratory report can be found in **Appendix H**.

MWSI contacted WDNR staff regarding the need for further analysis under WDNR administrative code. In discussing the well with WDNR staff, it was determined that the MWSI well is classified as a potable well even though the water is not used for drinking water. However, in further discussing the status of the well with WDNR staff, it was determined that the well did not need to be analyzed since the well is not used by the minimum of employees requiring analysis. A copy of the e-mail correspondence with WDNR staff regarding the status of the well and the need for analysis is included in **Appendix E**.

2.7 Summary of Remedial Actions Taken

2.7.1 Soil Remediation

Soil samples collected from various locations at the facility have contained detectable levels of mercury. It is believed that wind and rain events transfer residual mercury surrounding rooftop vents to surface soils. The most notable areas are between the East and West Buildings (courtyard), along the west side of the building near the downspouts, near the southern storm drain, and within the west ditch. Contaminated soil has been excavated from these areas, regularly from the courtyard and beneath downspouts, (see Figure 9, Appendix A) and treated in MWSI retort ovens to remove and recover mercury. Soil was subsequently sent out for disposal as a non-hazardous special waste to the Superior Emerald Park Landfill. Refer to Table 4, Appendix B for a summary of remedial activities and Appendix J for retorting documentation and disposal manifests.

Annual soil removal and retorting activities include:

- 1) excavating 1-2 feet of rock and soil in the courtyard and beneath downspouts,
- 2) collecting and analyzing soil samples at the base of select excavations (in the courtyard, samples are taken under the emission stack, under the vent for the continuous flow oven, and in the middle of courtyard),
- 3) retorting soil for mercury recovery with subsequent off-site disposal, and
- 4) replacing excavated soil with clean material.

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Soil removal and retorting activities completed in May and June 1999 and associated with the March 1999 Spill (Incident #4) included:

- 1) excavating approximately 24 cubic yards (36 tons) of soil from an area up to 5 feet wide, 150 feet long, and 1 to 2 feet deep,
- 2) retorting soil for mercury recovery with subsequent off-site disposal, and
- 3) replacing excavated soil with clean material,
- 4) burying the south outfall and culvert that leads to the retention pond on the Systematics property under approximately 2 to 3 feet of gravel and soil, and
- 5) establishing grass over the outfall area.

The outfall and culvert were covered with gravel and soil to slow storm water velocity and minimize the spread of contamination.

It is the intention of MWSI to periodically sample and analyze soil samples and, if necessary, remove and treat contaminated surface soils. MWSI has isolated the known areas of mercury deposition and has had a program in place since 1998 to remove, retort and replace the rock and soil from areas of mercury deposition.

2.7.2 Air Emissions

As indicated above, MWSI is exempt from additional treatment of exhaust stack emissions. The facility intends to continue to use carbon canisters and a wet scrubber. MWSI is also reviewing different scrubber solutions to help optimize VOC collection. The facility is making ongoing efforts to maintain waste stream plastic contents within an acceptable range to help prevent VOC emissions.

2.7.3 Surface Waters/Groundwater

There are no reported surface waters on or near the site and there are no reported facility-related environmental impacts to groundwater beneath the site. Mercury deposits from air emissions may impact surface water during storm events. However, mercury is not highly mobile and generally settles into the soil matrix before traveling more than a few feet. As such, removing and retorting soil is the most effective method for recovering mercury.

On-site storm water treatment consisting of a detention basin will likely be incorporated into the redesign of the facility receiving yard. There is no evidence that groundwater below the site has been impacted by facility processes or requires remediation.

2.8 Data Evaluation and Recommendations

MWSI operates and maintains a mercury recycling facility that focuses on increasing worker safety and minimizing impacts to the environment. Deficiencies in past operational procedures have been corrected and environmental damage remediated. MWSI will maintain an ongoing effort to eliminate threats to worker safety and minimize impacts to the environment.

As part of this ongoing effort, MWSI has developed a Malfunction Prevention and Abatement Plan (dated January 1999). The Plan was created and implemented to increase worker safety and eliminate or reduce impacts to the environment in the event of a process malfunction.

MWSI has developed a Contingency Plan that details response actions for various incidents, including spills and other releases. In addition, the facility Stormwater Pollution Prevention Plan outlines methods for preventing and responding to spills.

MWSI has also developed and implemented a Feasibility Report and Plan of Operations (dated April 2000) that has been submitted and accepted by the WDNR. The Plan covers materials approved for recycling, waste description and storage procedures, waste analysis and inspection, recycling procedures and processes, secondary containment and safety procedures, and other facility-related topics.

MWSI plans to develop and implement an Investigation Work Plan and a Site Maintenance Plan by January 23, 2004. The Investigation Work Plan will consider:

- Advancement of soil borings to determine subsurface soil conditions and depth to groundwater. Groundwater monitoring well locations may be proposed to determine groundwater flow direction at the site and whether there are impacts to groundwater.
- Definition of the vertical extent of impacts.
- Collection of samples from beneath the downspouts, the west drainage ditch (at ground surface, at the base of the ditch prior to placement of backfill, and at the elevation of the current pipe outfall within the ditch), southern storm drain, the courtyard, west drainage culvert, the southeast loading dock (at a minimum include the sumps and drains), the outside storage area, and the northeast loading dock.
- In addition samples should be collected from the northern and western property boundaries. Include any other areas that are part of the storm water runoff pathway or other areas where mercury was detected in the past.
- A sample numbering scheme which includes the sample date and location.
- Sample collection and analysis methodologies including proposed sample depth, which should generally be within the top 3 inches if aerial deposition or overland flow is the expected source.
- Proposed sample locations marked on a site map.

The Site Maintenance Plan will include:

- A proposed residual cleanup level for mercury, above which remedial action will be implemented.
- A schedule for reporting
- A description of how soil excavation, retorting, and disposal will occur.
- A sampling plan for the collection of confirmation samples from excavated areas and backfill procedures, which includes a description of backfill material to be used.
- Plans to document areas excavated and site figures to depict these areas.

2.8.1 Soils

Testing for potential soil contamination, a total of 58 Geoprobes were advanced across the site in October 1999 and September 2000. Soil samples were collected from approximately 1 foot bgs from target locations near points of interest (near downspouts for example) and on a grid pattern to ensure uniform site coverage. All samples were containerized and preserved as necessary and submitted to a licensed laboratory for mercury analysis. In December 2001, 13 shallow soil samples were collected from known hot spots using a shovel and submitted for laboratory analysis of mercury. Additional soil samples were collected in December 2002 and October 2003. In total, nearly 120 soil samples have been collected and analyzed for mercury. Table 1, Appendix B contains the laboratory results from all recent site investigations. Soil sample locations and laboratory results are depicted on Figures 7A and 7B, Appendix A.

Mercury levels above 1 ppm have been encountered in shallow soils in the courtyard and near downspouts on the west side of the facility. There may continue to be low levels of mercury found below the exhaust stack on the roof and below the downspouts. The mercury is a result of mercury stack emissions which are in compliance with WDNR air emission regulations. The only contamination of soil adjacent to the MWSI facility was a result of the mercury spill (Incident #4) and MWSI was not a responsible party in that incident. Soils contaminated by this third party release have been investigated and remediated as verified by the May 24, 2000, letter from the WDNR to MWSI issuing site closure (see Appendix G). MWSI has taken all known precautions to prevent another occurrence of this type.

MWSI will continue to monitor mercury levels in site soils and will remove and retort additional soils as necessary. Additional information on soil sampling, monitoring and retorting activities will be provided in the Investigation Work Plan and Site Maintenance Plan.

2.8.2 Air

Based upon review of available data, MWSI air emissions do not appear to be in violation of rules established under the requirements of the NR 400 series. Existing process filters and

carbon adsorbers remove air-borne contaminants (particulate matter, VOCs, mercury, etc.) during the mercury recovery process while a packed tower scrubber removes most of the remaining contaminants from the exhaust air. MWSI is in the process of replacing the existing wet scrubber with a more efficient model and will submit permit modifications/applications to the WDNR as required.

2.8.3 Surface Waters/Groundwater

MWSI has developed and implemented operational policies and procedures that significantly reduce the potential for surface water and groundwater impacts from facility releases. Furthermore, MWSI is in the process of redesigning the receiving yard to provide better control and treatment of storm water.

MWSI sampled and analyzed the on-site well potable well for mercury. The result was 1 part per billion total mercury. Although the well was constructed as a potable well, well water is used for non-consumptive uses such as hand washing. Water coolers are provided for drinking water.

MWSI sampled storm water for mercury, RCRA metals, and VOCs in April of 2003 as part of the facility SWPPP (see Appendix I). Laboratory results are included in Appendix G with the Annual Facility Site Compliance Inspection Report and summarized in Table 2, Appendix B. Regulatory advisory levels for drinking water/groundwater are included in the summary table although these standards do not directly apply to storm water. While laboratory tests identified contaminants at levels exceeding enforcement standards for groundwater, these levels in storm water do not pose an immediate threat to human health or the environment. MWSI will continue monitoring and sampling storm water as required by the SWPPP and intends to redesign the facility receiving area to further reduce storm water contaminant levels.

3.0 PRELIMINARY EVALUATION OF CORRECTIVE MEASURES

The corrective measures developed and implemented by MWSI reduce environmental impacts from facility activities. Corrective measures included:

- Developed and implemented a Malfunction Prevention and Abatement Plan.
- Developed and implemented a Feasibility Report and Plan of Operations.
- Developed and implemented a Storm Water Pollution Prevention Plan.
- Developed and implemented safe loading/unloading procedures and maintains clean up materials on site.
- Developed and implemented a Facility Contingency Plan.

- Use of a packed tower scrubber and a review of scrubber solutions to help optimize VOC collection.
- Maintain waste stream plastic contents within an acceptable range to help prevent VOC emissions.
- Complete and submit an Operation Permit Application and LACT Analysis.
- Developed and implemented a system to treat wastewater generated during the mercury recovery process.
- Investigated and remediated soils impacted in the courtyard, below downspouts, and by third party releases.
- Periodically sample and analyze soil samples and, if necessary, remove and treat impacted surface soils.

4.0 FACILITY INVESTIGATION WORK PLAN

As indicated above, an Investigation Work Plan will be completed for the MWSI facility by January 23, 2004.

5.0 SITE MAINTENANCE PLAN

As indicated above, a Facility Site Maintenance Plan will be completed for the MWSI facility by January 23, 2004.

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Appendix 15 WDNR Signoff of Corrective Action



State of Wisconsin \ DEPARTMENT OF NATURAL RESOURCES

Jim Doyle, Governor Matthew J. Frank, Secretary Gloria L. McCutcheon, Regional Director Waukesha Service Center 141 NW Barstow St Waukesha, Wisconsin 53188 Telephone 262-574-2100 FAX 262-574-2117 TTY Access via relay - 711

June 18, 2009

Mercury Waste Solutions, LLC Joseph Carruth 21211 Durand Ave. Union Grove, WI 53182-9711 FID # 252195350

SUBJECT: Case Closure Mercury Waste Solutions, LLC, 21211 Durand Ave., Union Grove, WI WDNR BRRTS Activity #: 02-52-305231

Dear Mr. Carruth:

On June 8, 2009, the Department of Natural Resources (Department) reviewed your request for closure of the case described above. The Department reviews environmental remediation cases for compliance with state rules and statutes to maintain consistency in the closure of these cases.

Based on the correspondence and data provided, it appears that your case meets the closure requirements in ch. NR 726, Wisconsin Administrative Code. The Department considers this case closed and no further investigation or remediation is required at this time.

Please be aware that this case may be reopened pursuant to s. NR 726.09, Wisconsin Administrative Code, if additional information regarding site conditions indicates that contamination on or from the site poses a threat to public health, safety or welfare, or the environment.

GIS Registry

The conditions of case closure set out below in this letter require that this site be listed on the Remediation and Redevelopment Program's GIS Registry. The specific reasons are summarized below:

 Residual soil contamination exists that must be properly managed should it be excavated or removed

This letter and information that was submitted with your closure request application will be included on the GIS Registry. To review the sites on the GIS Registry web page, visit the RR Sites Map page at: http://dnr.wi.gov/org/aw/rr/gis/index.htm. If the property is listed on the GIS Registry because of remaining contamination and you intend to construct or reconstruct a well, you will need prior Department approval in accordance with s. NR 812.09(4)(w), Wis. Adm. Code. To obtain approval, Form 3300-254 needs to be completed and submitted to the DNR Drinking and Groundwater program's regional water supply specialist. This form can be obtained on-line http://dnr.wi.gov/org/water/dwg/3300254.pdf or at the web address listed above for the GIS Registry.



Residual soil contamination remains as indicated in the information submitted to the Department of Natural Resources. If soil is excavated in the future, then pursuant to ch. NR 718 or, if applicable, ch. 289, Stats., and chs. 500 to 536, the property owner at the time of excavation must sample and analyze the excavated soil to determine if residual contamination remains. If sampling confirms that contamination is present the property owner at the time of excavation will need to determine whether the material is considered solid or hazardous waste and ensure that any storage, treatment or disposal is in compliance with applicable standards and rules. In addition, all current and future owners and occupants of the property need to be aware that excavation of the contaminated soil may pose an inhalation or other direct contact hazard and as a result special precautions may need to be taken to prevent a direct contact health threat to humans.

The Department appreciates your efforts to restore the environment at this site. If you have any questions regarding this closure decision or anything outlined in this letter, please contact Mark Drews at 262-574-2146.

Sincerely,

Mark Drews, P.G. Hydrogeologist Bureau for Remediation & Redevelopment

cc: Margie Voss, 16701 58th Road, Union Grove, WI 53182 SER File Appendix 16 Container Storage Area Drawings and Secondary Containment Calculations
16-1

SCS Report

Environmental Consultants & Contractors

December 23, 2020 File No. 25220201.00

MEMORANDUM

- TO: WM Waste, Inc.
- FROM: Jared Omernik, P.E.
- SUBJECT: Storage Area Secondary Containment Calculations WM Waste, Inc. Facility 21211 Durand Avenue, Union Grove, Wisconsin

SCS Engineers (SCS) visited the WM Waste, Inc. facility in Union Grove, Wisconsin, on December 1, 2020, to measure the storage area containment dimensions. SCS measured the storage area dimensions with a tape measure and a laser distance measure, and measured sloped areas with a laser level.

A Professional Engineer certification for the secondary containment calculations is included on the next page. The secondary containment calculations are included in **Attachment A**, and drawings are included in **Attachment B**.

JMO/AJR_Imh/SCC

I:\25220201.00\Deliverables\201223_WM Mercury Union Grove_Containment Calcs Memo.docx



MEMORANDUM December 23, 2020 Page 2

CERTIFICATION

I, Jared M. Omernik, hereby certify that I am a licensed professional engineer in the State of Wisconsin in accordance with the requirements of ch. A-E 4, Wis. Adm. Code; that this document has been prepared in accordance with the Rules of Professional Conduct in ch. A-E 8, Wis. Adm. Code; and that, to the best of my knowledge, all information contained in this document is correct. This certification covers the calculation of secondary containment capacities for the WM Waste, Inc. facility in Union Grove, Wisconsin.

Jared M. Omernik, PE

Printed Name of Registered Professional Engineer

Signature of Registered Professional Engineer

43424-6 Registration Number WI State

Date

12/23/2020



Attachment A

Secondary Containment Calculations

Job No. 25220201.00	Job: WM Mercury Containment	By: JMO	Date: 12/18/2020
Client: WM	Subject: Containment Calcs	Chk'd: MH	Date: 12/18/2020

Purpose: To calculate containment volumes of licensed storage areas at the WM Mercury facility in Union Grove, WI.

References:Attachment A - Figures 1 and 2.Attachment B - Secondary Containment Drawings with SCS markups.Attachment C - Original secondary containment calculations.

Background/Approach:

- 1. SCS Engineers measured the storage areas on December 1, 2020.
- 2. Storage area dimensions were measured using a tape measure and a laser distance measure, and slopes were measured with a laser level.
- 3. Pallet displacement (number of pallets and gal/pallet) for storage areas S-1 and S-2 were copied from the previous containment calculations and result in conservative displacement volumes relative to actual site conditions on 12/1/2020.

Calculations:

Storage Area S-1:								
Storage Area Dimensions =	59.75	ft. by	41.67	ft. by	3.5	in =	5,432	gallons
Ramp #1 Displacement = .5 x	10.0	ft. by	5.17	ft. by	3.5	in =	(56)	gallons
Ramp #2 Displacement = .5 x	4.67	ft. by	4.58	ft. by	4.0	in =	(27)	gallons
Pallets displacement =	66	pallets	13.6	gal/pa	allet	=	(898)	gallons
Available Secondary Containm	ent =	-		-			4,452	gallons
Storage Area S-2:								
Storage Area Dimensions =	24.0	ft. by	24.92	ft. by	5.0	in =	1864	gallons
Ramp #1 Displacement = .5 x	10.0	ft. by	5.0	ft. by	5.0	in =	(78)	gallons
Ramp #2 Displacement = .5 x	4.58	ft. by	3.92	ft. by	5.0	in =	(28)	gallons
Pallets displacement =	17	pallets	13.6	gal/pa	allet	=	(231)	gallons
Available Secondary Containm	ent =	•		-			1,527	gallons
Storage Area S-3:								
Trench Dimensions =	51.92	ft. by	10.0	in. by	11.0	in =	297	gallons
Available Secondary Containm	ent =	•		-			297	gallons
Storage Area S-4:								
Trench Dimensions =	52.0	ft. by	10.0	in. by	11.0	in =	297	gallons
Available Secondary Containm	ent =	•		-			297	gallons
Storage Area S-5:								
Trench Leg #1 Dimensions =	28.3	ft. by	10.0	in. by	11.0	in =	162	gallons
Trench Leg #2 Dimensions =	6.3	ft. by	10.0	in. by	11.0	in =	36	gallons
Available Secondary Containm	ent =	- !		-			198	gallons

Job No. 25220201.00	Job: WM Mercury Containme	nt By: JMO	Date: 12/18/2020
Client: WM	Subject: Containment Calcs	Chk'd: MH	Date: 12/18/2020
Storage Area S-6: Sump Dimensions = Available Secondary (1) Depth based on (2) Sump capacities	40.92 ft. by 6.92 A Containment = several spot checks within the cu listed on the vendor drawings in	_ft. by(1) in = ontainer. clude 1243, 1252, and	= 1942 ⁽²⁾ gallons 1942 ⁽²⁾ gallons d 1292 gallons.
Storage Area S-7: N/A Storage Area S-8:	(no secondary containment)		
Ramp Area Dimension Trench Dimensions = 12-inch Area Above Area Behind Trench	ons =3.22s.f. by49.5038.5ft. by10.0Trench =45.33ft. by12.0=0.58sf by45.33) ft. = in. by 11.0 in = in. by 2.8 in = 3 ft. =	1192 gallons220 gallons79 gallons196 gallons
Displacement Pyramid @ E. of ramp Wedge @ W. man do Rolloff wheel displac	$b = \frac{1}{3} x$ $b = \frac{1}{3} x$ $b = \frac{27.5}{6.75} \text{ ft. by } \frac{5.0}{8.58}$ $b = \frac{3}{3} \text{ rolloffs } x$ $b = \frac{1}{3} x$ $c = \frac{1}{3} x$ c	ft. by 2.8 in = ft. by 2.8 in = heels x 2 gal =	(80) gallons (51) gallons (12) gallons

displacement from 2 wheels per rolloff, assume 2 gal each)

Available Secondary Containment =

1545 gallons

Storage Area S-9 through S-11: N/A (future dry storage areas/no secondary containment)

Storage Areas S-12 Storage Area 33.75 ft. by 15.8 in = Ramp Area Dimensions = .5 x23.08 ft. by 3836 gallons Trench Dimensions = 26.0 ft. by 9.0 in. by 8.0 in = 97 gallons 11-inch Area Above Trench = 15.8 33.75 ft. by 11.0 in. by gallons in = 305 Area Behind Trench = 1.29 sf by 33.75 ft. 326 gallons = Displacement Rolloff runner displacement = 5.52 s.f. wedge area by 1.375 in = (28) gallons (3 rolloffs, 2 per rolloff) 2.55 s.f. wedge area by 7.33 Rolloff box displacement = ft = (56) gallons (3 rolloffs) 3 rolloffs x gal = Rolloff wheel displacement = 2 wheels x (12) gallons 2 (3 rolloffs, displacement from 2 wheels per rolloff, assume 2 gal each)

Available Secondary Containment =

4467 gallons

Job No. 25220201.00	Job: WM Mercury Containment	By: JMO	Da	te: 12/18/2020
Client: WM	Subject: Containment Calcs	Chk'd: MH	Da	ite: 12/18/2020
Storage Areas S-13 Storage Area Ramp Area Dimension Trench Dimensions = 11-inch Area Above Tr Area Behind Trench =	ns = .5 x 23.08 ft. by 33.92 26.0 ft. by 9.0 rench = 33.92 ft. by 11.0 1.29 sf by 33.92	ft. by 15.8 in = in. by 8.0 in = in. by 15.8 in = ft. =	3855 97 306 327	gallons gallons gallons gallons
Displacement Rolloff runner displace (3 rolloffs, 2 per rolloff) Rolloff box displaceme (3 rolloffs) Rolloff wheel displaceme (3 rolloffs, displaceme	ement = 5.52 s.f. wedge area ent = 2.55 s.f. wedge area ement = 3 rolloffs x 2 whe nt from 2 wheels per rolloff, assum	a by <u>1.375</u> in = a by <u>7.33</u> ft = eels x <u>2</u> gal = ne 2 gal each)	(28) (56) (12)	gallons gallons gallons
Available Secondary	Containment =		4490	gallons
Storage Area S-14: Storage Area Ramp Area Dimension Trench Dimensions = 11-inch Area Above Tr Area Behind Trench =	ns = .5 x 23.08 ft. by 24.0 20.0 ft. by 9.0 rench = 24.0 ft. by 11.0 1.29 sf by 23.08	ft. by 15.8 in = in. by 8.0 in = in. by 15.8 in = ft. =	2728 75 217 223	gallons gallons gallons gallons
Displacement Rolloff runner displace (3 rolloffs, 2 per rolloff) Rolloff box displaceme (3 rolloffs) Rolloff wheel displace (3 rolloffs, displaceme	ement = 5.52 s.f. wedge area ent = 2.55 s.f. wedge area ement = 3 rolloffs x 2 whe nt from 2 wheels per rolloff, assum	a by 1.375 in = a by 7.33 ft = eels x 2 gal = he 2 gal each)	(28) (56) (12)	gallons gallons gallons

Available Secondary Containment =

3146 gallons

Attachment B

Drawings



20201.00\Drawings\Storage Area Containment.dwg, 12/18/2020 11:34:42 AM

21211 DURAND AVE, UNION GROVE, WI



STODACE ADEA S 1	FIGURE
STORAGE AREA 3-1	S-1



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NOTE:	
DIMENSIONS BASED	ON FIELD MEASUREMENTS
COLLECTED BY SCS	ENGINEERS ON
DECEMBER 1, 2020.	

STODACE ADEA S 2	FIGURE
STURAGE AREA 3-2	S-2



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NOTE: DIMENSIONS BASED ON FIELD MEASUREMENTS COLLECTED BY SCS ENGINEERS ON DECEMBER 1, 2020.

	FIGURE
STORAGE AREA 5-0	S-6





<u>NOTE</u>:

STORAGE AREA INFORMATION BASED ON FIGURE 16-7, SHEET FPOR-10, DATED 2/24/2011 BY NIELSEN MADSEN & BARBER S.C.

	FIGURE
STURAGE AREA S-7	S-7



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NOTES:

- 1. STORAGE AREA DIMENSIONS MATCH STORAGE AREA S-12
- 2. POSITIVE SLOPE TO THE WEST WAS CONFIRMED IN THE FIELD BY SCS ENGINEERS ON DECEMBER 1, 2020. SLOPE PERCENT IS APPROXIMATE, AND BASED ON RACINE COUNTY LIDAR DATA COLLECTED APRIL-MAY 2017.

	FIGURE
FUTURE STURAGE AREA 5-9	S-9



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NOTES:

- 1. STORAGE AREA DIMENSIONS MATCH STORAGE AREA S-13
- POSITIVE SLOPE TO THE WEST WAS CONFIRMED IN THE FIELD BY SCS ENGINEERS ON DECEMBER 1, 2020. SLOPE PERCENT IS APPROXIMATE, AND BASED ON RACINE COUNTY LIDAR DATA COLLECTED APRIL-MAY 2017.

ELITURE STORAGE AREA S 10	FIGURE
FUTURE STORAGE AREA S-TU	S-10



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NOTES:

- 1. STORAGE AREA DIMENSIONS MATCH STORAGE AREA S-14
- 2. POSITIVE SLOPE TO THE WEST WAS CONFIRMED IN THE FIELD BY SCS ENGINEERS ON DECEMBER 1, 2020. SLOPE PERCENT IS APPROXIMATE, AND BASED ON RACINE COUNTY LIDAR DATA COLLECTED APRIL-MAY 2017.

ELITUDE STODAGE ADEA S 11	FIGURE
FUTURE STURAGE AREA S-TI	S-11



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16-2

Container Configurations





S-1 Containment Area			
Configuration	3 - Tier Racking System		
er Type	Drum		
m Number of Liquid Containers	600		
Container (gallons)	55		
d Permitted Capacity (Gallons)	33,000		
d Secondary Containment Capacity of 10% of total capacity or largest er)	3,300		
e Secondary Containment (gallons)	3,988		
nt Containment?	Yes		
d Upgrades	None		
ed Containment (gallons)	3,988		

LEGEND

----- RAMP

NOTE: EXISTING SECONDARY CONTAINMENT BASED ON FIELD MEASUREMENTS COLLECTED BY SCS ENGINEERS ON DECEMBER 1, 2020, AND DOCUMENTED IN A REPORT DATED DECEMBER 1, 2020, AND DOCUMENTED IN A REPORT DATED DECEMBER 23, 2020. SCS MEASURED THE STORAGE AREA DIMENSIONS WITH A TAPE MEASURE AND A LASER DISTANCE MEASURE, AND MEASURED SLOPED AREAS WITH A LASER LEVEL.





S-2 Containmen	t Area	
	2-Tier Stacking	
	Drum	
ntainers (55-		
	136	
	55	
Gallons)	7,480	
nt Capacity y or largest		
	748	
ent (gallons)	1,102	
	Yes	
	None	
)	1,102	

	WM Waste, Ind Union Grove, Wiscons	C.
Cont	Storage Area tainer Configu	S-2 uration
	Indenie county, w	
	Drawn: CAL	Checked: BDS
Environmental Consultants	Date: 6/14/2022	Approved: BHR
	Dwg. No.: WA5011-18114-43	Figure 16-2





S-3 Containment Area			
Stacking Configuration	2-Tier Stacking		
Container Type	Drum		
Maximum Number of Liquid Containers (55- gallon drums or DE)	256		
largest container (gallons)	55		
Proposed Permitted Capacity (Gallons)	14,080		
Required Secondary Containment Capacity (greater of 10% of total capacity or largest container)	1,408		
Available Secondary Containment (gallons)	297		
Sufficient Containment?	No		
Proposed Upgrades	Add 4 inch curbing. See details on drawing.		
Proposed Containment (gallons)	1,535		



PROPOSED UPGRADE

PAINTED AISLES

NOTE: EXISTING SECONDARY CONTAINMENT BASED ON FIELD MEASUREMENTS COLLECTED BY SCS ENGINEERS ON DECEMBER 1, 2020, AND DOCUMENTED IN A REPORT DATED DECEMBER 23, 2020. SCS MEASURED THE STORAGE AREA DIMENSIONS WITH A TAPE MEASURE AND A LASER DISTANCE MEASURE, AND MEASURED SLOPED AREAS WITH A LASER LEVEL.

> WM Waste, Inc. Union Grove, Wisconsin

Storage Area S-3 Container Configuration

Racine County, WI

	Drawn:	CAL	Checked:	BDS
ASSOCIATES Environmental Consultants	Date:	6/14/2022	Approved:	BHR
	Dwg. No.	011 10114 44	Figu	re 16-3
	WAS	011-18114-44		





S-4 Containment Area		
acking Configuration	2-Tier Stacking	
ntainer Type	Drum	
aximum Number of Liquid Containers (55- llon drums or DE)	256	
est container (gallons) 55		
oposed Permitted Capacity (Gallons)	14,080	
quired Secondary Containment Capacity reater of 10% of total capacity or largest ntainer)	1,408	
ailable Secondary Containment (gallons)	297	
fficient Containment?	No	
oposed Upgrades	Add 4 inch curbing. See details on drawing.	
oposed Containment (gallons)	1,478	



	1
0	5'
	0

S-5 Contai	inment Area	
Stacking Configuration	2-Tier Stacking	
Container Type	Drum	
Maximum Number of Liquid Containers (55- gallon drums or DE)	160	
largest container (gallons)	55	
Proposed Permitted Capacity (Gallons)	8,800	
Required Secondary Containment Capacity (greater of 10% of total capacity or largest container)	880	
Available Secondary Containment (gallons)	198	
Sufficient Containment?	No	
Proposed Upgrades	Add 5 inch curbing. See details on drawing.	
Proposed Containment (gallons)	942	

LEGEND

PROPOSED UPGRADE

PAINTED AISLES

NOTE: EXISTING SECONDARY CONTAINMENT BASED ON FIELD MEASUREMENTS COLLECTED BY SCS ENGINEERS ON DECEMBER 1, 2020, AND DOCUMENTED IN A REPORT DATED DECEMBER 23, 2020. SCS MEASURED THE STORAGE AREA DIMENSIONS WITH A TAPE MEASURE AND A LASER DISTANCE MEASURE, AND MEASURED SLOPED AREAS WITH A LASER LEVEL.

> WM Waste, Inc. Union Grove, Wisconsin

Storage Area S-5 Container Configuration

 Racine County, WI

 Drawn:
 CAL/KAC-rev
 Checked:
 BDS

 Date:
 06/03/2022
 Approved:
 BHR

 Dwg. No.:
 WA5011-18114-46
 Figure 16-5





S-6 Containment Area			
Stacking Configuration	1-Tier Stacking		
Container Type	Drum		
Maximum Number of Liquid Containers (55- gallon drums or DE)	37		
largest container (gallons) 55 Proposed Permitted Capacity (Gallons) 2,035			
Required Secondary Containment Capacity (greater of 10% of total capacity or largest container)	204		
Available Secondary Containment (gallons)	1,941		
Sufficient Containment?	Yes	-	
Proposed Upgrades	None		
Proposed Containment (gallons)	1,941		

LEGEND

11/1

PAINTED AISLES

NOTE: EXISTING SECONDARY CONTAINMENT BASED ON FIELD MEASUREMENTS COLLECTED BY SCS ENGINEERS ON DECEMBER 1, 2020, AND DOCUMENTED IN A REPORT DATED DECEMBER 23, 2020. SCS MEASURED THE STORAGE AREA DIMENSIONS WITH A TAPE MEASURE AND A LASER DISTANCE MEASURE, AND MEASURED SLOPED AREAS WITH A LASER LEVEL.

	WN	/ Waste, Ind	c.	
	Unior	n Grove, Wiscons	in	
Cont	Stora	age Area er Config	S-6 uratior	n
	Rac	cine County, W	1	
	Drawn:	CAL/KAC-rev	Checked:	BDS
ASSOCIATES Environmental Consultants	Date:	06/14/2022	Approved:	BHR
	Dwg. No.: WAS	: 5011-18114-47	Figu	ire 16-6





S-7 Containment Area		
ntainer Configuration	2-Tier Stacking	
ntainer Type	Drum or Tote	
aximum Number of Liquid Containers (55- llon drums or DE)	80	
gest container (gallons)	275	
oposed Permitted Capacity (Gallons)	4,400	
quired Secondary Containment Capacity reater of 10% of total capacity or largest ntainer)	440	
ailable Secondary Containment (gallons)	0	
fficient Containment?	No	
oposed Upgrades	Add 5 inch curbing. See details on drawing.	
oposed Containment (gallons)	553	

LEGEND

----- RAMP STORA PROPC

PROPOSED UPGRADE

PAINTED AISLES

STORAGE AREA INFORMATION BASED ON FIGURE 16-7, SHEET FPOR-10, DATED 2/24/2011 BY NIELSEN MADSEN & BARBER S.C. EXISTING SECONDARY CONTAINMENT BASED ON FIELD MEASUREMENTS COLLECTED BY SCS ENGINEERS ON DECEMBER 1, 2020, AND DOCUMENTED IN A REPORT DATED DECEMBER 23, 2020. SCS MEASURED THE STORAGE AREA DIMENSIONS WITH A TAPE MEASURE AND A LASER DISTANCE MEASURE, AND MEASURED SLOPED AREAS WITH A LASER LEVEL.

> WM Waste, Inc. Union Grove, Wisconsin
>
>
> Storage Area S-7 Container Configuration
>
>
> Racine County, WI
>
>
> Drawn: CAL/KAC-rev Checked: BDS Date: 06/14/2022 Approved: BHR Dwg. No: WA5011-18114-48





6/24/22

Appendix 17

BRRTS Activity # 02-52-586-974 Site Investigation Report and Remedial Action Plan October 25, 2022

Candace Sykora Hydrogeologist Wisconsin Department of Natural Resources 890 Spruce St Baldwin, WI 54002

 Re: 2022 Site Investigation Report and Remedial Action Plan WM Waste, Inc.
 21211 Durand Avenue, Union Grove, Racine County, WI 53182 BRRTS Activity # 02-52-586974 DNR FID # 252195350

Dear Ms. Sykora:

On behalf of WM Waste, Inc. (WM Waste), Cornerstone Environmental Group, LLC, a Tetra Tech Company (Tetra Tech) is submitting this Site Investigation Report and Remedial Action Plan (RAP) based on an investigation conducted at the Facility located in Union Grove, Wisconsin. The investigation was performed in accordance with an approved Site Investigation Work Plan (SIWP). The SIWP was submitted to the Wisconsin Department of Natural Resources (WDNR) on October 15, 2021 and approved by the WDNR in a Review of Site Investigation Work Plan Letter Dated March 9, 2022 (Attachment 1).

The purpose of the SIWP was to define the extent and magnitude of residual contamination remaining after a previous soil excavation was conducted associated with the release of mercury impacted carbon during change-out activities. On May 24, 2022, Tetra Tech collected soil samples from predetermined locations, private well samples, one surface water sample from the retention pond and one discharge water sample from the retention pond at the Facility.

In general, the following activities were performed during the 2022 Site Investigation. Soil and water samples were collected and analyzed for total mercury at a certified laboratory. The soil sample analytical results were compared to the 3.13-mg/kg standard residual contaminant limits (RCLs) for direct contact. Some soil sample locations exceeded the 3.13 mg/kg total mercury RCL and therefore required the collection of additional or step-out samples to further define the boundary of RCL exceeding soil. This action was performed in accordance with the approved SIWP. This Site Investigation Report has been prepared and Remedial Action Plan developed based upon the evaluation of the data collected during the field activities and is being submitted as required in the approved SIWP.

1.0 SITE INFORMATION

Site name: WM Waste, Inc. Facility Address: 21211 Durand Avenue, Union Grove, Racine County, WI 53182 Parcel IDs: 006-03-20-36-029-000 and 006-03-20-36-031-021 Environmental Protection Agency ID #: WID000000356

Facility ID #: 252195350)

Site location: Northeast ¼ of the Northeast ¼ of section 36 of Township 3 North and Range 20 East, Racine County, Wisconsin

Responsible Party's name and address: WM Waste, Inc., 21211 Durand Avenue, Union Grove, Racine County, WI 53182

Consultant name and address: Tetra Tech, 8413 Excelsior Drive, Suite 160, Madison, WI, 53717

2.0 BACKGROUND INFORMATION

The Facility is located in a small industrial park. The facility and is bordered to the north by Durand Avenue followed by agricultural land. The remainder of the surrounding area consists of industrial properties to the south and residences to the east and west. The site location is shown on Figure 1.

The facility was historically used as a mercury recycling and licensed hazardous waste storage and treatment facility. Mercury recycling activities were conducted utilizing retort ovens. Emissions from the mercury retort ovens were directed to a granular activated carbon (GAC) system. The facility no longer operates the ovens nor processes mercury for recycling. Nonetheless, the GAC system remains operational at the facility. The GAC's carbon media is replaced approximately every five years.

Beginning in 2012, WM Waste has been required as a condition of its operating license to collect bi-annual surficial soil samples from grid locations and analyze them for total mercury using a certified laboratory. Once received, the soil sample results are recorded on a drawing and in tabular format and became part of the facility's operating record. If the 10 mg/kg threshold is met or exceeded in any of the bi-annual soil samples, WM Waste is required to notify in writing the WDNR's designated Hazardous Waste Inspector assigned to the facility.

On August 28, 2020, the bi-annual soil sampling event was conducted by Environmental Monitoring & Technologies, Inc. (EMT). EMT collected grab soil samples from the facility and submitted them to a certified laboratory for mercury analysis. The analytical results indicated seven of the 89 samples exceeded the site-specific standard of 10 mg/kg. The suspected source of the elevated concentrations in these seven samples was spillage of approximately one gallon of carbon media that occurred during the last GAC changeout event on September 26, 2018. WM Waste was not aware of the release prior to the 2020 sampling event. The changeout was reportedly performed by new employees, and although plastic tarping was used, carbon media was spilled on the ground surface near the carbon vessels on the west side of the facility while being transferred to totes.

Remedial action was taken to address the site-specific exceedances. Over-excavation of contaminated soil was conducted from December 10, 2020 through December 16, 2020. WM Waste personnel over-excavated soils to a depth of approximately 1-foot below ground surface (bgs) based on analytical results around the GAC spill and visual observations. The approximate extent of the excavation is shown on Figure 2. Post-excavation confirmation samples collected from the bottom of the excavation were analyzed at a laboratory

and the sample results were below the site-specific standard of 10 mg/kg as well as the direct contact RCL of 3.13 mg/kg.

WM Waste submitted a Request for No Further Action Letter dated February 15, 2021 that described the remedial action, pre-excavation and post-excavation results and a recommendation for no further action. The WDNR responded with a No Further Action Not Recommended Letter Dated July 14, 2021. The Letter stated a need to further define the degree and extent of contamination and a need to conduct further remedial action if any soil has total mercury concentrations above the RCL. WM Waste responded by submitting a Site Investigation Work Plan Dated October 15, 2021. The WDNR sent a Review of Site Investigation Work Plan Letter Dated March 9, 2022, which agreed with the proposed sampling from the SIWP. The WDNR Correspondence Letters are provided in Attachment 1.

Between the previous remedial action in December of 2020 and the implementation of the SIWP, routine sampling has continued at the site including annual sediment sample collection in the stormwater retention pond and biannual sitewide surficial samples. The annual sediment samples from the stormwater retention pond were collected by Tetra Tech on December 21, 2020 and November 22, 2021. Concentrations of total mercury were present in the pond sediment in both events. Sediment samples collected from the stormwater retention pond have had detections for total mercury since the pond sediment was first analyzed in 2012.

Bi-annual surficial soil sampling was completed by Tetra Tech between April 26, 2022 and April 29, 2022. These samples were collected from the soil just below the grass or gravel surface in an established grid pattern across the site. The sample concentrations of total mercury were below the site-specific limit of 10mg/kg and therefore the WDNR was not notified of the results. The samples in the vicinity of the GAC cleanout spill and excavation area from the bi-annual sampling were used to further characterize the extent of the soil contamination related the spill that remained following the original remedial action. Specifically, biannual sample locations E6, E6a, E7, E7a, F5a, F6, F6a, F7 and F7a, are located within the remediated area or between the GAC location and the paved road to the West. None of the samples from the locations had concentrations above the NR 720 RCL of 3.13 mg/kg for direct contact (RCL) as indicated in Table 1.

Following the biennial soil sampling in April 2022, the SIWP was implemented in two phases (1A and 1B) during May 2022 and July - August 2022, respectively. The activities associated with the SIWP are summarized and described below.

3.0 METHODS OF INVESTIGATION

During the May 2022 Phase 1A Investigation, soil samples were collected at six locations. Soil sample locations are approximately 12 feet beyond the boundary of the December 2020 excavation. Two samples were collected at each sample location, one below the grass or gravel surface and one at 12 inches of depth. In grass areas, sampling was conducted by using a shovel to remove the overburden and expose the soil just below the grass surface. In areas with gravel fill, a shovel was used to remove the gravel to expose native soil. A stainless-steel soil sampling probe or hand auger was also used to aid in sample collection as needed. If there was an obstruction in the sample location, such as pavement, woody vegetation, culverts, or surface water, the sample was taken at an offset to the nearest accessible location. After removal of the overburden, a
soil sample was collected by using clean latex gloves. New, clean latex gloves were used for each sample. Between samples, the equipment was decontaminated. After the decontamination process, once every six to eight samples, distilled water was poured over the sampling equipment and collected in a sample container and analyzed for total mercury to confirm the efficiency of the decontamination procedures. Each soil sample location was surveyed with a GPS unit. The May 2022 soil sample locations are shown on Figure 2.

Water samples were taken using new, clean latex gloves. Groundwater samples were collected at the two onsite private wells. Specifically, the samples were collected at spigots outside the buildings after water was discharged or purged for 30 minutes. The private water supply wells at the facility do not have water treatment systems. The surface water in the stormwater retention pond was sampled in two locations: one sample from within the pond and one sample from the pond discharge while it was flowing.

Immediately following collection of the samples, they were placed into appropriate sample containers provided by Pace Laboratories, Green Bay, WI (Pace). The samples were placed on ice in a cooler. The sample coolers were delivered to Pace for total mercury analysis. The decontamination wastewater and disposable sampling items such as nitrile gloves and paper towels were containerized in labeled 55-gallon drums and left at the site for proper disposal at a permitted facility.

4.0 SAMPLE RESULTS AND EVALUATION

4.1 SOIL SAMPLES

The results of the soil sample collection and analysis are summarized in the following text and provided tables and figures.

Initial (Phase 1A) Soil Samples

During the initial (Phase 1A) of the Investigation a total of 12 soil samples and two decontamination water samples were collected in accordance with the SIWP and analyzed in a laboratory for total mercury using United States Environmental Protection Agency (USEPA) Method 7471. The 12 samples were collected at six locations and depths described in Section 3 of this report. Figure 3 shows the sample locations and analytical results. The May 2022 analytical results are summarized on Table 2. Out of the six sample locations, laboratory results showed that the surficial soils at two locations (S4 and S5) had concentrations of total mercury above the RCL of 3.13 mg/kg. The remaining surficial soil samples were below the RCL or non-detect. Although the concentration of total mercury at S1 (3.0mg/kg) was below the RCL, it was determined that step out sampling was appropriate to provide additional confidence in the mercury concentration surrounding this area. None of the samples collected during May 2022 at a depth of one foot below the surface had total mercury detections above the RCL.

Based on the results of the Initial (Phase 1A) investigation, further definition of the extent of mercury impacted soil was necessary to develop an effective and comprehensive remedial action plan. As a result, a Step Out (Phase 1B) Sampling Plan was developed in accordance with the SIWP around the Initial (Phase 1A)

soil sample locations S1, S4 and S5. Figure 3 shows the step out sample locations. The rationale and plan for each of these three locations is summarized below.

Step Out (Phase 1B) Samples

The Step Out samples were collected on July 12, 2022. Due to the July 2022 results, a subsequent or confirmation sample was collected adjacent to the SP4N1 location on August 17, 2022. Step-Out soil sample locations are shown on Figure 3. Samples were collected near the surface and at a depth of one foot below the surface following the same sampling techniques as the initial samples. Additional step out samples were collected around Phase 1A sample locations S1, S4 and S5 because the total mercury concentration approached or exceeded the RCL. Each of the 34 total step out samples were collected between areas that samples exceeded the RCL and/or warranted further investigation and a known boundary delineation. Boundary delineations are further defined for each initial sample point below.

S1 Step-outs

Two step-out samples were collected in three directions from Phase 1A sample point S1 - to the North (SP1N1 and SP1N2), East (SP1E1 and SP1E2) and West (SP1W1 and SP1W2). In each direction the first step out was collected three feet away from S1, then the second sample was collected six feet away from S1. Samples were not collected to the South of S1 because that boundary was delineated by the results at S2 that are below the RCL as well as the previously remediated area. The first step out sample (SP1N1) to the North had a concentration at the surface above the RCL for total mercury, but the second sample (SP1N2) had a concentration below the RCL for total mercury so the delineation boundary for mercury contamination north of S1 was placed between SP1N1 and SP1N2 just south of SP1N2. Both step out samples (SP1E1 and SP1E2) to the east of S1 had total mercury concentration at the surface above the RCL so the delineation boundary to the east of S1 was extended to the edge of the building. The building foundation acts as a barrier to further spread of the surface level contamination. The first step out sample (SP1W1) to the West had a concentration at the surface below the RCL for total mercury, but the second sample (SP1W2) had a concentration above the RCL for total mercury. The delineation boundary for mercury contamination west of S1 was extended to the paved road, which is a higher elevation and impervious to precipitation. These two factors likely hindered the spread of the spilled granular carbon material. Results from the bi-annual samples show that the area to the west of the paved road has total mercury concentrations below the direct contact RCL. The original subsurface sample at S1 and the subsequent subsurface samples all collected at a depth of one foot below the surface had concentrations of total mercury below the RCL, so the vertical delineation boundary of the mercury contamination is to a depth of one foot below the ground surface in the area around S1.

S4 Step-outs

Step-out samples were collected in two directions from Phase 1A soil sample location S4 - to the North (SP4N1 and SP4N2) and West (SP4W1 and SP4W2). Two samples were collected at each sample point. To the North, the first step out sample (SP4N1) was collected approximately three feet North of S4 or one-third the distance between S4 and the access road North of S4. The second sample (SP4N2) was collected at approximately six feet or two-thirds the distance to the access road. The total mercury concentration at the surface in sample SP4N1 was below the RCL. Based on this finding, the road is being used to define the contamination

boundary. The road is at a higher elevation that likely hindered the spread of the spilled granular carbon material. Results from the bi-annual samples and other initial samples show that the area to the north of the road has total mercury concentrations below the direct contact RCL. SPN41B was the only sample out of all the samples taken in Phase 1B investigation to have a concentration higher than the total mercury RCL at the one foot below the surface depth. It was suspected the SP4N1B result might be a field or laboratory error, so the location was resampled again at both depths to confirm the July 2022 result at an offset of four inches from the initial sample location. The samples were labelled SP4N1R and SP4N1BSR. The August 2022 result confirmed the elevated July mercury result at the SP4N1BS (deep) location. Since the concentration of total mercury at SP4N1BS and SP4N1BR were over the RCL at a depth of one foot, the vertical boundary delineation has not been determined in this specific area and will be specifically addressed in the Remedial Action Plan Section of this Report.

Two step-out samples were collected to the West of S4. The first (SP41W) was approximately four feet west S4 and the second (SP4W2) was approximately eight feet west of S4. Sample locations to the West were chosen to set a boundary delineation to the west. Both samples SP4W1 and SP4W2 were over the RCL at the surface, but below the RCL at a depth of one foot. Since both surface samples were over the RCL, the delineation boundary was set at the edge of the paved road to the west of S4 because the paved road is a higher elevation and impervious to precipitation. These two factors likely hindered the spread of the spilled granular carbon material. Results from the bi-annual samples show that the area to the west of the paved road has total mercury concentrations below the direct contact RCL.

S5 Step-outs

Step-out samples were collected to the Northwest (SP5NW1 and SP5NW2), Southwest (SP5SW1 and SP5SW2 and Southeast (SP5SE1, SP5SE2 and SP5SE3). To the Northwest and southwest, the step-out samples were collected to delineate the contamination boundary to the west of S5. To the Northwest, the step-out samples SP5NW1 and SP5NW2 were collected at three and six feet away from S5, respectively. S5NW1 had a total mercury concentration that exceeded the RCL at the surface and SP5NW2 had a total mercury concentration that was below the RCL. Based on these findings in the Northeast direction from S5 the contamination boundary was delineated just Southeast of sample SP5NW2. To the Southwest the step-out samples SP5SW1 and SP5SW2 were collected at four and eight feet away from S5. SP5SW1 and SP5SW2 had total mercury concentrations that were below the RCL. Based on these findings in the Southeast direction from S5, the contamination boundary was delineated just Northeast of sample SP5SW1. Sample S6 is located to the Southeast of S5 and had a concentration that was below the RCL for total mercury. To define the contamination boundary, the area between S5 and S6 was divided into three equally distanced step-out samples to delineate the boundary of contamination between them (SP5SE1, SP5SE2 and SP5SE3). SP5SE1, SP5SE2 and SP5SE3 all had concentrations of total mercury at the surface that exceeded the RCL. Based on these findings the contamination delineation boundary in the Southeast was placed directly North of S6. None of the step-out samples collected around S5 at a depth of one foot below the ground surface exhibited concentrations above the RCL. As a result, the contamination depth in the vicinity of S5 is delineated at one foot below the surface.

The surficial soil in the area as well as the unconsolidated deposits are made up of clay that extends to between 40 and 120 feet below the ground surface. The groundwater is at a depth of approximately 100 feet below the ground surface as noted in the surficial soils, geology and hydrology sections of the SIWP submitted to the WDNR on October 15, 2021. The thick clay deposit and depth to groundwater acts as a substantial barrier between the residual mercury contaminated soil and the groundwater. Groundwater contact is not anticipated as the results of the water supply well samples in the Section 4.2 of this report confirm.

The step out samples collected aroundS1, S4 and S5 were performed in accordance with the SIWP. The results of step-out sampling showed surficial concentrations above the 3.13 mg/kg limit in 12 of the 17 step-out locations. One step-out location had a concentration above the 3.13 mg/kg limit one foot below the surface depth. Figures 3 shows the step sample results as they relate to the delineation boundaries and the Table 3 shows the results in tabular form.

4.2 WATER SAMPLES

Water quality of the samples collected from the stormwater retention pond and the two water supply wells onsite were analyzed for total mercury using USEPA Method 7470. The sample locations are shown on Figure 3. The laboratory results are summarized in Table 2 and in the laboratory reports in Attachment 2. Samples were collected in accordance with the Sample and Analysis section of the SIWP on May 24, 2022. Total mercury was not detected in either of the two onsite water supply well samples (PW-1 and PW-2). The surface water in the stormwater pond and the stormwater pond discharge had detectable concentrations of total mercury. The sample collected in the pond had a concentration of 0.90 ug/L and the sample collected from the pond discharge had a concentration of 0.42ug/L. There is not an established standard to compare surface water concentrations. Once the Remedial Action Plan is implemented for the contaminated soil, it will no longer be a potential source of contamination for the surface water at the site and concentrations should decrease.

5.0 REMEDIAL ACTION PLAN

The proposed Remedial Action Plan (RAP) is based on analytical and field data collected from various investigations of the soil, surface water and groundwater, an understanding of the geology beneath and surrounding the facility, topographic conditions, and an assessment of the likely movement of the mercury impacted GAC near the spill area. The RAP proposes to excavate soil adjacent and surrounding portions of the previously performed soil excavation at the facility. The boundary of the expanded excavation area will be either set by a sample with a detection less than the RCL or by an impermeable surface such as a paved road or an area of greater elevation that would reasonably prevent mercury dispersion.

Soil samples used to designate the proposed excavation area were collected on May 24, 2022, July 12, 2022, and August 17, 2022. The proposed excavation will encompass two areas, one to the north around exceedances found at S1 and its associated step-out locations (Area A), and a second to the southwest of the previously remediated area in December 2020 surrounding S4 and S5 and their associated step-out samples (Area B). The remediation area will be excavated to a depth of one foot and encompass the boundaries

delineated by soil sample results, the previous remediated area and the manmade features such as roads and buildings as shown on Figure 4. At the location of SP4N1 and SP4N1R, a 5-foot diameter area will be excavated to a depth of one and a half feet to account for the mercury concentration over the RCL limit of 3.13 mg/kg at the 12 inches below ground surface.

The soil will be excavated with a backhoe or front-end bucket loader by site personnel. The soil will be loaded into roll-off containers for disposal. The excavation activities will be performed under the direction of a consultant. Given the limited depth of the excavation, six confirmation samples will be collected from the floor of the excavation following the completion of the excavation in Area A. The samples will be evenly spaced across the bottom of the excavation with four samples collected in the area located to the North and Northwest of the previously excavated area and two samples collected in the southern section of Area A to the west of the previously excavated area.

Seven confirmation samples will be collected from the base of the Area B excavation. Similar to Area A, the samples collected in Area B will be evenly spaced with five samples collected in the area to the West of the previously excavated area and two to the southwest of the previously excavated area. One confirmation sample will be collected within the five-foot radius around SP4N1 and SP4N1R that will be excavated to greater depth than the other excavation areas.

The confirmation samples will be shipped to a certified laboratory. The Area A and B excavations will stay open until confirmation sample results are received. The proposed excavation areas and confirmation sample locations are shown on Figure 4. If a confirmation sample exceeds the RCL, that area will be further excavated, and an additional confirmation sample or samples will be collected and analyzed until the concentration in the remaining soil is below the RCL. Excavation procedures will be considered complete once the soil sample results within the excavated or remediated areas are analyzed below the RCL. Upon completion of the remediation activities, the roll-off containers will be removed from site and disposed under proper chain-of-custody. The excavated areas will be backfilled with clean topsoil, general fill and/or gravel from a local supplier.

Once the on-site remediation activities are completed, a report will be prepared summarizing the remediation activities, confirmation sample results, soil disposal documentation and final dimensions of the excavated areas. The report will include a Request for No Further Action submitted to the WDNR.

WM plans to complete the soil excavation and backfilling activities during 2022 before the ground freezes. The remediation is anticipated to begin during October or early November 2022 and take less than two weeks to complete depending on confirmation sample results and laboratory turnaround times.

If you have any questions, concerns, or need further clarification, please contact Lee Daigle at (951) 236-2526 or lee.daigle@tetratech.com.

Sincerely,

Cornerstone Environmental Group, LLC - A Tetra Tech Company

C. Lee

Lee Daigle, P.E. Client Manager

John Oswald, P.G. Central Area Manager

Enclosures:

Tables:

Table 1 – Summary of April 2022 Analytical Soil Results

Table 2 – Summary of May 2022 Analytical Soil and Water Results

Table 3 – Summary of July and August 2022 Soil Analytical Results

Figures:

Figure 1 – Site Location Map Figure 2 – Site Investigation Sample Locations Figure 3 – Remedial Excavation Area Boundary Figure 4 – Remedial Confirmation Sample Locations

Attachments: Attachment 1 – WDNR Correspondence Attachment 2 – Laboratory Reports

Cc: Sixto Ortiz – WM Michelle Gale – WM Mark Noel – WM Steven Smolko – WM Todd Washburn – WM David Crass – Michael Best & Friedrich, LLP



Table 1Summary of April 2022 Sample Analytical ResultsBi-Annual SamplingWM Waste, Inc.Union Grove, Wisconsin

Client Project	Sample ID	Lab ID	Collected Date	Method	Matrix	Parameter	Results	Units	PQL
WM Waste, Inc.	E-6	40244305030	04/29/2022 08:50	EPA 7471	Solid	Mercury	0.18	mg/kg	0.034
WM Waste, Inc.	E-6A	40244305031	04/29/2022 10:15	EPA 7471	Solid	Mercury	0.26	mg/kg	0.035
WM Waste, Inc.	E-7	40244305032	04/29/2022 10:45	EPA 7471	Solid	Mercury	0.13	mg/kg	0.036
WM Waste, Inc.	E-7A	40244305033	04/29/2022 11:15	EPA 7471	Solid	Mercury	0.087	mg/kg	0.036
WM Waste, Inc.	F-5A	40244305044	04/27/2022 13:30	EPA 7471	Solid	Mercury	0.69	mg/kg	0.048
WM Waste, Inc.	F-6	40244305045	04/27/2022 13:40	EPA 7471	Solid	Mercury	0.70	mg/kg	0.041
WM Waste, Inc.	F-6A	40244305046	04/27/2022 13:50	EPA 7471	Solid	Mercury	0.26	mg/kg	0.041
WM Waste, Inc.	F-7	40244305047	04/27/2022 14:55	EPA 7471	Solid	Mercury	2.4	mg/kg	0.095
WM Waste, Inc.	F-7A	40244305048	04/27/2022 15:05	EPA 7471	Solid	Mercury	1.3	mg/kg	0.047

Notes:

1) Samples denoted with an "A" were taken at a depth of 12" below surface. Samples not denoted with an "A" were taken at the surface.

2) Tetra Tech collected 2022 soil sample results 4-26-2022 through 4-29-2022.

Prepared By: RME Checked By: DJP



Table 2Summary of May 2022 Sample Analytical ResultsPhase 1A InvestigationWM Waste, Inc.Union Grove, Wisconsin

Client Project	Sample ID	Lab ID	Collected Date	Method	Matrix	Parameter	Results	Units	PQL
WM Waste, Inc.	S6A	40245577006	05/24/2022 13:45	EPA 7471	Solid	Mercury	0.036 J	mg/kg	0.040
WM Waste, Inc.	S6	40245578006	05/24/2022 13:30	EPA 7471	Solid	Mercury	1.9	mg/kg	0.039
WM Waste, Inc.	S5A	40245577005	05/24/2022 13:20	EPA 7471	Solid	Mercury	0.89	mg/kg	0.040
WM Waste, Inc.	S5	40245578005	05/24/2022 13:10	EPA 7471	Solid	Mercury	185	mg/kg	22.2
WM Waste, Inc.	S4A	40245577004	05/24/2022 13:00	EPA 7471	Solid	Mercury	0.051	mg/kg	0.044
WM Waste, Inc.	S4	40245578004	05/24/2022 12:45	EPA 7471	Solid	Mercury	753	mg/kg	39.6
WM Waste, Inc.	S3A	40245577003	05/24/2022 12:00	EPA 7471	Solid	Mercury	0.49	mg/kg	0.039
WM Waste, Inc.	S3	40245578003	05/24/2022 11:50	EPA 7471	Solid	Mercury	0.66	mg/kg	0.041
WM Waste, Inc.	S2A	40245577002	05/24/2022 11:40	EPA 7471	Solid	Mercury	0.16	mg/kg	0.046
WM Waste, Inc.	S2	40245578002	05/24/2022 11:30	EPA 7471	Solid	Mercury	1.1	mg/kg	0.046
WM Waste, Inc.	S1A	40245577001	05/24/2022 11:15	EPA 7471	Solid	Mercury	0.53	mg/kg	0.039
WM Waste, Inc.	S1	40245578001	05/24/2022 11:00	EPA 7471	Solid	Mercury	3.0	mg/kg	0.081
WM Waste, Inc.	PW1	40245579003	05/24/2022 10:30	EPA 7470	Water	Mercury	<0.066	ug/L	0.20
WM Waste, Inc.	PW2	40245579004	05/24/2022 10:00	EPA 7470	Water	Mercury	<0.066	ug/L	0.20
WM Waste, Inc.	POND DISCHARGE	40245579002	05/24/2022 09:10	EPA 7470	Water	Mercury	0.42	ug/L	0.20
WM Waste, Inc.	POND SURFACE	40245579001	05/24/2022 09:00	EPA 7470	Water	Mercury	0.90	ug/L	0.20
WM Waste, Inc.	RINSE #1	40245579005	05/24/2022 12:15	EPA 7470	Water	Mercury	<0.066	ug/L	0.20
WM Waste, Inc.	RINSE #2	40245579006	05/24/2022 14:00	EPA 7470	Water	Mercury	<0.066	ug/L	0.20

Notes:

1) Samples denoted with an "A" were taken at a depth of 12" below surface. Samples not denoted with an "A" were taken at the surface.

2) The above Site Investigation Work Plan sample locations were approved by the WDNR on March 9, 2022 (Attachment 1).

3) Total Mercury concentration results designated with a "J" Qualifier are estimated concentrations greater than the limit of detection and less than the limit of quantitation

Prepared By: RME Checked By: DP



Table 3Summary of July and August 2022 Sample Analytical ResultsPhase 1B InvestigationWM Waste, Inc.Union Grove, Wisconsin

Client Project	Sample ID	Lab ID	Collected Date	Method	Matrix	Parameter	Results	Units	PQL
WM Waste, Inc.	4N1B	40250049002	08/17/2022 11:30	EPA 7471	Solid	Mercury	11.9	mg/kg	0.37
WM Waste, Inc.	4N1	40250049001	08/17/2022 11:20	EPA 7471	Solid	Mercury	0.038 J	mg/kg	0.041
WM Waste, Inc.	SP5SE3BS	40248114034	07/12/2022 17:10	EPA 7471	Solid	Mercury	0.57	mg/kg	0.36
WM Waste, Inc.	SP5SE3S	40248114033	07/12/2022 17:05	EPA 7471	Solid	Mercury	3.4	mg/kg	0.40
WM Waste, Inc.	SP5SE2BS	40248114032	07/12/2022 16:50	EPA 7471	Solid	Mercury	0.87	mg/kg	0.39
WM Waste, Inc.	SP5SE2S	40248114031	07/12/2022 16:45	EPA 7471	Solid	Mercury	7.0	mg/kg	0.42
WM Waste, Inc.	SP5SE1BS	40248114030	07/12/2022 16:35	EPA 7471	Solid	Mercury	1.7	mg/kg	0.40
WM Waste, Inc.	SP5SE1S	40248114029	07/12/2022 16:30	EPA 7471	Solid	Mercury	5.2	mg/kg	0.39
WM Waste, Inc.	SP5SW2BS	40248114028	07/12/2022 16:15	EPA 7471	Solid	Mercury	0.42	mg/kg	0.035
WM Waste, Inc.	SP5SW2S	40248114027	07/12/2022 16:10	EPA 7471	Solid	Mercury	2.1	mg/kg	0.40
WM Waste, Inc.	SP5SW1BS	40248114026	07/12/2022 16:00	EPA 7471	Solid	Mercury	0.10	mg/kg	0.035
WM Waste, Inc.	SP5SW1S	40248114025	07/12/2022 15:55	EPA 7471	Solid	Mercury	0.60	mg/kg	0.36
WM Waste, Inc.	SP5NW2BS	40248114024	07/12/2022 15:35	EPA 7471	Solid	Mercury	0.054	mg/kg	0.036
WM Waste, Inc.	SP5NW2S	40248114023	07/12/2022 15:30	EPA 7471	Solid	Mercury	1.7	mg/kg	0.40
WM Waste, Inc.	SP5NW1BS	40248114022	07/12/2022 15:10	EPA 7471	Solid	Mercury	0.34	mg/kg	0.038
WM Waste, Inc.	SP5NW1S	40248114021	07/12/2022 15:05	EPA 7471	Solid	Mercury	7.5	mg/kg	0.37
WM Waste, Inc.	SP4W2BS	40248114020	07/12/2022 14:45	EPA 7471	Solid	Mercury	0.11	mg/kg	0.037
WM Waste, Inc.	SP4W2S	40248114019	07/12/2022 14:40	EPA 7471	Solid	Mercury	48.1	mg/kg	2.0
WM Waste, Inc.	SP4W1BS	40248114018	07/12/2022 14:20	EPA 7471	Solid	Mercury	0.46	mg/kg	0.037
WM Waste, Inc.	SP4W1S	40248114017	07/12/2022 14:15	EPA 7471	Solid	Mercury	114	mg/kg	3.6
WM Waste, Inc.	SP4N2BS	40248114016	07/12/2022 12:55	EPA 7471	Solid	Mercury	1.1	mg/kg	0.038
WM Waste, Inc.	SP4N2S	40248114015	07/12/2022 12:50	EPA 7471	Solid	Mercury	71.9	mg/kg	2.0
WM Waste, Inc.	SP4N1BS	40248114014	07/12/2022 12:35	EPA 7471	Solid	Mercury	69.1	mg/kg	1.8



Table 3Summary of July and August 2022 Sample Analytical ResultsPhase 1B InvestigationWM Waste, Inc.Union Grove, Wisconsin

Client Project	Sample ID	Lab ID	Collected Date	Method	Matrix	Parameter	Results	Units	PQL
WM Waste, Inc.	SP4N1S	40248114013	07/12/2022 12:30	EPA 7471	Solid	Mercury	0.081	mg/kg	0.039
WM Waste, Inc.	SP1W2BS	40248114012	07/12/2022 12:10	EPA 7471	Solid	Mercury	0.71	mg/kg	0.040
WM Waste, Inc.	SP1W2S	40248114011	07/12/2022 12:05	EPA 7471	Solid	Mercury	3.7	mg/kg	0.080
WM Waste, Inc.	SP1W1BS	40248114010	07/12/2022 11:45	EPA 7471	Solid	Mercury	0.30	mg/kg	0.039
WM Waste, Inc.	SP1W1S	40248114009	07/12/2022 11:40	EPA 7471	Solid	Mercury	0.36	mg/kg	0.039
WM Waste, Inc.	SP1E2BS	40248114008	07/12/2022 11:25	EPA 7471	Solid	Mercury	2.7	mg/kg	0.079
WM Waste, Inc.	SP1E2S	40248114007	07/12/2022 11:20	EPA 7471	Solid	Mercury	6.3	mg/kg	0.20
WM Waste, Inc.	SP1E1BS	40248114006	07/12/2022 11:00	EPA 7471	Solid	Mercury	0.32	mg/kg	0.039
WM Waste, Inc.	SP1E1S	40248114005	07/12/2022 10:55	EPA 7471	Solid	Mercury	4.7	mg/kg	0.20
WM Waste, Inc.	SP1N2BS	40248114004	07/12/2022 10:45	EPA 7471	Solid	Mercury	0.27	mg/kg	0.041
WM Waste, Inc.	SP1N2S	40248114003	07/12/2022 10:40	EPA 7471	Solid	Mercury	2.2	mg/kg	0.075
WM Waste, Inc.	SP1N1BS	40248114002	07/12/2022 10:35	EPA 7471	Solid	Mercury	0.22	mg/kg	0.040
WM Waste, Inc.	SP1N1S	40248114001	07/12/2022 10:30	EPA 7471	Solid	Mercury	3.8	mg/kg	0.084
WM Waste, Inc.	RINSE #1	40248114035	07/12/2022 11:30	EPA 7470	Water	Mercury	<0.066	ug/L	0.20
WM Waste, Inc.	RINSE #2	40248114036	07/12/2022 13:00	EPA 7470	Water	Mercury	<0.066	ug/L	0.20
WM Waste, Inc.	RINSE #3	40248114037	07/12/2022 15:40	EPA 7470	Water	Mercury	<0.066	ug/L	0.20
WM Waste, Inc.	RINSE #4	40248114038	07/12/2022 17:20	EPA 7470	Water	Mercury	<0.066	ug/L	0.20

Notes:

1) Samples denoted with a "BS" were taken at a depth of 12" below surface. Samples denoted with a "S" were taken at the surface. Samples denoted "4N1" and "4N1B" are resembled on the planview sheet as "SP4N1R".

2) Total Mercury concentration results designated with a"J" qualifier are estimated concentrations greater than the limit of quantitation

Prepared By: RME Checked By: DP





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	REV	DATE	DESCRIPTION	DWN BY	DES BY	СНК ВҮ	APP BY	
ļ	DATI OC	e of Issue T. 2022	DRAWN BYRME DESIGNED BYRME	CHECKED APPROVED	BY BY	LRS/CL JCO	D	ALL PROFESSIONAL ENGINEERING WORK IS PERFORMED BY DULY LICENSED PROFESSIONAL ENGINEERS UNDER APPROPRIATE STATE REGISTERED PROFESSIONAL ENTITY.

This drawing represents intellectual property of Tetra Tech. Any modification to the original by other than Tetra Tech personnel violates its original purpose and as such is rendered void. Tetra Tech will not be held liable for any changes made to this document without express written consent of the originator.



LEGEND PROPERTY BOUNDARY SOIL SAMPLE LOCATION AND IDENTIFICATION PRIVATE WELL SAMPLE LOCATION AND IDENTIFICATION

(0.00) (TOP) SOIL TOTAL MERCURY CONCENTRATION AT SURFACE - mg/kg (0.00) (BOTTOM) SOIL TOTAL MERCURY CONCENTRATION 12" BELOW SURFACE - mg/kg

(0.00) ug/L _____1400_____

_____1402 _____

WATER MERCURY CONCENTRATION EXISTING 10' CONTOUR EXISTING 2' CONTOUR APPROX. EXTENT OF DECEMBER 2020 EXCAVATION

NOTES:

- 1. TETRA TECH COLLECTED SOIL SAMPLES, SURFACE WATER SAMPLES, AND PRIVATE WELL SAMPLES ON 5/24/2022.
- 2. SAMPLE LOCATIONS WERE SURVEYED IN THE FIELD.
- 3. TOTAL MERCURY CONCENTRATION RESULTS WERE REPORTED BY PACE ANALYTICAL JUNE 6, 2022 AND JUNE 7, 2022.
- 4. TOTAL MERCURY CONCENTRATION RESULTS DESIGNATED WITH A "J" QUALIFIER ARE ESTIMATED CONCENTRATIONS GREATER THAN THE LIMIT OF DETECTION AND LESS THAN THE LIMIT OF QUANTITATION.
- 5. THE 2017 EXISTING SURFACE IS TAKEN FROM THE WI STATE CARTOGRAPHER'S OFFICE.





WM WASTE, INC. UNION GROVE, WISCONSIN 2022 SITE INVESTIGATION REPORT AND **REMEDIAL ACTION PLAN** SITE INVESTIGATION SAMPLING LOCATIONS





LEGEND



PROPERTY BOUNDARY

SOIL SAMPLE LOCATION AND IDENTIFICATION

(0.00) (TOP) SOIL TOTAL MERCURY CONCENTRATION AT SURFACE - mg/kg (0.00) (BOTTOM) SOIL TOTAL MERCURY CONCENTRATION 12" BELOW SURFACE - mg/kg

SOIL MERCURY CONCENTRATION BELOW GRASS LAYER - mg/kg

EXISTING 10' CONTOUR

EXISTING 2' CONTOUR APPROX. EXTENT OF DECEMBER 2020 EXCAVATION

PROPOSED 2022 EXCAVATION AREA BOUNDARY (1 FOOT DEPTH)

NOTES: 2022 BI-ANNUAL:

- 1. TETRA TECH COLLECTED SOIL SAMPLES 4/26/2022 THROUGH 4/29/2022.
- 2. SAMPLE LOCATIONS WERE SURVEYED IN THE FIELD BASED ON HISTORICAL SAMPLE LOCATION MAP PROVIDED BY WASTE MANAGEMENT.
- 3. TOTAL MERCURY CONCENTRATION RESULTS WERE REPORTED BY PACE ANALYTICAL MAY 16, 2022.
- 4. TOTAL MERCURY CONCENTRATION RESULTS DESIGNATED WITH A "J" QUALIFIER ARE ESTIMATED CONCENTRATIONS GREATER THAN THE LIMIT OF DETECTION AND LESS THAN THE LIMIT OF QUANTITATION.
- 5. THE 2017 EXISTING SURFACE IS TAKEN FROM THE WI STATE CARTOGRAPHER'S OFFICE.

NOTES: SP1-SP6

- 1. TETRA TECH COLLECTED SOIL SAMPLES, SURFACE WATER SAMPLES, AND PRIVATE WELL SAMPLES ON 5/24/2022.
- 2. SAMPLE LOCATIONS WERE SURVEYED IN THE FIELD.
- 3. TOTAL MERCURY CONCENTRATION RESULTS WERE REPORTED BY PACE ANALYTICAL JUNE 6, 2022 AND JUNE 7, 2022.
- 4. TOTAL MERCURY CONCENTRATION RESULTS DESIGNATED WITH A "J" QUALIFIER ARE ESTIMATED CONCENTRATIONS GREATER THAN THE LIMIT OF DETECTION AND LESS THAN THE LIMIT OF QUANTITATION.

NOTES: STEP OUT SAMPLING:

- 1. TETRA TECH COLLECTED SOIL SAMPLES ON 7/12/2022.
- 2. SAMPLE LOCATIONS WERE SURVEYED IN THE FIELD.
- 3. TOTAL MERCURY CONCENTRATION RESULTS WERE REPORTED BY PACE ANALYTICAL JULY 28, 2022.

NOTES: SP4N1 RE-SAMPLE:

- 1. RE-SAMPLE LOCATION IS DENOTED AS SP4N1R LOCATED 4" TO THE EAST OF SP4N1.
- 2. TETRA TECH COLLECTED SOIL SAMPLE ON 8/17/2022.
- 3. SAMPLE LOCATION WAS SURVEYED IN THE FIELD.
- 4. TOTAL MERCURY CONCENTRATION RESULT WAS REPORTED BY PACE ANALYTICAL AUGUST 22, 2022.









LEGEND



PROPERTY BOUNDARY SOIL SAMPLE LOCATION AND IDENTIFICATION EXISTING 10' CONTOUR EXISTING 2' CONTOUR APPROX. EXTENT OF DECEMBER 2020 EXCAVATION PROPOSED 2022 EXCAVATION AREA BOUNDARY (1 FOOT OF DEPTH)

PROPOSED 2022 5 FOOT RADIUS EXCAVATION AREA BOUNDARY (1.5 FOOT OF DEPTH)

○ R14 CONFIRMATION SAMPLE LOCATION

NOTES: EXCAVATION AND REMEDIATION

- 1. TETRA TECH WILL SURVEY EXCAVATION BOUNDARIES AND CONFIRMATION SAMPLE LOCATIONS FOLLOWING EXCAVATION.
- 2. THE PROPOSED EXCAVATION AREAS (AREA A AND AREA B) WILL BE EXCAVATED TO A DEPTH OF ONE FOOT BELOW HE GROUND SURFACE. THE FIVE FOOT RADIUS AROUND SP4N1 & SP4N1R WILL BE EXCAVATED TO A DEPTH OF 1.5 FEET BELOW THE GROUND SURFACE.
- 3. THE 2017 EXISTING SURFACE IS TAKEN FROM THE WI STATE CARTOGRAPHER'S OFFICE.









ATTACHMENT 1 – WDNR CORRESPONDENCE

State of Wisconsin DEPARTMENT OF NATURAL RESOURCES 890 Spruce Street Baldwin, WI 54002

Tony Evers, Governor Preston D. Cole, Secretary Telephone 608-266-2621 Toll Free 1-888-936-7463 TTY Access via relay - 711



July 14, 2021

Sixto Ortiz WM Waste, Inc. 800 Capitol Street 28th floor Houston, TX 77002

Subject: No Further Action Not Recommended WM Waste, Inc Facility, 21211 Durand Avenue, Union Grove, Racine County, Wisconsin DNR BRRTS Activity # 02-52-586974 FID #: 252195350

Dear Mr. Ortiz:

On June 3rd, the Wisconsin Department of Natural Resources (DNR) reviewed the No Further Action request for the case identified above. As you are aware, the DNR reviews environmental remediation cases for compliance with applicable laws, including Wis. Stat. ch. 292 and Wis. Admin. Code chs. NR 700 – 754 and whether any further threat to public health, safety or welfare or the environment exists at the site or facility, per Wis. Admin. Code § NR 726.13 (2) (b). As discussed with your consultant on 6/15/21, case closure is not recommended because additional legal requirements must be met. The purpose of this letter is to inform you of the remaining requirements for obtaining closure.

Need to Define the Degree and Extent of Contamination

Additional soil, groundwater, surface water, sediment, sampling is needed to define the degree and extent of contamination per Wis. Admin. Code § NR 716.11. Based on the identified soil impacts additional investigation is needed to establish the extent and magnitude of the release to the environment. This includes but is not limited to the soil previously identified as having impacts but also, the adjacent pond and pertaining sediments, and on-site groundwater.

Need to Conduct Additional Remedial Action

Additional remedial action is needed to comply with the closure criteria of Wis. Admin. Code ch. NR 726. Excavations of impacted soils were completed using the hazardous waste site-specific standard of 10ppb. The site-specific standard for mercury is a permitted number but not a standard used nor allowed for a release to the environment. Remedial actions addressing impacts to the environment are required to meet residual contaminant limits (RCLs). The direct contact RCL for mercury is 3.13 mg/kg and the groundwater (leachability to groundwater) RCL is 0.208 mg/kg.

Schedule

Within 60 days of the date of this letter, respond in writing with a schedule of your plans to meet these requirements.

Until requirements are met, your site will remain "open" and you are required to submit semi-annual progress reports, per Wis. Admin. Code § NR 700.11. You are also responsible for any operation and maintenance activities required under Wis. Admin. Code § NR 724.13. Once the additional work has been completed, documentation should be submitted to the DNR to demonstrate that the applicable requirements have been met.

Conclusion

If you have any questions regarding the information in this letter or would like to schedule a meeting to discuss this case, please contact the DNR project manager, Candace Sykora at 715-928-0452. For more information on the closure reconsideration process, please see DNR publication, RR-102, "Wis. Admin. Code ch. NR 726 Case Closure Reconsideration Process" by visiting dnr.wi.gov, search: RR-102, for more information.

The DNR appreciates your efforts to restore the environment at this site.

Sincerely,

Candace Sykora Hydrogeologist Remediation & Redevelopment Wisconsin Department of Natural Resources 890 Spruce St, Baldwin, WI 54002 Phone: 715-928-0452 Candace.sykora@wisconsin.gov

cc: Lee Daigle, Tetra Tech



State of Wisconsin DEPARTMENT OF NATURAL RESOURCES 890 Spruce Street Baldwin, WI 54002

Tony Evers, Governor Preston D. Cole, Secretary Telephone 608-266-2621 Toll Free 1-888-936-7463 TTY Access via relay - 711



March 9, 2022

Sixto Ortiz WM Waste, Inc. 800 Capitol Street 28th Floor Houston, TX 77002

Re:

Review of Site Investigation Work Plan WM Waste, Inc Facility, 21211 Durand Avenue, Union Grove, Racine County, WI 53182 DNR BRRTS Activity #02-52-586974 FID#: 252195350

Dear Mr. Ortiz:

Thank you for the submittal of Site Investigation Work Plan (Report) to the Wisconsin Department of Natural Resources (WDNR), received on October 15, 2021. The report was prepared by Tetra Tech on behalf of WM waste, Inc. The SIWP has been prepared in response to a letter to a WDNR letter dated July 14, 2021.

The purpose of this SIWP is to complete a site investigation to define the extend and magnitude of residual contamination associated with the release of impacted carbon during change-out activities. The extent of soil contamination in the vicinity of the granular activated carbon (GACs) spill will be defined by collecting soil samples from six locations to the north, west and south of the area of the spill. The sample locations are 12 feet beyond the boundary of the previously excavated area. Soils samples (S1-S6) will be analyzed for Total Mercury. If lab results indicate mercury levels within the soil samples are above the direct contact residual contaminant limits (RCLs) of 3.3mg/L, additional soil samples will be collected in a step out phase. One surface water sample will be collected from the stormwater pond. A sample will be collected from each of the two private water supply wells.

Based on the review of the report the WDNR agrees with the sampling proposed and understands that upon receiving laboratory results additional sampling may be necessary to define the extent of impacted media. One note is to establish that the laboratory limit of detection is set low enough to compare the RCL for groundwater (0.208mg/kg) in soil.

If you have any further questions or concerns, please feel free to contact me at any time.

Candace Sykora

Candace Sykora Hydrogeologist West Central Region Remediation and Redevelopment Email: <u>Candace.sykora@gmail.com</u> Phone: (715) 928-0452



ATTACHMENT 2 – LABORATORY REPORTS

BI-ANNUAL SAMPLING ANALYTICAL RESULTS



May 16, 2022

Luke Specketer TETRATECH - Madison 8413 Excelsior Drive Madison, WI 53717

RE: Project: 209-4221498 WM MERCURY WASTE Pace Project No.: 40244305

Dear Luke Specketer:

Enclosed are the analytical results for sample(s) received by the laboratory on May 03, 2022. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

The test results provided in this final report were generated by each of the following laboratories within the Pace Network: • Pace Analytical Services - Green Bay

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Day Milenty

Dan Milewsky dan.milewsky@pacelabs.com (920)469-2436 Project Manager

Enclosures





CERTIFICATIONS

Project: 209-4221498 WM MERCURY WASTE

Pace Project No.: 40244305

Pace Analytical Services Green Bay

1241 Bellevue Street, Green Bay, WI 54302 Florida/NELAP Certification #: E87948 Illinois Certification #: 200050 Kentucky UST Certification #: 82 Louisiana Certification #: 04168 Minnesota Certification #: 055-999-334 New York Certification #: 12064 North Dakota Certification #: R-150 Virginia VELAP ID: 460263 South Carolina Certification #: 83006001 Texas Certification #: T104704529-14-1 Wisconsin Certification #: 405132750 Wisconsin DATCP Certification #: 105-444 USDA Soil Permit #: P330-16-00157 Federal Fish & Wildlife Permit #: LE51774A-0



SAMPLE SUMMARY

Project: 209-4221498 WM MERCURY WASTE

Pace Project No .:

No.: 40244305

Lab ID	Sample ID	Matrix	Date Collected	Date Received
40244305001	A-2	Solid	04/28/22 10:40	05/03/22 10:00
40244305002	A-2A	Solid	04/28/22 10:50	05/03/22 10:00
40244305003	A-9	Solid	04/28/22 08:10	05/03/22 10:00
40244305004	A-9A	Solid	04/28/22 08:30	05/03/22 10:00
40244305005	A-9B	Solid	04/28/22 08:40	05/03/22 10:00
40244305006	A-9C	Solid	04/28/22 08:50	05/03/22 10:00
40244305007	B-1A	Solid	04/28/22 11:00	05/03/22 10:00
40244305008	B-2	Solid	04/28/22 13:35	05/03/22 10:00
40244305009	B-2A	Solid	04/28/22 14:30	05/03/22 10:00
40244305010	B-3	Solid	04/28/22 11:15	05/03/22 10:00
40244305011	B-9	Solid	04/28/22 09:00	05/03/22 10:00
40244305012	B-9A	Solid	04/28/22 09:10	05/03/22 10:00
40244305013	B-9B	Solid	04/28/22 09:20	05/03/22 10:00
40244305014	B-9C	Solid	04/28/22 09:30	05/03/22 10:00
40244305015	C-1	Solid	04/28/22 11:30	05/03/22 10:00
40244305016	C-2	Solid	04/28/22 11:45	05/03/22 10:00
40244305017	C-9	Solid	04/28/22 09:40	05/03/22 10:00
40244305018	D-2	Solid	04/28/22 11:55	05/03/22 10:00
40244305019	D-3	Solid	04/28/22 12:10	05/03/22 10:00
40244305020	D-4	Solid	04/29/22 11:55	05/03/22 10:00
40244305021	D-4C	Solid	04/29/22 12:40	05/03/22 10:00
40244305022	D-9	Solid	04/27/22 18:25	05/03/22 10:00
40244305023	D-9A	Solid	04/27/22 18:30	05/03/22 10:00
40244305024	D-9B	Solid	04/27/22 18:35	05/03/22 10:00
40244305025	D-9C	Solid	04/27/22 18:55	05/03/22 10:00
40244305026	E-2	Solid	04/27/22 16:10	05/03/22 10:00
40244305027	E-3	Solid	04/27/22 16:25	05/03/22 10:00
40244305028	E-4	Solid	04/27/22 16:45	05/03/22 10:00
40244305029	E-4A	Solid	04/28/22 15:30	05/03/22 10:00
40244305030	E-6	Solid	04/29/22 08:50	05/03/22 10:00
40244305031	E-6A	Solid	04/29/22 10:15	05/03/22 10:00
40244305032	E-7	Solid	04/29/22 10:45	05/03/22 10:00
40244305033	E-7A	Solid	04/29/22 11:15	05/03/22 10:00
40244305034	E-9	Solid	04/27/22 17:40	05/03/22 10:00
40244305035	E-9A	Solid	04/27/22 17:50	05/03/22 10:00
40244305036	E-9B	Solid	04/27/22 18:05	05/03/22 10:00
40244305037	E-9C	Solid	04/27/22 18:10	05/03/22 10:00



SAMPLE SUMMARY

Project: 209-4221498 WM MERCURY WASTE

40244305

Pace Project No.:

40244305072

40244305073

40244305074

I-1

I-2

I-3

Lab ID Sample ID Matrix **Date Collected** Date Received 40244305038 F-1 Solid 04/27/22 10:45 05/03/22 10:00 F-2 40244305039 Solid 04/27/22 10:55 05/03/22 10:00 40244305040 F-3 Solid 04/27/22 11:05 05/03/22 10:00 40244305041 F-4 04/27/22 11:15 Solid 05/03/22 10:00 40244305042 F-4A Solid 04/27/22 11:40 05/03/22 10:00 40244305043 F-5 Solid 04/27/22 13:15 05/03/22 10:00 40244305044 F-5A Solid 04/27/22 13:30 05/03/22 10:00 40244305045 F-6 Solid 04/27/22 13:40 05/03/22 10:00 40244305046 F-6A Solid 04/27/22 13:50 05/03/22 10:00 40244305047 F-7 Solid 04/27/22 14:55 05/03/22 10:00 04/27/22 15:05 40244305048 F-7A Solid 05/03/22 10:00 40244305049 04/27/22 15:20 F-8 Solid 05/03/22 10:00 40244305050 F-9 Solid 04/27/22 15:40 05/03/22 10:00 40244305051 F-9A Solid 04/27/22 15:45 05/03/22 10:00 40244305052 G-1 Solid 04/27/22 08:15 05/03/22 10:00 40244305053 G-2 Solid 04/27/22 09:00 05/03/22 10:00 40244305054 04/27/22 09:10 G-3 Solid 05/03/22 10:00 40244305055 G-4 Solid 04/27/22 09:20 05/03/22 10:00 40244305056 G-5 Solid 04/27/22 09:30 05/03/22 10:00 40244305057 04/27/22 09:35 G-6 Solid 05/03/22 10:00 40244305058 G-7 Solid 04/27/22 09:45 05/03/22 10:00 40244305059 G-8 Solid 04/27/22 10:00 05/03/22 10:00 40244305060 Solid 04/27/22 10:10 G-9 05/03/22 10:00 40244305061 Solid 04/27/22 10:15 G-9A 05/03/22 10:00 40244305062 H-1 Solid 04/26/22 15:30 05/03/22 10:00 40244305063 04/26/22 16:10 H-2 Solid 05/03/22 10:00 40244305064 H-3 Solid 04/26/22 16:20 05/03/22 10:00 40244305065 H-4 Solid 04/26/22 16:40 05/03/22 10:00 04/26/22 17:00 40244305066 H-5 Solid 05/03/22 10:00 40244305067 H-6 Solid 04/26/22 17:10 05/03/22 10:00 40244305068 H-7 04/26/22 17:20 Solid 05/03/22 10:00 40244305069 H-8 Solid 04/26/22 17:35 05/03/22 10:00 05/03/22 10:00 40244305070 H-9 Solid 04/26/22 17:50 40244305071 H-9A Solid 04/26/22 18:10 05/03/22 10:00

REPORT OF LABORATORY ANALYSIS

Solid

Solid

Solid

04/26/22 10:25

04/26/22 14:00

04/26/22 14:25

05/03/22 10:00

05/03/22 10:00

05/03/22 10:00



SAMPLE SUMMARY

Project: 209-4221498 WM MERCURY WASTE

Pace Project No.: 40244305

Lab ID	Sample ID	Matrix	Date Collected	Date Received
40244305075		Solid	04/26/22 14:45	05/03/22 10:00
40244305076	I-5	Solid	04/26/22 15:00	05/03/22 10:00
40244305077	I-6	Solid	04/26/22 15:15	05/03/22 10:00
40244305078	RINSE # 1	Water	04/26/22 18:00	05/03/22 10:00
40244305079	RINSE # 2	Water	04/27/22 11:30	05/03/22 10:00
40244305080	RINSE # 3	Water	04/27/22 18:00	05/03/22 10:00
40244305081	RINSE # 4	Water	04/28/22 10:00	05/03/22 10:00
40244305082	RINSE # 5	Water	04/29/22 13:15	05/03/22 10:00



SAMPLE ANALYTE COUNT

 Project:
 209-4221498 WM MERCURY WASTE

 Pace Project No.:
 40244305

Lab ID	Sample ID	Method	Analysts	Analytes Reported
40244305001	A-2	EPA 7471	AJT	1
		ASTM D2974-87	MYH	1
40244305002	A-2A	EPA 7471	AJT	1
		ASTM D2974-87	MYH	1
40244305003	A-9	EPA 7471	AJT	1
		ASTM D2974-87	MYH	1
40244305004	A-9A	EPA 7471	AJT	1
		ASTM D2974-87	MYH	1
40244305005	A-9B	EPA 7471	AJT	1
		ASTM D2974-87	MYH	1
40244305006	A-9C	EPA 7471	AJT	1
		ASTM D2974-87	MYH	1
40244305007	B-1A	EPA 7471	AJT	1
		ASTM D2974-87	MYH	1
40244305008	B-2	EPA 7471	AJT	1
		ASTM D2974-87	MYH	1
40244305009	B-2A	EPA 7471	AJT	1
		ASTM D2974-87	MYH	1
40244305010	B-3	EPA 7471	AJT	1
		ASTM D2974-87	MYH	1
40244305011	B-9	EPA 7471	AJT	1
		ASTM D2974-87	MYH	1
40244305012	B-9A	EPA 7471	AJT	1
		ASTM D2974-87	MYH	1
40244305013	B-9B	EPA 7471	AJT	1
		ASTM D2974-87	MYH	1
40244305014	B-9C	EPA 7471	AJT	1
		ASTM D2974-87	MYH	1
40244305015	C-1	EPA 7471	AJT	1
		ASTM D2974-87	MYH	1
40244305016	C-2	EPA 7471	AJT	1
		ASTM D2974-87	MYH	1
40244305017	C-9	EPA 7471	AJT	1
		ASTM D2974-87	MYH	1
40244305018	D-2	EPA 7471	AJT	1
		ASTM D2974-87	MYH	1
40244305019	D-3	EPA 7471	AJT	1



SAMPLE ANALYTE COUNT

 Project:
 209-4221498 WM MERCURY WASTE

 Pace Project No.:
 40244305

Lab ID	Sample ID	Method	Analysts	Analytes Reported
		ASTM D2974-87	MYH	1
40244305020	D-4	EPA 7471	AJT	1
		ASTM D2974-87	MYH	1
40244305021	D-4C	EPA 7471	AJT	1
		ASTM D2974-87	MYH	1
40244305022	D-9	EPA 7471	AJT	1
		ASTM D2974-87	MYH	1
40244305023	D-9A	EPA 7471	AJT	1
		ASTM D2974-87	MYH	1
40244305024	D-9B	EPA 7471	AJT	1
		ASTM D2974-87	MYH	1
40244305025	D-9C	EPA 7471	AJT	1
		ASTM D2974-87	MYH	1
40244305026	E-2	EPA 7471	AJT	1
		ASTM D2974-87	MYH	1
40244305027	E-3	EPA 7471	AJT	1
		ASTM D2974-87	MYH	1
40244305028	E-4	EPA 7471	AJT	1
		ASTM D2974-87	MYH	1
40244305029	E-4A	EPA 7471	AJT	1
		ASTM D2974-87	MYH	1
40244305030	E-6	EPA 7471	AJT	1
		ASTM D2974-87	MYH	1
40244305031	E-6A	EPA 7471	AJT	1
		ASTM D2974-87	MYH	1
40244305032	E-7	EPA 7471	AJT	1
		ASTM D2974-87	MYH	1
40244305033	E-7A	EPA 7471	AJT	1
		ASTM D2974-87	MYH	1
40244305034	E-9	EPA 7471	AJT	1
		ASTM D2974-87	MYH	1
40244305035	E-9A	EPA 7471	AJT	1
		ASTM D2974-87	MYH	1
40244305036	E-9B	EPA 7471	AJT	1
		ASTM D2974-87	MYH	1
40244305037	E-9C	EPA 7471	AJT	1
		ASTM D2974-87	MYH	1



SAMPLE ANALYTE COUNT

 Project:
 209-4221498 WM MERCURY WASTE

 Pace Project No.:
 40244305

Lab ID	Sample ID	Method	Analysts	Analytes Reported
40244305038	F-1	EPA 7471	AJT	1
		ASTM D2974-87	MYH	1
40244305039	F-2	EPA 7471	AJT	1
		ASTM D2974-87	MYH	1
40244305040	F-3	EPA 7471	AJT	1
		ASTM D2974-87	MYH	1
40244305041	F-4	EPA 7471	AJT	1
		ASTM D2974-87	MYH	1
40244305042	F-4A	EPA 7471	AJT	1
		ASTM D2974-87	MYH	1
40244305043	F-5	EPA 7471	AJT	1
		ASTM D2974-87	MYH	1
40244305044	F-5A	EPA 7471	AJT	1
		ASTM D2974-87	MYH	1
40244305045	F-6	EPA 7471	AJT	1
		ASTM D2974-87	MYH	1
40244305046	F-6A	EPA 7471	AJT	1
		ASTM D2974-87	MYH	1
40244305047	F-7	EPA 7471	AJT	1
		ASTM D2974-87	MYH	1
40244305048	F-7A	EPA 7471	AJT	1
		ASTM D2974-87	MYH	1
40244305049	F-8	EPA 7471	AJT	1
		ASTM D2974-87	MYH	1
40244305050	F-9	EPA 7471	AJT	1
		ASTM D2974-87	MYH	1
40244305051	F-9A	EPA 7471	AJT	1
		ASTM D2974-87	MYH	1
40244305052	G-1	EPA 7471	AJT	1
		ASTM D2974-87	MYH	1
40244305053	G-2	EPA 7471	AJT	1
		ASTM D2974-87	MYH	1
40244305054	G-3	EPA 7471	AJT	1
		ASTM D2974-87	MYH	1
40244305055	G-4	EPA 7471	AJT	1
		ASTM D2974-87	MYH	1
40244305056	G-5	EPA 7471	AJT	1



SAMPLE ANALYTE COUNT

 Project:
 209-4221498 WM MERCURY WASTE

 Pace Project No.:
 40244305

Lab ID	Sample ID	Method	Analysts	Analytes Reported
		ASTM D2974-87	MYH	1
40244305057	G-6	EPA 7471	AJT	1
		ASTM D2974-87	MYH	1
40244305058	G-7	EPA 7471	AJT	1
		ASTM D2974-87	MYH	1
40244305059	G-8	EPA 7471	AJT	1
		ASTM D2974-87	MYH	1
40244305060	G-9	EPA 7471	AJT	1
		ASTM D2974-87	MYH	1
40244305061	G-9A	EPA 7471	AJT	1
		ASTM D2974-87	MYH	1
40244305062	H-1	EPA 7471	AJT	1
		ASTM D2974-87	MYH	1
40244305063	H-2	EPA 7471	AJT	1
		ASTM D2974-87	MYH	1
40244305064	H-3	EPA 7471	AJT	1
		ASTM D2974-87	MYH	1
40244305065	H-4	EPA 7471	AJT	1
		ASTM D2974-87	MYH	1
40244305066	H-5	EPA 7471	AJT	1
		ASTM D2974-87	MYH	1
40244305067	H-6	EPA 7471	AJT	1
		ASTM D2974-87	MYH	1
40244305068	H-7	EPA 7471	AJT	1
		ASTM D2974-87	MYH	1
40244305069	H-8	EPA 7471	AJT	1
		ASTM D2974-87	MYH	1
40244305070	H-9	EPA 7471	AJT	1
		ASTM D2974-87	MYH	1
40244305071	H-9A	EPA 7471	AJT	1
		ASTM D2974-87	MYH	1
40244305072	I-1	EPA 7471	AJT	1
		ASTM D2974-87	MYH	1
40244305073	I-2	EPA 7471	AJT	1
		ASTM D2974-87	MYH	1
40244305074	I-3	EPA 7471	AJT	1
		ASTM D2974-87	MYH	1



SAMPLE ANALYTE COUNT

Project:	209-4221498 WM MERCURY WASTE
Pace Project No.:	40244305

Lab ID	Sample ID	Method	Analysts	Analytes Reported
40244305075	— I-4	EPA 7471	AJT	1
		ASTM D2974-87	MYH	1
40244305076	I-5	EPA 7471	AJT	1
		ASTM D2974-87	MYH	1
40244305077	I-6	EPA 7471	AJT	1
		ASTM D2974-87	MYH	1
40244305078	RINSE # 1	EPA 7470	AJT	1
40244305079	RINSE # 2	EPA 7470	AJT	1
40244305080	RINSE # 3	EPA 7470	AJT	1
40244305081	RINSE # 4	EPA 7470	AJT	1
40244305082	RINSE # 5	EPA 7470	AJT	1

PASI-G = Pace Analytical Services - Green Bay



Project:	209-4221498 V	VM MERCURY	WASTE
1 101000	200 12211001		

40244305

Pace Project No.:

Sample: A-2	Lab ID:	40244305001	Collecte	d: 04/28/2	2 10:40	Received: 05/	/03/22 10:00 M	latrix: Solid		
Results reported on a "dry w	eight" basis and are	e adjusted for	percent m	oisture, sa	mple si	ize and any dilut	ions.			
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual	
7471 Mercury	Analytical	Method: EPA 7	'471 Prepa	ration Meth	od: EP/	A 7471				
	Pace Anal	ytical Services	- Green Ba	У						
Mercury	0.17	mg/kg	0.045	0.013	1	05/06/22 12:03	05/09/22 11:34	7439-97-6		
Percent Moisture	Analytical	Method: ASTM	1 D2974-87							
	Pace Anal	ytical Services	- Green Ba	у						
Percent Moisture	21.8	%	0.10	0.10	1		05/09/22 13:53			
Sample: A-2A	Lab ID:	40244305002	Collecte	d: 04/28/2	2 10:50	Received: 05/	/03/22 10:00 M	latrix: Solid		
Results reported on a "dry w	eight" basis and are	e adjusted for	percent m	oisture, sa	mple si	ize and any dilut	ions.			
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual	
7471 Mercury	Analytical Pace Anal	Method: EPA 7 ytical Services	'471 Prepa - Green Ba	ration Meth y	iod: EP/	A 7471				
Mercury	0.62	mg/kg	0.040	0.011	1	05/06/22 12:03	05/09/22 11:41	7439-97-6		
Percent Moisture	Analytical Method: ASTM D2974-87									
	Pace Analytical Services - Green Bay									
Percent Moisture	20.2	%	0.10	0.10	1		05/09/22 13:53	1		
Sample: A-9	Lab ID:	40244305003	Collecte	d: 04/28/2	2 08:10	Received: 05/	/03/22 10:00 M	latrix: Solid		
Results reported on a "dry w	eight" basis and are	e adjusted for	percent m	oisture, sa	mple si	ize and any dilut	ions.			
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual	
7471 Mercury	Analytical	Method: EPA 7	'471 Prepa	ration Meth	od: EP/	A 7471				
	Pace Anal	ytical Services	- Green Ba	у						
Mercury	0.066	mg/kg	0.041	0.012	1	05/06/22 12:03	05/09/22 11:43	7439-97-6		
Percent Moisture	Analytical	Method: ASTM	1 D2974-87							
	Pace Anal	ytical Services	- Green Ba	у						

 Percent Moisture
 21.4
 %
 0.10
 0.10
 1
 05/09/22 13:53



Project:	209-4221498	WM MERCURY	WASTE
1 10/000	200 4221400		

, .

Pace Project No.: 40244305

Sample: A-9A	Lab ID:	40244305004	Collected	: 04/28/2	2 08:30	Received: 05/	/03/22 10:00 M	atrix: Solid		
Results reported on a "dry w	eight" basis and are	e adjusted for	percent mo	isture, sa	mple si	ze and any dilut	ions.			
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual	
7471 Mercury	Analytical	Method: EPA 7	471 Prepara	ation Meth	nod: EP/	A 7471				
	Pace Anal	ytical Services	- Green Bay							
Mercury	0.26	mg/kg	0.041	0.012	1	05/06/22 12:03	05/09/22 11:45	7439-97-6		
Percent Moisture	Analytical	Method: ASTN	1 D2974-87							
	Pace Anal	ytical Services	- Green Bay							
Percent Moisture	23.4	%	0.10	0.10	1		05/09/22 13:53			
Sample: A-9B	Lab ID:	40244305005	Collected	: 04/28/2	2 08:40	Received: 05/	/03/22 10:00 Mi	atrix: Solid		
Results reported on a "dry w	eight" basis and are	e adjusted for	percent mo	isture, sa	mple si	ze and any dilut	ions.			
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual	
7471 Mercury	Analytical Pace Anal	Method: EPA 7 ytical Services	7471 Prepara - Green Bay	ation Meth	nod: EP/	\ 7471				
Mercury	0.28	mg/kg	0.044	0.013	1	05/06/22 12:03	05/09/22 11:48	7439-97-6		
Percent Moisture	Analytical	Analytical Method: ASTM D2974-87								
	Pace Anal	ytical Services	- Green Bay							
Percent Moisture	29.2	%	0.10	0.10	1		05/09/22 13:53			
Sample: A-9C	Lab ID:	40244305006	Collected	: 04/28/2	2 08:50	Received: 05/	/03/22 10:00 M	atrix: Solid		
Results reported on a "dry w	eight" basis and are	e adjusted for	percent mo	isture, sa	mple si	ze and any dilut	ions.			
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual	
7471 Mercury	Analytical	Method: EPA 7	471 Prepara	ation Meth	nod: EP/	7471				
	Pace Anal	ytical Services	- Green Bay							
Mercury	1.1	mg/kg	0.046	0.013	1	05/06/22 12:03	05/09/22 11:50	7439-97-6		
Percent Moisture	Analytical Pace Anal	Method: ASTN ytical Services	1 D2974-87 - Green Bay							

 Percent Moisture
 24.6
 %
 0.10
 0.10
 1
 05/09/22 13:54



Project:	209-4221498	WM MERCURY	WASTE
1 10/000	200 4221400		

Pace Project No.: 40244305 Sample: B-1A

Sample: B-1A	Lab ID:	40244305007	Collecte	d: 04/28/2	2 11:00	Received: 05/	/03/22 10:00 M	latrix: Solid	
Results reported on a "dry w	eight" basis and ar	e adjusted for	r percent mo	oisture, sa	mple si	ize and any dilut	ions.		
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
7471 Mercury	Analytical Pace Ana	Method: EPA	7471 Prepa s - Green Ba	ration Meth y	nod: EP/	A 7471			
Mercury	0.24	mg/kg	0.039	0.011	1	05/06/22 12:03	05/09/22 11:52	7439-97-6	
Percent Moisture	Analytical Pace Ana	Method: ASTN	M D2974-87 s - Green Ba	у					
Percent Moisture	15.9	%	0.10	0.10	1		05/09/22 13:54	Ļ	
Sample: B-2 Results reported on a "dry w	Lab ID: eight" basis and ar	40244305008 e adjusted for	Collecter	d: 04/28/2 Disture, sa	2 13:35 mple si	Received: 05	/03/22 10:00 M ions.	latrix: Solid	
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
7471 Mercury	Analytical Pace Ana	Method: EPA	7471 Prepa s - Green Ba	ration Meth y	nod: EP/	A 7471			
Mercury	0.036J	mg/kg	0.048	0.014	1	05/06/22 12:03	05/09/22 11:55	7439-97-6	
Percent Moisture	Analytical Pace Ana	Method: ASTN	M D2974-87 s - Green Ba	У					
Percent Moisture	29.4	%	0.10	0.10	1		05/09/22 13:54	Ļ	
Sample: B-2A Results reported on a "dry w	Lab ID: reight" basis and ar	40244305009 e adjusted for	Collecter	d: 04/28/2 oisture, sa	2 14:30 mple si	Received: 05	/03/22 10:00 M	latrix: Solid	
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
7471 Mercury	Analytical Pace Ana	Method: EPA	7471 Prepa s - Green Ba	ration Meth	nod: EP/	A 7471			
Mercury	0.016J	mg/kg	0.038	0.011	1	05/06/22 12:03	05/09/22 12:02	2 7439-97-6	
Percent Moisture	Analytical Pace Ana	Method: ASTN	M D2974-87 s - Green Ba	у					
Percent Moisture	16.3	%	0.10	0.10	1		05/09/22 13:54	Ļ	

16.3 % 0.10 0.10 1 05/09/22 13:54



Project:	209-4221498	WM MERCURY	WASTE

40244305

Pace Project No.:

Sample: B-3	Lab ID:	40244305010	Collecte	d: 04/28/2	2 11:15	Received: 05/	/03/22 10:00 M	atrix: Solid	
Results reported on a "dry we	eight" basis and are	e adjusted for	percent m	oisture, sa	mple si	ze and any dilut	ions.		
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
7471 Mercury	Analytical	Method: EPA 7	7471 Prepa	ration Meth	od: EP/	A 7471			
	Pace Anal	ytical Services	- Green Ba	У					
Mercury	0.23	mg/kg	0.039	0.011	1	05/06/22 12:03	05/09/22 12:04	7439-97-6	
Percent Moisture	Analytical	Method: ASTM	1 D2974-87						
	Pace Anal	ytical Services	- Green Ba	у					
Percent Moisture	18.8	%	0.10	0.10	1		05/09/22 13:54		
Sample: B-9	Lab ID:	40244305011	Collecte	d: 04/28/2	2 09:00	Received: 05/	/03/22 10:00 M	atrix: Solid	
Results reported on a "dry we	eight" basis and are	e adjusted for	percent m	oisture, sa	mple si	ze and any dilut	ions.		
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
7471 Mercury	Analytical Pace Anal	Method: EPA 7 ytical Services	7471 Prepa - Green Ba	ration Meth	iod: EP/	A 7471			
Mercury	0.40	mg/kg	0.040	0.012	1	05/06/22 12:03	05/09/22 12:06	7439-97-6	
Percent Moisture	Analytical Pace Anal	Method: ASTM ytical Services	1 D2974-87 - Green Ba	У					
Percent Moisture	18.4	%	0.10	0.10	1		05/09/22 13:54		
Sample: B-9A	Lab ID:	40244305012	Collecte	d: 04/28/2	2 09:10	Received: 05/	/03/22 10:00 M	atrix: Solid	
Results reported on a "dry we	eight" basis and are	adjusted for	percent m	oisture, sa	mple si	ze and any dilut	ions.		
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
7471 Mercury	Analytical Pace Anal	Method: EPA 7 ytical Services	7471 Prepa - Green Ba	ration Meth	iod: EPA	A 7471			
Mercury	0.24	mg/kg	0.039	0.011	1	05/06/22 12:03	05/09/22 12:09	7439-97-6	
Percent Moisture	Analytical	Method: ASTM	1 D2974-87						

20.3 % 0.10 0.10 1 05/09/22 13:54

Pace Analytical Services - Green Bay

REPORT OF LABORATORY ANALYSIS

Percent Moisture



CAS No.

Matrix: Solid

CAS No.

Qual

Qual

ANALYTICAL RESULTS

Project: 209-4221498 WM MERCURY WASTE Pace Project No .: 40244305 Sample: B-9B Lab ID: 40244305013 Collected: 04/28/22 09:20 Received: 05/03/22 10:00 Matrix: Solid Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions. Parameters Results Units LOQ LOD DF Prepared Analyzed Analytical Method: EPA 7471 Preparation Method: EPA 7471 7471 Mercury Pace Analytical Services - Green Bay Mercury 0.34 mg/kg 0.040 0.011 05/06/22 12:03 05/09/22 12:11 7439-97-6 1 **Percent Moisture** Analytical Method: ASTM D2974-87 Pace Analytical Services - Green Bay Percent Moisture 19.9 % 0.10 0.10 1 05/09/22 13:54 Lab ID: 40244305014 Collected: 04/28/22 09:30 Received: 05/03/22 10:00 Sample: B-9C Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions. Parameters Results Units 100 LOD DF Prepared Analyzed

7471 Mercury	Analytical N Pace Analy	Vethod: EPA vtical Service	7471 Prepara es - Green Bay	ation Metho	od: EP	PA 7471			
Mercury	0.32	mg/kg	0.044	0.013	1	05/06/22 12:03	05/09/22 12:13	7439-97-6	
Percent Moisture	Analytical Method: ASTM D2974-87 Pace Analytical Services - Green Bay								
Percent Moisture	20.9	%	0.10	0.10	1		05/09/22 13:54		

Sample: C-1 Lab ID: 40244305015 Collected: 04/28/22 11:30 Received: 05/03/22 10:00 Matrix: Solid Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual	
7471 Mercury	Analytical I	Method: EPA	7471 Prepara	ation Metho	od: EPA	7471				
	Pace Analytical Services - Green Bay									
Mercury	0.061	mg/kg	0.041	0.012	1	05/06/22 12:03	05/09/22 12:16	7439-97-6		
Percent Moisture	Analytical I	Method: ASTN	N D2974-87							
	Pace Analytical Services - Green Bay									
Percent Moisture	21.1	%	0.10	0.10	1		05/09/22 13:55			



Project:	209-4221498 WM MERCURY	WASTE
1 101000		

40244305

Pace Project No.:

Sample: C-2	Lab ID:	Lab ID: 40244305016 Collected: 04/28/22 11:45 Received: 05/03/22 10:00 Matrix: Solid								
Results reported on a "dry w	eight" basis and are	e adjusted for	percent m	oisture, sa	mple si	ize and any dilut	ions.			
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual	
7471 Mercury	Analytical	Method: EPA	7471 Prepa	ration Meth	od: EPA	A 7471				
	Pace Analytical Services - Green Bay									
Mercury	0.077	mg/kg	0.041	0.012	1	05/06/22 12:03	05/09/22 12:18	7439-97-6		
Percent Moisture	Analytical Method: ASTM D2974-87									
	Pace Analytical Services - Green Bay									
Percent Moisture	21.8	%	0.10	0.10	1		05/09/22 13:55			
Sample: C-9	Lab ID:	40244305017	Collecte	d: 04/28/2	2 09:40	Received: 05/	/03/22 10:00 M	atrix: Solid		
Results reported on a "dry w	eight" basis and are	e adjusted for	percent m	oisture, sa	mple si	ize and any dilut	ions.			
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual	
7471 Mercury	Analytical Method: EPA 7471 Preparation Method: EPA 7471 Pace Analytical Services - Green Bay									
Mercury	0.41	mg/kg	0.042	0.012	1	05/06/22 12:03	05/09/22 12:20	7439-97-6		
Percent Moisture	Analytical Method: ASTM D2974-87 Pace Analytical Services - Green Bay									
Percent Moisture	26.0	%	0.10	0.10	1		05/09/22 13:55			
Sample: D-2	Lab ID:	40244305018	Collecte	d: 04/28/2	2 11:55	Received: 05/	/03/22 10:00 M	atrix: Solid		
Results reported on a "dry w	eight" basis and are	e adjusted for	percent m	oisture, sa	mple si	ize and any dilut	ions.			
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual	
7471 Mercury	Analytical Method: EPA 7471 Preparation Method: EPA 7471 Pace Analytical Services - Green Bay									
Mercury	0.12	mg/kg	0.041	0.012	1	05/06/22 12:03	05/09/22 12:23	7439-97-6		
Percent Moisture	Analytical Method: ASTM D2974-87									

 Percent Moisture
 23.0
 %
 0.10
 0.10
 1
 05/09/22 14:25

Pace Analytical Services - Green Bay


Project:	209-4221498 WM MERCURY	WASTE
1 101000		

Pace Project No.: 40244305

	Lab ID:	40244305019	Collected	l: 04/28/2	2 12:10	Received: 05/	03/22 10:00 Ma	atrix: Solid	
Results reported on a "dry w	eight" basis and are	adjusted for	percent mo	isture, sa	nple si	ze and any diluti	ons.		
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
7471 Mercury	Analytical Pace Anal	Method: EPA 7 ytical Services	7471 Prepar - Green Bay	ation Meth	od: EP/	A 7471			
Mercury	0.19	mg/kg	0.042	0.012	1	05/06/22 12:03	05/09/22 12:30	7439-97-6	
Percent Moisture	Analytical Pace Anal	Method: ASTM ytical Services	/I D2974-87 - Green Bay	1					
Percent Moisture	22.7	%	0.10	0.10	1		05/09/22 15:05		
Sample: D-4 Results reported on a "dry w	Lab ID: eight" basis and are	40244305020 adjusted for	Collected percent mo	l: 04/29/2: isture, sa l	2 11:55 nple si	Received: 05/	03/22 10:00 Ma ions.	atrix: Solid	
Baramatara	Populto	Linita	100		DE	Broporod	Applyzod		Qual
Parameters	Results	Units	LOQ	LOD		Prepared	Analyzed	CAS No.	Qual
Parameters 7471 Mercury	Results Analytical Pace Anal	Units Method: EPA 7 ytical Services	LOQ 7471 Prepar 5 - Green Bay	LOD ation Meth	DF od: EP/	Prepared	Analyzed	CAS No.	Qual
Parameters 7471 Mercury Mercury	Results Analytical Pace Anal 0.027J	Units Method: EPA 7 ytical Services mg/kg	LOQ 7471 Prepar - Green Bay 0.036	LOD ation Meth , 0.010	DF od: EP/ 1	Prepared A 7471 05/06/22 12:03	Analyzed	CAS No. 7439-97-6	Qual
Parameters 7471 Mercury Mercury Percent Moisture	Results Analytical Pace Anal 0.027J Analytical Pace Anal	Units Method: EPA 7 ytical Services mg/kg Method: ASTM ytical Services	LOQ 7471 Prepar - Green Bay 0.036 1 D2974-87 - Green Bay	LOD ation Meth , 0.010	DF od: EP/ 1	Prepared A 7471 05/06/22 12:03	Analyzed	CAS No. 7439-97-6	Qual
Parameters 7471 Mercury Mercury Percent Moisture Percent Moisture	Results Analytical Pace Anal 0.027J Analytical Pace Anal 13.4	Units Method: EPA 7 ytical Services mg/kg Method: ASTM ytical Services %	LOQ 7471 Prepar 5 - Green Bay 0.036 1 D2974-87 5 - Green Bay 0.10	LOD ation Meth 0.010	DF od: EP/ 1	Prepared A 7471 05/06/22 12:03	Analyzed 05/09/22 12:32 05/09/22 14:25	CAS No. 7439-97-6	Qual
Parameters 7471 Mercury Mercury Percent Moisture Percent Moisture Sample: D-4C	Results Analytical Pace Anal 0.027J Analytical Pace Anal 13.4 Lab ID:	Units Method: EPA 7 ytical Services mg/kg Method: ASTM ytical Services % 40244305021	LOQ 7471 Prepar 5 - Green Bay 0.036 1 D2974-87 5 - Green Bay 0.10 Collected	LOD ation Meth 0.010 0.10 : 04/29/2:	DF od: EP/ 1 1 2 12:40	Prepared A 7471 05/06/22 12:03 Received: 05/	Analyzed 05/09/22 12:32 05/09/22 14:25 03/22 10:00 Ma	CAS No. 7439-97-6 atrix: Solid	Qual

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
7471 Mercury	Analytical Pace Analy	Method: EPA ytical Service	7471 Prepara s - Green Bay	ation Metho	od: EP/	A 7471			
Mercury	0.039	mg/kg	0.036	0.010	1	05/10/22 09:20	05/11/22 08:47	7439-97-6	
Percent Moisture	Analytical Method: ASTM D2974-87 Pace Analytical Services - Green Bay								
Percent Moisture	4.0	%	0.10	0.10	1		05/09/22 15:05		



Project:	209-4221498 WM MERCURY	WASTE
1 101000		

40244305

Pace Project No.:

Sample: D-9	Lab ID:	40244305022	2 Collecte	d: 04/27/22	2 18:25	Received: 05/	/03/22 10:00 M	latrix: Solid	
Results reported on a "dry we	eight" basis and are	e adjusted fo	r percent mo	oisture, sai	nple si	ize and any dilut	ions.		
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
7471 Mercury	Analytical Pace Anal	Method: EPA	7471 Prepa s - Green Ba	ration Meth	od: EP/	A 7471			
Mercury	0.95	mg/kg	0.044	0.012	1	05/10/22 09:20	05/11/22 08:49	7439-97-6	
Percent Moisture	Analytical Pace Anal	Analytical Method: ASTM D2974-87 Pace Analytical Services - Green Bay							
Percent Moisture	22.9	%	0.10	0.10	1		05/09/22 15:06	5	
Sample: D-9A	Lab ID:	40244305023	3 Collecte	d: 04/27/22	2 18:30	Received: 05/	/03/22 10:00 M	latrix: Solid	
Results reported on a "dry we	eight" basis and are	e adjusted fo	r percent mo	oisture, sai	nple si	ize and any dilut	ions.		
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
7471 Mercury	Analytical Pace Anal	Analytical Method: EPA 7471 Preparation Method: EPA 7471 Pace Analytical Services - Green Bay							
Mercury	0.15	mg/kg	0.043	0.012	1	05/10/22 09:20	05/11/22 08:51	7439-97-6	
Percent Moisture	Analytical Pace Anal	Method: AST	M D2974-87 s - Green Ba	У					
Percent Moisture	23.0	%	0.10	0.10	1		05/09/22 15:06	5	
Sample: D-9B	Lab ID:	40244305024	4 Collecte	d: 04/27/22	2 18:35	Received: 05/	/03/22 10:00 M	latrix: Solid	
Results reported on a "dry we	eight" basis and are	e adjusted fo	r percent mo	oisture, sai	nple si	ize and any dilut	ions.		
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
7471 Mercury	Analytical Pace Anal	Method: EPA ytical Service	7471 Prepa s - Green Ba	ration Meth y	od: EP/	A 7471			
Mercury	0.046	mg/kg	0.040	0.011	1	05/10/22 09:20	05/11/22 08:54	7439-97-6	
Percent Moisture	Analytical	Analytical Method: ASTM D2974-87							

Percent Moisture **17.5** % 0.10 0.10 1 05/09/22 15:06

Pace Analytical Services - Green Bay



Project:	209-4221498	WM MERCURY	WASTE

40244305

Pace Project No.:

Sample: D-9C	Lab ID:	40244305025	Collecte	d: 04/27/2	2 18:55	Received: 05/	/03/22 10:00 M	atrix: Solid	
Results reported on a "dry we	eight" basis and are	e adjusted for	percent m	oisture, sai	mple si	ze and any diluti	ions.		
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
7471 Mercury	Analytical Pace Anal	Method: EPA 7 vtical Services	′471 Prepa - Green Ba	ration Meth v	od: EPA	A 7471			
Mercury	0.29	mg/kg	0.044	0.012	1	05/10/22 09:20	05/11/22 08:56	7439-97-6	
Percent Moisture	Analytical Pace Anal	Analytical Method: ASTM D2974-87 Pace Analytical Services - Green Bay							
Percent Moisture	23.8	%	0.10	0.10	1		05/09/22 15:06	i	
Sample: E-2	Lab ID:	40244305026	Collecte	d: 04/27/22	2 16:10	Received: 05/	/03/22 10:00 M	atrix: Solid	
Results reported on a "dry we	eight" basis and are	e adjusted for	percent m	oisture, sai	mple si	ze and any diluti	ions.		
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
7471 Mercury	Analytical Pace Anal	Analytical Method: EPA 7471 Preparation Method: EPA 7471 Pace Analytical Services - Green Bay							
Mercury	0.076	mg/kg	0.043	0.012	1	05/10/22 09:20	05/11/22 08:58	7439-97-6	
Percent Moisture	Analytical Pace Anal	Method: ASTM ytical Services	l D2974-87 - Green Ba	У					
Percent Moisture	24.2	%	0.10	0.10	1		05/09/22 15:06	i	
Sample: E-3	Lab ID:	40244305027	Collecte	d: 04/27/2	2 16:25	Received: 05/	/03/22 10:00 M	atrix: Solid	
Results reported on a "dry we	eight" basis and are	e adjusted for	percent m	oisture, sai	mple si	ze and any diluti	ions.		
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
7471 Mercury	Analytical Pace Anal	Method: EPA 7 ytical Services	'471 Prepa - Green Ba	ration Meth y	od: EPA	7471			
Mercury	0.14	mg/kg	0.043	0.012	1	05/10/22 09:20	05/11/22 09:00	7439-97-6	
Percent Moisture	Analytical	Method: ASTM	I D2974-87						

 Percent Moisture
 24.9
 %
 0.10
 0.10
 1
 05/09/22 15:06

Pace Analytical Services - Green Bay



Project:	209-4221498 WM MERCURY	WASTE
1 101000		

40244305

Pace Project No.:

Sample: E-4	Lab ID: 40244305028 Collected: 04/27/22 16:45 Received: 05/03/22 10:00 Matrix: Solid										
Results reported on a "dry w	eight" basis and are	e adjusted for	percent mo	oisture, sa	mple si	ze and any diluti	ions.				
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual		
7471 Mercury	Analytical	Method: EPA 7	'471 Prepar	ation Meth	od: EP/	A 7471					
	Pace Anal	lytical Services	- Green Bay	/							
Mercury	0.043	mg/kg	0.040	0.012	1	05/10/22 09:20	05/11/22 09:03	7439-97-6			
Percent Moisture	Analytical	Method: ASTM	D2974-87								
	Pace Anal	Pace Analytical Services - Green Bay									
Percent Moisture	20.4	%	0.10	0.10	1		05/09/22 15:06				
Sample: E-4A	Lab ID:	40244305029	Collected	1: 04/28/2	2 15:30	Received: 05/	/03/22 10:00 M	atrix: Solid			
Results reported on a "dry w	eight" basis and ar	e adjusted for	percent mo	oisture, sa	mple si	ze and any diluti	ions.				
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual		
7471 Mercury	Analytical Pace Anal	Analytical Method: EPA 7471 Preparation Method: EPA 7471 Pace Analytical Services - Green Bay									
Mercury	0.014J	mg/kg	0.037	0.010	1	05/10/22 09:20	05/11/22 09:10	7439-97-6			
Percent Moisture	Analytical	Analytical Method: ASTM D2974-87									
	Pace Anal	Pace Analytical Services - Green Bay									
Percent Moisture	14.3	%	0.10	0.10	1		05/09/22 15:06				
Sample: E-6	Lab ID:	40244305030	Collected	1: 04/29/2	2 08:50	Received: 05/	/03/22 10:00 M	atrix: Solid			
Results reported on a "dry w	eight" basis and ar	e adjusted for	percent mo	isture, sa	mple si	ze and any diluti	ions.				
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual		
7471 Mercury	Analytical Pace Anal	Method: EPA 7 lytical Services	'471 Prepar - Green Bay	ation Meth	iod: EP/	A 7471					
Mercury	0.18	mg/kg	0.034	0.0098	1	05/10/22 09:20	05/11/22 09:12	7439-97-6			
Percent Moisture	Analytical Pace Anal	Method: ASTM lytical Services	l D2974-87 - Green Bay	/							

REPORT OF LABORATORY ANALYSIS

0.10

0.10 1

05/09/22 15:06

2.4

%

Percent Moisture



Project:	209-4221498	WM MERCURY	WASTE
1 10/000	200 4221400		

- ' -

Pace Project No.: 40244305

Sample: E-6A	Lab ID:	40244305031	Collected	: 04/29/22	2 10:15	Received: 05/	/03/22 10:00 M	atrix: Solid		
Results reported on a "dry w	eight" basis and are	e adjusted for	percent moi	isture, sai	mple si	ize and any dilut	ions.			
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual	
7471 Mercury	Analytical	Method: EPA 7	471 Prepara	ation Meth	od: EP/	A 7471				
	Pace Anal	ytical Services	- Green Bay							
Mercury	0.26	mg/kg	0.035	0.010	1	05/10/22 09:20	05/11/22 09:14	7439-97-6		
Percent Moisture	Analytical	Method: ASTN	1 D2974-87							
	Pace Anal	ytical Services	- Green Bay							
Percent Moisture	4.6	%	0.10	0.10	1		05/09/22 15:06			
Sample: E-7	Lab ID:	40244305032	Collected	: 04/29/22	2 10:45	Received: 05/	/03/22 10:00 M	atrix: Solid		
Results reported on a "dry w	eight" basis and are	e adjusted for	percent moi	isture, sai	mple si	ize and any dilut	ions.			
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual	
7471 Mercury	Analytical Pace Anal	Method: EPA 7 ytical Services	7471 Prepara - Green Bay	ation Meth	od: EP/	A 7471				
Mercury	0.13	mg/kg	0.036	0.010	1	05/10/22 09:20	05/11/22 09:17	7439-97-6		
Percent Moisture	Analytical	Analytical Method: ASTM D2974-87								
	Pace Anal	Pace Analytical Services - Green Bay								
Percent Moisture	9.7	%	0.10	0.10	1		05/09/22 15:07			
Sample: E-7A	Lab ID:	40244305033	Collected	: 04/29/22	2 11:15	Received: 05/	/03/22 10:00 M	atrix: Solid		
Results reported on a "dry w	eight" basis and are	e adjusted for	percent moi	isture, sai	mple si	ize and any dilut	ions.			
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual	
7471 Mercury	Analytical	Method: EPA 7	471 Prepara	ation Meth	od: EP/	A 7471				
	Pace Anal	ytical Services	- Green Bay							
Mercury	0.087	mg/kg	0.036	0.010	1	05/10/22 11:44	05/11/22 09:24	7439-97-6	В	
Percent Moisture	Analytical	Method: ASTM	1 D2974-87							
	Pace Anal	vtical Services	- Green Bav							

Percent Moisture **3.0** % 0.10 0.10 1 05/09/22 15:07



Project:	209-4221498	WM MERCURY	WASTE

40244305

Pace Project No.:

Sample: E-9	Lab ID:	40244305034	Collected	l: 04/27/2	2 17:40	Received: 05/	/03/22 10:00 M	atrix: Solid		
Results reported on a "dry w	eight" basis and ar	e adjusted for	percent mo	isture, sa	mple si	ze and any dilut	ions.			
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual	
7471 Mercury	Analytical	Method: EPA 7	471 Prepar	ation Meth	od: EP/	A 7471				
	Pace Anal	ytical Services	- Green Bay	/						
Mercury	0.47	mg/kg	0.045	0.013	1	05/10/22 11:44	05/11/22 09:31	7439-97-6		
Percent Moisture	Analytical	Method: ASTM	I D2974-87							
	Pace Anal	ytical Services	- Green Bay	,						
Percent Moisture	29.8	%	0.10	0.10	1		05/09/22 15:07			
Sample: E-9A	Lab ID:	40244305035	Collected	1: 04/27/2	2 17:50	Received: 05/	/03/22 10:00 M	atrix: Solid		
Results reported on a "dry w	eight" basis and ar	e adjusted for	percent mo	isture, sa	mple si	ze and any dilut	ions.			
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual	
7471 Mercury	Analytical Pace Anal	Method: EPA 7 lytical Services	7471 Prepar - Green Bay	ation Meth	iod: EPA	A 7471				
Mercury	0.094	mg/kg	0.043	0.012	1	05/10/22 11:44	05/11/22 09:38	7439-97-6	В	
Percent Moisture	Analytical Method: ASTM D2974-87									
	Pace Anal	ytical Services	- Green Bay	/						
Percent Moisture	21.3	%	0.10	0.10	1		05/09/22 15:07			
Sample: E-9B	Lab ID:	40244305036	Collected	I: 04/27/2	2 18:05	Received: 05/	/03/22 10:00 M	atrix: Solid		
Results reported on a "dry w	eight" basis and ar	e adjusted for	percent mo	isture, sa	mple si	ze and any dilut	ions.			
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual	
7471 Mercury	Analytical Pace Anal	Method: EPA 7 lytical Services	'471 Prepar - Green Bay	ation Meth	iod: EP/	A 7471				
Mercury	0.18	mg/kg	0.044	0.013	1	05/10/22 11:44	05/11/22 09:40	7439-97-6	В	
Percent Moisture	Analytical Pace Anal	Method: ASTM lytical Services	l D2974-87 - Green Bay	,						

 Percent Moisture
 24.0
 %
 0.10
 0.10
 1
 05/09/22 15:07



Project:	209-4221498 WM	MERCURY	WASTE
1 10/000	200 422 1400 101		WAOIL

40244305

Pace Project No .:

Sample: E-9C	Lab ID:	40244305037	Collecte	d: 04/27/22	2 18:10	Received: 05/	/03/22 10:00 Ma	atrix: Solid	
Results reported on a "dry we	eight" basis and are	adjusted for	percent m	oisture, sai	nple si	ze and any dilut	ions.		
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
7471 Mercury	Analytical	Method: EPA 7	'471 Prepa	ration Meth	od: EPA	7471			
	Pace Analy	ytical Services	- Green Ba	У					
Mercury	0.26	mg/kg	0.044	0.013	1	05/10/22 11:44	05/11/22 09:42	7439-97-6	В
Percent Moisture	Analytical	Method: ASTM	D2974-87						
	Pace Analy	vtical Services	- Green Ba	у					
Percent Moisture	22.6	%	0.10	0.10	1		05/09/22 15:07		
Sample: F-1	Lab ID:	40244305038	Collecte	d: 04/27/22	2 10:45	Received: 05/	/03/22 10:00 Mi	atrix: Solid	
Results reported on a "dry we	eight" basis and are	adjusted for	percent m	oisture, saı	nple si	ze and any dilut	ions.		
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
7471 Mercury	Analytical	Method: EPA 7	'471 Prepa	ration Meth	od: EPA	7471			
	Pace Analytical Services - Green Bay								
Mercury	0.31	mg/kg	0.045	0.013	1	05/10/22 11:44	05/11/22 09:45	7439-97-6	
Percent Moisture	Analytical	Method: ASTM	D2974-87						
	Pace Analy	vtical Services	- Green Ba	у					
Percent Moisture	26.2	%	0.10	0.10	1		05/09/22 15:07		
Sample: F-2	Lab ID:	40244305039	Collecte	d: 04/27/22	2 10:55	Received: 05/	/03/22 10:00 M	atrix: Solid	
Results reported on a "dry we	eight" basis and are	adjusted for	percent m	oisture, saı	nple si	ze and any dilut	ions.		
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
7471 Mercury	Analytical	Method: EPA 7	'471 Prepa	ration Meth	od: EPA	7471			
	Pace Analy	vtical Services	- Green Ba	у					

Mercury	0.27	mg/kg	0.046	0.013	1	05/10/22 11:44	05/11/22 09:47	7439-97-6	
Percent Moisture	Analytical I Pace Analy	Method: ASTI /tical Service:	M D2974-87 s - Green Bay						
Percent Moisture	24.4	%	0.10	0.10	1		05/09/22 15:07		



Project:	209-4221498 WM MERCURY	WASTE
1 101000		

40244305

Pace Project No.:

Sample: F-3	Lab ID:	40244305040	Collected	d: 04/27/22	2 11:05	Received: 05/	/03/22 10:00 M	atrix: Solid	
Results reported on a "dry we	eight" basis and are	e adjusted for	percent mo	oisture, sar	mple si	ze and any dilut	ions.		
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
7471 Mercury	Analytical Pace Anal	Method: EPA 7 lytical Services	471 Prepa - Green Ba	ration Meth	od: EP/	A 7471			
Mercury	0.36	mg/kg	0.047	0.014	1	05/10/22 11:44	05/11/22 09:49	7439-97-6	
Percent Moisture	Analytical Pace Anal	Method: ASTM lytical Services	l D2974-87 - Green Ba	у					
Percent Moisture	27.2	%	0.10	0.10	1		05/09/22 15:34		
Sample: F-4 Results reported on a "dry we	Lab ID: eight" basis and are	40244305041 e adjusted for	Collected percent mo	d: 04/27/22 Disture, sar	2 11:15 mple si	Received: 05/	/03/22 10:00 M ions.	atrix: Solid	
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
7471 Mercury	Analytical Pace Anal	Method: EPA 7 lytical Services	471 Prepa - Green Ba	ration Meth	od: EP/	A 7471			
Mercury	0.094	mg/kg	0.042	0.012	1	05/10/22 11:44	05/11/22 09:52	7439-97-6	В
Percent Moisture	Analytical Pace Anal	Method: ASTM lytical Services	l D2974-87 - Green Ba	у					
Percent Moisture	25.7	%	0.10	0.10	1		05/09/22 15:34		
Sample: F-4A Results reported on a "dry w	Lab ID:	40244305042	Collected	d: 04/27/22	2 11:40	Received: 05/	/03/22 10:00 M	atrix: Solid	
Results reported on a "dry w		e aujustea tor	percenting	nstare, sar	npic 3i	ze and any und	ions.		
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
7471 Mercury	Analytical Pace Anal	Method: EPA 7 lytical Services	471 Prepa - Green Ba	ration Meth	od: EPA	A 7471			
Mercury	0.35	mg/kg	0.043	0.012	1	05/10/22 11:44	05/11/22 09:54	7439-97-6	

Percent Moisture **21.8** % 0.10 0.10 1 05/09/22 15:34

Analytical Method: ASTM D2974-87 Pace Analytical Services - Green Bay

REPORT OF LABORATORY ANALYSIS

Percent Moisture



Project:	209-4221498	WM MERCURY	WASTE

40244305

Pace Project No.:

Sample: F-5	Lab ID:	40244305043	Collecte	d: 04/27/22	2 13:15	Received: 05/	/03/22 10:00 M	atrix: Solid	
Results reported on a "dry w	eight" basis and are	e adjusted for	percent m	oisture, sai	mple si	ze and any dilut	ions.		
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
7471 Mercury	Analytical Pace Anal	Method: EPA 7 ytical Services	′471 Prepa - Green Ba	ration Meth y	od: EPA	A 7471			
Mercury	1.1	mg/kg	0.040	0.011	1	05/10/22 11:44	05/11/22 09:56	7439-97-6	
Percent Moisture	Analytical Pace Anal	Method: ASTN ytical Services	l D2974-87 - Green Ba	У					
Percent Moisture	21.6	%	0.10	0.10	1		05/09/22 15:34		
Sample: F-5A Results reported on a "dry w	Lab ID: eight" basis and are	40244305044 adjusted for	Collecte percent me	d: 04/27/22 Disture, sai	2 13:30 mple si	Received: 05,	/03/22 10:00 M ions.	atrix: Solid	
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
7471 Mercury	Analytical Pace Analy	Method: EPA 7 ytical Services	'471 Prepa - Green Ba	ration Meth y	od: EP/	A 7471			
Mercury	0.69	mg/kg	0.048	0.014	1	05/10/22 11:44	05/11/22 09:59	7439-97-6	
Percent Moisture	Analytical Pace Anal	Method: ASTN ytical Services	l D2974-87 - Green Ba	У					
Percent Moisture	31.1	%	0.10	0.10	1		05/09/22 15:34		
Sample: F-6	Lab ID:	40244305045	Collecte	d: 04/27/22	2 13:40	Received: 05	/03/22 10:00 M	atrix: Solid	
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
7471 Mercury	Analytical Pace Anal	Method: EPA 7 ytical Services	471 Prepa - Green Ba	ration Meth y	od: EPA	A 7471			
Mercury	0.70	mg/kg	0.041	0.012	1	05/10/22 11:44	05/11/22 10:08	7439-97-6	
Percent Moisture	Analytical	Method: ASTN	I D2974-87						

Percent Moisture 20.4 % 0.10 0.10 1 05/09/22 15:34

Pace Analytical Services - Green Bay



Collected: 04/27/22 13:50 Received: 05/03/22 10:00 Matrix: Solid

Project:	209-4221498 WM	MERCURY	WASTE
1 10/000	200 422 1400 101		WAOIL

Pace Project No.: 40244305 Sample: F-6A Lab ID: 40244305046

Results reported on a "dry we	eight" basis and ar	e adjusted for	percent mo	oisture, sa	mple s	ize and any dilut	ions.		
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
7471 Mercury	Analytical Pace Ana	Method: EPA	7471 Prepa s - Green Ba	ration Meth y	od: EP	A 7471			
Mercury	0.26	mg/kg	0.041	0.012	1	05/10/22 11:44	05/11/22 10:10	7439-97-6	В
Percent Moisture	Analytical Pace Ana	Method: ASTN lytical Services	/I D2974-87 s - Green Bay	y					
Percent Moisture	18.2	%	0.10	0.10	1		05/09/22 15:34		
Sample: F-7 Results reported on a "dry w	Lab ID: eight" basis and ar	40244305047 e adiusted for	Collected	d: 04/27/2	2 14:55 mple s	Received: 05	/03/22 10:00 M	atrix: Solid	
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
7471 Mercury	Analytical Pace Ana	Method: EPA	7471 Prepa	ration Meth y	od: EP	A 7471			
Mercury	2.4	mg/kg	0.095	0.027	2	05/10/22 11:44	05/11/22 11:40	7439-97-6	
Percent Moisture	Analytical Pace Ana	Method: ASTN lytical Services	/I D2974-87 s - Green Bag	у					
Percent Moisture	29.4	%	0.10	0.10	1		05/09/22 15:34		
Sample: F-7A Results reported on a "dry w	Lab ID:	40244305048		d: 04/27/2	2 15:05	Received: 05	/03/22 10:00 M	atrix: Solid	
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analvzed	CAS No.	Qual
7471 Mercury	Analytical Pace Ana	Method: EPA	7471 Prepa	ration Meth	od: EP	A 7471			
Mercury	1.3	mg/kg	0.047	0.013	1	05/10/22 11:44	05/11/22 10:15	7439-97-6	
Percent Moisture	Analytical Pace Ana	Method: ASTN lytical Services	/I D2974-87 s - Green Bag	у					
Percent Moisture	26.7	%	0.10	0.10	1		05/09/22 15:34		



Project:	209-4221498	WM MERCURY	WASTE

40244305

Pace Project No.:

Sample: F-8	Lab ID:	40244305049	Collecte	d: 04/27/2	2 15:20	Received: 05	/03/22 10:00 M	latrix: Solid	
Results reported on a "dry we	eight" basis and are	e adjusted for	percent mo	oisture, sai	mple si	ze and any dilut	ions.		
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
7471 Mercury	Analytical Pace Anal	Method: EPA 7 ytical Services	′471 Prepa - Green Ba	ration Meth	od: EPA	A 7471			
Mercury	2.8	mg/kg	0.10	0.029	1	05/10/22 11:44	05/11/22 10:17	7439-97-6	
Percent Moisture	Analytical Pace Anal	Method: ASTM ytical Services	l D2974-87 - Green Ba	У					
Percent Moisture	65.4	%	0.10	0.10	1		05/09/22 15:34	ļ	
Sample: F-9 Results reported on a "dry we	Lab ID: eight" basis and are	40244305050 adjusted for	Collecter percent mo	d: 04/27/22	2 15:40 mple si	Received: 05/	/03/22 10:00 M	latrix: Solid	
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
7471 Mercury	Analytical Pace Anal	Method: EPA 7 ytical Services	'471 Prepa - Green Ba	ration Meth y	od: EPA	A 7471			
Mercury	0.35	mg/kg	0.043	0.012	1	05/10/22 11:44	05/11/22 10:19	7439-97-6	
Percent Moisture	Analytical Pace Anal	Method: ASTM ytical Services	l D2974-87 - Green Ba	У					
Percent Moisture	23.5	%	0.10	0.10	1		05/09/22 15:35	i	
Sample: F-9A	Lab ID:	40244305051	Collecte	d: 04/27/22	2 15:45	Received: 05/	/03/22 10:00 M	latrix: Solid	
Results reported on a "dry we	eight" basis and are	e adjusted for	percent mo	oisture, sai	mple si	ze and any dilut	ions.		
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
7471 Mercury	Analytical Pace Anal	Method: EPA 7 ytical Services	′471 Prepa - Green Ba	ration Meth y	od: EPA	A 7471			
Mercury	0.30	mg/kg	0.040	0.011	1	05/10/22 11:44	05/11/22 10:22	7439-97-6	
Percent Moisture	Analytical	Method: ASTM	1 D2974-87						

 Percent Moisture
 21.7
 %
 0.10
 0.10
 1
 05/09/22 15:35

Pace Analytical Services - Green Bay



Project:	209-4221498	WM MERCURY	WASTE

40244305

Pace Project No.:

Sample: G-1	Lab ID:	40244305052	Collecte	d: 04/27/2	2 08:15	Received: 05	/03/22 10:00 M	atrix: Solid			
Results reported on a "dry w	eight" basis and ar	e adjusted for	percent m	oisture, sa	mple si	ize and any dilut	ions.				
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual		
7471 Mercury	Analytical	Method: EPA 7	7471 Prepa	ration Meth	nod: EP/	A 7471					
	Pace Ana	ytical Services	- Green Ba	ıy							
Mercury	0.45	mg/kg	0.050	0.014	1	05/10/22 11:44	05/11/22 10:24	7439-97-6			
Percent Moisture	Analytical	Method: ASTN	1 D2974-87								
	Pace Ana	ytical Services	- Green Ba	ıy							
Percent Moisture	30.5	%	0.10	0.10	1		05/09/22 15:35				
Sample: G-2	Lab ID:	40244305053	Collecte	d: 04/27/2	2 09:00	Received: 05	/03/22 10:00 M	atrix: Solid			
Results reported on a "dry w	eight" basis and ar	e adjusted for	percent m	oisture, sa	mple si	ize and any dilut	ions.				
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual		
7471 Mercury	Analytical Pace Ana	Method: EPA 7 lytical Services	7471 Prepa - Green Ba	ration Meth	od: EP/	A 7471					
Mercury	0.23	mg/kg	0.048	0.014	1	05/10/22 11:55	05/11/22 10:36	7439-97-6			
Percent Moisture	Analytical	Method: ASTM	1 D2974-87								
	Pace Ana	Pace Analytical Services - Green Bay									
Percent Moisture	27.8	%	0.10	0.10	1		05/09/22 15:35				
Sample: G-3	Lab ID:	40244305054	Collecte	d: 04/27/2	2 09:10	Received: 05	/03/22 10:00 M	atrix: Solid			
Results reported on a "dry w	eight" basis and ar	e adjusted for	percent m	oisture, sa	mple si	ize and any dilut	ions.				
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual		
7471 Mercury	Analytical	Method: EPA 7	7471 Prepa	ration Meth	nod: EP/	A 7471					
	Pace Ana	ytical Services	- Green Ba	ıy							
Mercury	0.32	mg/kg	0.043	0.012	1	05/10/22 11:55	05/11/22 10:43	7439-97-6			
Percent Moisture	Analytical	Method: ASTM	1 D2974-87								
	Pace Ana	vtical Services	- Green Ba	IY							

 Percent Moisture
 20.4
 %
 0.10
 0.10
 1
 05/09/22 15:35



Project:	209-4221498 WM MERCURY	WASTE
1 101000		

Pace Project No.: 40244305

Sample: G-4		40244205055	Collected	· 04/27/2	2 00.20	Pacaivad: 05	/02/22 10:00 M	atrix: Solid	
Besults reported on a "dry w	Lau ID. oiaht" basis and are	adjusted for	nercent mo	. 04/21/2. istura sa	2 09.20 mnle si	Received. 05/	ions	anix. Soliu	
Results reported on a dry w	eight basis and are	aujusteu tot	percentino	<i>Stare, Sa</i>	iipie 3i		0113.		
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
7471 Mercury	Analytical	Method: EPA 7	471 Prepara	ation Meth	od: EP/	A 7471			
	Pace Anal	ytical Services	- Green Bay						
Mercury	0.66	mg/kg	0.045	0.013	1	05/10/22 11:55	05/11/22 10:45	7439-97-6	
Percent Moisture	Analytical	Method: ASTM	D2974-87						
	Pace Anal	ytical Services	- Green Bay						
Percent Moisture	28.6	%	0.10	0.10	1		05/09/22 14:26		
Sample: G-5	Lab ID:	40244305056	Collected	: 04/27/2	2 09:30	Received: 05/	/03/22 10:00 Ma	atrix: Solid	
Results reported on a "dry w	eight" basis and are	e adjusted for	percent mo	isture, sa	mple si	ze and any dilut	ions.		
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
7471 Mercury	Analytical	Method: EPA 7	471 Prepara	ation Meth	od: EP/	A 7471			
	Pace Anal	ytical Services	- Green Bay						
Mercury	4.8	mg/kg	0.23	0.065	5	05/10/22 11:55	05/11/22 11:42	7439-97-6	
Percent Moisture	Analytical	Method: ASTM	D2974-87						
	Pace Anal	ytical Services	- Green Bay						
Percent Moisture	31.7	%	0.10	0.10	1		05/09/22 14:26		
Sample: G-6	Lab ID:	40244305057	Collected	: 04/27/2	2 09:35	Received: 05/	/03/22 10:00 Ma	atrix: Solid	
Results reported on a "dry w	eight" basis and are	e adjusted for	percent mo	isture, sa	mple si	ze and any dilut	ions.		
Parameters	Results	Linite	100		DE	Prenared	Analyzed	CAS No	Qual

Falalleters		Units						CAS NO.	
7471 Mercury	Analytical Pace Anal	Method: EPA ytical Service	7471 Prepara es - Green Bay	ation Metho	od: EP	PA 7471			
Mercury	0.29	mg/kg	0.046	0.013	1	05/10/22 11:55	05/11/22 10:51	7439-97-6	
Percent Moisture	Analytical Method: ASTM D2974-87 Pace Analytical Services - Green Bay								
Percent Moisture	27.4	%	0.10	0.10	1		05/09/22 14:26		



CAS No.

Qual

ANALYTICAL RESULTS

Project:	209-4221498 V	VM MERCURY	WASTE
	203-4221490 1		VVAST

40244305

Pace Project No .:

Sample: G-7 Lab ID: 40244305058 Collected: 04/27/22 09:45 Received: 05/03/22 10:00 Matrix: Solid Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions. Parameters Results Units LOQ LOD

7471 Mercury	Analytical Method: EPA 7471 Preparation Method: EPA 7471 Pace Analytical Services - Green Bay							
Mercury	0.56	mg/kg	0.043	0.012	1	05/10/22 11:55	05/11/22 10:53 7439-97-6	
Percent Moisture	Analytical Method: ASTM D2974-87 Pace Analytical Services - Green Bay							
Percent Moisture	24.6	%	0.10	0.10	1		05/09/22 14:26	

DF

Prepared

Analyzed

Sample: G-8 Lab ID: 40244305059 Collected: 04/27/22 10:00 Received: 05/03/22 10:00 Matrix: Solid Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
7471 Mercury	Analytical Pace Anal	Method: EPA ytical Service	. 7471 Prepara es - Green Bay	ation Metho	od: EP	A 7471			
Mercury	0.13	mg/kg	0.043	0.012	1	05/10/22 11:55	05/11/22 10:55	7439-97-6	
Percent Moisture	Analytical Method: ASTM D2974-87 Pace Analytical Services - Green Bay								
Percent Moisture	23.6	%	0.10	0.10	1		05/09/22 14:26		

Sample: G-9 Lab ID: 40244305060 Collected: 04/27/22 10:10 Received: 05/03/22 10:00 Matrix: Solid Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual	
7471 Mercury	Analytical M	lethod: EPA 7	471 Prepara	tion Metho	d: EPA	7471				
	Pace Analytical Services - Green Bay									
Mercury	0.33	mg/kg	0.045	0.013	1	05/10/22 11:55	05/11/22 10:58	7439-97-6		
Percent Moisture	Analytical M	lethod: ASTM	D2974-87							
	Pace Analytical Services - Green Bay									
Percent Moisture	24.4	%	0.10	0.10	1		05/09/22 14:26			



Project:	209-4221498 WM MERCURY	WASTE
1 101000		

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Pace Project No.: 40244305

Sample: G-9A	Lab ID:	40244305061	Collected	: 04/27/22	2 10:15	Received: 05	/03/22 10:00 M	atrix: Solid		
Results reported on a "dry w	eight" basis and are	e adjusted for	r percent mo	isture, saı	nple si	ize and any dilut	ions.			
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual	
7471 Mercury	Analytical Pace Anal	Method: EPA	7471 Prepar s - Green Bay	ation Meth	od: EP/	A 7471				
Mercury	0.041J	mg/kg	0.046	0.013	1	05/10/22 11:55	05/11/22 11:05	7439-97-6		
Percent Moisture	Analytical Pace Anal	Analytical Method: ASTM D2974-87 Pace Analytical Services - Green Bay								
Percent Moisture	25.0	%	0.10	0.10	1		05/09/22 14:26			
Sample: H-1	Lab ID:	40244305062	2 Collected	: 04/26/22	2 15:30	Received: 05	/03/22 10:00 M	atrix: Solid		
Results reported on a "dry w	eight" basis and ar	e adjusted for	r percent mo	isture, saı	nple si	ize and any dilut	ions.			
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual	
7471 Mercury	Analytical Pace Anal	Method: EPA	7471 Prepar s - Green Bay	ation Meth	od: EP/	A 7471				
Mercury	0.32	mg/kg	0.046	0.013	1	05/10/22 11:55	05/11/22 11:07	7439-97-6		
Percent Moisture	Analytical Pace Anal	Method: ASTN	M D2974-87 s - Green Bay	,						
Percent Moisture	29.4	%	0.10	0.10	1		05/09/22 14:26			
Sample: H-2	Lab ID:	40244305063	B Collected	: 04/26/22	2 16:10	Received: 05	/03/22 10:00 M	atrix: Solid		
Results reported on a "dry w	eight" basis and are	e adjusted for	r percent mo	isture, saı	nple si	ize and any dilut	ions.			
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual	
7471 Mercury	Analytical Pace Anal	Method: EPA	7471 Prepar s - Green Bay	ation Meth	od: EP/	A 7471				
Mercury	0.075	mg/kg	0.042	0.012	1	05/10/22 11:55	05/11/22 11:10	7439-97-6		
Percent Moisture	Analytical Pace Anal	Method: ASTN	M D2974-87 s - Green Bay	,						
Percent Moisture	23.2	%	0.10	0.10	1		05/09/22 14:26			



Project:	209-4221498 WM MERCURY	WASTE
1 101000		

40244305

Pace Project No.:

Sample: H-3	Lab ID:	40244305064	Collecte	d: 04/26/2	2 16:20	Received: 05/	/03/22 10:00 M	atrix: Solid	
Results reported on a "dry we	eight" basis and are	adjusted for	percent m	oisture, sa	mple si	ze and any dilut	ions.		
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
7471 Mercury	Analytical	Method: EPA 7	471 Prepa	ration Meth	od: EP/	7471			
	Pace Anal	ytical Services	- Green Ba	У					
Mercury	0.091	mg/kg	0.041	0.012	1	05/10/22 11:55	05/11/22 11:12	7439-97-6	
Percent Moisture	Analytical	Method: ASTM	D2974-87						
	Pace Anal	ytical Services	- Green Ba	у					
Percent Moisture	17.6	%	0.10	0.10	1		05/09/22 14:26	i	
Sample: H-4	Lab ID:	40244305065	Collecte	d: 04/26/2	2 16:40	Received: 05/	/03/22 10:00 M	atrix: Solid	
Results reported on a "dry we	eight" basis and are	adjusted for	percent m	oisture, sa	mple si	ze and any dilut	ions.		
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
7471 Mercury	Analytical Pace Anal	Method: EPA 7 ytical Services	471 Prepa - Green Ba	ration Meth	iod: EP/	\ 7471			
Mercury	0.23	mg/kg	0.041	0.012	1	05/10/22 11:55	05/11/22 11:14	7439-97-6	
Percent Moisture	Analytical	Method: ASTM	D2974-87						
	Pace Anal	ytical Services	- Green Ba	у					
Percent Moisture	24.3	%	0.10	0.10	1		05/09/22 14:26	i	
Sample: H-5	Lab ID:	40244305066	Collecte	d: 04/26/2	2 17:00	Received: 05/	/03/22 10:00 M	atrix: Solid	
Results reported on a "dry we	eight" basis and are	e adjusted for	percent m	oisture, sa	mple si	ze and any dilut	ions.		
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
7471 Mercury	Analytical	Method: EPA 7	471 Prepa	ration Meth	od: EP/	A 7471			
	Pace Anal	ytical Services	- Green Ba	У					
Mercury	1.3	mg/kg	0.043	0.012	1	05/10/22 11:55	05/11/22 11:17	7439-97-6	
Percent Moisture	Analytical Pace Anal	Method: ASTN ytical Services	D2974-87 - Green Ba	y					

 Percent Moisture
 24.8
 %
 0.10
 0.10
 1
 05/09/22 14:26



Project:	209-4221498 WM MERCURY	WASTE
1 101000		

40244305

Pace Project No.:

Sample: H-6	Lab ID:	40244305067	Collected	d: 04/26/22	2 17:10	Received: 05/	/03/22 10:00 M	atrix: Solid			
Results reported on a "dry we	eight" basis and are	e adjusted for	percent mo	oisture, san	nple si	ize and any dilut	ions.				
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual		
7471 Mercury	Analytical Pace Anal	Method: EPA 7 lytical Services	471 Prepa - Green Ba	ration Metho y	od: EP/	A 7471					
Mercury	0.044	mg/kg	0.041	0.012	1	05/10/22 11:55	05/11/22 11:19	7439-97-6			
Percent Moisture	Analytical Pace Anal	Method: ASTM lytical Services	l D2974-87 - Green Ba	74-87 en Bay							
Percent Moisture	24.7	%	0.10	0.10	1		05/09/22 14:26				
Sample: H-7 Results reported on a "dry we	Lab ID: eight" basis and are	40244305068 e adjusted for	Collected percent mo	d: 04/26/22 Disture, san	2 17:20 n ple si	Received: 05	/03/22 10:00 M ions.	atrix: Solid			
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual		
7471 Mercury	Analytical Pace Anal	Method: EPA 7 lytical Services	471 Prepa - Green Ba	ration Metho y	od: EP/	A 7471					
Mercury	0.24	mg/kg	0.044	0.012	1	05/10/22 11:55	05/11/22 11:21	7439-97-6			
Percent Moisture	Analytical Pace Anal	Method: ASTM lytical Services	l D2974-87 - Green Ba	у							
Percent Moisture	20.1	%	0.10	0.10	1		05/09/22 14:27				
Sample: H-8 Results reported on a "dry we	Lab ID: eight" basis and are	40244305069 e adjusted for	Collected percent mo	d: 04/26/22 Disture, san	2 17:35 m ple si	Received: 05	/03/22 10:00 M ions.	atrix: Solid			
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual		
7471 Mercury	Analytical Pace Anal	Method: EPA 7 lytical Services	'471 Prepa - Green Ba	ration Metho y	od: EP/	A 7471					
Mercury	0.36	mg/kg	0.042	0.012	1	05/10/22 11:55	05/11/22 11:23	7439-97-6			

Percent Moisture 24.4 % 0.10 0.10 1 05/09/22 14:27

Analytical Method: ASTM D2974-87

Pace Analytical Services - Green Bay

REPORT OF LABORATORY ANALYSIS

Percent Moisture



Project:	209-4221498 WM MERCURY	WASTE
1 101000		

40244305

Pace Project No .:

Sample: H-9	Lab ID:	40244305070	Collected	d: 04/26/22	2 17:50	Received: 05/	/03/22 10:00 M	atrix: Solid	
Results reported on a "dry we	eight" basis and are	e adjusted for	percent mo	oisture, sai	nple si	ze and any dilut	ions.		
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
7471 Mercury	Analytical Pace Anal	Method: EPA 7 vtical Services	'471 Prepar - Green Bay	ation Meth	od: EPA	7471			
Mercury	0.37	mg/kg	0.043	0.012	1	05/10/22 11:55	05/11/22 11:26	7439-97-6	
Percent Moisture	Analytical Pace Anal	Method: ASTM ytical Services	l D2974-87 - Green Bay	/					
Percent Moisture	25.0	%	0.10	0.10	1		05/09/22 14:27		
Sample: H-9A Results reported on a "dry we	Lab ID: eight" basis and are	40244305071 adjusted for	Collected percent mo	1: 04/26/22 Disture, sai	2 18:10 nple si	Received: 05/ ze and any dilut	/03/22 10:00 M ions.	atrix: Solid	
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
7471 Mercury	Analytical Pace Anal	Method: EPA 7 ytical Services	471 Prepar - Green Bay	ation Meth	od: EPA	X 7471			
Mercury	0.20	mg/kg	0.050	0.014	1	05/10/22 11:55	05/11/22 11:33	7439-97-6	
Percent Moisture	Analytical Pace Anal	Method: ASTM ytical Services	l D2974-87 - Green Bay	/					
Percent Moisture	34.3	%	0.10	0.10	1		05/09/22 14:27		
Sample: I-1 Results reported on a "dry we	Lab ID: eight" basis and are	40244305072 adjusted for	Collected percent mo	d: 04/26/22 Disture, sai	2 10:25 nple si 2	Received: 05/ ze and any dilut	/03/22 10:00 M	atrix: Solid	
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
7471 Mercury	Analytical Pace Anal	Method: EPA 7 ytical Services	471 Prepar - Green Bay	ation Meth	od: EPA	7471			

	•		•					
Mercury	0.38	mg/kg	0.051	0.015	1	05/10/22 11:55	05/11/22 11:35	7439-97-6
Percent Moisture	Analytical M Pace Analyt	lethod: ASTM D ical Services - C	2974-87 Green Bay					
Percent Moisture	32.4	%	0.10	0.10	1		05/09/22 14:27	



Project:	209-4221498	WM MERCURY	WASTE

40244305

Pace Project No.:

Sample: I-2	Lab ID:	40244305073	Collected	d: 04/26/22	2 14:00	Received: 05/	/03/22 10:00 Ma	atrix: Solid		
Results reported on a "dry w	eight" basis and are	adjusted for	percent mo	oisture, sai	nple si	ze and any diluti	ions.			
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual	
7471 Mercury	Analytical	Method: EPA 7	471 Prepa	ration Meth	od: EPA	A 7471				
	Pace Anal	ytical Services	- Green Bay	у						
Mercury	0.099	mg/kg	0.048	0.014	1	05/12/22 09:10	05/13/22 09:46	7439-97-6		
Percent Moisture	Analytical	Method: ASTM	1 D2974-87							
	Pace Analytical Services - Green Bay									
Percent Moisture	34.2	%	0.10	0.10	1		05/09/22 15:35			
Sample: I-3	Lab ID:	40244305074	Collected	d: 04/26/22	2 14:25	Received: 05/	/03/22 10:00 Ma	atrix: Solid		
Results reported on a "dry w	eight" basis and are	e adjusted for	percent mo	oisture, sai	nple si	ze and any diluti	ions.			
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual	
7471 Mercury	Analytical Pace Anal	Method: EPA 7 ytical Services	7471 Prepar - Green Bay	ration Meth y	od: EPA	A 7471				
Mercury	0.15	mg/kg	0.051	0.015	1	05/12/22 09:10	05/13/22 09:53	7439-97-6		
Percent Moisture	Analytical Pace Anal	Method: ASTM ytical Services	1 D2974-87 - Green Bay	y						
Percent Moisture	35.9	%	0.10	0.10	1		05/09/22 15:35			
Sample: I-4	Lab ID:	40244305075	Collected	d: 04/26/22	2 14:45	Received: 05/	/03/22 10:00 M	atrix: Solid		
Results reported on a "dry w	eight" basis and are	e adjusted for	percent mo	oisture, sai	nple si	ze and any diluti	ions.			
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual	
7471 Mercury	Analytical Pace Anal	Method: EPA 7 ytical Services	7471 Prepai - Green Bay	ration Meth y	od: EPA	A 7471				
Mercury	0.020J	mg/kg	0.044	0.013	1	05/12/22 09:10	05/13/22 09:56	7439-97-6		
Percent Moisture	Analytical	Method: ASTM	1 D2974-87							

 Percent Moisture
 24.9
 %
 0.10
 0.10
 1
 05/09/22 15:35

Pace Analytical Services - Green Bay



Project:	209-4221498 V	VM MERCURY	WASTE
1 101000	200 12211001		

40244305

Pace Project No.:

Sample: I-5	Lab ID:	40244305076	Collected	1: 04/26/2	2 15:00	Received: 05/	/03/22 10:00 Ma	atrix: Solid	
Results reported on a "dry w	eight" basis and ar	e adjusted for	percent mo	oisture, sa	mple si	ze and any dilut	ions.		
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
7471 Mercury	Analytical Pace Ana	Method: EPA 7 lytical Services	471 Prepar - Green Bay	ation Meth	od: EPA	A 7471			
Mercury	0.16	mg/kg	0.046	0.013	1	05/12/22 09:10	05/13/22 09:58	7439-97-6	
Percent Moisture	Analytical Pace Ana	Method: ASTM lytical Services	D2974-87 - Green Bay	/					
Percent Moisture	26.7	%	0.10	0.10	1		05/09/22 15:35		
Sample: I-6	Lab ID:	40244305077	Collected	1: 04/26/2	2 15:15	Received: 05/	/03/22 10:00 Ma	atrix: Solid	
Results reported on a "dry w	eight" basis and ar	e adjusted for	percent mo	oisture, sa	mple si	ze and any dilut	ions.		
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
7471 Mercury	Analytical Pace Ana	Method: EPA 7 lytical Services	471 Prepar - Green Bay	ation Meth	od: EPA	x 7471			
Mercury	0.20	mg/kg	0.044	0.013	1	05/12/22 09:10	05/13/22 10:00	7439-97-6	
Percent Moisture	Analytical Pace Ana	Method: ASTM lytical Services	D2974-87 - Green Bay	/					
Percent Moisture	24.5	%	0.10	0.10	1		05/09/22 15:35		
Sample: RINSE # 1	Lab ID:	40244305078	Collected	1: 04/26/2	2 18:00	Received: 05/	/03/22 10:00 Ma	atrix: Water	
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
7470 Mercury	Analytical Pace Ana	Method: EPA 7 lytical Services	470 Prepar - Green Bay	ation Meth	od: EPA	A 7470			
Mercury	<0.066	ug/L	0.20	0.066	1	05/09/22 10:50	05/10/22 10:31	7439-97-6	
Sample: RINSE # 2	Lab ID:	40244305079	Collected	1: 04/27/2	2 11:30	Received: 05/	/03/22 10:00 Ma	atrix: Water	
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
7470 Mercury	Analytical Pace Ana	Method: EPA 7 lytical Services	470 Prepar - Green Bay	ation Meth	od: EPA	A 7470			
Mercury	<0.066	ug/L	0.20	0.066	1	05/09/22 10:50	05/10/22 10:34	7439-97-6	



Project: 209-4221498 WM MERCURY WASTE

Pace Project No.: 40244305

Sample: RINSE # 3	Lab ID:	40244305080	Collected	l: 04/27/2	2 18:00	Received: 05/	03/22 10:00 Ma	atrix: Water	
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
7470 Mercury	Analytical Pace Ana	Method: EPA 7 lytical Services	470 Prepar - Green Bay	ation Meth	od: EPA	A 7470			
Mercury	<0.066	ug/L	0.20	0.066	1	05/09/22 10:50	05/10/22 10:36	7439-97-6	
Sample: RINSE # 4	Lab ID:	40244305081	Collected	I: 04/28/2	2 10:00	Received: 05/	03/22 10:00 Ma	atrix: Water	
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
7470 Mercury	Analytical Pace Ana	Analytical Method: EPA 7470 Preparation Method: EPA 7470 Pace Analytical Services - Green Bay							
Mercury	0.073J	ug/L	0.20	0.066	1	05/09/22 10:50	05/10/22 10:43	7439-97-6	
Sample: RINSE # 5	Lab ID:	40244305082	Collected	l: 04/29/2	2 13:15	Received: 05/	03/22 10:00 Ma	atrix: Water	
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
7470 Mercury	Analytical Pace Ana	Method: EPA 7 lytical Services	470 Prepar - Green Bay	ation Meth	od: EPA	A 7470			
Mercury	0.085J	ug/l	0.20	0.066	1	05/09/22 10:50	05/10/22 10:45	7439-97-6	



Project:	209-4221498 WM	MERCURY WAS	TE									
Pace Project No.:	40244305											
QC Batch:	415124		Anal	ysis Metho	d:	EPA 7470						
QC Batch Method:	EPA 7470		Anal	ysis Descr	iption:	7470 Mercu	iry					
			Labo	oratory:		Pace Analyt	tical Servic	es - Green	Вау			
Associated Lab San	nples: 402443050	078, 4024430507	9, 402443	05080, 402	44305081,	402443050	82					
METHOD BLANK:	2390421			Matrix: W	/ater							
Associated Lab San	nples: 402443050	78, 4024430507	9, 402443	05080, 402	44305081,	402443050	82					
			Bla	ink	Reporting							
Paran	neter	Units	Res	sult	Limit	Anal	yzed	Qualifier	S			
Mercury		ug/L		<0.066	0.2	20 05/10/2	2 09:50					
LABORATORY COM	NTROL SAMPLE:	2390422										
			Spike	LC	CS	LCS	% R	ec				
Paran	neter	Units	Conc.	Re	sult	% Rec	Lim	its	Qualifiers			
Mercury		ug/L		5	4.9	9	8	85-115		_		
			400		000040							
MATRIX SPIKE & M	IATRIX SPIKE DUP	LICATE: 2390	423 MS	MSD	2390424	4						
		40244176027	Spike	Spike	MS	MSD	MS	MSD	% Rec		Max	
Parameter	Units	Result	Conc.	Conc.	Result	Result	% Rec	% Rec	Limits	RPD	RPD	Qual
Mercury	ug/L	<0.066	5	5	5.0	5.0	98	99	85-115	1	20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.



Project:	209-422	1498 WM	MERCURY WAS	ΓE									
Pace Project No.:	4024430)5											
QC Batch:	415009	9		Analy	sis Metho	od:	EPA 7471						
QC Batch Method:	EPA 74	171		Analy	sis Descr	iption:	7471 Mercu	ry					
				Laboi	ratory:		Pace Analyt	ical Service	es - Green	Bay			
Associated Lab San	nples:	402443050 402443050 402443050	001, 40244305002 008, 40244305009 015, 40244305016	2, 4024430 9, 4024430 6, 4024430	5003, 402 5010, 402 5017, 402	244305004, 244305011, 244305018,	, 402443050 402443050 , 402443050	05, 402443 12, 402443 19, 402443	05006, 402 05013, 402 05020	244305007 244305014	, ,		
METHOD BLANK:	2389521				Matrix: S	olid							
Associated Lab San	nples:	40244305(40244305(40244305(001, 40244305002 008, 40244305009 015, 40244305016	2, 4024430 9, 4024430 6, 4024430	5003, 402 5010, 402 5017, 402	244305004, 244305011, 244305018,	, 402443050 , 402443050 , 402443050	05, 402443 12, 402443 19, 402443	05006, 402 05013, 402 05020	244305007 244305014	, ,		
				Blan	nk	Reporting							
Paran	neter		Units	Resu	ult	Limit	Analy	/zed	Qualifier	s			
Mercury			mg/kg	<	<0.010	0.03	35 05/09/2	2 11:25					
LABORATORY COM		AMPLE:	2389522										
				Spike	L	CS	LCS	% R	ec				
Paran	neter		Units	Conc.	Re	sult	% Rec	Limi	ts (Qualifiers	_		
Mercury			mg/kg	0.8	3	0.87	104	4 8	35-115				
MATRIX SPIKE & M	IATRIX SI	PIKE DUP	LICATE: 23895	523 MS	MSD	238952	4						
			40244305001	Spike	Spike	MS	MSD	MS	MSD	% Rec		Max	
Parameter	r	Units	Result	Conc.	Conc.	Result	Result	% Rec	% Rec	Limits	RPD	RPD	Qual
Mercury		mg/kg	0.17	1.1	1.1	1.3	1.3	105	108	85-115	3	20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.



Project:	209-4221498 W	M MERCURY WAS	ΓE									
Pace Project No.:	40244305											
QC Batch:	415247		Analy	sis Method	d:	EPA 7471						
QC Batch Method:	EPA 7471		Analy	sis Descrip	otion:	7471 Mercur	у					
			Labor	atory:		Pace Analyti	cal Service	es - Greer	n Bay			
Associated Lab Sar	mples: 402443 402443	05021, 40244305022 05028, 40244305029	2, 4024430 9, 4024430	5023, 4024 5030, 4024	44305024, 44305031,	4024430502 4024430503	25, 402443 32	05026, 40)244305027	,		
METHOD BLANK:	2390931			Matrix: So	olid							
Associated Lab Sa	mples: 402443 402443	05021, 4024430502 05028, 4024430502	2, 4024430 9, 4024430 Blan	5023, 4024 5030, 4024 k l	44305024, 44305031, Reporting	4024430502 4024430503	25, 402443 32	05026, 40)244305027	, ,		
Para	neter	Units	Resu	ılt	Limit	Analy	zed	Qualifie	rs			
Mercury		mg/kg	<	:0.010	0.03	35 05/11/22	2 08:14					
LABORATORY CO	NTROL SAMPLE	: 2390932										
			Spike	LC	S	LCS	% Re	€C				
Parar	meter	Units	Conc.	Res	ult	% Rec	Limit	ts	Qualifiers	_		
Mercury		mg/kg	0.83	3	0.83	100	3 (35-115				
MATRIX SPIKE & M	ATRIX SPIKE D	UPLICATE: 23909	933 MS	MSD	2390934	4						
		40244493001	IVIJ Sniko	Snike	MS	MSD	MS	MSD	% Rec		Max	
Paramete	r Ur	nits Result	Conc.	Conc.	Result	Result	% Rec	% Rec	Limits	RPD	RPD	Qual
Mercury	mg	/kg 0.034J	1	1	1.0	1.0	96	96	85-115	0	20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.



Project:	209-42214	98 WM N	IERCURY WAS	ΓE									
Pace Project No.:	40244305												
QC Batch:	415249			Analy	sis Me	thod:	EPA 7471						
QC Batch Method:	EPA 7471	1		Analy	sis Des	scription:	7471 Merc	ury					
				Labo	ratory:		Pace Analy	tical Service	es - Green	Bay			
Associated Lab San	nples: 40 40 40	24430503 24430504 24430504	33, 40244305034 40, 4024430504 47, 4024430504	4, 4024430 1, 4024430 3, 4024430	5035, 4 5042, 4 5049, 4	40244305036, 40244305043, 40244305050,	, 402443050 , 402443050 , 402443050)37, 402443)44, 402443)51, 402443	05038, 40 05045, 40 05052	244305039 244305046	9, 8,		
METHOD BLANK:	2390935				Matrix:	Solid							
Associated Lab San	nples: 40 40 40	2443050; 24430504 24430504	33, 40244305034 40, 4024430504 47, 4024430504	4, 4024430 1, 4024430 3, 4024430	5035, 4 5042, 4 5049, 4	40244305036, 40244305043, 40244305050,	, 402443050 , 402443050 , 402443050)37, 402443)44, 402443)51, 402443	05038, 40 05045, 40 05052	244305039 244305046	9, 8,		
				Blar	nk	Reporting							
Param	neter		Units	Res	ult	Limit	Ana	yzed	Qualifier	S			
Mercury			mg/kg		0.023J	0.03	35 05/11/2	2 11:37					
LABORATORY COM	NTROL SAM	/IPLE: 2	2390936										
Paran	neter		Units	Spike Conc.		LCS Result	LCS % Rec	% Re Limi	ec ts	Qualifiers			
Mercury			mg/kg	0.8	3	0.91	10		35-115				
MATRIX SPIKE & M	IATRIX SPI	KE DUPL	ICATE: 23909	937		239093	8						
				MS	MSD								
_			40244305033	Spike	Spike	MS	MSD	MS	MSD	% Rec		Max	- ·
Parameter	r	Units	Result	Conc.	Conc.	Result	Result	% Rec	% Rec	Limits	RPD	RPD	Qual
Mercury		mg/kg	0.087	0.86	0.	86 0.92	0.93	97	99	85-115	1	20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.



Project:	209-422	1498 WM	MERCURY	WASTI	E												
Pace Project No.:	4024430	05															
QC Batch:	41525	0			Analy	sis Me	thod:		EPA 74	71							
QC Batch Method:	EPA 74	471			Analy	sis De	scriptic	n:	7471 M	ercury	,						
					Labo	ratory:		I	Pace Ar	nalytic	al Service	es - Gree	en Ba	ay			
Associated Lab Sam	nples:	402443050 402443050 402443050)53, 40244)60, 40244)67, 40244	305054 305061 305068	, 4024430 , 4024430 , 4024430	5055, 4 5062, 4 5069, 4	402443 402443 402443	305056, 305063, 305070,	402443 402443 402443	05057 05064 05071	7, 402443 1, 402443 1, 402443	05058, 4 05065, 4 05072	1024 1024	4305059 4305066), ò,		
METHOD BLANK:	2390939	Э				Matrix	: Solid										
Associated Lab Sam	nples:	402443050 402443050 402443050)53, 40244)60, 40244)67, 40244	305054 305061 305068	, 4024430 , 4024430 , 4024430	5055, 4 5062, 4 5069, 4	402443 402443 402443	305056, 305063, 305070,	402443 402443 402443	05057 05064 05071	7, 402443 1, 402443 1, 402443	05058, 4 05065, 4 05072	4024 4024	4305059 4305066), ;,		
					Blan	nk	Re	porting									
Param	neter		Unit	S	Resu	ult	L	imit	A	nalyz	ed	Qualifi	ers				
Mercury			mg/k	kg		<0.010		0.03	5 05/1	1/22	10:26						
LABORATORY COM	NTROL S	AMPLE:	2390940														
Param	neter		Unit	S	Spike Conc.		LCS Result		LCS % Red	0	% Re Limi	ec ts	Qu	ualifiers			
Mercury			mg/ŀ	ĸg	0.8	3		0.85		102	6	35-115			_		
MATRIX SPIKE & M	IATRIX S	PIKE DUP	LICATE:	239094	41		:	2390942	!								
					MS	MSD)										
Dente		1.1	4024430	5053	Spike	Spike		MS	MSD		MS	MSD		% Rec		Max	0
Parameter	ſ		Kes		Conc.	Conc	. r	kesult	Kesu	IT	% Rec	% Rec	; 	LIMITS	RPD	RPD	Qual
Mercury		mg/kg		0.23	1.1		1.1	1.4		1.3	103	ę	94	85-115	7	20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.



Project:	209-4221498 WM	MERCURY WAS	TE									
Pace Project No.:	40244305											
QC Batch:	415535		Analy	sis Metho	d:	EPA 7471						
QC Batch Method:	EPA 7471		Analy	/sis Descri	ption:	7471 Mercu	ъ					
			Labo	ratory:		Pace Analyt	cal Servic	es - Green	Bay			
Associated Lab Sar	mples: 402443050	073, 4024430507	4, 4024430)5075, 402 ₄	44305076,	4024430507	7					
METHOD BLANK:	2392256			Matrix: So	olid							
Associated Lab Sar	mples: 402443050	073, 4024430507	4, 4024430	5075, 402	44305076,	4024430507	7					
			Blar	nk	Reporting							
Parar	neter	Units	Res	ult	Limit	Analy	zed	Qualifier	S			
Mercury		mg/kg		<0.010	0.03	05/13/22	2 08:58					
LABORATORY CO	NTROL SAMPLE:	2392257										
			Spike	LC	S	LCS	% R	ec				
Parar	neter	Units	Conc.	Res	sult	% Rec	Limi	ts	Qualifiers			
Mercury		mg/kg	0.8	3	0.84	100) 3	85-115				
MATRIX SPIKE & N	ATRIX SPIKE DUP	LICATE: 2392	258		2392259	9						
			MS	MSD					_			
Descente		40244446001	Spike	Spike	MS	MSD	MS	MSD	% Rec	000	Max	0
Paramete	r Units	Kesult	Conc.	Conc.	Result	Result	% Kec	% Rec	LIMITS	RPD	KPD	Qual
Mercury	mg/kg	0.019J	1.1	1.1	1.1	1.1	101	101	85-115	0	20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.



Parameter

Percent Moisture

Units

%

QUALITY CONTROL DATA

Project: Pace Project No.:	209-42 40244:	21498 WM MERCURY WA 805	STE		
QC Batch:	4151	87	Analysis Method:	ASTM D2974-87	
QC Batch Method:	AST	/I D2974-87	Analysis Description:	Dry Weight/Percent Moisture	
			Laboratory:	Pace Analytical Services - Green Bay	
Associated Lab Sa	mples:	40244305001, 402443050 40244305008, 402443050 40244305015, 402443050	002, 40244305003, 402443050 009, 40244305010, 402443050 016, 40244305017	04, 40244305005, 40244305006, 40244305007, 11, 40244305012, 40244305013, 40244305014,	
SAMPLE DUPLICA	TE: 23	90672	40244305009 Dup	Мах	

Result

16.3

Result

17.1

RPD

4

RPD

10

Qualifiers

Results presented on this page are in the units indicated by	y the "Units'	' column except where an alternate unit is presented to the right of the result.



Project [.]	209-4221498 W/M MERCURY WASTE

Pace Project No.: 40244305

QC Batch:	415197	Analysis Method:	ASTM D2974-87
QC Batch Method:	ASTM D2974-87	Analysis Description:	Dry Weight/Percent Moisture
		Laboratory:	Pace Analytical Services - Green Bay
Associated Lab Samp	bles: 40244305018, 402443 40244305060, 402443 40244305067, 402443	05020, 40244305055, 40244305056, 05061, 40244305062, 40244305063, 05068, 40244305069, 40244305070,	40244305057, 40244305058, 40244305059, 40244305064, 40244305065, 40244305066, 40244305071, 40244305072

SAMPLE DUPLICATE: 2390694						
		40244305020	Dup		Max	
Parameter	Units	Result	Result	RPD	RPD	Qualifiers
Percent Moisture	%	13.4	13.2	2	10	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.



Project:	200 4221409 W/M MEDCUDY W/ASTE
Project.	209-422 1496 VIVI IVIERCURT VASTE

Pace Project No.: 40244305

QC Batch:	415199	Analysis Me	ethod: ASTM D2974-8	37
QC Batch Method:	ASTM D2974-87	Analysis De	scription: Dry Weight/Per	cent Moisture
		Laboratory:	Pace Analytical	Services - Green Bay
Associated Lab Samp	les: 4024430501 4024430502 4024430503	9, 40244305021, 40244305022, 7, 40244305028, 40244305029, 4, 40244305035, 40244305036,	40244305023, 40244305024, 40244305030, 40244305031, 40244305037, 40244305038,	40244305025, 40244305026, 40244305032, 40244305033, 40244305039

SAMPLE DUPLICATE: 2390698						
		40244305028	Dup		Max	
Parameter	Units	Result	Result	RPD	RPD	Qualifiers
Percent Moisture	%	20.4	21.4	5	10	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.



Project:	209-4221498 WM MERCURY WASTE

Pace Project No.: 40244305

QC Batch:	415204			Analysis M	ethod:	ASTM D2974-87	
QC Batch Method:	ASTM D2974-87		Analysis D	escription:	Dry Weight/Percent Moisture		
				Laboratory	:	Pace Analytical Services - G	reen Bay
Associated Lab Samp	oles: 4 4 4	10244305040, 10244305047, 10244305054,	40244305041, 40244305048, 40244305073,	40244305042 40244305049 40244305074	40244305043, 40244305050, 40244305075,	40244305044, 40244305049 40244305051, 40244305052 40244305076, 4024430507	5, 40244305046, 2, 40244305053, 7

SAMPLE DUPLICATE: 2390720						
		40244305048	Dup		Max	
Parameter	Units	Result	Result	RPD	RPD	Qualifiers
Percent Moisture	%		27.3	2	10	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.



QUALIFIERS

Project: 209-4221498 WM MERCURY WASTE

Pace Project No.: 40244305

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above LOD.

J - Estimated concentration at or above the LOD and below the LOQ.

LOD - Limit of Detection adjusted for dilution factor, percent moisture, initial weight and final volume.

LOQ - Limit of Quantitation adjusted for dilution factor, percent moisture, initial weight and final volume.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected at or above the adjusted LOD.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

ANALYTE QUALIFIERS

В

Analyte was detected in the associated method blank.



Project: 209-4221498 WM MERCURY WASTE

Pace Project No.: 40244305

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
40244305078	RINSE # 1	EPA 7470	415124	EPA 7470	415182
40244305079	RINSE # 2	EPA 7470	415124	EPA 7470	415182
40244305080	RINSE # 3	EPA 7470	415124	EPA 7470	415182
40244305081	RINSE # 4	EPA 7470	415124	EPA 7470	415182
40244305082	RINSE # 5	EPA 7470	415124	EPA 7470	415182
40244305001	A-2	EPA 7471	415009	EPA 7471	415057
40244305002	A-2A	EPA 7471	415009	EPA 7471	415057
40244305003	A-9	EPA 7471	415009	EPA 7471	415057
40244305004	A-9A	EPA 7471	415009	EPA 7471	415057
40244305005	A-9B	EPA 7471	415009	EPA 7471	415057
40244305006	A-9C	EPA 7471	415009	EPA 7471	415057
40244305007	B-1A	EPA 7471	415009	EPA 7471	415057
40244305008	B-2	EPA 7471	415009	EPA 7471	415057
40244305009	B-2A	EPA 7471	415009	EPA 7471	415057
40244305010	B-3	EPA 7471	415009	EPA 7471	415057
40244305011	B-9	EPA 7471	415009	EPA 7471	415057
40244305012	B-9A	EPA 7471	415009	EPA 7471	415057
40244305013	B-9B	EPA 7471	415009	EPA 7471	415057
40244305014	B-9C	EPA 7471	415009	EPA 7471	415057
40244305014	C-1	EDA 7471	415000	EPA 7471	415057
40244305015	C-2	EDA 7471	415000	EPA 7471	415057
40244305010	C-9	EDA 7471	415009		415057
40244305017	D-2		415009		415057
40244305010	D-2		415009		415057
40244305019	D-3 D-4	EPA 7471 EPA 7471	415009	EPA 7471 EPA 7471	415057
40244305021	D-4C	FPA 7471	415247	FPA 7471	415324
40244305022	D-9	EPA 7471	415247	EPA 7471	415324
40244305023	D-94	EPA 7471	415247	EPA 7471	415324
40244305024	D-9B	EPA 7471	415247	EPA 7471	415324
40244305025	D-9C	EPA 7471	415247	EPA 7471	415324
40244305026	F-2	EPA 7471	415247	EPA 7471	415324
40244305020	E-2 E-3	EPA 7471	415247	ΕΡΔ 7471	415324
40244305027	E-4	EDA 7471	415247	EPA 7471	415324
40244305020	E-40	EPA 7471	415247	EPA 7471	415324
40244305023	E-6	EDA 7471	415247	EPA 7471	415324
40244305030	E-6A		415247		415324
40244305032	E-7	EPA 7471	415247	EPA 7471	415324
40244305033	E-7A	EPA 7471	415249	EPA 7471	415325
40244305034	E-9	EPA 7471	415249	EPA 7471	415325
40244305035	E-9A	EPA 7471	415249	EPA 7471	415325
40244305036	E-9B	EPA 7471	415249	EPA 7471	415325
40244305037	E-9C	EPA 7471	415249	EPA 7471	415325
40244305038	F-1	EPA 7471	415249	EPA 7471	415325
40244305039	F-2	EPA 7471	415249	EPA 7471	415325
40244305040	F-3	EPA 7471	415240	EPA 7471	415325
40244305041	F-4	EPA 7471	415249	EPA 7471	415325
40244305042	Ε-4Δ	EPA 7471	415249	ΕΡΔ 7471	415325



Project: 209-4221498 WM MERCURY WASTE

Pace Project No.: 40244305

Analytical QC Batch **QC Batch Method** Lab ID Sample ID **Analytical Method** Batch 40244305043 F-5 415249 415325 EPA 7471 EPA 7471 40244305044 F-5A EPA 7471 415249 EPA 7471 415325 40244305045 F-6 EPA 7471 415249 FPA 7471 415325 40244305046 F-6A 415249 EPA 7471 EPA 7471 415325 40244305047 F-7 EPA 7471 415249 EPA 7471 415325 F-7A 40244305048 EPA 7471 415249 EPA 7471 415325 F-8 40244305049 EPA 7471 415249 EPA 7471 415325 40244305050 F-9 EPA 7471 415249 EPA 7471 415325 40244305051 F-9A EPA 7471 415249 EPA 7471 415325 40244305052 EPA 7471 415249 EPA 7471 415325 G-1 40244305053 G-2 EPA 7471 415250 EPA 7471 415326 40244305054 G-3 EPA 7471 415250 415326 EPA 7471 40244305055 G-4 415250 FPA 7471 FPA 7471 415326 40244305056 G-5 EPA 7471 415250 EPA 7471 415326 40244305057 G-6 415250 EPA 7471 EPA 7471 415326 G-7 40244305058 EPA 7471 415250 EPA 7471 415326 40244305059 G-8 EPA 7471 415250 EPA 7471 415326 40244305060 G-9 EPA 7471 415250 EPA 7471 415326 40244305061 G-9A EPA 7471 415250 EPA 7471 415326 40244305062 H-1 EPA 7471 415250 415326 EPA 7471 40244305063 H-2 EPA 7471 415250 EPA 7471 415326 40244305064 H-3 EPA 7471 415250 EPA 7471 415326 40244305065 H-4 EPA 7471 415250 EPA 7471 415326 40244305066 H-5 415250 EPA 7471 EPA 7471 415326 40244305067 H-6 415250 EPA 7471 FPA 7471 415326 H-7 40244305068 EPA 7471 415250 EPA 7471 415326 H-8 40244305069 EPA 7471 415250 EPA 7471 415326 H-9 40244305070 EPA 7471 415250 EPA 7471 415326 40244305071 H-9A EPA 7471 415250 EPA 7471 415326 40244305072 I-1 EPA 7471 415250 EPA 7471 415326 40244305073 I-2 EPA 7471 415535 415609 EPA 7471 40244305074 I-3 EPA 7471 415535 EPA 7471 415609 40244305075 I-4 EPA 7471 415535 EPA 7471 415609 40244305076 I-5 EPA 7471 415535 EPA 7471 415609 40244305077 I-6 EPA 7471 415609 415535 EPA 7471 40244305001 Δ-2 ASTM D2974-87 415187 A-2A 40244305002 ASTM D2974-87 415187 40244305003 A-9 ASTM D2974-87 415187 40244305004 A-9A ASTM D2974-87 415187 40244305005 A-9B ASTM D2974-87 415187 40244305006 A-9C ASTM D2974-87 415187 40244305007 B-1A ASTM D2974-87 415187 40244305008 B-2 ASTM D2974-87 415187 40244305009 B-2A ASTM D2974-87 415187 40244305010 B-3 ASTM D2974-87 415187 40244305011 B-9 ASTM D2974-87 415187 40244305012 B-9A ASTM D2974-87 415187



Project: 209-4221498 WM MERCURY WASTE

Pace Project No.: 40244305

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
40244305013	 B-9B	ASTM D2974-87	415187		
40244305014	B-9C	ASTM D2974-87	415187		
40244305015	C-1	ASTM D2974-87	415187		
40244305016	C-2	ASTM D2974-87	415187		
40244305017	C-9	ASTM D2974-87	415187		
40244305018	D-2	ASTM D2974-87	415197		
40244305019	D-3	ASTM D2974-87	415199		
40244305020	D-4	ASTM D2974-87	415197		
40244305021	D-4C	ASTM D2974-87	415199		
40244305022	D-9	ASTM D2974-87	415199		
40244305023	D-9A	ASTM D2974-87	415199		
40244305024	D-9B	ASTM D2974-87	415199		
40244305025	D-9C	ASTM D2974-87	415199		
40244305026	E-2	ASTM D2974-87	415199		
40244305027	E-3	ASTM D2974-87	415199		
40244305028	E-4	ASTM D2974-87	415199		
40244305029	E-4A	ASTM D2974-87	415199		
40244305030	E-6	ASTM D2974-87	415199		
40244305031	E-6A	ASTM D2974-87	415199		
40244305032	E-7	ASTM D2974-87	415199		
40244305033	E-7A	ASTM D2974-87	415199		
40244305034	E-9	ASTM D2974-87	415199		
40244305035	E-9A	ASTM D2974-87	415199		
40244305036	E-9B	ASTM D2974-87	415199		
40244305037	E-9C	ASTM D2974-87	415199		
40244305038	F-1	ASTM D2974-87	415199		
40244305039	F-2	ASTM D2974-87	415199		
40244305040	F-3	ASTM D2974-87	415204		
40244305041	F-4	ASTM D2974-87	415204		
40244305042	F-4A	ASTM D2974-87	415204		
40244305043	F-5	ASTM D2974-87	415204		
40244305044	F-5A	ASTM D2974-87	415204		
40244305045	F-6	ASTM D2974-87	415204		
40244305046	F-6A	ASTM D2974-87	415204		
40244305047	F-7	ASTM D2974-87	415204		
40244305048	F-7A	ASTM D2974-87	415204		
40244305049	F-8	ASTM D2974-87	415204		
40244305050	F-9	ASTM D2974-87	415204		
40244305051	F-9A	ASTM D2974-87	415204		
40244305052	G-1	ASTM D2974-87	415204		
40244305053	G-2	ASTM D2974-87	415204		
40244305054	G-3	ASTM D2974-87	415204		
40244305055	G-4	ASTM D2974-87	415197		
40244305056	G-5	ASTM D2974-87	415197		
40244305057	G-6	ASTM D2974-87	415197		
40244305058	G-7	ASTM D2974-87	415197		



Project: 209-4221498 WM MERCURY WASTE

Pace Project No.: 40244305

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytica Batch															
40244305059	 G-8	ASTM D2974-87	415197																	
40244305060	G-9	ASTM D2974-87	415197																	
40244305061	G-9A	ASTM D2974-87	415197																	
40244305062	H-1	ASTM D2974-87	415197																	
40244305063	H-2	ASTM D2974-87	415197																	
40244305064	H-3	ASTM D2974-87	415197																	
40244305065	H-4	ASTM D2974-87	415197																	
40244305066	H-5	ASTM D2974-87	415197																	
40244305067	H-6	ASTM D2974-87	415197																	
40244305068	H-7	ASTM D2974-87	415197																	
40244305069	H-8	ASTM D2974-87	415197																	
40244305070	H-9	ASTM D2974-87	415197																	
40244305071	H-9A	ASTM D2974-87	415197																	
40244305072	I-1	ASTM D2974-87	415197																	
40244305073	I-2	ASTM D2974-87	415204																	
40244305074	I-3	ASTM D2974-87	415204																	
40244305075	I-4	ASTM D2974-87	415204																	
40244305076	I-5	ASTM D2974-87	415204																	
40244305077	I-6	ASTM D2974-87	415204																	
Pace Analytical*	CH Submitting a s	IAIN-O ample via thi Condition Chain-of-	F-CUSTOD s chain of custody s found at: https: Custody is a LEC	Y Analy constitutes ac //info.pacelab GAL DOCUM	tical Ree knowledgmen s.com/hubfs/p ENT - Comple	quest Do t and acceptance as-standard-ter ete all relevar	ce of the P ms.pdf	e nt ace Terms	and			LAB U	SE ON	ily- Afi	fix Wo	rkorde N	r/Login I ITJL Log-	Label H in Num	ere or ber He	List Pace Workorder Number or ire
-------------------------------------------------------------------------------	------------------------------------------------------------	---------------------------------------------------	---------------------------------------------------------------------------------	----------------------------------------------------------	-----------------------------------------------------------	--------------------------------------------------------------------	-----------------------	--------------------------	-----------------	-------------------	-----------------	-----------------------	---------------------	------------------------	---------------------------------------------------------------------------------------------------------------------------------------------	-----------------------	---------------------------	-------------------	-------------------------------	------------------------------------------------------------------------------------------------------
Company: Tetra Tech			Billing Infor	mation: 21	211 Duranc	Avenue, U	nion Gr	ove,				Ĺ	AT 1		ווח נ	TIIN		REAS	aro	for LAB LISE ONLY
Address: 8413 Excelsior Dr #160, N	ladison, WI 537	17	WI 53182									Con							uic Viat	
Poport To: Luko Croskator (luko sr	a katar @tatra		Empil Tours	malka						-			lane	Fiese		: type				Project Manager.
Report to: cake specketer (lake.sp	ecketer@tetra	ecn.com)	Email TO: SS	moiko@wi	n.com					** Pre	servati	ve Types	s: (1) ni	tric acid	l, (2) su	lfuric ac	id, (3) hyc	Irochlori	c acid, (4) sodium hydroxide, (5) zinc acetate,
Copy To: Riley Eklund (riley.eklund	@tetratech.com	1)	Site Collecti Grove, WI 5	on Info/Ad 3 182	dress: 2121	1 Durand A	venue,	Union		(6) me (C) arr	thanol moniu	, (7) sodi m hydro	ium bis xide, (I	ulfate, (D) TSP, ((8) sodi U) Unp	um thio reserve	sulfate, (9 d, (0) Oth) hexane er	e, (A) as	corbic acid, (B) ammonium sulfate,
Customer Project Name/Number:			State: WI Co	ounty/City:	Union Gro	ve Time Zor	ne Colle	cted: [┨	r	1		Analy	yses	r			Lab	Profile/Line:
209-4221498	Tau (5 10) 15]PT []MT	[x]CT []ET					4									Cus	tody Seals Present/Intact / N NA
Email:	Site/Facility ID	#: WM M	ercury Waste	e, INC.	[Compliand [x] Yes	e Monitorii [] No	ng?												Cus Col Bot	tody Signatures Present Y N NA lector Signature Present Y N NA tles Intact Y N NA
Collected By (print): Riley Eklund	Purchase Orde Quote #: 0011	er # : 1458			DW PWS I DW Locati	D #: ion Code:													Cor Suf	rect Bottles ficient Volume Ples Pereived on Low Y N NA
Collected By (signature): <i>Riley</i> Eklund	Turnaround Da	at e Requir	ed: Standard		Immediate [x]Yes	ely Packed o [] No	on ice:		ss (G)	Γ'n									VOA USD	- Headspate Proceptable Y N NA A Regulated Spils Y N NA
Sample Disposal: [x] Dispose as appropriate [] Return [] Archive:	Rush: (Expedit [] Same D [] 2 Day [[] 4 Day [te Charges ay [] N] 3 Day] 5 Day	Apply) ext Day		Field Filter [] Yes Analysis: _	red (if applic	cable):		tic (P) or Glas	. Total Merc	•								Sam Res Cl Sam pH	ples in Holding Time YN NA idual Church Yresent YN NA Strips ple physicalle YN NA Strips
Hold:	halaw is Daiati		D140 Carrier	111/	40 14/				Plast	ž									Sul Lea	fide Present Y N NA d Acetate Strips:
Product (P), Soil/Solid (SL), Oil (OL	, Wipe (WP), A	ng water ir (AR). Tis	sue (TS), Bioz	a water (Gi assav (B), V	apor (V), O	ther (WW)	,		;je	120									TAD	
Customer Sample ID	Matrix *	Comp / Grab	Collect Composi	ed (or te Start)	Compo	osite End	Res Cl	# of Ctns	intainer Ty	astic (P)									Lab	sample # / Comments:
		Curk		10.40.404				<u> </u>		Ē									4	1201
A-2	<u> </u>	Grab	4/28/2022	10:40 AM	<u> </u>					X	<u> </u>								Š	201
A-2A		Grab	4/28/2022	10:50 AN	1					X	<u> </u>								-15-	
A-9		Grab	4/28/2022	8:10 AM						X							· _		R	$\underline{\mathcal{O}}$
A-3A		Grab	4/28/2022	8:50 AIV						X									\mathbb{R}	<u>Q</u> <u>q</u>
A-50		Grab	4/20/2022	0.40 AIV						×										
		Grab	4/28/2022	8:50 AIV						X									10	x9
B.7 %		Grah	4/20/2022	1.25 DAA						×		<u> </u>							R	<u> </u>
B-7A	3L CI	Grah	4/20/2022	2.30 044						×									R	<u>Vo</u>
P-2A		Grab	4/20/2022	2.30 PIV						×									8	<u></u>
Customer Remarks / Special Condit		Hazards	4/28/2022	11:15 AIV						X	l								$\underline{\bigcirc}$	1 AB Sample Temperature Info:
customer remarks/ special contain		1828103.	Packing Mat	used: terial Used	wet :	Blue D	ry r	vone	G	>	Lab	Trackin	lds Pf	ESENT	(21</td <td>nours)</td> <td>YN</td> <td></td> <td></td> <td>Temp Blank Received: Y N YA Therm ID#: Cooler 1 Temp Upon Receipt</td>	nours)	YN			Temp Blank Received: Y N YA Therm ID#: Cooler 1 Temp Upon Receipt
			Radchem sa	mple(s) sc	reened (<50	00 cpm):	Y N	NA			Sam	ples re EDEX	ceived UPS	l via: S Cli	ient	Courie	r Pace	Courier	•••••	Cooler 1 Therm Corr. Factor:OC Cooler 1 Corrected Temp:OC Comments:
Relinguished by/Company: (Signati	ure)	Date S	2/Time: 12/202	2 ^{3:20} p	Received b	y/Company	r: (Signa	ture)				Date/T	ïme:			 Table	ITJL LAB #:	USE ON	LY	
Relinquished by/Company: (Signatu Fedex	ure)	Date 5	:/Time: 3/22 \	000	Received b	y/Company	r: (Signa	ture)	Ì	1		Date/T 5/3/	ime: 29	100	0	Acctr Tem Preio	num: plate: gin:			Trip Blank Received: Y N NA HCL MeOH TSP Other
Relinquished by/Company: (Signati	ure)	Date	e/Time:		Received b	y/eompany	r: (Signa	ture)				Date/T	ïme:			PM: PB:				NonConformance(s): Page: YES / NO of:

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Pace Analytical*	CH Submitting a si	IAIN-OF ample via this Condition: Chain-of-C	F-CUSTOD s chain of custody s found at: https: Custody is a LEC	Y Analyt constitutes act //info.pacelabs 3AL DOCUME	tical Rec knowledgment .com/hubfs/pa NT - Comple	uest Do and acceptant is-standard-ter te all relevar	cume ce of the F ms.pdf t fields	ent Pace Terms	and			LAB US	SE ONL	Y- Aff	ix Work	order, MT	'Login L JL Log-i	abel Hei n Numb	re or L Der Hei	ist Pace Workorder Number or re
Company: Tetra Tech			Billing Inform	nation: 212	11 Durand	Avenue, U	nion G	rove,		1		A	LL B	OLD	OUT	LINI	ED AR	EAS a	are f	or LAB USE ONLY
Address: 8413 Excelsior Dr #160, M	ladison, WI 537	17	WI 53182									Con	tainer	Presei	vative T	ype *	1.000 M 100 M 1 1		Lab P	Project Manager:
Report To: Luke Specketer (luke.sp	ecketer@tetrat	ech.com)	Email To: ss	molko@wn	n.com					0 ** Pre	servati	ive Types	: (1) niti	ric acid	, (2) sulfu	ric acio	, (3) hydi	rochloric	acid, (4	l) sodium hydroxide, (5) zinc acetate,
Copy To: Riley Eklund (riley.eklund	@tetratech.com	1)	Site Collecti Grove, WI 5	on Info/Add • 3182	Iress: 2121	1 Durand A	venue,	Union		(C) arr	moniu	im hydrox	um bisu kide, (D)	TSP, (8) sodium	erved,	(O) Othe	hexane, r	(A) asc	orbic acid, (B) ammonium sulfate,
Customer Project Name/Number:			State: WI Co	ounty/City:	Union Grov	/e Time Zor	ne Colle	cted: [<u> </u>	1 1	<u> </u>					1	Lab	Sample Receipt Checklist:
209-4221498 Phone: 608-346-1677	Site/Facility ID	#+ 14/64 64	INI IMI orcuru Maste		JEI	e Monitori			<u> </u>	-									Cust	ody Seals Present/Intact Y N NA
Email:		77. 44 141 141	ciculy waste	5) 114C.	[x] Yes	[]No	IR I												Coll	ector Signature Present Y N NA
uke.specketer@tetratech.com `ollected By (print): Biley Eklund	Purchase Orde	or # ·				<u>ר #י</u>			{										Corr	cect Bottles IN NA
Sheeted by (print). Nicy Lkiuliu	Quote #: 0011	1458			DW Locati	on Code:													Suff	icient Volume Y N NA
Collected By (signature): Riley	Turnaround Da	ate Requir	ed: Standard		Immediate	ly Packed o	on Ice:		ତ	-									VOA	- Headspace acceptable Y N NA
Eklund	D. 1 (5		A		[x]Yes	[] No	- L L		ass	l ng									USDA	Regulated Schils YN NA ples in Holding Time YN NA
Sample Disposal: I x 1 Dispose as appropriate	Kush: (Expedit	e Charges	ext Day		Field Filter	eu (ir applic [x] No	able):		0	Me									Resi	dual Chlorine Present YNNA
] Return	[] 2 Day [] 3 Dav	CALOUY		[][65	[* 100			6	al									Samp	ole pH Acceptable Y N NA
Archive:	[]4 Day [] 5 Day			Analysis:				Ei	14	ĺ								рН S	strips:
] Hold:			DU() C		0. 14/				Plas'	ž				.					Lead	ide Present Y N NA Acetate Strips:
Product (P), Soil/Solid (SL). Oil (OL), Wipe (WP). A	ing water (ir (AR), Tis	sue (TS), Bioa	assay (B). Va	v), vvastew apor (V), Ot	acer (WW), her (OT)			/pe:	120									ם א ז	
	<u></u>	Comp/	Collect	ed (or			Res	# of	1	e l									Lab	Sample # / Comments:
Customer Sample ID	Matrix *	Grab	Composi	te Start)	Compo	site End	С	Ctns	taine	stic										
			Date	Time	Date	Time]		Cont	Pla									\mathbf{V}	
3-9	SL	Grab	4/28/2022	9:00 AM				1		x									C	
3-9A	SL	Grab	4/28/2022	9:10 AM				1		x									\odot	12
3-9B	SL	Grab	4/28/2022	9:20 AM				1		x									0	17
3-9C	SL	Grab	4/28/2022	9:30 AM				1		x									5	iu i
C-1	SL	Grab	4/28/2022	11:30 AM				1		X									K	is is
C-2	SL ·	Grab	4/28/2022	11:45 AM				1		x									0	6
C-9	SL	Grab	4/28/2022	9:40 AM				1	1	x									Ki	9
D-2	SL	Grab	4/28/2022	11:55 AM				1		x		\square				-			K	2
D-3	SL	Grab	4/28/2022	12:10 PM			i —	1		x							-		M	a
D-4	SL	Grab	4/29/2022	11:55 AM				1		×									K	$\dot{\Omega}$
Customer Remarks / Special Condit	ions / Possible I	Hazards:	Type of Ice I	Used:	Wet	Blue Di	v I	Vone			ISHC	DRT HOL	DS PRE	SENT	(<72 ho	urs) :	- <u>Y-N</u>	N/A	<u>ل</u> لل	LAB Sample Temperature Info:
			Packing Mat	erial Used:	·····	· · · · · · · · · · · · · · · · · · ·		0		_	Lab	Trackin	g#:							Temp Blank Received: Y N NA Therm ID#: Cooler 1 Temp Upon Receipt: oC
			Radchem sa	mple(s) sen	eened (<50	0 cpm):	Y N	NA			Sarr Fl	nples rec EDEX	eived UPS	via: Clio	ent Co	urier	Pace C	ourier		Cooler 1 Therm Corr. Factor: oC Cooler 1 Corrected Temp:OC Comments:
Relinquished by/Company: (Signati	ure)	Date 5/2	/Time:	opm	Received by	//Company	: (Signa	ture)				Date/Ti	me:		Т	MT able #	IL LAB U	SE ONL	Y	\bigcirc
Relinquished by/Company: (Signati	ure)	Date 5/	:/Time: 3/22 \1	000	Received by	//Company	: (Signa	ture)	let	1		Date/Ti 5/3/	me: DD	100		empla relog	m: ate: n:			Trip Blank Received: Y N NA HCL MeOH TSP Other
Relinquished by/Company: (Signati	ure)	Date	e/Time:	<u>, , , , , , , , , , , , , , , , , , , </u>	Received by	//Company	: (Signa	ture)				Date/Ti	me:		P	M: B:	•••			Non Conformance(s): Page: YES / NO of: Pag

Pace Analytical	CH Submitting a s	IAIN-OF ample via this Conditions Chain-of-C	F-CUSTODY s chain of custody cor s found at: https://in Custody is a LEGAL	Analy nstitutes ack 1fo.pacelabs. L DOCUME	rical Rec nowledgment com/hubfs/pa NT - Comple	IUEST DO and acceptand s-standard-ter te all relevar	ce of the l ms.pdf	e nt Pace Terms	and		- - -	LAB USE O	NLY- A	ffix Woi	korder, M1	/Login Lab JL Log-in I	el Here d lumber l	r List Pace Workorder Number or Here
Company: Tetra Tech			Billing Informa	tion: 212	11 Durand	Avenue, U	nion G	rove,		1		ALL	BOL	D OU	TLIN	ED ARE	AS are	e for LAB USE ONLY
Address: 8413 Excelsior Dr #160, M	ladison, WI 537	17	WI 53182									Contain	er Pres	ervative	Type *	*	La	b Project Manager:
Report To: Luke Specketer (luke.sp	ecketer@tetrat	tech.com)	Email To: ssmo	olko@wn	n.com	••••••••••				0 ** Pre	servati	ve Types: (1)	nitric aci	d, (2) sul	furic acio	l, (3) hydrod	hloric acid	, (4) sodium hydroxide, (5) zinc acetate,
Copy To: Riley Eklund (riley.eklund	@tetratech.com	1)	Site Collection Grove, WI 531	Info/Add 82	ress: 2121	1 Durand A	venue,	, Union		(6) me (C) am	moniu	, (7) sodium i m hydroxide,	(D) TSP,	(8) sodiu (U) Unpr	eserved	ulfate, (9) hi . (0) Other _	exane, (A)	ascorbic acid, (B) ammonium sulfate,
Customer Project Name/Number:			State: WI Coun	nty/City: I	Jnion Grov	e Time Zor	ne Colle	ected: [· · · ·		19363			La	b Sample Receipt Checklist:
209-4221498 Phone: 608-346-1677	Site/Eacility ID	#• W/M M	IIPI [JMI [)		JEI Complianc	e Monitori				4							Cu	stody Seals Present/Intact Y N NA
Email:	Siterracinty ib		cically waste, in		[x] Yes	[]No	121										Co	ollector Signature Present Y N NA
Collected By (print): Riley Eklund	Purchase Orde	er # :			DW PWS II	D #:			1								Co	prrect Bottles Y N NA
	Quote #: 0011	1458	- 4. Chan. 1. 1		DW Locatio	on Code:				1 .						.	Sa	mples Received on Ice Y N NA
Collected By (signature): <i>Riley</i> Sklund	l urnaround Da	ate Require	ed: Standard		Immediate	ly Packed c	on Ice:		0 0	Ę							VC	DA - Headspace Acceptable Y N NA
Sample Disposal:	Rush: (Expedit	te Charges	Apply)		Field Filter	ed (if applic	able):		Glas	erci							Sa	mples in Holding Time YN NA
x] Dispose as appropriate	[] Same D	ay []N	ext Day		[]Yes	[x]No			P	Σ							C]	Strips:
] Return] Archive:	[]2 Day [] 3 Day							(a)	ota							Sa	mple pH Acceptable Y N NA
] Hold:	[] 4 Day [J 5 Day			Analysis: _				stic								Su	lfide Present Y N NA
* Matrix Codes (Insert in Matrix bo)	(below): Drinki	ng Water (DW), Ground W	Vater (GW	/), Wastew	ater (WW),				SO N							Le	ad Acetate Strips:
Product (P), Soil/Solid (SL), Oil (OL	.), Wipe (WP), A	ir (AR), Tis	sue (TS), Bioass	ay (B), Va	por (V), Ot	her (OT)			Å,	1;							LÆ	B USE ONLY:
	1	Comp/	Collected	(or	Compo	site End	Res	# of	ner	i (F							Lā	b Sample # / Comments:
Lustomer Sample ID	Matrix	Grab	Date	Start) Time	Date	Time		Ctns	ontai	lasti								
		Grah	4/20/2022 12	2:40 DM					<u> </u>	<u> </u>								
)-4C	5L C1	Grab	4/23/2022 1	6.25 DM														
)-0A	5L C1	Grab	4/27/2022	6-20 DM													<u> </u>	ix a
) OP	51	Grab	4/27/2022	0:30 PIVI			<u> </u>			X							—Ķ	
	SL	Grab	4/27/2022	0.33 PIVI						X								****
		Grab	4/27/2022	4.10 DM						×							<u> </u>	<u>5</u> 2 <u>5</u>
	<u>SL</u>	Grab	4/2//2022	4:10 PIVI						X -							<u> </u>	20
	SL	Grab	4/2//2022	4:25 PM						X				-			<u> </u>	∞
-4	SL	Grab	4/2//2022 4	4:45 PM				1	<u> </u>	X							<u> </u>	<u>778</u>
	SL	Grab	4/28/2022 :	3:30 PM						X					· .		K	29
Customer Remarks / Special Condit	ions / Possible I	Hazards	4/29/2022		147-4					X	Icuro							
	.01371033.0101	1020103.	Packing Materi	ed: ial Used:	wet		γ i	None	0	·	Lab	Tracking #:	RESEN	1 (2 h</td <td>ours) :</td> <td><u> </u></td> <td>т\/A</td> <td>Temp Blank Received: Y N NA Therm ID#:</td>	ours) :	<u> </u>	т\/A	Temp Blank Received: Y N NA Therm ID#:
			Radchem samp	ple(s) sere	ened (<50	0 cpm):	Y N	NA			Sam FE	ples receive DEX UI	ed via: PS C	lient (Courier	Pace Cou	rier	Cooler 1 Temp opon Receipt: _OC Cooler 1 Therm Corr. Factor _OC Cooler 1 Corrected Temp:OC
Relinquished by/Company: (Signatu	ure)	Date 5/1	e/Time: 2/2022 3:20	pm F	Received by	/Company	: (Signa	iture)			Jana	Date/Time:			MT Table i	JL LAB USE t:	ONLY	
Relinquished by/Company: (Signatu Fedex	ure)	Date 5	2/Time: 3/22 100	20 /		Company	: (Signa	iture)	fe)	0		Date/Time: 5/3/12	100	∞	Acctnu Templ Prelog	im: ate: in:		Trip Blank Reteived: Y N NA HCL MeOH T5P Other
Relinquished by/Company: (Signati	ıre)	Date	/Time:	F	Received by	/Company	: (Signa	iture)	<u>/-9</u>			Date/Time:			PM: PB:			Non Conformance(s): Page: YES / NO of: Page

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Pace Analytical*	CH Submitting a s	IAIN-OF sample via this Condition Chain-of-	-CUSTOD s chain of custody is found at: https: Custody is a LE)Y Analy y constitutes ar :://info.pacelab :GAL DOCUM	tical Rec cknowledgment is.com/hubfs/p IENT - Comple	t and acceptani as-standard-ter ete all releva)CUM ce of the rms.pdf nt fields	ent Pace Term:	s and			LAB U	JSE ON	iLY- Af	fix W	orkord	ier/Lo MTJL	igin Lab Log-in I	oel Hero Numbe	e or List Pace Workorder Number or ar Here
Company: Tetra Tech			Billing Inform	mation: 21	211 Durand	Avenue, U	Jnion G	irove,		1			ALL	BOL	D OI	UTLI	NED) ARE	:AS a	are for LAB USE ONLY
Address: 8413 Excelsior Dr #160, M	ladison, WI 537	/17	WI 53182									Co	ntaine	r Prese	ervativ	ve Typ	e **			Lab Project Manager:
Report To: Luke Specketer (luke.sp	ecketer@tetra	tech.com)	Email To: ss	molko@wr	m.com					- 0				itric aci						noid (A) codium hydrovida (S) zinc postata
Copy To: Riley Eklund (riley.eklund	@tetratech.con	n)	Site Collecti	ion Info/Ad	dress: 2121	1 Durand /	Avenue	., Union		- (6) m ^r (C) ar	ethanc mmon	ol, (7) soc	dium bis oxide, (sulfate,	(8) soc (11) Un	dium th	niosulfa ved. (O	ite, (9) h	exane, (A) ascorbic acid, (B) ammonium sulfate,
Customer Project Name/Number:			Grove, WI 5	3182	Union Gro	Time 70	ne Colle	octed: [-				Anal	lyses	p.ccc.				Lab Profile/Line:
209-4221498			JPT []MT	[x]CT [JET	/C THE 201	16 Conc				Γ	Τ,				Ι	Γ			Lab Sample Receipt Checklist: Custody Seals Present/Intact Y N NA
Phone: 608-346-1677 Email:	Site/Facility ID) #: WM M(ercury Waste	a, INC.	Compliance [x] Yes	.e Monitorir [] No	ng?		Ī											Custody Signatures Present Y N NA Collector Signature Present Y N NA
luke.specketer@tetratech.com Collected By (print): Riley Eklund	Purchase Orde	er # :			DW PWS I	D#:			-											Bottles Intact YN NA Correct Bottles Y N NA
Collected By (signature): @:/	Quote #: 0011	.1458	od: Standard		DW Locatio	on Code:						· · · !								Sufficient Volume Y N NA Samples Received on Ice Y N NA
Eklund		ate Keyun	20: Stanuaru		[x]Yes	IV Packed o	in ice:		ass (G	- Ang										VOA - Headspace Acceptable Y N NA USDA Regulated Soils Y N NA
Sample Disposal: [x] Dispose as appropriate	Rush: (Expedit	te Charges	Apply) ext Day		Field Filter	ed (if applic	:able):		r Gla	Мег										Samples in Hozon's Tyme Y N NA Residual Chlotine Dresent Y N NA
[]Return	[] 2 Day [[] 3 Day	Ext Day			[*]100			o (d)	otal										Cl Strips: Sample pH Acceptable Y N NA
] Archive:	[]4 Day [[] 5 Day			Analysis: _				astic	יד ער		'								PH Strips:
* Matrix Codes (Insert in Matrix boy Product (P) Soil/Solid (SL) Oil (OL	x below): Drinkir	ng Water (DW), Ground	J Water (GV	N), Wastew	ater (WW),	,		pe: Pl	120 N										Lead Acetare Strips:
		Comp/	Collect	ted (or			Res	# of	er Tyl	(d										LAB USE ONLY: Lab Sample # / Comments:
Customer Sample ID	Matrix *	Grab	Composit	te Start)	Compos	site End	CI	Ctns	ntaine	astic										
		Crah	Date	Lime	Date	Time		<u> </u>	Ğ	ä	_	$\downarrow \downarrow$		$\left - \right $		 	_			
		Grah	4/29/2022	10:15 AN	. '			$\frac{1}{1}$	–	+ <u>×</u>	+	- 			├		–			
/ - 7A		Grah	4/25/2022	10:45 AM	.['	 '		+ + + + + + + + + + + + + + + + + + + +	–	+	+	+		$\left - \right $	├	–		- 		
:-/A 		Grab	4/25/2022	5-40 PM	. '		┼──	+	┼──		+	+			<u> </u>	┼──	┼──			
		Grab	4/21/2022	5.50 PM	. /	 '		+		<u>+</u> ˆ	+	++			├	┼──	–			
		Grah	4/21/2022	6-05 PM	<u> </u> '	 '		+	—	÷	+	+		├		┼	┢			
		Grab	4/21/2022	6.10 PM	<u> </u> '	 '	┼──	+		+	┼──	++	┝──┤	┝──┤	┝		┼──	- 		
F-1		Grab	A/27/2022	10:45 AM	¦!	<u> '</u>		+ 1		+	\vdash	++			├	+	┼──	+	\vdash	$\frac{OO}{\Lambda 7 2}$
		Grab	4/27/2022	10:55 AM	¦!	ł'	 	+		$+\frac{}{x}$	+	++			<u> </u>		╂───	+		
 F-3	SL	Grab	4/27/2022	11:05 AM	<u> </u>	<u> </u>		1	 	X	┼──	+-+				┼──		+		AUC I
Customer Remarks / Special Condit	tions / Possible /	Hazards:	Type of Ice !	Used:	Wet	Blue D	rv f	None		denner	Ish'	ORT HO	DS PF	RESENT	Г (<72	hours	<u>۲_</u> ۱۰	<u></u>	N/A	LAB Sample Temperature Info:
		1	Packing Mat	terial Used:				\bigcirc			Lab	Trackir	ig #.		<u> </u>		<u></u>			Temp Blank Received: Y N NA Therm ID#:
			Radchem sa	imple(s) scr	eened (<50	0 cpm):	Y N	NA			San F	nples re EDEX	ceived	l via: 5 Cl	lient	Couri	ier Pi	ace Cou	urier	Cooler 1 Themp Upon ReceiverOC Cooler 1 Therm Corr. Factor:OC Cooler 1 Corrected Temp:OC
Relinguished by/Company: (Signatu	Jre)	Date 5/2	/Time: /ZJ22 3.	20 PM	Received by	//Company:	: (Signa	iture)			<u></u>	Date/T	íime:			Tab	MTJL L ole #:	AB USE	ONLY	
Relinquished by/Company: (Signatu	Jre)	Date 51	/Time: 2/20)[m	Received by	//Company:	: (Signa 2	iture)	1,0	,		Date/T 5/3/	lime:	100	Y)	Ассі Теп	tnum: nplate:	:		Trip Blark Received: Y N NA HCL MeOH TSP Other
Relinquished by/Company: (Signatu	ure)	Date	//////////////////////////////////////		Received by	//Company	: (Signa	iture)	<u>57</u>		·	Date/T	lime:			Prel PM: PB:	login: :			Nor Conformance(s): Page: YES / NO of: Page

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Pace Analytical*	CH Submitting a s	HAIN-O sample via thi Conditior Chain-of-	F-CUSTODY s chain of custody c s found at: https:// Custody is a LEGA	/ Analy constitutes ac /info.pacelab AL DOCUM ¹	tical Red knowledgmen s.com/hubfs/p ENT - Comple	quest Do it and acceptan jas-standard-te ete all releva)CUM6 Ice of the i Irms.pdf Int fields	2 nt Pace Terms	and			LABU	SE ONL	.Y- Affi	ix Wor	korde M	r/Login I TJL Log-	abel He in Numb	re or l Der He	Ist Pace Workorder Number or re	5
Company: Tetra Tech			Billing Inform	ation: 21	211 Duranc	d Avenue, l	Jnion G	rove,		1			ALL B	OLD	OU	TLIN	ED AI	REAS	are	for LAB USE ONLY	
Address: 8413 Excelsior Dr #160, N	1adison, WI 537	'17	WI 53182							Lucia		Cor	ntainer	Preser	vative	Туре *	**		Lab I	Project Manager:	
Report To: Luke Specketer (luke.sp	ecketer@tetra	tech.com)	Email To: ssm	iolko@wr	n.com					0 ** Pre	servati	ve Types	s: (1) nitr	ric acid,	. (2) sulf	uric aci	id, (3) hyc	rochloric	acid, (4	4) sodium hydroxide, (5) zinc acetate,	
Copy To: Riley Eklund (riley.eklund	@tetratech.com	n)	Site Collection Grove, WI 53	n Info/Add 182	dress: 2121	1 Durand /	Avenue,	, Union		(6) me (C) am	thanol	, (7) sod m hydro	ium bisu xide, (D)	lfate, (l) TSP, (l	8) sodiu J) Unpr	m thio: eserved	sulfate, (9 I, (0) Oth) hexane, er	, (A) asc	corbic acid, (B) ammonium sulfate,	/
Customer Project Name/Number: 209-4221498			State: WI Cou]PT []MT [unty/City:	Union Gro	ve Time Zo	ne Colle	cted: [Analy	ses			1	Lab	Sample Receipt Checklist:	
Phone: 608-346-1677 Email: Iuke specketer@tetratech.com	Site/Facility ID	#: WM M	ercury Waste,	INC.	Compliand [x] Yes	ce Monitori [] No	ng?												Cust Coll Bott	cody Signatures Present Y L lector Signature Present Y cles Intact	N NA NA N NA
Collected By (print): Riley Eklund	Purchase Orde Quote #: 0011	er # : 1458			DW PWS I DW Locati	D #: ion Code:													Cori Suff Samr	rect Bottles ficient Volume oles Received on Ice	NNA NNA NNA
Collected By (signature): <i>Riley</i> Eklund	Turnaround Da	ate Requir	ed: Standard		Immediate [x]Yes	ely Packed ([] No	on Ice:		ss (G)	L IN			ъ.,						VOA USDA	- Headspace Acceptable Y	N NA N NA
Sample Disposal: [x] Dispose as appropriate [] Return [] Archive: [] Hold:	Rush: (Expedi [] Same D [] 2 Day [[] 4 Day [te Charges Day [] N [] 3 Day [] 5 Day	s Apply) ext Day		Field Filter [] Yes Analysis: _	red (if appli	cable):		stic (P) or Gla	IL Total Mer									Resi Cl S Samp pH S Sulf	Idual Chlorfie Present Y i Strips: Dle pH Acceptole Y i Strips: Fide Present Y	N NA N NA N NA
* Matrix Codes (Insert in Matrix bo Product (P) Soil/Solid (SL) Oil (OI	x below): Drinki	ng Water ir (AR). Tis	(DW), Ground V	Water (GV	N), Wastew	vater (WW)	,		pe: Pla	120 M									Lead	Acetato Strips:	-
Customer Sample ID	Matrix *	Comp/ Grab	Collecter Composite Date	d (or Start) Time	Compc Date	osite End	Res Cl	# of Ctns	Container Ty	Plastic (P)									LAD	Sample # / Comments:	
F-4	SL	Grab	4/27/2022	11:15 AM		1	+	1		x			[-	-					Ø		
F-4A	SL	Grab	4/27/2022	11:40 AM		1	1	1	1	x									0	uz	
F-5	SL	Grab	4/27/2022	1:15 PM		1	1	1		x									Õ	43	
F-5A	SL	Grab	4/27/2022	1:30 PM				1		x									Õ	44	
F-6	SL	Grab	4/27/2022	1:40 PM		1	-	1	1	x									A	15	
F-6A	SL	Grab	4/27/2022	1:50 PM		1		1		x									M	UG	
F-7	SL	Grab	4/27/2022	2:55 PM			1	1		x									\square	17	
F-7A	SL	Grab	4/27/2022	3:05 PM				1		X									D	18	
F-8	SL	Grab	4/27/2022	3:20 PM				1		x									O	L1a	
F-9	5L	Grab	4/27/2022	3:40 PM				1		. X									\mathbb{O}	50	
Customer Remarks / Special Condi	tions / Possible I	Hazards:	Type of Ice Us Packing Mate	sed: rial Used:	Wet	Blue D	ry I	None			SHC Lab	ORT HOL Trackin	DS PRE		(<72 h	ours) :	Y N	<u>N/A</u>		LAB Sample Temperature Info: Temp Blank Received: Y N Therm ID#: Cooler 1 Temp Upon Receipt Cooler 1 Therm Corr. Factor	A C C
Relinguished hv/Company: (Signat	ure)		Radchem sam	iple (s) scr	eened (<50)0 cpm):	Y N	NA ature)			FI	DEX	UPS	Clie	ent C	ourier	Pace (~	Cooler 1 Corrected Temp: Comments:	OC
US they	,	5/2	2/222 3:2	əpm		,, company	. (9.810									Table	#:				
Relinquished by/Company: (Signation of Company): (Sign	ure)	Date 5	e/Time: 3/22-10	Ø)		y/Company	/: (Signa	iture)	lel	1		Date/T	ime: JQ	100	Ø	Acctn Temp Prelog	um: late: gin:			Trip Blank Received: Y N N HCI MeOH TSP Other	A
Relinquished by/Company: (Signat	ure)	Date	e/Time:		Received b	γ/Company	/: (Signa	iture)				Date/T	ïme:			PM: PB:				Nor Conformance(s): Page: YES / NO of:	 Pao

Pace Analytical*	CH Submitting a s	IAIN-OF ample via this Condition Chain-of-(-CUSTOD s chain of custody s found at: https:/ Custody is a LEG	Y Analy constitutes ac /info.pacelabs AL DOCUME	tical Rec knowledgment com/hubfs/pa NT - Comple	uest Do and acceptant as-standard-ter te all relevar)CUM ce of the rms.pdf nt fields	ent Pace Terms	s and			LABUS	SE ON	LY- Afi	fix Wor	korder M	r/Login TJL Log	Label H -in Nun	lere or nber He	List Pace Workorder Number or ere
Company: Tetra Tech			Billing Inform	nation: 212	211 Durand	Avenue, U	Inion G	irove,				A	ALL E	BOLE) OU	TLIN	ED A	REAS	6 are	for LAB USE ONLY
Address: 8413 Excelsior Dr #160, N	ladison, WI 537	17										Con	itainer	Prese	rvative	Type *	k #		Lab	Project Manager:
Report To: Luke Specketer (luke.sp	ecketer@tetrat	tech.com)	Email To: ssn	10lko@wn	n.com					0 ** Pre	eservat	tive Types	: (1) ni	tric acid	l, (2) suli	furic aci	id, (3) hy	/drochlor	ric acid,	(4) sodium hydroxide, (5) zinc acetate,
Copy To: Riley Eklund (riley.eklund	@tetratech.com	a)	Site Collectio Grove, WI 5	n Info/Add 3182	dress: 2121	1 Durand A	venue	., Union		(6) m (C) an	ethano nmonii	ol, (7) sodi um hydrox	um bis xide, (D	ulfate, ()) TSP, ((8) sodiu U) Unpr	eserved	sulfate, I, (O) Ot	(9) hexan her	ie, (A) a:	scorbic acid, (B) ammonium sulfate,
Customer Project Name/Number:		**	State: WI Co	unty/City:	Union Gro	ve Time Zor	ne Colle	ected: [1	1	1 1		Anai	yses				Lab	Sample Receipt Checklist:
209-4221498	101 - 15 - 111 - 17		PT []MT	[x]CT [JET					-									Cus	stody Seals Present/Intact YN NA
Email:	Site/Facility ID	#: WM M	ercury Waste,	, INC.	Compliance [x] Yes	e Monitorii [] No	ng?											1	Cus Col	stody Signatures Present X N NA lector Signature Present Y N NA
uke.specketer@tetratech.com					014 0140				4										Bot	THES INTACT Y N NA
Collected By (print): Riley Eklund	Purchase Orde	21 # : 1458			DW PWS I	J #: on Codo:													Suf	ficient Volume Y N NA
Collected By (signature): Rilaw	Turnaround D	ate Requir	ed: Standard		Immediate	elv Packed (on Ice:		1 🚊					:					Sam VOP	nples Received on Ide Y N NA - Headspace Acceptable Y N NA
Eklund					[x]Yes	[] No			000	L S									USI	DA Regulated Spils Y N NA
Sample Disposal:	Rush: (Expedi	te Charges	Apply)		Field Filter	ed (if appli	cable):		Glas	erc									San	nples in Holding Time Y N NA Nidual Chloring Present Y N NA
[x] Dispose as appropriate	[] Same D	Jay []N	ext Day	1	[]Yes	[x]No			5	W									C1	Strips:
] Return	[] 2 Day [] 3 Day		ļ					(a)	ota			1						San	nple pH Acceptable Y N NA
] Hold:	[] 4 Day [] 5 Day			Analysis: _				stic									·	рл Sul	fide Present Y N NA
* Matrix Codes (Insert in Matrix bo	x below): Drinki	ng Water (DW), Ground	Water (GV	V), Wastew	ater (WW)	·		1 🖥	NO									Lea	d Acetite Strips:
Product (P), Soil/Solid (SL), Oil (Ol	.), Wipe (WP), A	ir (AR), Tis	sue (TS), Bioa	ssay (B), Va	apor (V), Ot	her (OT)			ype	12									LAF	USE ONLY:
	1	Comp /	Collecte	d (or	Compo	cito End	Res	# of	15	e e									Lab	Sample # / Comments:
Customer Sample ID	Matrix *	Grab	Composit	e Start)	Compo		CI	Ctns	tain	stic										/
			Date	Time	Date	Time		1	l G	Pla										
F-9A	SL	Grab	4/27/2022	3:45 PM				1	1	x									TC	051
G-1	SL	Grab	4/27/2022	8:15 AM				1		x	1								10	162
G-2	SL	Grab	4/27/2022	9:00 AM				1		x		+							Ŕ	053
G-3	SL	Grab	4/27/2022	9:10 AM			1	1		x									7	FU
G-4	SI	Grab	4/27/2022	9:20 AM			+	$+ \frac{-}{1}$		T v	+	++							-17	ET.
G-5		Grah	A/27/2022	0.30 AM			<u>+</u>	+		÷		++							\dashv	<u>5</u>
G-5		Grab	4/27/2022	9.30 AN			—			×										26
0-D	<u> </u>	Grab	4/2//2022	9:35 AM		<u> </u>				×										<u>b</u> /
G-7	SL	Grab	4/27/2022	9:45 AM		ļ	<u> </u>	1	<u> </u>	X	ļ								-C	<u>258</u>
G-8	SL	Grab	4/27/2022	10:00 AM				1		X									0	59
G-9	SL	Grab	4/27/2022	10:10 AM				1		X									IC	60 /
Customer Remarks / Special Condi	ions / Possible I	Hazards:	Type of Ice U	sed:	Wet	Blue D	ry	None			SHO	ORT HOL	DS PR	ESENT	(<72 h	ours) :	Y	N N//	4	TAB Sample Temperature Info:
			Packing Mate	erial Used:	<u>.</u> .			\bigcirc			Lab	Tracking	g #:						· · · · · · · · · · · · · · · · · · ·	Temp Blank Received: Y N NA Therm ID#:
			Radchem sar	nple(s) scr	eened (<50	0 cpm):	Y N	I NA	• • • •		San	nples rec EDEX	eived UPS	via: Cli	ent C	ourier	Pace	Courier		Cooler 1 Corrected Temp:OC Cooler 1 Corrected Temp:OC
Relinguished by/Company: (Signati	ure)	Date 5/2	/Time: 2/2022 3:	20 pm	Received by	//Company	: (Signa	ature)			<u>adorna</u>	Date/Ti	ime:			M Table	TJL LAB #:	USE ON	ILY	0/
Relinquished by/Company: (Signati Fedex	ıre)	Date 51	:/Time: 3/22_[[200	Received by	1/Company	: (Signa	iture)	ÂĞ	D		Date/Ti 5/3/	ime: 12	10	00	Acctn Temp Prelog	um: late: gin:	. ·		Trip Blank Received: Y N NA HCL MeOH TSP Other
Relinquished by/Company: (Signati	ıre)	Date	:/Time:	1	Received by	//Company	: (Signa	ature)				Date/Ti	ime:			PM: PB:	- 			Nor Conformance(s): Page: YES / NO of:

Pace Analytical*	CH Submitting a s	IAIN-OF ample via this Condition: Chain-of-C	F-CUSTOD s chain of custody s found at: https:/ Custody is a LEG	Y Analy constitutes ac /info.pacelabs AL DOCUM	tical Req knowledgment s.com/hubfs/pa ENT - Comple	uest Do and acceptanc s-standard-ter te all relevan	cum e of the ms.pdf t fields	E nt Pace Terms	and			LAB US	SE ON	LY- Affi	x Wo	orkorde N	er/Log MTJL L	in Labe og-in N	l Here d umber l	br List Pace Workorder Number or Here
Company: Tetra Tech	•		Billing Inform	nation: 212	211 Durand	Avenue, U	nion G	rove,				A		BOLD	OL	JTLI	NED	ARE/	AS are	e for LAB USE ONLY
Address: 8413 Excelsior Dr #160, N	nadison, Wi 537	1/										Con	tainer	Preser	vativ	е Туре	**		La	b Project Manager:
Report To: Luke Specketer (luke.sp	becketer@tetrat	tech.com)	Email To: ssr	nolko@wr	n.com					O ** Pre:	servat	ive Types:	: (1) ni	tric acid,	(2) su	ulfuric a	cid, (3)	hydroch	loric acio	d, (4) sodium hydroxide, (5) zinc acetate,
Copy To: Riley Eklund (riley.eklund	@tetratech.com	ו)	Site Collection Grove, WI 5	on Info/Add 3182	dress: 2121:	l Durand A	venue	, Union		(6) me (C) am	thano moniu	l, (7) sodiı ım hydrox	um bis cide, (E	ulfate, (8 0) TSP, (L	3) sod J) Unp	ium thi preserve	osulfat ed, (O)	e, (9) he: Other	ane, (A)	ascorbic acid, (B) ammonium sulfate,
Customer Project Name/Number:			State: WI Co	unty/City:	Union Grov	e Time Zor	e Colle	ected: [1		1 1		Analy	ses	[]		·	La La	ab Profile/Line:
209-4221498]PT []MT	[x]CT []ET														Cı	ustody Seals Present/Intact Y N/NA
Phone: 608-346-16// Email:	Site/Facility ID	#: WM M	ercury Waste	, INC.	Compliance [x]Yes	e Monitorii [] No	ng?												Ci Co Bo	ustody Signatures Present Y N NA ollector Signature Present N NA ottles Intact V N NA
uke.specketer@tetratech.com Collected By (print): Riley Eklund	Purchase Orde	er#:			DW PWS I)#:			-										Co	prrect Bottles Y N NA
	Quote #: 0011	1458			DW Locatio	on Code:				1.									ຣາ ຣະ	ufficient Volume Y N NA amples Received on Ice Y N NA
Collected By (signature): Riley	Turnaround Da	ate Requir	ed: Standard		Immediate	ly Packed o	n Ice:		(0	2						-			vo	DA - Headspace Acceptable Y N NA
Eklund Sampla Disposali	Ruch: /Evnodit	to Charger	Annly		[X]Yes	[]No	able		lass	LCU									Sa	amples in Holding Time Y N NA
a inpre Disposar. (x) Dispose as appropriate	Same D	ay [] N	ext Day		[]Yes	(n applic (x) No	ane):		sr G	Me									Re	esidual Chlorine Present Y N NA
] Return	[]2 Day [] 3 Day	1		1.00	[]0			(d	otal									Sa	ample pH Acceptable Y N NA
] Archive:	[] 4 Day [] 5 Day			Analysis: _				tic (Ĕ									pl	H Strips:
Matrix Codes (Insert in Matrix bo	v below): Drinki	ng Water (DW) Ground	Water (G)	l M) Wastew	ator (\\/\\/)			Plas	IW									Le	ead Acetate Strips:
Product (P), Soil/Solid (SL), Oil (Oi	L), Wipe (WP), A	ir (AR), Tis	sue (TS), Bioa	ssay (B), V	apor (V), Ot	her (OT)			/pe:	120				[T 2	AB USE ONLY:
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Customer Sample ID	Matrix *	Grab	Composit	e Start)	Compo	site End	С	Ctns	taint	stic										/
			Date	Time	Date	Time			Cont	Pla										
G-9A	SL	Grab	4/27/2022	10:15 AM				1		x									7	961
H-1	SL	Grab	4/26/2022	3:30 PM				1		X									1	KI
H-2	SL	Grab	4/26/2022	4:10 PM				1		X			_							963
H-3	SL	Grab	4/26/2022	4:20 PM				1		x									- 7	MEU
H-4	SL	Grab	4/26/2022	4:40 PM				1	1	x		++							-	N/F
		Grah	4/26/2022	5:00 PM															}	
u c		Grab	4/26/2022	5.00 T M																
n-o		Giab	4/20/2022	5.10 FW						. X									— Ç	\$
1-7		Grab	4/26/2022	5:20 PM				1		X									<u> </u> Γ	68
1-8	SL	Grab	4/26/2022	5:35 PM				1		X									_4	69
H-9	SL	Grab	4/26/2022	5:50 PM				1		X	-								(
Customer Remarks / Special Condi	itions / Possible I	Hazards:	Type of Ice L Packing Mat	Ised: erial Used:	Wet	Blue Di	$\sum_{i=1}^{N}$	None			SHC	ORT HOL	DS PR	ESENT	(<72-	hours)	r: Y	N	N/A	LAB Sample Temperature Info: — Temp Blank Received: Y N XA Therm ID#:
											-									Cooler 1 Temp Upon Receipt:oC
			Radchem sa	nple(s) scr	eened (<50	D cpm):	Y N	NA			San	ples rec	eived:	via:	ant .	Court	or Do		ior	Cooler 1 Corrected Temp
							10						UPS		ent	Courie	er Pa	ce cou	ier	Comments: (l)
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Relinquished by/Company: (Signat	ure)	Date 5	e/Time: 13/20	000		/Company	: (Signa	iture)	de	1		Date/Ti 5136	me: 22	100	C	Acct Tem Prel	num: plate: ogin:			Trip Blank Received: Y N NA HCL MeOH TSP Other
Relinquished by/Company: (Signat	:ure)	Date	e/Time:		Received by	/Company	: (Signa	iture)				Date/Ti	me:			PM: PB:				Non conformance(s): Page: YES / NO of:

Pace Analytical*	CH Submitting a s	IAIN-OF ample via this Condition Chain-of-(-CUSTOD chain of custody s found at: https:// Custody is a LEG	Y Analy constitutes ac //info.pacelabs GAL DOCUM	tical Rec knowledgment s.com/hubfs/pa ENT - Comple	JUEST DO and acceptand s-standard-ter te all relevar	cume ce of the f ms.pdf nt fields	ent Pace Terms	and			LAB USE	ONL	Y- Affi	ix Wo	rkorde N	r/Logir 1TJL Log	Label H -in Nun	lere or nber He	ere UDR44305
Company: Tetra Tech			Billing Inform	mation: 212	211 Durand	Avenue, U	nion G	rove,				AL	L B	OLD	OU	ITLIN	IED A	REAS	5 are	for LAB USE ONLY
Address: 8413 Excelsior Dr #160, N	ladison, WI 537	17	441 33102							CONTRACTOR .		Contai	ner f	Preser	vative	e Type	**		Lab	Project Manager:
Report To: Luke Specketer (luke.sp	ecketer@tetrat	ech.com)	Email To: ssi	m olko@w r	n.com					O ** Pres	ervat	ive Types: (1	.) nitri	ic acid,	, (2) su	Ifuric ad	id, (3) h	ydrochloi	ric acid,	(4) sodium hydroxide, (5) zinc acetate,
Copy To: Riley Eklund (riley.eklund	@tetratech.com	1)	Site Collectio Grove, WI 5	on Info/Add 3182	dress: 2121	1 Durand A	venue,	Union		(C) ami	moniu	ı, (7) sodium ım hydroxid	e, (D)	TSP, (I	8) sodi U) Unp	um thic reserve	d, (O) O	(9) hexar her	ie, (A) as	scorbic acid, (B) ammonium sulfate,
Customer Project Name/Number:			State: WI Co	ounty/City:	Union Grov	e Time Zor	ne Colle	cted: [<u> </u>	Analy	1		T	·	Lab	o Sample Receipt Checklist:
209-4221498 Phone: 608-346-1677					JEI Comuliana					-									Cus	stody Seals Present/Intact Y N/NA
Email:	Site/Facility ID	#: 99191 191	ercury waste	:, INC.	[x] Yes	[]No	ıgr												Col Bot	Llector Signature Present NNA tles Intact Y NNA
Collected By (print): Riley Eklund	Purchase Orde	er # :			DW PWS II	D #:			1										Cor	crect Bottles Y N NA
	Quote #: 0011	1458			DW Locati	on Code:													San	mples Received on Ice Y N NA
Collected By (signature): <i>Riley</i> Eklund	Turnaround Da	ate Requir	ed: Standard		Immediate [x] Yes	ly Packed o [] No	on ice:		ss (G)	N II									VOA USD	A - Headspace Acceptable Y N NA DA Regulated Soils Y N NA
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-1 .	SL	Grab	4/26/2022	10:25 AM				1		x									17	72
-2	SL	Grab	4/26/2022	2:00 PM				1		x									5	573
-3	SL	Grab	4/26/2022	2:25 PM				1		x		<u> </u>							1	574
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Customer Remarks / Special Condi	tions / Possible l	Hazards:	Type of Ice L Packing Mat	Jsed: :erial Used:	Wet	Blue D		Vone			SHC Lab	ORT HOLDS	PRE	SENT	(<72)	hours)		Ν̈́Ν/	A	LAB Sample Temperature Info: Temp Blank Received: Y N NA Therm ID#:
			Radchem sa	m ple(S) scr	eened (<50	0 cpm):	Y N	NA			Şarı F	nples recei EDEX I	ved v JPS	/ia: Clie	ent	Courie	r Pace	e Courie	r	Cooler 1 Temp Upon Receipt: oC Cooler 1 Therm Corr. Factor: oC Cooler 1 Corrected Temp: oC
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Pace Analytical*	CH Submitting a s	HAIN-OF sample via this Conditions Chain-of-C	-CUSTOD schain of custody s found at: https:/ Custody is a LEG	Y Analy constitutes act //info.pacelabs GAL DOCUME	t ical Rec mowledgment .com/hubfs/pa	uest Do and acceptanc s-standard-ten te all relevan	cume ce of the F ms.pdf t fields	ent Pace Terms	and			LAB USE	ONL	Y- Affi	x Work	order M	/Login FJL Log-	Label Ho in Num	ere or L ber Her	Ist Pace Warkorder Number or e UDRUYPO	5
Company: Tetra Tech			Billing Inform	nation: 212	11 Durand	Avenue, U	nion G	rove,		1		AI	LL B	OLD	OUI	LIN	ED A	REAS	are f	or LAB USE ONLY	
Address: 8413 Excelsior Dr #160, M	adison, WI 537	'17	WI 53182									Conta	iner	Preser	vative	Type *	*		Lab P	Project Manager:	
Report To: Luke Specketer (luke.sp	ecketer@tetra	tech.com)	Email To: ssi	molko@wn	n.com					1 ** Pres	ervati	ve Types: (1) nitr	ric acid,	(2) sulfi	uric aci	d, (3) hy	drochlori	c acid, (4) sodium hydroxide, (5) zinc acetate,	
Copy To: Riley Eklund (riley.eklund)	@tetratech.con	n) .	Site Collectio Grove, WI 5	on Info/Add 3182	lress: 2121	L Durand A	venue,	Union		(6) me (C) am	thanol moniu	, (7) sodiur m hydroxia	n bisu de, (D)	lfate, (8 TSP, (L	8) sodiur 1) Unpre	n thios served	ulfate, (9 , (0) Oth	9) hexane Ier	e, (A) asc	orbic acid, (B) ammonium sulfate, 	
Customer Project Name/Number:			State: WI Co	ounty/City:	Union Grov	e Time Zor	ne Colle	cted: [Analy	ses		<u> </u>	<u> </u>	Lab P	Yrofile/Line: Sample Receipt Checklist:	
209-4221498		4. 14/6.0 6.0]PT []MT	[x]CT []ET Compliant				r	-					`				Cust	ody Seals Present/Intact Y	N NA
mail:	Site/Facility ID) #: VVIVI IVI)	ercury waste	:, INC.	[x] Yes	[]No	ıgr												Cust Coll Bott	ector Signature Present I les Intact Y	N NA N NA
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			Packing Mat	terial Used:		Ũ	>				Lab	Tracking	#:							Temp Blank Received: Y M Therm ID#: Cooler 1 Temp Upon Receive	
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BG1L	1 lit	er cle	ar gla	ass				BF	2U 2	250	mL p	lastic	unpre	es		DC	39T	40 n	nL arr	ber N	la Th	io		JG	39U	9 oz	amb	er jar	unpre)S			
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Pace Analytical Services, LLC

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Pace Analytical Services, LLC

Qualtrax Document ID: 41307

DC#_Title: ENV-FRM-GBAY-0014 v02_SCUR Revision: 3 | Effective Date: | Issued by: Green Bay

Sample Condition Upon Receipt Form (SCUR) Project #: Client Name: Courier: CS Logistics N Fed Ex Client Pace Other: Tracking #: Other: Trans Blank Present: Other: Temp should be above freczing to Cr. Biological Tissue is Frozen: yes [n no Samples may be received at 5 0°C if shipped on Dry tee. Chain of Custody Preliquished: None Arise Materia: Web None Arise Materia: None Nata Cooler Temporature Other: Decord Materia: None <td col<="" th=""><th>Revision: 3 Effective Date: Issued by: Green Bay</th><th></th></td>	<th>Revision: 3 Effective Date: Issued by: Green Bay</th> <th></th>	Revision: 3 Effective Date: Issued by: Green Bay	
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Containers Intact: Yes Ino Filtered volume received for Dissolved tests IVes INo Avia 11.	-Pace IR Containers Used: Yes No Yes		
Filtered volume received for Dissolved tests DYes DNo ANA 11.	Containers Intact:	10.	
$\sum_{i=1}^{n} \sum_{j=1}^{n} \sum_{i=1}^{n} \sum_{i=1}^{n} \sum_{i=1}^{n} \sum_{j=1}^{n} \sum_{i=1}^{n} \sum_{i$	Filtered volume received for Dissolved tests	N/A 11.	
Sample Labels match COC:	Sample Labels match COC:	INA 12.028; "4:40PM" 513122-02	
-Includes date/time/ID/Analysis Matrix:	-Includes date/time/ID/Analysis Matrix: 3, W		
Trip Blank Present:	Trip Blank Present:	N/A 13.	
Trip Blank Custody Seals Present	Trip Blank Custody Seals Present	Ęn/a	
Pace Trip Blank Lot # (if purchased):	Pace Trip Blank Lot # (if purchased):		
Client Notification/ Resolution: If checked, see attached form for additional comments	Client Notification/ Resolution:	If checked, see attached form for additional comments	
Comments/ Resolution:	Comments/ Resolution:		

PM Review is documented electronically in LIMs. By releasing the project, the PM acknowledges they have reviewed the sample login

Page 5 of 5

Qualtrax Document ID: 41292

Pace Analytical Services, LLC

SIWP SAMPLING ANALYTICAL RESULTS



Pace Analytical Services, LLC 1241 Bellevue Street - Suite 9 Green Bay, WI 54302 (920)469-2436

June 07, 2022

Luke Specketer TETRATECH - Madison 8413 Excelsior Drive Madison, WI 53717

RE: Project: 209-4221563 WM MERCURY WASTE Pace Project No.: 40245578

Dear Luke Specketer:

Enclosed are the analytical results for sample(s) received by the laboratory on May 26, 2022. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

The test results provided in this final report were generated by each of the following laboratories within the Pace Network: • Pace Analytical Services - Green Bay

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Day Milery

Dan Milewsky dan.milewsky@pacelabs.com (920)469-2436 Project Manager

Enclosures





Pace Analytical Services, LLC 1241 Bellevue Street - Suite 9 Green Bay, WI 54302 (920)469-2436

CERTIFICATIONS

Project: 209-4221563 WM MERCURY WASTE

Pace Project No.: 40245578

Pace Analytical Services Green Bay

1241 Bellevue Street, Green Bay, WI 54302 Florida/NELAP Certification #: E87948 Illinois Certification #: 200050 Kentucky UST Certification #: 82 Louisiana Certification #: 04168 Minnesota Certification #: 055-999-334 New York Certification #: 12064 North Dakota Certification #: R-150 Virginia VELAP ID: 460263 South Carolina Certification #: 83006001 Texas Certification #: T104704529-14-1 Wisconsin Certification #: 405132750 Wisconsin DATCP Certification #: 105-444 USDA Soil Permit #: P330-16-00157 Federal Fish & Wildlife Permit #: LE51774A-0



SAMPLE SUMMARY

Project: 209-4221563 WM MERCURY WASTE

Pace Project No.: 4024

No.:	40245578	

Lab ID	Sample ID	Matrix	Date Collected	Date Received
40245578001	S1	Solid	05/24/22 11:00	05/26/22 10:15
40245578002	S2	Solid	05/24/22 11:30	05/26/22 10:15
40245578003	S3	Solid	05/24/22 11:50	05/26/22 10:15
40245578004	S4	Solid	05/24/22 12:45	05/26/22 10:15
40245578005	S5	Solid	05/24/22 13:10	05/26/22 10:15
40245578006	S6	Solid	05/24/22 13:30	05/26/22 10:15



SAMPLE ANALYTE COUNT

Project:209-4221563 WM MERCURY WASTEPace Project No.:40245578

Method	Analysts	Reported
EPA 7471	AJT	1
ASTM D2974-87	K1S	1
EPA 7471	AJT	1
ASTM D2974-87	K1S	1
EPA 7471	AJT	1
ASTM D2974-87	K1S	1
EPA 7471	AJT	1
ASTM D2974-87	K1S	1
EPA 7471	AJT	1
ASTM D2974-87	K1S	1
EPA 7471	AJT	1
ASTM D2974-87	K1S	1
	EPA 7471 ASTM D2974-87 EPA 7471 ASTM D2974-87 EPA 7471 ASTM D2974-87 EPA 7471 ASTM D2974-87 EPA 7471 ASTM D2974-87 EPA 7471 ASTM D2974-87	EPA 7471 AJT ASTM D2974-87 K1S EPA 7471 AJT

PASI-G = Pace Analytical Services - Green Bay



SUMMARY OF DETECTION

Project: 209-4221563 WM MERCURY WASTE

Pace Project No.: 40245578

Lab Sample ID	Client Sample ID					
Method	Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
40245578001	S1					
EPA 7471	Mercury	3.0	mg/kg	0.081	06/07/22 13:42	
ASTM D2974-87	Percent Moisture	17.0	%	0.10	05/27/22 09:19	
40245578002	S2					
EPA 7471	Mercury	1.1	mg/kg	0.046	06/07/22 13:19	
ASTM D2974-87	Percent Moisture	25.8	%	0.10	05/27/22 09:19	
40245578003	S3					
EPA 7471	Mercury	0.66	mg/kg	0.041	06/07/22 13:21	
ASTM D2974-87	Percent Moisture	15.6	%	0.10	05/27/22 09:19	
40245578004	S4					
EPA 7471	Mercury	753	mg/kg	39.6	06/07/22 13:44	
ASTM D2974-87	Percent Moisture	21.6	%	0.10	05/27/22 09:19	
40245578005	S5					
EPA 7471	Mercury	185	mg/kg	22.2	06/07/22 13:47	
ASTM D2974-87	Percent Moisture	21.3	%	0.10	05/27/22 09:19	
40245578006	S6					
EPA 7471	Mercury	1.9	mg/kg	0.039	06/07/22 13:39	
ASTM D2974-87	Percent Moisture	15.8	%	0.10	05/27/22 09:19	



Project: 209-4221563 WM MERCURY WASTE

40245578

Pace Project No.:

Sample: S1	Lab ID:	4024557800	1 Collected	1: 05/24/22	2 11:00	Received: 05/	/26/22 10:15 Ma	atrix: Solid	
Results reported on a "dry w	eight" basis and are	adjusted fo	r percent mo	oisture, sai	nple s	ize and any dilut	ions.		
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
7471 Mercury	Analytical I Pace Analy	Method: EPA /tical Service	. 7471 Prepar es - Green Bay	ation Meth	od: EP	A 7471			
Mercury	3.0	mg/kg	0.081	0.023	2	06/06/22 12:40	06/07/22 13:42	7439-97-6	
Percent Moisture	Analytical I Pace Analy	Method: AST /tical Service	M D2974-87 s - Green Bay	/					
Percent Moisture	17.0	%	0.10	0.10	1		05/27/22 09:19		



Project: 209-4221563 WM MERCURY WASTE

Pace Project No.: 40245578

Sample: S2	Lab ID: 4	40245578002	Collected:	05/24/22	11:30	Received: 05/2	26/22 10:15 Ma	atrix: Solid	
Results reported on a "dry weight"	basis and are	adjusted for p	percent moi	sture, san	nple siz	ze and any diluti	ons.		
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
7471 Mercury	Analytical M Pace Analy	Method: EPA 7	471 Prepara	ition Metho	d: EPA	7471			
Mercury	1.1	mg/kg	0.046	0.013	1	06/06/22 12:40	06/07/22 13:19	7439-97-6	
Percent Moisture	Analytical N	Method: ASTM	D2974-87						
	Pace Analy	tical Services	- Green Bay						
Percent Moisture	25.8	%	0.10	0.10	1		05/27/22 09:19		



Project: 209-4221563 WM MERCURY WASTE

40245578

Pace Project No.:

Sample: S3 Lab ID: 40245578003 Collected: 05/24/22 11:50 Received: 05/26/22 10:15 Matrix: Solid Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions. Parameters Results Units LOQ LOD DF Prepared Analyzed CAS No. Qual 7471 Mercury Analytical Method: EPA 7471 Preparation Method: EPA 7471 Pace Analytical Services - Green Bay 06/06/22 12:40 06/07/22 13:21 7439-97-6 Mercury 0.66 mg/kg 0.041 0.012 1 Analytical Method: ASTM D2974-87 **Percent Moisture** Pace Analytical Services - Green Bay Percent Moisture

15.6 % 0.10 0.10 1 05/27/22 09:19



Project: 209-4221563 WM MERCURY WASTE

21.6

%

40245578

Pace Project No.:

Percent Moisture

Sample: S4 Lab ID: 40245578004 Collected: 05/24/22 12:45 Received: 05/26/22 10:15 Matrix: Solid Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions. Parameters Results Units LOQ LOD DF Prepared Analyzed CAS No. Qual 7471 Mercury Analytical Method: EPA 7471 Preparation Method: EPA 7471 Pace Analytical Services - Green Bay 11.3 1000 06/06/22 12:40 06/07/22 13:44 7439-97-6 Mercury 753 mg/kg 39.6 Analytical Method: ASTM D2974-87 **Percent Moisture** Pace Analytical Services - Green Bay

0.10

0.10

1

05/27/22 09:19



Project: 209-4221563 WM MERCURY WASTE

40245578

Pace Project No.:

Sample: S5 Lab ID: 40245578005 Collected: 05/24/22 13:10 Received: 05/26/22 10:15 Matrix: Solid Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions. Parameters Results Units LOQ LOD DF Prepared Analyzed CAS No. Qual 7471 Mercury Analytical Method: EPA 7471 Preparation Method: EPA 7471 Pace Analytical Services - Green Bay 500 06/06/22 12:40 06/07/22 13:47 7439-97-6 Mercury 185 mg/kg 22.2 6.4 Analytical Method: ASTM D2974-87 **Percent Moisture** Pace Analytical Services - Green Bay Percent Moisture 21.3 % 0.10 0.10 1 05/27/22 09:19



Project: 209-4221563 WM MERCURY WASTE

40245578

Pace Project No.:

Sample: S6	Lab ID:	4024557800	6 Collected	I: 05/24/22	2 13:30	Received: 05/	26/22 10:15 Ma	atrix: Solid	
Results reported on a "dry we	eight" basis and are	adjusted fo	r percent mo	isture, saı	nple si	ize and any diluti	ons.		
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
7471 Mercury	Analytical I Pace Analy	Method: EPA /tical Service:	7471 Prepar s - Green Bay	ation Meth	od: EP/	A 7471			
Mercury	1.9	mg/kg	0.039	0.011	1	06/06/22 12:40	06/07/22 13:39	7439-97-6	
Percent Moisture	Analytical I Pace Analy	Method: ASTI /tical Service:	M D2974-87 s - Green Bay	,					
Percent Moisture	15.8	%	0.10	0.10	1		05/27/22 09:19		



QUALITY CONTROL DATA

Project:	209-4221563 WM I	MERCURY WAS	TE									
Pace Project No.:	40245578											
QC Batch:	417512		Anal	ysis Metho	d:	EPA 7471						
QC Batch Method:	EPA 7471		Analy	ysis Descri	ption:	7471 Mercu	ry					
			Labo	oratory:		Pace Analyt	ical Service	es - Green	Bay			
Associated Lab San	nples: 402455780	001, 4024557800	2, 4024557	78003, 402	45578004,	402455780	05, 402455	78006				
METHOD BLANK:	2404330			Matrix: So	olid							
Associated Lab San	nples: 402455780	01, 4024557800	2, 4024557	78003, 402	45578004,	402455780	05, 402455	78006				
			Blai	nk	Reporting							
Paran	neter	Units	Res	ult	Limit	Anal	/zed	Qualifier	S			
Mercury		mg/kg		<0.010	0.03	35 06/07/2	2 12:30					
LABORATORY COM	NTROL SAMPLE:	2404331										
			Spike	LC	s	LCS	% R	ec				
Paran	neter	Units	Conc.	Res	sult	% Rec	Limi	ts	Qualifiers			
Mercury		mg/kg	0.8	33	0.81	98	8 8	35-115		_		
MATRIX SPIKE & N	IATRIX SPIKE DUPI	_ICATE: 2404	332		240433	3						
		40245001012	MS	MSD Spike	MS	MOD	MC	MOD	% Boo		Mox	
Parameter	· Units	Result	Conc.	Conc.	Result	Result	% Rec	% Rec	Limits	RPD	RPD	Qual
Mercury	mg/kg	0.065	0.93	0.92	0.97	0.99	98	101	85-115	2	20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.



QUALITY CONTROL DATA

Project: Pace Project No.:	209-4221563 WM N 40245578	IERCURY WAST	E					
QC Batch:	416892		Analysis Meth	od:	ASTM D2974-8	37		
QC Batch Method:	ASTM D2974-87		Analysis Desc	ription:	Dry Weight/Per	cent Moist	ure	
			Laboratory:		Pace Analytical	Services -	- Green B	ay
Associated Lab Sar	mples: 4024557800	01, 40245578002	, 40245578003, 40	245578004,	40245578005,	40245578	006	
SAMPLE DUPLICA	TE: 2400643							
			40245496001	Dup		Ν	lax	
Parar	meter	Units	Result	Result	RPD	R	PD	Qualifiers
Percent Moisture		%	5.2	5	.2	1	10	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.



QUALIFIERS

Project: 209-4221563 WM MERCURY WASTE

Pace Project No.: 40245578

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above LOD.

J - Estimated concentration at or above the LOD and below the LOQ.

LOD - Limit of Detection adjusted for dilution factor, percent moisture, initial weight and final volume.

LOQ - Limit of Quantitation adjusted for dilution factor, percent moisture, initial weight and final volume.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected at or above the adjusted LOD.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.



QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 209-4221563 WM MERCURY WASTE

Pace Project No.: 40245578

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
40245578001	S1	EPA 7471	417512	 EPA 7471	417539
40245578002	S2	EPA 7471	417512	EPA 7471	417539
40245578003	S3	EPA 7471	417512	EPA 7471	417539
40245578004	S4	EPA 7471	417512	EPA 7471	417539
40245578005	S5	EPA 7471	417512	EPA 7471	417539
40245578006	S6	EPA 7471	417512	EPA 7471	417539
40245578001	S1	ASTM D2974-87	416892		
40245578002	S2	ASTM D2974-87	416892		
40245578003	S3	ASTM D2974-87	416892		
40245578004	S4	ASTM D2974-87	416892		
40245578005	S5	ASTM D2974-87	416892		
40245578006	S6	ASTM D2974-87	416892		

																				HQU	1551
Pace Analytical*	CF Submitting a s	IAIN-OF ample via this Conditions	chain of custody of found at: https://	Y Analy constitutes ac /info.pacelab	rtical Rec cknowledgment s.com/hubfs/pa	and acceptance is-standard-ten	CUME :e of the P ms.pdf t fields	ent Pace Terms	and			LAB US	SE ONLY	- Affix	Worko	rder/Lc MTJL	ogin Lal Log-in	bel Hei Numb	re or Lis er Here	st Pace Workorder Number ?	r or
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Address: 8413 Excelsior Dr #160. M	adison, WI 537	17	WI 53182					-,			1910100	H				LINEL		-731			
anart Tau Luka Crashatar (hut	alkatan Ot-t		Con ell Tour										tainer P	reserv	ative Ty	/pe **	<u> </u>	1	Lab Pr	roject Manager:	
report to: Luke Specketer (luke.sp	ecketer@tetra	tecn.com)	Email 10: SSR	1101K0@W	m.com					** Pres	ı servati	ive Types:	: (1) nitric	c acid, (2) sulfuri	ic acid, (:	3) hydro	chloric a	acid, (4)	sodium hydroxide, (5) zinc ace	tate,
Copy To: Riley Eklund (riley.eklund)	@tetratech.con	1)	Site Collectio Grove, WI 53	on Info/Ad 3182	dress: 2121	1 Durand A	\venue,	, Union		(6) me (C) ami	thanoi moniu	l, (7) sodiı ım hydrox	um bisult (ide, (D) 1	fate, (8) TSP, (U)) sodium Unprese	thiosulfa erved, (C	ate, (9))) Other	hexane,	(A) asco	orbic acid, (B) ammonium sulfat	e,
Customer Project Name/Number:			State: WI Co	unty/City:	Union Gro	ve Time Zoı	ne Colle	cted: [┣		 	'	Analys	<u></u>			T	Lab S	Sample Receipt Checkli	ist:
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;3	SL	Grab	5/24/2022	11:50	-	1	+	1	1	x	†						-	1	10	03	
4	SL	Grab	5/24/2022	12:45	1	1	\uparrow	1	+	x	\square	++						+	1ð	04	
5	SL	Grab	5/24/2022	13:10	1	1	1-	1	+	x	1-	+						+	TO.	05	
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Pace Analytical Services, LLC

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Sample Co	ondition Up	on Receipt Form (SCL	JR)
The The		Project #:	
Client Name: <u>letralech</u>	<u></u>	MC)#:40245578
Courier: CS Logistics Eed Ex Speedee		Waltco	
Client Pace Other:			
Tracking #: 2735 34249	043	4024	
Custody Seal on Cooler/Box Present: yes	Ko Seals intac	t: ∏ yes ∏ no ⊥	
Custody Seal on Samples Present: Tyes Kno	o Seals intac	t: 🔽 yes 🔽 no	
Packing Material: TBubble Wrap TBubble	Bags XNo	ne Other	
Thermometer Used <u>SR - 111</u> T	ype of Ice: (We	Blue Dry None X Sa	mples on ice, cooling process has begun
Cooler Lemperature Uncorr: //Corr:			Person examining contents:
Temp Blank Present: yes no	Biological	Tissue is Frozen: ☐ yes	no Date: 5/26/2 Pritials:
Biota Samples may be received at < 0°C if shipped on Dry Ic	<u>ce.</u>	·	Labeled By Initials:
Chain of Custody Present:	Kes []No []N/4	1.	
Chain of Custody Filled Out: 51201267		2. 19#-512612	Lup
Chain of Custody Relinquished:	Xyes ⊡No ⊡N/#	3.	
Sampler Name & Signature on COC:		4.	
Samples Arrived within Hold Time:	Xyes □No	5.	
- VOA Samples frozen upon receipt	∃Yes □No	Date/Time:	
Short Hold Time Analysis (<72hr):	Yes XNo	6.	
Rush Turn Around Time Requested:	TYes XNo	7	
Sufficient Volume:		8	
For Analysis: 🖄 🖉 🗆 No MS/MSD 🗆			
Correct Containers Used:		0	
-Pace Containers Llead		5.	
Page IB Containers Used:			
		· · · · · · · · · · · · · · · · · · ·	
Filtered volume reasilied for Direct and a		10.	
Semale Lehale and Leha	JYes ∐No ⊅SN/A	11	
	Xes LINo ⊡N/A	12.	
-Includes date/time/ID/Analysis Matrix:			
Trip Blank Present:]Yes □No XN/A	13.	
Irip Blank Custody Seals Present	IYes INO XINA		
Pace Trip Blank Lot # (if purchased):			
Person Contacted:	Date	If checked, se	e attached form for additional comments
Comments/ Resolution:			·

PM Review is documented electronically in LIMs. By releasing the project, the PM acknowledges they have reviewed the sample login

Qualtrax Document ID: 41292

Pace Analytical Services, LLC

Page



Pace Analytical Services, LLC 1241 Bellevue Street - Suite 9 Green Bay, WI 54302 (920)469-2436

June 07, 2022

Luke Specketer TETRATECH - Madison 8413 Excelsior Drive Madison, WI 53717

RE: Project: 209-4221563 WM MERCURY WASTE Pace Project No.: 40245577

Dear Luke Specketer:

Enclosed are the analytical results for sample(s) received by the laboratory on May 26, 2022. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

The test results provided in this final report were generated by each of the following laboratories within the Pace Network: • Pace Analytical Services - Green Bay

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Day Milery

Dan Milewsky dan.milewsky@pacelabs.com (920)469-2436 Project Manager

Enclosures





Pace Analytical Services, LLC 1241 Bellevue Street - Suite 9 Green Bay, WI 54302 (920)469-2436

CERTIFICATIONS

Project: 209-4221563 WM MERCURY WASTE

Pace Project No.: 40245577

Pace Analytical Services Green Bay

1241 Bellevue Street, Green Bay, WI 54302 Florida/NELAP Certification #: E87948 Illinois Certification #: 200050 Kentucky UST Certification #: 82 Louisiana Certification #: 04168 Minnesota Certification #: 055-999-334 New York Certification #: 12064 North Dakota Certification #: R-150 Virginia VELAP ID: 460263 South Carolina Certification #: 83006001 Texas Certification #: T104704529-14-1 Wisconsin Certification #: 405132750 Wisconsin DATCP Certification #: 105-444 USDA Soil Permit #: P330-16-00157 Federal Fish & Wildlife Permit #: LE51774A-0



SAMPLE SUMMARY

Project: 209-4221563 WM MERCURY WASTE

Pace Project No.: 402

lo.:	40245577	

Lab ID	Sample ID	Matrix	Date Collected	Date Received
40245577001	S1A	Solid	05/24/22 11:15	05/26/22 10:15
40245577002	S2A	Solid	05/24/22 11:40	05/26/22 10:15
40245577003	S3A	Solid	05/24/22 12:00	05/26/22 10:15
40245577004	S4A	Solid	05/24/22 13:00	05/26/22 10:15
40245577005	S5A	Solid	05/24/22 13:20	05/26/22 10:15
40245577006	S6A	Solid	05/24/22 13:45	05/26/22 10:15


SAMPLE ANALYTE COUNT

 Project:
 209-4221563 WM MERCURY WASTE

 Pace Project No.:
 40245577

Lab ID	Sample ID	Method	Analysts	Analytes Reported
40245577001	S1A	EPA 7471	AJT	1
		ASTM D2974-87	K1S	1
40245577002	S2A	EPA 7471	AJT	1
		ASTM D2974-87	K1S	1
40245577003	S3A	EPA 7471	AJT	1
		ASTM D2974-87	K1S	1
40245577004	S4A	EPA 7471	AJT	1
		ASTM D2974-87	K1S	1
40245577005	S5A	EPA 7471	AJT	1
		ASTM D2974-87	K1S	1
40245577006	S6A	EPA 7471	AJT	1
		ASTM D2974-87	K1S	1

PASI-G = Pace Analytical Services - Green Bay



SUMMARY OF DETECTION

Project: 209-4221563 WM MERCURY WASTE

Pace Project No.: 40245577

Lab Sample ID	Client Sample ID					
Method	Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
40245577001	S1A					
EPA 7471	Mercury	0.53	mg/kg	0.039	06/07/22 13:00	
ASTM D2974-87	Percent Moisture	19.0	%	0.10	05/27/22 09:18	
40245577002	S2A					
EPA 7471	Mercury	0.16	mg/kg	0.046	06/07/22 13:02	
ASTM D2974-87	Percent Moisture	25.3	%	0.10	05/27/22 09:18	
40245577003	S3A					
EPA 7471	Mercury	0.49	mg/kg	0.039	06/07/22 13:05	
ASTM D2974-87	Percent Moisture	17.4	%	0.10	05/27/22 09:19	
40245577004	S4A					
EPA 7471	Mercury	0.051	mg/kg	0.044	06/07/22 13:12	
ASTM D2974-87	Percent Moisture	20.7	%	0.10	05/27/22 09:19	
40245577005	S5A					
EPA 7471	Mercury	0.89	mg/kg	0.040	06/07/22 13:14	
ASTM D2974-87	Percent Moisture	15.4	%	0.10	05/27/22 09:19	
40245577006	S6A					
EPA 7471	Mercury	0.036J	mg/kg	0.040	06/07/22 13:16	
ASTM D2974-87	Percent Moisture	14.5	%	0.10	05/27/22 09:19	



Project: 209-4221563 WM MERCURY WASTE

40245577

Pace Project No.:

Sample: S1A	Lab ID:	4024557700	1 Collected	l: 05/24/22	2 11:15	Received: 05/	26/22 10:15 Ma	atrix: Solid	
Results reported on a "dry weig	ght" basis and are	adjusted fo	r percent mo	isture, sar	nple si	ize and any diluti	ons.		
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
7471 Mercury	Analytical I Pace Analy	Method: EPA /tical Service	7471 Prepar s - Green Bay	ation Meth	od: EP/	A 7471			
Mercury	0.53	mg/kg	0.039	0.011	1	06/06/22 12:40	06/07/22 13:00	7439-97-6	
Percent Moisture	Analytical I Pace Analy	Method: AST /tical Service	M D2974-87 s - Green Bay	,					
Percent Moisture	19.0	%	0.10	0.10	1		05/27/22 09:18		



Project: 209-4221563 WM MERCURY WASTE

40245577

Pace Project No.:

Sample: S2A	Lab ID: 4	40245577002	Collected	l: 05/24/22	2 11:40	Received: 05/	26/22 10:15 Ma	atrix: Solid	
Results reported on a "dry v	veight" basis and are	adjusted for	percent mo	isture, sar	nple si	ize and any diluti	ons.		
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
7471 Mercury	Analytical M	/lethod: EPA 7	471 Prepar	ation Meth	od: EP/	A 7471			
	Pace Analy	tical Services	- Green Bay	/					
Mercury	0.16	mg/kg	0.046	0.013	1	06/06/22 12:40	06/07/22 13:02	7439-97-6	
Percent Moisture	Analytical M	lethod: ASTM	I D2974-87						
	Pace Analy	tical Services	- Green Bay	/					
Percent Moisture	25.3	%	0.10	0.10	1		05/27/22 09:18		



Project: 209-4221563 WM MERCURY WASTE

40245577

Pace Project No.:

Sample: S3A	Lab ID:	40245577003	Collected	d: 05/24/22	2 12:00	Received: 05/	26/22 10:15 Ma	atrix: Solid	
Results reported on a "dry weig	ht" basis and are	adjusted for	percent mo	oisture, sai	nple si	ze and any diluti	ons.		
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
7471 Mercury	Analytical Pace Analy	Method: EPA 7 ytical Services	'471 Prepar - Green Bay	ation Meth	od: EP/	A 7471			
Mercury	0.49	mg/kg	0.039	0.011	1	06/06/22 12:40	06/07/22 13:05	7439-97-6	
Percent Moisture	Analytical Pace Analy	Method: ASTM ytical Services	l D2974-87 - Green Bay	/					
Percent Moisture	17.4	%	0.10	0.10	1		05/27/22 09:19		



Project: 209-4221563 WM MERCURY WASTE

40245577

Pace Project No.:

Sample: S4A	Lab ID:	40245577004	Collected	d: 05/24/22	13:00	Received: 05/	26/22 10:15 Ma	atrix: Solid	
Results reported on a "dry weight	" basis and are	adjusted for	percent mo	oisture, san	nple si	ize and any diluti	ons.		
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
7471 Mercury	Analytical Pace Anal	Method: EPA 7	471 Prepar - Green Bay	ation Metho	od: EP/	A 7471			
Mercury	0.051	mg/kg	0.044	0.012	1	06/06/22 12:40	06/07/22 13:12	7439-97-6	
Percent Moisture	Analytical Pace Anal	Method: ASTM	D2974-87 - Green Bay	/					
Percent Moisture	20.7	%	0.10	0.10	1		05/27/22 09:19		



Project: 209-4221563 WM MERCURY WASTE

40245577

Pace Project No.:

Sample: S5A	Lab ID: 4	40245577005	Collected	: 05/24/22	2 13:20	Received: 05/	26/22 10:15 Ma	atrix: Solid	
Results reported on a "dry weig	ght" basis and are	adjusted for	percent mo	isture, saı	nple si	ize and any diluti	ons.		
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
7471 Mercury	Analytical M Pace Analy	/lethod: EPA 7 tical Services	7471 Prepar - Green Bay	ation Meth	od: EP/	A 7471			
Mercury	0.89	mg/kg	0.040	0.011	1	06/06/22 12:40	06/07/22 13:14	7439-97-6	
Percent Moisture	Analytical M Pace Analy	/lethod: ASTM tical Services	1 D2974-87 - Green Bay	,					
Percent Moisture	15.4	%	0.10	0.10	1		05/27/22 09:19		



Project: 209-4221563 WM MERCURY WASTE

Pace Project No.: 40245577

Sample: S6A	Lab ID: 4	10245577006	Collected:	05/24/22	13:45	Received: 05/2	26/22 10:15 Ma	trix: Solid	
Results reported on a "dry weight" b	asis and are	adjusted for p	percent moi	sture, san	nple siz	ze and any diluti	ons.		
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
7471 Mercury	Analytical N Pace Analy	/lethod: EPA 74 tical Services -	471 Prepara - Green Bay	tion Metho	od: EPA	7471			
Mercury	0.036J	mg/kg	0.040	0.011	1	06/06/22 12:40	06/07/22 13:16	7439-97-6	
Percent Moisture	Analytical N Pace Analy	/lethod: ASTM tical Services -	D2974-87 - Green Bay						
Percent Moisture	14.5	%	0.10	0.10	1		05/27/22 09:19		



QUALITY CONTROL DATA

Project: 209-422	1563 WM MERCU	JRY WASTE										
Pace Project No.: 4024557	77											
QC Batch: 417512	2		Analys	is Method	1:	EPA 7471						
QC Batch Method: EPA 74	171		Analys	is Descrip	otion:	7471 Mercu	ry					
			Labora	atory:		Pace Analyti	cal Service	es - Green	Bay			
Associated Lab Samples:	40245577001, 402	245577002, 4	40245577	003, 4024	15577004,	4024557700	05, 402455	77006				
METHOD BLANK: 2404330)		Ν	Aatrix: So	lid							
Associated Lab Samples:	40245577001, 402	245577002, 4	40245577	003, 4024	15577004,	4024557700	05, 402455	77006				
			Blank	: F	Reporting							
Parameter	L	Jnits	Resul	t	Limit	Analy	zed	Qualifier	S			
Mercury	r	ng/kg	<(0.010	0.03	5 06/07/22	2 12:30					
LABORATORY CONTROL SA	AMPLE: 240433	31										
			Spike	LC	S	LCS	% Re	ec				
Parameter	L	Jnits	Conc.	Res	ult	% Rec	Limit	s (Qualifiers	_		
Mercury	m	ng/kg	0.83		0.81	98	8 8	5-115				
MATRIX SPIKE & MATRIX S	PIKE DUPLICATE	: 2404332	2		2404333	3						
	40045	004040	MS	MSD	MO	MOD	MC	MOD	0/ Dee		Mair	
Parameter	40245 Units R	esult C	ріке onc.	Spike Conc.	Result	Result	MS % Rec	% Rec	% Rec Limits	RPD	RPD	Qual
Mercury	mg/kg	0.065	0.93	0.92	0.97	0.99	98	101	85-115	2	20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.



QUALITY CONTROL DATA

Project: Pace Project No.:	209-4221563 WM N 40245577	IERCURY WAST	Ē					
QC Batch:	416892		Analysis Meth	od:	ASTM D2974-87			
QC Batch Method:	ASTM D2974-87		Analysis Desc	ription:	Dry Weight/Perce	ent Moisture		
			Laboratory:		Pace Analytical S	Services - Gre	een Bay	
Associated Lab Sar	nples: 402455770	01, 40245577002	2, 40245577003, 40	245577004,	40245577005, 4	0245577006		
SAMPLE DUPLICA	TE: 2400643							
			40245496001	Dup		Max		
Parar	neter	Units	Result	Result	RPD	RPD	Qualifiers	
Percent Moisture		%	5.2	5	.2	1	10	_

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.



QUALIFIERS

Project: 209-4221563 WM MERCURY WASTE

Pace Project No.: 40245577

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above LOD.

J - Estimated concentration at or above the LOD and below the LOQ.

LOD - Limit of Detection adjusted for dilution factor, percent moisture, initial weight and final volume.

LOQ - Limit of Quantitation adjusted for dilution factor, percent moisture, initial weight and final volume.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected at or above the adjusted LOD.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.



QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 209-4221563 WM MERCURY WASTE

Pace Project No.: 40245577

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
40245577001		EPA 7471	417512	 EPA 7471	417539
40245577002	S2A	EPA 7471	417512	EPA 7471	417539
40245577003	S3A	EPA 7471	417512	EPA 7471	417539
40245577004	S4A	EPA 7471	417512	EPA 7471	417539
40245577005	S5A	EPA 7471	417512	EPA 7471	417539
40245577006	S6A	EPA 7471	417512	EPA 7471	417539
40245577001	S1A	ASTM D2974-87	416892		
40245577002	S2A	ASTM D2974-87	416892		
40245577003	S3A	ASTM D2974-87	416892		
40245577004	S4A	ASTM D2974-87	416892		
40245577005	S5A	ASTM D2974-87	416892		
40245577006	S6A	ASTM D2974-87	416892		

Pace Analytical*	CH Submitting a sa	IAIN-OF ample via this Conditions Chain-of-C	F-CUSTOD' ; chain of custody (; found at: https:// ; ustody is a LEG.	Y Analy constitutes ac /info.pacelabs AL DOCUMI	tical Req knowledgment s.com/hubfs/pa ENT - Comple	uest Do and acceptanc s-standard-terr :e all relevan	CUME :e of the P ms.pdf t fields	ent 'ace Terms	and			LAB US	EONLI	r- Affi	k Worl	korder M	/Login TJL Log	Label -in Nu	I Here or List Pace Workorder Number or umber Here
Company: Tetra Tech			Billing Inform	nation: 212	211 Durand	Avenue, U	nion G	rove,		1		· . A	LL BO	OLD	OU	TLIN	ED A	REA	AS are for LAB USE ONLY
Address: 8413 Excelsior Dr #160, M	ladison, WI 537	17	WI 53182									Cont	ainer P	reserv	/ative	Type *	*		Lab Project Manager:
Report To: Luke Specketer (luke.sp	ecketer@tetrat	ech.com)	Email To: s sn	nolko@wr	n.com					U ** Pres	servativ	e Types:	(1) nitri	c acid,	(2) sulf	uric aci	d, (3) hy	drochle	loric acid, (4) sodium hydroxide, (5) zinc acetate,
Copy To: Riley Eklund (riley.eklund	@tetratech.com	1)	Site Collectic Grove, WI 53	on Info/Ad 3182	dress: 2121	1 Durand A	wenue,	, Union		(6) me (C) am	thanol, moniun	(7) sodiu hydrox	im bisul ide, (D)	TSP, (U	sodiu Unpre	eserved	sulfate, i I, (O) Oti	(9) hexa her	xane, (A) ascorbic acid, (B) ammonium sulfate,
Customer Project Name/Number: 209-4221563			State: WI Co]PT []MT	unty/City: [x]CT [Union Grov]ET	r e Time Zor	ne Colle	cted: [<u> </u>	Analys		T			Lab Sample Receipt Checklist
Phone: 608-346-1677 Email: luke.specketer@tetratech.com	Site/Facility ID	#: WM M	ercury Waste	, INC.	Complianc [x]Yes	e Monitoriı [] No	ng?												Custody Signatures Present Y NA Collector Signature Present Y NA Bottle Intact Y N NA
Collected By (print): Riley Eklund	Purchase Orde Quote #:	er # : 95794	47		DW PWS II DW Locatio) #: on Code:			1										Correct Bottles Y N NA Sufficient Volume Y N NA Samples Received on Ice Y N NA
Collected By (signature): <i>Riley</i> Ekland	Turnaround Da	ate Requir	ed: Standard		Immediate [x]Yes	ly Packed ([] No	on Ice:		(D) 25E	cury									VOA - Headspace Acceptable Y N NA USDA Regulated Soils Y N NA Samples in Holding Time Y N NA
ample Disposal: x] Dispose as appropriate] Return] Archive:	Rush: (Expedit []Same D []2 Day [[]4 Day [te Charges ay [] N] 3 Day] 5 Dav	s Apply) ext Day		Field Filter	ed (if applic [x]No	cable):		ic (P) or Gl	Total Men									Residual Chlorine Present Y N NA Cl Strips: Sample pH Acceptable Y N NA pH Strips:
Hold: Matrix Codes (Insert in Matrix bo: Product (P), Soil/Solid (SL) Oil (OI	L	ng Water (r (AR) Tie	DW), Ground	Water (G)	W), Wastew	ater (WW),	•		pe: Plast	120 ML									Sulfide Present Y N NA Lead Acetate Strips:
Customer Sample ID	Matrix *	Comp / Grab	Collecte Composit Date	ed (or e Start) Time	Compo Date	site End	Res Cl	# of Ctns	Container Ty	Plastic (P)									LAD USL UNLI: Lab Sample # / Comments:
51A	SL	Grab	5/24/2022	11:15			\vdash	1	⊢	x			$\neg \uparrow$	-+			-+	-+	-00/
2A	SL	Grab	5/24/2022	11:40			1	1	1	x					-+		+		002
3A	SL	Grab	5/24/2022	12:00		<u> </u>	1	1		x			-+		$\neg \uparrow$				002
4A	5L	Grab	5/24/2022	13:00				1		x					T	-	\uparrow		004-
5A	SL	Grab	5/24/2022	13:20				1	1	x			-+		\neg			$\neg \uparrow$	005
i6A	SL	Grab	5/24/2022	13:45				1		x									006
							<u> </u>	+	+				-		-	-	-	-	
																_	\pm		
				96400/10 × 1															0
Customer Remarks / Special Condi	tions / Possible	Hazards:	Type of Ice t Packing Mat	Jsed: erial Used	Wet :	Blue D	ny	None		_	SHO Lab	RT HOL Tracking	DS PRE	SENT	(<72 h	iours)	50 50	212	N/A 7 HAB Sample Temperature Info: Temp Blank Received: N N NA 7 There ID#:
			Radchem sa	mple(s) sc	reened (<50	0 cpm):	Y N	NA			Sam FE	ples rec DEX	ceived v	via: Clie	ent (Courie	r Pace	:Couri	Cooler 1 Norm Corr. Factor:od Cooler 1 Corrected Temp:od terComments:
Relinquished by/Company: (Signat	ure)	Date S/	e/Time: 25/wil	9:25 Ar	Received b	y/Company	/: (Signa	ature)				Date/Ti	ime:		<u></u>	M Table	TJL LAI #:	3 USE (
Kellinguished by/Company: (Signat	ecex	Dati 5	e/Time: [<u> 24</u>]2	0;15 22	Received b		y; (Signa T]p	bee	,	Date/T	^{، ۱me:} 24/	0:1 ZZ	5	TAcctr Temp Prelo	num: plate: gin:		Trip Blank Received: YNN NA HCL MeOH TSP Other
Relinquished by/Company: (Signature) Date/Time: Received by/Company: (Signature)			ature)	- ,	,		Date/T	ime:			PM: PB;			Non Conformance(s): Page: YES / NO of: Pag					

1

DC#_Title: ENV-FRM-GBAY-0035 v01_Sample Preservation Receipt Form Revision: 3 | Effective Date: | Issued by: Green Bay

Clie	nt All	Nar	ne:		e +	ervati	小 のn ha	e ve be	en chi	ecked	and n	S oted t	Sam - pelow:	I ple □Ye	e Pr Pro	ese ojec □№	e rva st #			ece	ipt	For	s S	7	7				Initial	when		Date/	
			[Gl	ass]			Lab	Lot# c	of pH (paper:			Vi	La als	b Std	#ID of	prese [rvatio Ji	n (if pl ars	H adju	usted): Ge	nera	1	: (>6mm) *	1 ≤2	Act oH ≥9	ileted:	₹2	Time:	Volume
Pace Lab #	AG1U	BG1U	AG1H	AG4S	AG4U	AG5U	AG2S	BG3U	BP1U	BP3U	BP3B	BP3N	BP3S	VG9A	DG9T	VG9U	VG9H	VG9M	VG9D	JGFU	169U	WGFU	WPFU	SP5T	ZPLC	N	VOA Vials	H2SO4 pH	NaOH+Zn	NaOH oH	Hd EONH	pH after ac	(mL)
001																							1										2.5/5/10
002							51-26-35 5-2757					dish: Kova	963-jej	1292								912111 449184	1										2.5/5/10
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AG1U	1 lit	er an	iber g	lass				BP	21U	1 lite	er plas	stic u	npres			VC	39A	40 n	nL cle	ar as	corbi	0		JC	FU	4 oz	amb	er jar	unpre	es			
BG1U	1 lit	er cle	ar gla	ISS					-3U 	250	mL p	lastic	UNP	es L			39T	40 n	nLam	ber N	va Th	i0			39U 2EU	9 oz	: amb	er jar	unpro	es			
AG1H	125	mL an	iner å amper	nass r alas	not is H29	504			23N	250	mi p	lastic	HNO	п 13			39H	40 n 40 n	nt cle nt cle	ar via ar via	a unp al HCI	162			PFU	4 02	, cieal r plasi	i jar u tic iar	unpres	es es			
AG4U	120	mLa	ambei	glas	is unp	res		BF	235	250	mL pl	lastic	H2S	04			59M	40 n	nL cle	ar via	al Me	- ЭН		s	25T	120	mL p	lastic	Na T	hiosu	fate		
AG5U	100	mL a	ambei	glas	is unp	res						_				V	39D	40 n	nL cle	ar via	al DI			Z	PLC	zipl	oc ba	g					
AG2S	500	mL a	ambei	r glas	s H2S	504																			GN								」つ
BG3U	250	mL o	clear	glass	unpre	es		J																								Page	1_of

Qualtrax Document ID: 41307

Pace Analytical Services, LLC

DC#_Title: ENV-FRM-GBAY-0014 v02_SCUR Revision: 3 | Effective Date: | Issued by: Green Bay

Sample Condition Upon Receipt Form (SCUR)

	Project #:
Client Name: <u>Tetra Tech</u>	WO#:40245577
Courier: CS Logistics	
Client Pace Other:	
Tracking #: 2735 3424 9043	40245577
Custody Seal on Cooler/Box Present: ves no Seal	als intact: 🔲 yes 🔲 no
Custody Seal on Samples Present: yes no Seal	als intact: 🔲 yes 🔲 no
Packing Material: 🔲 Bubble Wrap 🔲 Bubble Bags	None Cother
Thermometer Used <u>SR - 111</u> Type of Ice	e: Wet Blue Dry None Samples on ice, cooling process has begun
Cooler Temperature Uncorr: /Corr: 0	
Temp Blank Present: 🔲 yes 🕅 no Biol	blogical Tissue is Frozen: yes no Date: 5/40/6/feitials:
Temp should be above freezing to 6°C. Biota Samples may be received at ≤ 0°C if shipped on Dry Ice.	Labeled By Initials:
Chain of Custody Present:	
Chain of Custody Filled Out: 5/26/25	2 □N/A 2. P9# 5/26122mp
Chain of Custody Relinquished:	lo □N/A 3.
Sampler Name & Signature on COC:	lo □n/a 4.
Samples Arrived within Hold Time:	lo 5.
- VOA Samples frozen upon receipt	lo Date/Time:
Short Hold Time Analysis (<72hr):	lo 6.
Rush Turn Around Time Requested: 🛛 Yes 太	Q 7.
Sufficient Volume:	8.
For Analysis: 🗙 💷 🗛 MS/MSD: 🗠 Yes	
Correct Containers Used:	9.
-Pace Containers Used:	lo □n/A
-Pace IR Containers Used:	
Containers Intact:	lo 10.
Filtered volume received for Dissolved tests	□ XVA 11.
Sample Labels match COC:	lo □N/A 12.
-Includes date/time/ID/Analysis Matrix:	
Trip Blank Present:	₀ X(N/A 13.
Trip Blank Custody Seals Present	
Pace Trip Blank Lot # (if purchased):	
Client Notification/ Resolution: Person Contacted:	If checked, see attached form for additional comments
	· · · · · · · · · · · · · · · · · · ·

PM Review is documented electronically in LIMs. By releasing the project, the PM acknowledges they have reviewed the sample login

Page

Qualtrax Document ID: 41292

Pace Analytical Services, LLC



June 06, 2022

Luke Specketer TETRATECH - Madison 8413 Excelsior Drive Madison, WI 53717

RE: Project: 209-4221563 WM MERCURY WASTE Pace Project No.: 40245579

Dear Luke Specketer:

Enclosed are the analytical results for sample(s) received by the laboratory on May 26, 2022. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

The test results provided in this final report were generated by each of the following laboratories within the Pace Network: • Pace Analytical Services - Green Bay

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Day Milery

Dan Milewsky dan.milewsky@pacelabs.com (920)469-2436 Project Manager

Enclosures





CERTIFICATIONS

Project: 209-4221563 WM MERCURY WASTE

Pace Project No.: 40245579

Pace Analytical Services Green Bay

1241 Bellevue Street, Green Bay, WI 54302 Florida/NELAP Certification #: E87948 Illinois Certification #: 200050 Kentucky UST Certification #: 82 Louisiana Certification #: 04168 Minnesota Certification #: 055-999-334 New York Certification #: 12064 North Dakota Certification #: R-150 Virginia VELAP ID: 460263 South Carolina Certification #: 83006001 Texas Certification #: T104704529-14-1 Wisconsin Certification #: 405132750 Wisconsin DATCP Certification #: 105-444 USDA Soil Permit #: P330-16-00157 Federal Fish & Wildlife Permit #: LE51774A-0



SAMPLE SUMMARY

Project: 209-4221563 WM MERCURY WASTE

Pace Project No.: 40245579

Lab ID	Sample ID	Matrix	Date Collected	Date Received
40245579001	POND SURFACE	Water	05/24/22 09:00	05/26/22 10:15
40245579002	POND DISCHARGE	Water	05/24/22 09:10	05/26/22 10:15
40245579003	PW1	Water	05/24/22 10:30	05/26/22 10:15
40245579004	PW2	Water	05/24/22 10:00	05/26/22 10:15
40245579005	RINSE #1	Water	05/24/22 12:15	05/26/22 10:15
40245579006	RINSE #2	Water	05/24/22 14:00	05/26/22 10:15



SAMPLE ANALYTE COUNT

Project:209-4221563 WM MERCURY WASTEPace Project No.:40245579

Lab ID	Sample ID	Method	Analysts	Analytes Reported
40245579001	POND SURFACE	EPA 7470	AJT	1
40245579002	POND DISCHARGE	EPA 7470	AJT	1
40245579003	PW1	EPA 7470	AJT	1
40245579004	PW2	EPA 7470	AJT	1
40245579005	RINSE #1	EPA 7470	AJT	1
40245579006	RINSE #2	EPA 7470	AJT	1

PASI-G = Pace Analytical Services - Green Bay



SUMMARY OF DETECTION

Project: 209-4221563 WM MERCURY WASTE

Pace Project No.: 40245579

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
40245579001	POND SURFACE					
EPA 7470	Mercury	0.90	ug/L	0.20	06/06/22 10:56	
40245579002	POND DISCHARGE					
EPA 7470	Mercury	0.42	ug/L	0.20	06/06/22 11:08	



Project: 209-4221563 WM MERCURY WASTE

Pace Project No.: 40245579

Sample: POND SURFACE	Lab ID:	40245579001	Collecte	d: 05/24/22	2 09:00	Received: 05/	26/22 10:15 Ma	atrix: Water	
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
7470 Mercury	Analytical	Method: EPA 7	470 Prepa	ration Meth	od: EPA	7470			
	Pace Anal	ytical Services	- Green Ba	iy					
Mercury	0.90	ug/L	0.20	0.066	1	06/03/22 10:40	06/06/22 10:56	7439-97-6	



Project: 209-4221563 WM MERCURY WASTE

Pace Project No.: 40245579

Sample: POND DISCHARGE	Lab ID:	40245579002	Collecte	d: 05/24/22	2 09:10	Received: 05/	26/22 10:15 Ma	atrix: Water	
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
7470 Mercury	Analytical Pace Ana	Method: EPA 7	470 Prepa - Green Ba	ration Meth	od: EPA	7470			
Mercury	0.42	ug/L	0.20	0.066	1	06/03/22 10:40	06/06/22 11:08	7439-97-6	



Project:	209-4221563 WM MERCURY WASTE
1 10/000	

Pace Project No.: 40245579

Sample: PW1	Lab ID:	40245579003	Collecte	d: 05/24/22	2 10:30	Received: 05/	26/22 10:15 Ma	atrix: Water	
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
7470 Mercury	Analytical	Method: EPA 7	470 Prepa	ration Meth	od: EPA	7470			
	Pace Ana	lytical Services	- Green Ba	у					
Mercury	<0.066	ug/L	0.20	0.066	1	06/03/22 10:40	06/06/22 11:10	7439-97-6	



Project:	209-4221563 WM MERCURY WASTE
1 10/000	

Pace Project No.: 40245579

Sample: PW2	Lab ID:	40245579004	Collecte	d: 05/24/22	2 10:00	Received: 05/	26/22 10:15 Ma	atrix: Water	
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
7470 Mercury	Analytical	Method: EPA 7	470 Prepa	ration Meth	od: EPA	7470			
	Pace Anal	ytical Services	- Green Ba	у					
Mercury	<0.066	ug/L	0.20	0.066	1	06/03/22 10:40	06/06/22 11:13	7439-97-6	



Project:	209-4221563 WM MERCURY WASTE
1 10/000	LOO ILLIGOO IIIII MERCOORTI III COTE

Pace Project No.: 40245579

Sample: RINSE #1	Lab ID:	40245579005	Collecte	d: 05/24/2	2 12:15	Received: 05/	26/22 10:15 M	atrix: Water	
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
7470 Mercury	Analytical	Method: EPA 7	470 Prepa	ration Meth	od: EPA	7470			
	Pace Ana	lytical Services	- Green Ba	у					
Mercury	<0.066	ug/L	0.20	0.066	1	06/03/22 10:40	06/06/22 11:15	7439-97-6	



Project:	209-4221563 WM MERCURY WASTE
1 10/000	LOO ILLIGOO IIIII MERCOORTI III COTE

Pace Project No.: 40245579

Sample: RINSE #2	Lab ID:	40245579006	Collecte	d: 05/24/22	2 14:00	Received: 05/	26/22 10:15 Ma	atrix: Water	
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
7470 Mercury	Analytical	Method: EPA 7	470 Prepa	ration Meth	od: EPA	7470			
	Pace Ana	lytical Services	- Green Ba	у					
Mercury	<0.066	ug/L	0.20	0.066	1	06/03/22 10:40	06/06/22 11:17	7439-97-6	



QUALITY CONTROL DATA

Project:	209-4221563 WM	MERCURY WAS	TE									
Pace Project No.:	40245579											
QC Batch:	417399		Ana	ysis Metho	d:	EPA 7470						
QC Batch Method:	EPA 7470		Ana	ysis Descri	ption:	7470 Mercu	iry					
			Labo	oratory:		Pace Analy	tical Servic	es - Green	Вау			
Associated Lab Sar	nples: 40245579	001, 4024557900	02, 402455	79003, 402	45579004,	402455790	05, 402455	79006				
METHOD BLANK:	2403499			Matrix: W	/ater							
Associated Lab Sar	nples: 40245579	001, 4024557900	2, 402455	79003, 402	45579004,	402455790	05, 402455	579006				
			Bla	ink	Reporting							
Parar	neter	Units	Res	sult	Limit	Anal	yzed	Qualifier	S			
Mercury		ug/L		<0.066	0.2	0 06/06/2	2 10:52					
LABORATORY CO	NTROL SAMPLE:	2403500										
			Spike	LC	S	LCS	% R	ес				
Parar	neter	Units	Conc.	Re	sult	% Rec	Limi	ts	Qualifiers			
Mercury		ug/L		5	4.7	9	4 8	85-115		_		
MATRIX SPIKE & N	ATRIX SPIKE DUP	LICATE: 2403	501		2403502	2						
			MS	MSD								
		40245579001	Spike	Spike	MS	MSD	MS	MSD	% Rec		Max	
Paramete	r Units	Result	Conc.	Conc.	Result	Result	% Rec	% Rec	Limits	RPD	RPD	Qual
Mercury	ug/L	0.90	5	5	5.6	5.8	95	98	85-115	3	20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.



QUALIFIERS

Project: 209-4221563 WM MERCURY WASTE

Pace Project No.: 40245579

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above LOD.

J - Estimated concentration at or above the LOD and below the LOQ.

LOD - Limit of Detection adjusted for dilution factor, percent moisture, initial weight and final volume.

LOQ - Limit of Quantitation adjusted for dilution factor, percent moisture, initial weight and final volume.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected at or above the adjusted LOD.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.



QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 209-4221563 WM MERCURY WASTE

Pace Project No.: 40245579

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
40245579001	POND SURFACE	EPA 7470	417399	EPA 7470	417427
40245579002	POND DISCHARGE	EPA 7470	417399	EPA 7470	417427
40245579003	PW1	EPA 7470	417399	EPA 7470	417427
40245579004	PW2	EPA 7470	417399	EPA 7470	417427
40245579005	RINSE #1	EPA 7470	417399	EPA 7470	417427
40245579006	RINSE #2	EPA 7470	417399	EPA 7470	417427

																			UM245.579
Pace Analytical*	CH Submitting a s	IAIN-OF ample via this Conditions Chain-of-C	-CUSTOD chain of custody s found at: https:/ Custody is a LEG	Y Analy constitutes ac //info.pacelab GAL DOCUM	cknowledgment s.com/hubfs/pa ENT - Comple	uest Do and acceptant s-standard-ter te all relevar	CUME ce of the F ms.pdf nt fields	ent Pace Terms	and			LAB USI	E ONLY-	- Affix	Workor	der/Lo MTJL I	gin Lab Log-in N	el Here lumbe	e or List Pace Workorder Number or r Here
Company: Tetra Tech			Billing Inform	nation: 21	211 Durand	Avenue, U	nion G	rove,		1		Δ		סוס	OUTL	INFD		ASa	re for LAB USE ONLY
Address: 8413 Excelsior Dr #160, M	ladison, WI 537	17	WI 53182								0.000	Cont	ainor Pr			**			ch Designt Manager
Report To: Luke Snecketer (luke sn	ecketer@tetrat	ech com)	Email To: ssr	nolko@w	m com					1	<u> </u>					<u></u>			
	etherer er terrar	centering		nonee m						** Pres	servati	ve Types:	(1) nitric	acid, (2	2) sulfuri	acid, (3) hydroc	hloric a	cid, (4) sodium hydroxide, (5) zinc acetate,
Copy To: Riley Eklund (riley.eklund	@tetratech.com	1)	Site Collectio Grove, WI 5	on Info/Ad 3182	dress: 2121	1 Durand A	venue,	Union		(6) me (C) am	thanol, moniu	, (7) sodiu m hydroxi	ide, (D) T	ate, (8) SP, (U)	Unprese	hiosulta rved, (O)	te, (9) he) Other _	exane, (/	A) ascorbic acid, (B) ammonium sultate,
Customer Project Name/Number:			State: WI Co	unty/City:		e Time Zoi	ne Colle	cted: [r		<u> </u>			1			Lab Sample Receipt Checklist:
Phone: 608-346-1677 Email:	Site/Facility ID	#: WM M	ercury Waste	, INC.	Complianc	e Monitori	ng?												ustody Seals Present/Intact Y N NA Custody Signatures Present Y N MA CoNector Signature Present /Y/W NA
luke.specketer@tetratech.com Collected By (print): Riley Eklund	Purchase Orde	r # : 95794	47		DW PWS II	D#:													Bottles Intact 5/2 YN NA Correct Bottles 5/2 YN NA Sufficient Volume 2000 NA
Collected By (signature): <i>Riley</i>	Quote #: Turnaround Da	ate Require	ed: Standard		DW Location	Ily Packed o	on Ice:		(e)	Σ									Samples Acceived on Ice YOA - Headspace Acceptable Y () WA USDA Regulated Soils
Sample Disposal: [x] Dispose as appropriate] Return [] Archive: [] Hold:	Rush: (Expedi [] Same D [] 2 Day [[] 4 Day [e Charges ay [] No] 3 Day] 5 Day	Apply) ext Day		Field Filter	L INO ed (if appli [x]No	cable):		astic (P) or Glass	AL Total Mercu									Samples in Holding Time Y N NA Residual Chlorine Present Y N NA Cl Strips:
* Matrix Codes (Insert in Matrix box Product (P), Soil/Solid (SL), Oil (OL	k below): Drinki .), Wipe (WP), A	ng Water (ir (AR), Tis	DW), Ground sue (TS), Bioa	Water (G ssay (B), V	W), Wastew 'apor (V), Ot	ater (WW) her (OT)	,	1	Type: Pla	P) 250 N					- A 				Lead Acetate Strips:
Customer Sample ID	Matrix *	Grab	Collect Composit Date	ed (or e Start) Time	Compo Date	site End Time	Cl	# of Ctns	Container	Plastic (Lab Sample # / Comments:
Pond Surface	ww	Grab	5/24/2022	9:00				1		x									001
Pond Discharge	ww	Grab	5/24/2022	9:10				1		x									002
PW1	GW	Grab	5/24/2022	10:30				1		x									003
PW2	GW	Grab	5/24/2022	10:00				1		X									004
Rinse #1	ww	Grab	5/24/2022	12:15				1		x									005
Rinse #2	ww	Grab	5/24/2022	14:00				1		x						-			006
																-			
							1		1	1									
Customer Remarks / Special Condit	tions / Possible	Hazards:	Type of ice I	Jsed:	Wet	Blue D	l ry	None			SHC	J J DRT HOLO	DS PRES	ENT (<	:72 hou	rs); Y	1 	R/x	DAB Sample Temperature Info:
											Sam	nples rec	eiv ed v i	a:	50	S	pre		Therm D#: Cooler 1 Temp Upon Receipe: LOC Cooler 1 Therm Corr. Fortor: A
Relinquished by/Company; (Signati	ure)	Date	Kadchem sa	mple(s) sc	reene d (<50 Received b	u cpm): //Company	Y N /: (Signa	NA ature)			FI	EDEX Date/Tir	UPS me:	Clien	nt Cou	rier P MTJL I	ace Cou LAB USE	urier ONLY	Cooler 1 Corrected Temp)' dC Comments:
Relinquished by/Company: (Signat	<u>)</u> ш(е)	5/ 	<u> </u>	0.15	n Receixed b	/Company	/: (Signa	ature)				Date/Tir	me: /	-D • •	Ta Ac	ble #:			Trip Blank Received: Y NNA
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Relinquished by/Company: (Signati	ure)	Date	e/Time:		Received b	y/Company	/: (Signa	aturej		-		Date/Tir	me:		PN PE	Л: 3:			Non Conformance(s): Page: YES / NO of: Page 1

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DC#_Title: ENV-FRM-GBAY-0035 v01_Sample Preservation Receipt Form Revision: 3 | Effective Date: | Issued by: Green Bay

Cli	ent Name: <u>TetraTech</u> All containers needing preservation have been checked and noted below: Wes INO INVA																																
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Qualtrax Document ID: 41307

Pace Analytical Services, LLC

DC#_Title: ENV-FRM-GBAY-0014 v02_SCUR Revision: 3 | Effective Date: | Issued by: Green Bay

Sample Conditio	n Upon Receipt Forn	n (SCUR)
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• •		
Client Name: Tetra Tech		WO#:40245579
Courier: CS Logistics	dee EUPS EWaltco	
Client Pace Other:		
Tracking #: 2735 3424	9043	
Custody Seal on Cooler/Box Present:	Xno Seals intact: Ves T	
Custody Seal on Samples Present: 🔽 yes 🗡	Seals intact: Ves I	
Packing Material: T Bubble Wrap T Bub	ble Bags KNone Cott	ner
Thermometer Used <u>SR</u> - \\\	Type of Ice: Wet Blue Dry	None Samples on ice, cooling process has begun
Cooler Temperature Uncorr: /Corr:	00	Person examining contents:
Temp Blank Present: 🔽 yes 🕅 no	Biological Tissue is F	rozen: ves no Date: 5/26/27 mitials: MA
Temp should be above freezing to 6°C. Biota Samples may be received at ≤ 0°C if shipped on D)ry Ice.	
Chain of Custody Present:	Xes INO IN/A 1.	
Chain of Custody Filled Out: 5/26/22	5 X S S N DN/A 2. P9#	- 3126/22 mp
Chain of Custody Relinquished:	Xyes INO IN/A 3.	
Sampler Name & Signature on COC:	Xyes 🗆 No 🗆 N/A 4.	
Samples Arrived within Hold Time:	Xes 🗆 No 5.	
- VOA Samples frozen upon receipt	□Yes □No Date/Time:	
Short Hold Time Analysis (<72hr):	DYes XNo 6.	
Rush Turn Around Time Requested:	□Yes 🗛 7.	
Sufficient Volume:	8.	
For Analysis: 🕅 🗠 MS/MSD); 🗆 Yes 🆄 No 🗆 N/A	•
Correct Containers Used:	XYes □No 9.	
-Pace Containers Used:	Dices Ino Inia	
-Pace IR Containers Used:		
Containers Intact:	25xes 🗆 No 10.	
Filtered volume received for Dissolved tests	□Yes □No 🎾 11.	
Sample Labels match COC:	Xes DNO DN/A 12.	
-Includes date/time/ID/Analysis Matrix:	ω	
Trip Blank Present:	□Yes □No XN/A 13.	
Trip Blank Custody Seals Present	□Yes □No XXN/A	
Pace Trip Blank Lot # (if purchased):		
Client Notification/ Resolution:		If checked, see attached form for additional comments
Comments/ Resolution:	Date/Time:	

PM Review is documented electronically in LIMs. By releasing the project, the PM acknowledges they have reviewed the sample login

Qualtrax Document ID: 41292

Pace Analytical Services, LLC

2

Page

STEP OUT SAMPLNG ANALYTICAL RESULTS



July 28, 2022

Luke Specketer TETRATECH - Madison 8413 Excelsior Drive Madison, WI 53717

RE: Project: 209-4221563 WM MERCURY WASTE Pace Project No.: 40248114

Dear Luke Specketer:

Enclosed are the analytical results for sample(s) received by the laboratory on July 14, 2022. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

The test results provided in this final report were generated by each of the following laboratories within the Pace Network: • Pace Analytical Services - Green Bay

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Day Milery

Dan Milewsky dan.milewsky@pacelabs.com (920)469-2436 Project Manager

Enclosures





CERTIFICATIONS

Project: 209-4221563 WM MERCURY WASTE

Pace Project No.: 40248114

Pace Analytical Services Green Bay

1241 Bellevue Street, Green Bay, WI 54302 Florida/NELAP Certification #: E87948 Illinois Certification #: 200050 Kentucky UST Certification #: 82 Louisiana Certification #: 04168 Minnesota Certification #: 055-999-334 New York Certification #: 12064 North Dakota Certification #: R-150 Virginia VELAP ID: 460263 South Carolina Certification #: 83006001 Texas Certification #: T104704529-14-1 Wisconsin Certification #: 405132750 Wisconsin DATCP Certification #: 105-444 USDA Soil Permit #: P330-16-00157 Federal Fish & Wildlife Permit #: LE51774A-0



SAMPLE SUMMARY

Project: 209-4221563 WM MERCURY WASTE

Pace Project No .:

o.: 40248114

Lab ID	Sample ID	Matri	x Date Collec	ted Date I	Received
40248114001	SP1N1S	Solic	07/12/22 10):30 07/14	/22 10:05
40248114002	SP1N1BS	Solic	07/12/22 10):35 07/14	/22 10:05
40248114003	SP1N2S	Solic	07/12/22 10):40 07/14	/22 10:05
40248114004	SP1N2BS	Solic	07/12/22 10):45 07/14	/22 10:05
40248114005	SP1E1S	Solic	07/12/22 10):55 07/14	/22 10:05
40248114006	SP1E1BS	Solic	07/12/22 11	:00 07/14	/22 10:05
40248114007	SP1E2S	Solic	07/12/22 11	:20 07/14	/22 10:05
40248114008	SP1E2BS	Solic	07/12/22 11	:25 07/14	/22 10:05
40248114009	SP1W1S	Solic	07/12/22 11	:40 07/14	/22 10:05
40248114010	SP1W1BS	Solic	07/12/22 11	:45 07/14	/22 10:05
40248114011	SP1W2S	Solic	07/12/22 12	2:05 07/14	/22 10:05
40248114012	SP1W2BS	Solic	07/12/22 12	2:10 07/14	/22 10:05
40248114013	SP4N1S	Solic	07/12/22 12	2:30 07/14	/22 10:05
40248114014	SP4N1BS	Solic	07/12/22 12	2:35 07/14	/22 10:05
40248114015	SP4N2S	Solic	07/12/22 12	2:50 07/14	/22 10:05
40248114016	SP4N2BS	Solic	07/12/22 12	2:55 07/14	/22 10:05
40248114017	SP4W1S	Solic	07/12/22 14	1:15 07/14	/22 10:05
40248114018	SP4W1BS	Solic	07/12/22 14	1:20 07/14	/22 10:05
0248114019	SP4W2S	Solic	07/12/22 14	1:40 07/14	/22 10:05
0248114020	SP4W2BS	Solic	07/12/22 14	1:45 07/14	/22 10:05
0248114021	SP5NW1S	Solic	07/12/22 15	5:05 07/14	/22 10:05
0248114022	SP5NW1BS	Solic	07/12/22 15	5:10 07/14	/22 10:05
0248114023	SP5NW2S	Solic	07/12/22 15	5:30 07/14	/22 10:05
40248114024	SP5NW2BS	Solic	07/12/22 15	5:35 07/14	/22 10:05
40248114025	SP5SW1S	Solic	07/12/22 15	5:55 07/14	/22 10:05
40248114026	SP5SW1BS	Solic	07/12/22 16	6:00 07/14	/22 10:05
40248114027	SP5SW2S	Solic	07/12/22 16	6:10 07/14	/22 10:05
40248114028	SP5SW2BS	Solic	07/12/22 16	6:15 07/14	/22 10:05
40248114029	SP5SE1S	Solic	07/12/22 16	6:30 07/14	/22 10:05
40248114030	SP5SE1BS	Solic	07/12/22 16	6:35 07/14	/22 10:05
40248114031	SP5SE2S	Solic	07/12/22 16	6:45 07/14	/22 10:05
40248114032	SP5SE2BS	Solic	07/12/22 16	6:50 07/14	/22 10:05
40248114033	SP5SE3S	Solic	07/12/22 17	7:05 07/14	/22 10:05
40248114034	SP5SE3BS	Solic	07/12/22 17	7:10 07/14	/22 10:05
40248114035	RINSE #1	Wate	er 07/12/22 11	:30 07/14	/22 10:05
40248114036	RINSE #2	Wate	er 07/12/22 13	3:00 07/14	/22 10:05
40248114037	RINSE #3	Wate	r 07/12/22 15	5:40 07/14	/22 10:05


SAMPLE SUMMARY

Project: 209-4221563 WM MERCURY WASTE

Pace Project No.: 40248114

Lab ID	Sample ID	Matrix	Date Collected	Date Received
40248114038	RINSE #4	Water	07/12/22 17:20	07/14/22 10:05



SAMPLE ANALYTE COUNT

 Project:
 209-4221563 WM MERCURY WASTE

 Pace Project No.:
 40248114

Lab ID	Sample ID	Method	Analysts	Analytes Reported
40248114001	SP1N1S	EPA 7471	AJT	1
		ASTM D2974-87	PDV	1
40248114002	SP1N1BS	EPA 7471	AJT	1
		ASTM D2974-87	PDV	1
40248114003	SP1N2S	EPA 7471	AJT	1
		ASTM D2974-87	PDV	1
40248114004	SP1N2BS	EPA 7471	AJT	1
		ASTM D2974-87	PDV	1
40248114005	SP1E1S	EPA 7471	AJT	1
		ASTM D2974-87	PDV	1
40248114006	SP1E1BS	EPA 7471	AJT	1
		ASTM D2974-87	PDV	1
40248114007	SP1E2S	EPA 7471	AJT	1
		ASTM D2974-87	PDV	1
40248114008	SP1E2BS	EPA 7471	AJT	1
		ASTM D2974-87	PDV	1
40248114009	SP1W1S	EPA 7471	AJT	1
		ASTM D2974-87	PDV	1
40248114010	SP1W1BS	EPA 7471	AJT	1
		ASTM D2974-87	PDV	1
40248114011	SP1W2S	EPA 7471	AJT	1
		ASTM D2974-87	PDV	1
40248114012	SP1W2BS	EPA 7471	AJT	1
		ASTM D2974-87	PDV	1
40248114013	SP4N1S	EPA 7471	AJT	1
		ASTM D2974-87	PDV	1
40248114014	SP4N1BS	EPA 7471	AJT	1
		ASTM D2974-87	PDV	1
40248114015	SP4N2S	EPA 7471	AJT	1
		ASTM D2974-87	PDV	1
40248114016	SP4N2BS	EPA 7471	AJT	1
		ASTM D2974-87	PDV	1
40248114017	SP4W1S	EPA 7471	AJT	1
		ASTM D2974-87	PDV	1
40248114018	SP4W1BS	EPA 7471	AJT	1
		ASTM D2974-87	PDV	1
40248114019	SP4W2S	EPA 7471	AJT	1



SAMPLE ANALYTE COUNT

Project: 209-4221563 WM MERCURY WASTE

Pace Project No.: 40248114

Lab ID	Sample ID	Method	Analysts	Analytes Reported
		ASTM D2974-87	PDV	1
40248114020	SP4W2BS	EPA 7471	AJT	1
		ASTM D2974-87	PDV	1
40248114021	SP5NW1S	EPA 7471	AJT	1
		ASTM D2974-87	PDV	1
40248114022	SP5NW1BS	EPA 7471	AJT	1
		ASTM D2974-87	PDV	1
40248114023	SP5NW2S	EPA 7471	AJT	1
		ASTM D2974-87	PDV	1
40248114024	SP5NW2BS	EPA 7471	AJT	1
		ASTM D2974-87	PDV	1
40248114025	SP5SW1S	EPA 7471	AJT	1
		ASTM D2974-87	PDV	1
40248114026	SP5SW1BS	EPA 7471	AJT	1
		ASTM D2974-87	PDV	1
40248114027	SP5SW2S	EPA 7471	AJT	1
		ASTM D2974-87	PDV	1
40248114028	SP5SW2BS	EPA 7471	AJT	1
		ASTM D2974-87	PDV	1
40248114029	SP5SE1S	EPA 7471	AJT	1
		ASTM D2974-87	PDV	1
40248114030	SP5SE1BS	EPA 7471	AJT	1
		ASTM D2974-87	PDV	1
40248114031	SP5SE2S	EPA 7471	AJT	1
		ASTM D2974-87	PDV	1
40248114032	SP5SE2BS	EPA 7471	AJT	1
		ASTM D2974-87	PDV	1
40248114033	SP5SE3S	EPA 7471	AJT	1
		ASTM D2974-87	PDV	1
40248114034	SP5SE3BS	EPA 7471	AJT	1
		ASTM D2974-87	PDV	1
40248114035	RINSE #1	EPA 7470	AJT	1
40248114036	RINSE #2	EPA 7470	AJT	1
40248114037	RINSE #3	EPA 7470	AJT	1
40248114038	RINSE #4	EPA 7470	AJT	1

PASI-G = Pace Analytical Services - Green Bay



SUMMARY OF DETECTION

Project: 209-4221563 WM MERCURY WASTE

Pace Project No.: 40248114

Lab Sample ID Client Sample ID Parameters Method Qualifiers Result Units Report Limit Analyzed 40248114001 SP1N1S EPA 7471 Mercury 3.8 mg/kg 0.084 07/19/22 12:45 M0 ASTM D2974-87 Percent Moisture 16.6 % 0.10 07/15/22 12:18 40248114002 SP1N1BS EPA 7471 Mercury 0.22 mg/kg 0.040 07/19/22 11:08 ASTM D2974-87 Percent Moisture 16.0 % 0.10 07/15/22 12:18 40248114003 SP1N2S EPA 7471 Mercurv 2.2 mg/kg 0.075 07/19/22 12:57 ASTM D2974-87 Percent Moisture 14.9 07/15/22 12:18 % 0.10 SP1N2BS 40248114004 EPA 7471 Mercury 0.27 mg/kg 0.041 07/19/22 11:17 ASTM D2974-87 Percent Moisture 14.7 % 0.10 07/15/22 12:18 SP1E1S 40248114005 EPA 7471 Mercury 4.7 mg/kg 0.20 07/19/22 12:59 ASTM D2974-87 Percent Moisture 16.7 07/15/22 12:54 % 0.10 SP1E1BS 40248114006 EPA 7471 0.32 mg/kg 0.039 07/19/22 11:24 Mercury ASTM D2974-87 Percent Moisture 13.2 % 0.10 07/15/22 12:54 40248114007 SP1E2S EPA 7471 Mercury 6.3 mg/kg 0.20 07/19/22 13:02 ASTM D2974-87 Percent Moisture 18.8 0.10 07/15/22 12:54 % SP1E2BS 40248114008 EPA 7471 Mercurv 2.7 mg/kg 0.079 07/19/22 13:04 ASTM D2974-87 Percent Moisture 14.3 0.10 07/15/22 12:54 % SP1W1S 40248114009 EPA 7471 Mercury 0.36 mg/kg 0.039 07/19/22 11:35 ASTM D2974-87 Percent Moisture 16.7 % 0.10 07/15/22 12:54 40248114010 SP1W1BS EPA 7471 Mercury 0.30 mg/kg 0.039 07/19/22 11:38 ASTM D2974-87 Percent Moisture 16.1 % 0.10 07/15/22 12:54 SP1W2S 40248114011 EPA 7471 3.7 mg/kg 0.080 07/19/22 13:06 Mercury ASTM D2974-87 Percent Moisture 18.7 % 0.10 07/15/22 12:54 40248114012 SP1W2BS FPA 7471 Mercury 0.71 mg/kg 0.040 07/19/22 11:45 ASTM D2974-87 Percent Moisture 0.10 07/15/22 12:54 15.7 % SP4N1S 40248114013 EPA 7471 Mercury 0.081 mg/kg 0.039 07/19/22 11:52 ASTM D2974-87 Percent Moisture 07/15/22 12:54 15.1 % 0.10



SUMMARY OF DETECTION

Project: 209-4221563 WM MERCURY WASTE

Pace Project No.: 40248114

Lab Sample ID Client Sample ID Qualifiers Method Parameters Result Units Report Limit Analyzed 40248114014 SP4N1BS EPA 7471 Mercury 69.1 mg/kg 1.8 07/19/22 13:40 ASTM D2974-87 Percent Moisture 11.5 % 0.10 07/15/22 12:54 40248114015 SP4N2S EPA 7471 Mercury 71.9 mg/kg 2.0 07/19/22 13:42 ASTM D2974-87 Percent Moisture 13.8 % 0.10 07/15/22 12:55 40248114016 SP4N2BS EPA 7471 Mercury 1.1 mg/kg 0.038 07/19/22 12:15 ASTM D2974-87 Percent Moisture 10.3 0.10 07/15/22 12:55 % 40248114017 SP4W1S EPA 7471 Mercury 114 mg/kg 3.6 07/19/22 13:44 ASTM D2974-87 Percent Moisture 13.1 % 0.10 07/15/22 12:55 SP4W1BS 40248114018 EPA 7471 Mercury 0.46 mg/kg 0.037 07/19/22 12:29 ASTM D2974-87 Percent Moisture 7.7 07/15/22 12:55 % 0.10 SP4W2S 40248114019 EPA 7471 48.1 mg/kg 2.0 07/19/22 13:47 Mercury ASTM D2974-87 Percent Moisture 13.0 % 07/15/22 12:55 0.10 40248114020 SP4W2BS EPA 7471 Mercury 0.11 mg/kg 0.037 07/19/22 12:42 ASTM D2974-87 Percent Moisture 16.5 0.10 07/15/22 12:55 % SP5NW1S 40248114021 EPA 7471 Mercurv 7.5 mg/kg 0.37 07/26/22 07:11 ASTM D2974-87 Percent Moisture 12.3 07/15/22 12:55 % 0.10 SP5NW1BS 40248114022 EPA 7471 Mercury 0.34 mg/kg 0.038 07/26/22 08:41 ASTM D2974-87 Percent Moisture 10.0 % 0.10 07/15/22 12:55 40248114023 SP5NW2S EPA 7471 Mercury 1.7 mg/kg 0.40 07/26/22 07:15 ASTM D2974-87 Percent Moisture 13.6 07/15/22 12:55 % 0.10 SP5NW2BS 40248114024 EPA 7471 0.054 mg/kg 0.036 07/26/22 08:43 Mercury 1q ASTM D2974-87 Percent Moisture 12.1 % 0.10 07/15/22 13:33 40248114025 SP5SW1S EPA 7471 Mercury 0.60 mg/kg 0.36 07/26/22 07:20 1q ASTM D2974-87 Percent Moisture 13.5 0.10 07/15/22 13:33 % SP5SW1BS 40248114026 EPA 7471 Mercurv 0.10 mg/kg 0.035 07/26/22 08:45 1a ASTM D2974-87 Percent Moisture 07/15/22 13:33 9.0 % 0.10



SUMMARY OF DETECTION

Project: 209-4221563 WM MERCURY WASTE

Pace Project No.: 40248114

Lab Sample ID	Client Sample ID					
Method	Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
40248114027	SP5SW2S					
EPA 7471	Mercury	2.1	mg/kg	0.40	07/26/22 07:25	
ASTM D2974-87	Percent Moisture	12.4	%	0.10	07/15/22 13:33	
40248114028	SP5SW2BS					
EPA 7471	Mercury	0.42	mg/kg	0.035	07/26/22 08:48	
ASTM D2974-87	Percent Moisture	7.1	%	0.10	07/15/22 13:34	
40248114029	SP5SE1S					
EPA 7471	Mercury	5.2	mg/kg	0.39	07/26/22 07:29	
ASTM D2974-87	Percent Moisture	15.2	%	0.10	07/15/22 13:34	
40248114030	SP5SE1BS					
EPA 7471	Mercury	1.7	mg/kg	0.40	07/26/22 07:36	
ASTM D2974-87	Percent Moisture	14.3	%	0.10	07/15/22 13:34	
40248114031	SP5SE2S					
EPA 7471	Mercury	7.0	mg/kg	0.42	07/26/22 07:39	
ASTM D2974-87	Percent Moisture	18.5	%	0.10	07/15/22 13:34	
40248114032	SP5SE2BS					
EPA 7471	Mercury	0.87	mg/kg	0.39	07/26/22 07:41	
ASTM D2974-87	Percent Moisture	12.3	%	0.10	07/15/22 13:34	
40248114033	SP5SE3S					
EPA 7471	Mercury	3.4	mg/kg	0.40	07/26/22 07:43	
ASTM D2974-87	Percent Moisture	13.8	%	0.10	07/15/22 13:34	
40248114034	SP5SE3BS					
EPA 7471	Mercury	0.57	mg/kg	0.36	07/26/22 07:46	1q
ASTM D2974-87	Percent Moisture	11.0	%	0.10	07/15/22 13:34	



Project: 209-4221563 WM MERCURY WASTE

40248114

Pace Project No.:

Sample: SP1N1S	Lab ID:	4024811400	1 Collected	: 07/12/22	2 10:30	Received: 07/	14/22 10:05 Ma	atrix: Solid	
Results reported on a "dry weig	ht" basis and are	adjusted fo	r percent mo	isture, sar	nple si	ze and any diluti	ons.		
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
7471 Mercury	Analytical I Pace Analy	Vethod: EPA /tical Service	. 7471 Prepara s - Green Bay	ation Metho	od: EPA	A 7471			
Mercury	3.8	mg/kg	0.084	0.024	2	07/18/22 13:15	07/19/22 12:45	7439-97-6	MO
Percent Moisture	Analytical I Pace Analy	Method: AST /tical Service	M D2974-87 s - Green Bay	,					
Percent Moisture	16.6	%	0.10	0.10	1		07/15/22 12:18		



Project: 209-4221563 WM MERCURY WASTE

Pace Project No.: 40248114

Sample: SP1N1BS	Lab ID:	40248114002	Collected	l: 07/12/22	2 10:35	Received: 07/	14/22 10:05 Ma	atrix: Solid	
Results reported on a "dry weight"	" basis and are	e adjusted for	percent mo	isture, sar	nple si	ize and any diluti	ons.		
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
7471 Mercury	Analytical Pace Anal	Method: EPA 7 ytical Services	471 Prepar - Green Bay	ation Metho	od: EP/	A 7471			
Mercury	0.22	mg/kg	0.040	0.011	1	07/18/22 13:15	07/19/22 11:08	7439-97-6	
Percent Moisture	Analytical Pace Anal	Method: ASTN ytical Services	l D2974-87 - Green Bay	,					
Percent Moisture	16.0	%	0.10	0.10	1		07/15/22 12:18		



Project: 209-4221563 WM MERCURY WASTE

40248114

Pace Project No .:

Sample: SP1N2S	Lab ID:	40248114003	Collected	d: 07/12/22	2 10:40	Received: 07/	14/22 10:05 Ma	atrix: Solid	
Results reported on a "dry weight	" basis and are	adjusted for	percent mo	oisture, sai	nple si	ize and any diluti	ons.		
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
7471 Mercury	Analytical I Pace Analy	Method: EPA 7 /tical Services	'471 Prepar - Green Bay	ation Meth	od: EP/	A 7471			
Mercury	2.2	mg/kg	0.075	0.021	2	07/18/22 13:15	07/19/22 12:57	7439-97-6	
Percent Moisture	Analytical I Pace Analy	Method: ASTM /tical Services	l D2974-87 - Green Bay	/					
Percent Moisture	14.9	%	0.10	0.10	1		07/15/22 12:18		



Project: 209-4221563 WM MERCURY WASTE

Pace Project No.: 40248114

Sample: SP1N2BS	Lab ID:	40248114004	Collected	l: 07/12/22	2 10:45	Received: 07/	14/22 10:05 Ma	atrix: Solid	
Results reported on a "dry weigh	nt" basis and are	e adjusted fo	r percent mo	isture, san	nple si	ize and any diluti	ons.		
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
7471 Mercury	Analytical Pace Anal	Method: EPA	7471 Prepara s - Green Bay	ation Metho	od: EP/	A 7471			
Mercury	0.27	mg/kg	0.041	0.012	1	07/18/22 13:15	07/19/22 11:17	7439-97-6	
Percent Moisture	Analytical Pace Anal	Method: ASTI	M D2974-87 s - Green Bay	,					
Percent Moisture	14.7	%	0.10	0.10	1		07/15/22 12:18		



Qual

ANALYTICAL RESULTS

Project: 209-4221563 WM MERCURY WASTE

40248114

Pace Project No.:

Sample: SP1E1S Lab ID: 40248114005 Collected: 07/12/22 10:55 Received: 07/14/22 10:05 Matrix: Solid Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions. Parameters Results Units LOQ LOD DF Prepared Analyzed CAS No. Analytical Method: EPA 7471 Preparation Method: EPA 7471 7471 Mercury Pace Analytical Services - Green Bay 07/18/22 13:15 07/19/22 12:59 7439-97-6 Mercury 4.7 mg/kg 0.20 0.057 5 Analytical Method: ASTM D2974-87 **Percent Moisture** Pace Analytical Services - Green Bay

 Percent Moisture
 16.7
 %
 0.10
 0.10
 1
 07/15/22 12:54



Project: 209-4221563 WM MERCURY WASTE

Pace Project No.: 40248114

Sample: SP1E1BS	Lab ID:	40248114006	Collected	l: 07/12/22	2 11:00	Received: 07/	14/22 10:05 Ma	atrix: Solid	
Results reported on a "dry weight"	" basis and are	e adjusted for	r percent mo	isture, sar	nple si	ze and any diluti	ons.		
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
7471 Mercury	Analytical Pace Anal	Method: EPA ytical Service:	7471 Prepar s - Green Bay	ation Metho	od: EP/	A 7471			
Mercury	0.32	mg/kg	0.039	0.011	1	07/18/22 13:15	07/19/22 11:24	7439-97-6	
Percent Moisture	Analytical Pace Anal	Method: ASTI ytical Service:	M D2974-87 s - Green Bay	,					
Percent Moisture	13.2	%	0.10	0.10	1		07/15/22 12:54		



Project: 209-4221563 WM MERCURY WASTE

Pace Project No.: 40248114

Sample: SP1E2S	Lab ID:	40248114007	7 Collected	: 07/12/22	2 11:20	Received: 07/	14/22 10:05 Ma	atrix: Solid	
Results reported on a "dry weig	ht" basis and are	adjusted fo	r percent mo	isture, sar	nple si	ize and any diluti	ons.		
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
7471 Mercury	Analytical I Pace Analy	Vethod: EPA /tical Service:	7471 Prepar s - Green Bay	ation Metho	od: EP/	A 7471			
Mercury	6.3	mg/kg	0.20	0.056	5	07/18/22 13:15	07/19/22 13:02	7439-97-6	
Percent Moisture	Analytical I Pace Analy	Method: ASTI /tical Service:	M D2974-87 s - Green Bay	,					
Percent Moisture	18.8	%	0.10	0.10	1		07/15/22 12:54		



Project: 209-4221563 WM MERCURY WASTE

Pace Project No.: 40248114

Sample: SP1E2BS	Lab ID:	4024811400	B Collected	l: 07/12/22	2 11:25	Received: 07/	14/22 10:05 Ma	atrix: Solid	
Results reported on a "dry weight	t" basis and are	e adjusted fo	r percent mo	isture, san	nple si	ize and any diluti	ons.		
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
7471 Mercury	Analytical Pace Anal	Method: EPA	7471 Prepar s - Green Bay	ation Metho	od: EP/	A 7471			
Mercury	2.7	mg/kg	0.079	0.023	2	07/18/22 13:15	07/19/22 13:04	7439-97-6	
Percent Moisture	Analytical Pace Anal	Method: AST	M D2974-87 s - Green Bay	,					
Percent Moisture	14.3	%	0.10	0.10	1		07/15/22 12:54		



Project: 209-4221563 WM MERCURY WASTE

Pace Project No.: 40248114

Sample: SP1W1S	Lab ID:	40248114009	Collected	I: 07/12/22	2 11:40	Received: 07/	14/22 10:05 Ma	atrix: Solid	
Results reported on a "dry weight	" basis and are	e adjusted for	percent mo	isture, san	nple si	ize and any diluti	ons.		
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
7471 Mercury	Analytical Pace Anal	Method: EPA 7 ytical Services	7471 Prepar - Green Bay	ation Metho	od: EP/	A 7471			
Mercury	0.36	mg/kg	0.039	0.011	1	07/18/22 13:15	07/19/22 11:35	7439-97-6	
Percent Moisture	Analytical Pace Anal	Method: ASTN ytical Services	1 D2974-87 - Green Bay	/					
Percent Moisture	16.7	%	0.10	0.10	1		07/15/22 12:54		



Project: 209-4221563 WM MERCURY WASTE

Pace Project No.: 40248114

Sample: SP1W1BS	Lab ID:	40248114010	Collected	d: 07/12/22	2 11:45	Received: 07/	14/22 10:05 Ma	atrix: Solid	
Results reported on a "dry weight"	basis and are	e adjusted for _l	percent mo	oisture, san	nple si	ize and any diluti	ons.		
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
7471 Mercury	Analytical Pace Anal	Method: EPA 7	471 Prepar - Green Bay	ation Metho	od: EP/	A 7471			
Mercury	0.30	mg/kg	0.039	0.011	1	07/18/22 13:15	07/19/22 11:38	7439-97-6	
Percent Moisture	Analytical Pace Anal	Method: ASTM	D2974-87 - Green Bay	/					
Percent Moisture	16.1	%	0.10	0.10	1		07/15/22 12:54		



Project: 209-4221563 WM MERCURY WASTE

Pace Project No.: 40248114 Sample: SP1W2S Collected: 07/12/22 12:05 Received: 07/14/22 10:05 Matrix: Solid Lab ID: 40248114011

Results reported on a "dry wei	ight" basis and ar	e adjusted fo	or percent mo	isture, sar	nple s	ize and any diluti	ons.		
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
7471 Mercury	Analytical Pace Ana	Method: EPA	A 7471 Prepar es - Green Bay	ation Metho	od: EP	A 7471			
Mercury	3.7	mg/kg	0.080	0.023	2	07/18/22 13:15	07/19/22 13:06	7439-97-6	
Percent Moisture	Analytical Pace Ana	Method: AST	「M D2974-87 es - Green Bay	,					
Percent Moisture	18.7	%	0.10	0.10	1		07/15/22 12:54		



Project: 209-4221563 WM MERCURY WASTE

Pace Project No.: 40248114

Sample: SP1W2BS	Lab ID:	40248114012	Collected	l: 07/12/22	2 12:10	Received: 07/	14/22 10:05 Ma	atrix: Solid	
Results reported on a "dry weigh	t" basis and are	e adjusted for	percent mo	isture, san	nple si	ze and any diluti	ons.		
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
7471 Mercury	Analytical Pace Anal	Method: EPA 7 lytical Services	'471 Prepar - Green Bay	ation Metho	od: EP/	A 7471			
Mercury	0.71	mg/kg	0.040	0.011	1	07/18/22 13:15	07/19/22 11:45	7439-97-6	
Percent Moisture	Analytical Pace Anal	Method: ASTN lytical Services	l D2974-87 - Green Bay	,					
Percent Moisture	15.7	%	0.10	0.10	1		07/15/22 12:54		



Project: 209-4221563 WM MERCURY WASTE

Pace Project No.: 40248114

Sample:	SP4N1S	Lab ID:	40248114013	Collected	d: 07/12/22	2 12:30	Received: 07/	14/22 10:05 Ma	atrix: Solid	
Results	reported on a "dry we	eight" basis and are	e adjusted for	percent mo	oisture, sai	nple s	ize and any diluti	ons.		
	Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
7471 Me	rcury	Analytical Pace Anal	Method: EPA 7	7471 Prepar - Green Bay	ation Meth	od: EP	A 7471			
Mercury		0.081	mg/kg	0.039	0.011	1	07/18/22 13:15	07/19/22 11:52	7439-97-6	
Percent	Moisture	Analytical Pace Anal	Method: ASTN ytical Services	1 D2974-87 - Green Bay	/					
Percent	Moisture	15.1	%	0.10	0.10	1		07/15/22 12:54		



Project: 209-4221563 WM MERCURY WASTE

Pace Project No.: 40248114

Sample: SP4N1BS	Lab ID:	4024811401	4 Collected	: 07/12/22	2 12:35	Received: 07/	14/22 10:05 Ma	atrix: Solid				
Results reported on a "dry weigl	ht" basis and are	e adjusted fo	or percent mo	isture, sar	nple s	ize and any diluti	ons.					
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual			
7471 Mercury	Analytical Pace Anal	Method: EPA ytical Service	7471 Prepara es - Green Bay	ation Meth	od: EP	A 7471						
Mercury	69.1	mg/kg	1.8	0.51	50	07/18/22 13:15	07/19/22 13:40	7439-97-6				
Percent Moisture	Analytical Pace Anal	Analytical Method: ASTM D2974-87 Pace Analytical Services - Green Bay										
Percent Moisture	11.5	%	0.10	0.10	1		07/15/22 12:54					



Project: 209-4221563 WM MERCURY WASTE

40248114

Pace Project No .:

Sample: SP4N2S	Lab ID:	40248114015	Collected	l: 07/12/22	12:50	Received: 07/	14/22 10:05 Ma	atrix: Solid			
Results reported on a "dry weight"	basis and are	adjusted for	percent mo	isture, san	nple si	ze and any diluti	ons.				
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual		
7471 Mercury	Analytical I Pace Analy	Method: EPA 7 /tical Services	471 Prepar - Green Bay	ation Metho	od: EP/	7471					
Mercury	71.9	mg/kg	2.0	0.57	50	07/18/22 13:15	07/19/22 13:42	7439-97-6			
Percent Moisture	Analytical Method: ASTM D2974-87 Pace Analytical Services - Green Bay										
Percent Moisture	13.8	%	0.10	0.10	1		07/15/22 12:55				



Project: 209-4221563 WM MERCURY WASTE

Pace Project No.: 40248114

Sample: SP4N2BS	Lab ID:	4024811401	6 Collected	l: 07/12/22	2 12:55	Received: 07/	14/22 10:05 Ma	atrix: Solid	
Results reported on a "dry weigh	ht" basis and ar	e adjusted fo	r percent mo	isture, sar	nple si	ize and any diluti	ons.		
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
7471 Mercury	Analytical Pace Ana	Method: EPA lytical Service	7471 Prepar s - Green Bay	ation Metho	od: EP/	A 7471			
Mercury	1.1	mg/kg	0.038	0.011	1	07/18/22 13:15	07/19/22 12:15	7439-97-6	
Percent Moisture	Analytical Pace Ana	Method: AST lytical Service	M D2974-87 s - Green Bay	,					
Percent Moisture	10.3	%	0.10	0.10	1		07/15/22 12:55		



Project: 209-4221563 WM MERCURY WASTE

40248114

Pace Project No .:

Sample:	SP4W1S	Lab ID:	40248114017	Collected:	: 07/12/22	2 14:15	Received: 07/	14/22 10:05 Ma	atrix: Solid				
Results	reported on a "dry we	eight" basis and are	adjusted fo	r percent moi	isture, sar	nple si	ze and any diluti	ons.					
	Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual			
7471 Me	rcury	Analytical M Pace Analy	Method: EPA	7471 Prepara s - Green Bay	ation Metho	od: EPA	A 7471						
Mercury		114	mg/kg	3.6	1.0	100	07/18/22 13:15	07/19/22 13:44	7439-97-6				
Percent	Moisture	Analytical Pace Analy	Analytical Method: ASTM D2974-87 Pace Analytical Services - Green Bay										
Percent N	Moisture	13.1	%	0.10	0.10	1		07/15/22 12:55					



Project: 209-4221563 WM MERCURY WASTE

Pace Project No.: 40248114

Sample: SP4W1BS	Lab ID:	40248114018	Collected	I: 07/12/22	2 14:20	Received: 07/	14/22 10:05 Ma	atrix: Solid	
Results reported on a "dry weigh	nt" basis and are	e adjusted for	r percent mo	isture, sar	nple si	ize and any diluti	ons.		
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
7471 Mercury	Analytical Pace Anal	Method: EPA	7471 Prepar s - Green Bay	ation Metho	od: EP/	A 7471			
Mercury	0.46	mg/kg	0.037	0.011	1	07/18/22 13:15	07/19/22 12:29	7439-97-6	
Percent Moisture	Analytical Pace Anal	Method: ASTN	M D2974-87 s - Green Bay	1					
Percent Moisture	7.7	%	0.10	0.10	1		07/15/22 12:55		



Project: 209-4221563 WM MERCURY WASTE

40248114

Pace Project No.:

Sample: SP4	W2S	Lab ID:	40248114019	Collected	l: 07/12/22	2 14:40	Received: 07/	14/22 10:05 Ma	atrix: Solid				
Results report	ted on a "dry wei	ght" basis and are	e adjusted for	r percent mo	isture, sar	nple s	ize and any diluti	ons.					
Pa	rameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual			
7471 Mercury		Analytical Pace Anal	Method: EPA ytical Services	7471 Prepar s - Green Bay	ation Metho	od: EP	A 7471						
Mercury		48.1	mg/kg	2.0	0.57	50	07/18/22 13:15	07/19/22 13:47	7439-97-6				
Percent Moist	ure	Analytical Pace Anal	Analytical Method: ASTM D2974-87 Pace Analytical Services - Green Bay										
Percent Moistu	ire	13.0	%	0.10	0.10	1		07/15/22 12:55					



Project: 209-4221563 WM MERCURY WASTE

Pace Project No.: 40248114

Sample: SP4W2BS	Lab ID:	40248114020	Collected	l: 07/12/22	2 14:45	Received: 07/	14/22 10:05 Ma	atrix: Solid	
Results reported on a "dry weigl	ht" basis and are	e adjusted for	r percent mo	isture, san	nple si	ize and any diluti	ons.		
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
7471 Mercury	Analytical Pace Anal	Method: EPA	7471 Prepar s - Green Bay	ation Metho	od: EP/	A 7471			
Mercury	0.11	mg/kg	0.037	0.011	1	07/18/22 13:15	07/19/22 12:42	7439-97-6	
Percent Moisture	Analytical Pace Anal	Method: ASTN ytical Services	/I D2974-87 s - Green Bay	,					
Percent Moisture	16.5	%	0.10	0.10	1		07/15/22 12:55		



Project: 209-4221563 WM MERCURY WASTE

Pace Project No.: 40248114

Sample: SP5NW1S	Lab ID:	40248114021	Collected	d: 07/12/22	2 15:05	Received: 07/	14/22 10:05 Ma	atrix: Solid	
Results reported on a "dry weight	" basis and are	e adjusted for	percent mo	oisture, sar	nple si	ize and any diluti	ons.		
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
7471 Mercury	Analytical Pace Anal	Method: EPA 7 lytical Services	471 Prepar - Green Bay	ration Metho y	od: EP/	A 7471			
Mercury	7.5	mg/kg	0.37	0.11	10	07/25/22 09:54	07/26/22 07:11	7439-97-6	
Percent Moisture	Analytical Pace Anal	Method: ASTM lytical Services	l D2974-87 - Green Bay	ý					
Percent Moisture	12.3	%	0.10	0.10	1		07/15/22 12:55		



Project: 209-4221563 WM MERCURY WASTE

Pace Project No.: 40248114

Sample: SP5NW1BS	Lab ID:	4024811402	2 Collected	l: 07/12/22	2 15:10	Received: 07/	14/22 10:05 Ma	atrix: Solid	
Results reported on a "dry we	ight" basis and are	e adjusted fo	r percent mo	isture, sar	nple si	ize and any diluti	ons.		
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
7471 Mercury	Analytical Pace Anal	Method: EPA ytical Service	7471 Prepar s - Green Bay	ation Metho	od: EP/	A 7471			
Mercury	0.34	mg/kg	0.038	0.011	1	07/25/22 09:54	07/26/22 08:41	7439-97-6	
Percent Moisture	Analytical Pace Anal	Method: AST ytical Service	M D2974-87 s - Green Bay	,					
Percent Moisture	10.0	%	0.10	0.10	1		07/15/22 12:55		



Project: 209-4221563 WM MERCURY WASTE

Pace Project No.: 40248114

Sample: SP5NW2S	Lab ID:	40248114023	Collected	d: 07/12/22	15:30	Received: 07/	14/22 10:05 Ma	atrix: Solid		
Results reported on a "dry weight	" basis and are	e adjusted for	percent mo	oisture, san	nple si	ze and any diluti	ons.			
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual	
7471 Mercury	Analytical Method: EPA 7471 Preparation Method: EPA 7471 Pace Analytical Services - Green Bay									
Mercury	1.7	mg/kg	0.40	0.11	10	07/25/22 09:54	07/26/22 07:15	7439-97-6		
Percent Moisture	Analytical Pace Anal	Method: ASTN lytical Services	1 D2974-87 - Green Bay	/						
Percent Moisture	13.6	%	0.10	0.10	1		07/15/22 12:55			



Project: 209-4221563 WM MERCURY WASTE

Pace Project No.: 40248114

Sample: SP5NW2BS	Lab ID:	40248114024	Collected	l: 07/12/22	2 15:35	Received: 07/	14/22 10:05 Ma	atrix: Solid	
Results reported on a "dry weig	ght" basis and are	e adjusted for	percent mo	isture, san	nple si	ize and any diluti	ons.		
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
7471 Mercury	Analytical Pace Anal	Method: EPA 7 ytical Services	471 Prepar - Green Bay	ation Metho	od: EP/	A 7471			
Mercury	0.054	mg/kg	0.036	0.010	1	07/25/22 09:54	07/26/22 08:43	7439-97-6	1q
Percent Moisture	Analytical Pace Anal	Method: ASTM ytical Services	D2974-87 - Green Bay	,					
Percent Moisture	12.1	%	0.10	0.10	1		07/15/22 13:33		



Project: 209-4221563 WM MERCURY WASTE

Pace Project No.: 40248114

Sample:	SP5SW1S	Lab ID:	4024811402	5 Collected	: 07/12/22	2 15:55	Received: 07/	14/22 10:05 Ma	atrix: Solid		
Results re	eported on a "dry we	eight" basis and are	adjusted fo	or percent mo	isture, san	nple si	ize and any diluti	ons.			
	Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual	
7471 Merc	cury	Analytical I Pace Analy	Analytical Method: EPA 7471 Preparation Method: EPA 7471 Pace Analytical Services - Green Bay								
Mercury		0.60	mg/kg	0.36	0.10	10	07/25/22 09:54	07/26/22 07:20	7439-97-6	1q	
Percent N	loisture	Analytical I Pace Analy	Method: AST /tical Service	M D2974-87 s - Green Bay	,						
Percent M	oisture	13.5	%	0.10	0.10	1		07/15/22 13:33			



Project: 209-4221563 WM MERCURY WASTE

Pace Project No.: 40248114

Sample: SP5SW1BS	Lab ID:	40248114026	6 Collected	l: 07/12/22	2 16:00	Received: 07/	14/22 10:05 Ma	atrix: Solid	
Results reported on a "dry weight	" basis and are	e adjusted fo	r percent mo	isture, san	nple si	ize and any diluti	ons.		
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
7471 Mercury	Analytical Pace Anal	Method: EPA ytical Service	7471 Prepar s - Green Bay	ation Metho	od: EP/	A 7471			
Mercury	0.10	mg/kg	0.035	0.0099	1	07/25/22 09:54	07/26/22 08:45	7439-97-6	1q
Percent Moisture	Analytical Pace Anal	Method: ASTI	M D2974-87 s - Green Bay	/					
Percent Moisture	9.0	%	0.10	0.10	1		07/15/22 13:33		



Project: 209-4221563 WM MERCURY WASTE

Pace Project No.: 40248114

Sample: SP5SW2S	Lab ID:	40248114027	Collected	d: 07/12/22	2 16:10	Received: 07/	14/22 10:05 Ma	atrix: Solid		
Results reported on a "dry weig	ht" basis and are	e adjusted for	percent mo	oisture, sar	nple si	ize and any diluti	ons.			
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual	
7471 Mercury	Analytical Method: EPA 7471 Preparation Method: EPA 7471 Pace Analytical Services - Green Bay									
Mercury	2.1	mg/kg	0.40	0.11	10	07/25/22 09:54	07/26/22 07:25	7439-97-6		
Percent Moisture	Analytical Pace Anal	Method: ASTN lytical Services	/I D2974-87 - Green Bay	ý						
Percent Moisture	12.4	%	0.10	0.10	1		07/15/22 13:33			



Project: 209-4221563 WM MERCURY WASTE

Pace Project No.: 40248114

Sample: SP5SW2BS	Lab ID:	40248114028	Collected	l: 07/12/22	2 16:15	Received: 07/	14/22 10:05 Ma	atrix: Solid	
Results reported on a "dry weight	" basis and are	e adjusted for	percent mo	isture, san	nple si	ize and any diluti	ons.		
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
7471 Mercury	Analytical Pace Anal	Method: EPA 7 ytical Services	471 Prepar - Green Bay	ation Metho	od: EP/	A 7471			
Mercury	0.42	mg/kg	0.035	0.010	1	07/25/22 09:54	07/26/22 08:48	7439-97-6	
Percent Moisture	Analytical Pace Anal	Method: ASTM ytical Services	D2974-87 - Green Bay	/					
Percent Moisture	7.1	%	0.10	0.10	1		07/15/22 13:34		



Project: 209-4221563 WM MERCURY WASTE

Pace Project No.: 40248114

Sample: SP5SE1S	Lab ID:	4024811402	9 Collected	: 07/12/22	2 16:30	Received: 07/	14/22 10:05 Ma	atrix: Solid	
Results reported on a "dry wei	ght" basis and are	e adjusted fo	r percent mo	isture, sar	nple si	ize and any diluti	ons.		
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
7471 Mercury	Analytical Pace Anal	Method: EPA ytical Service	7471 Prepar s - Green Bay	ation Meth	od: EP/	A 7471			
Mercury	5.2	mg/kg	0.39	0.11	10	07/25/22 09:54	07/26/22 07:29	7439-97-6	
Percent Moisture	Analytical Pace Anal	Method: AST ytical Service	M D2974-87 s - Green Bay	,					
Percent Moisture	15.2	%	0.10	0.10	1		07/15/22 13:34		



Project: 209-4221563 WM MERCURY WASTE

Pace Project No.: 40248114

Sample: SP5SE1BS	Lab ID:	4024811403	0 Collected	d: 07/12/22	2 16:35	Received: 07/	14/22 10:05 Ma	atrix: Solid	
Results reported on a "dry weig	ht" basis and are	e adjusted fo	r percent mo	oisture, sar	nple si	ize and any diluti	ons.		
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
7471 Mercury	Analytical Pace Anal	Method: EPA	.7471 Prepar s - Green Bay	ation Metho	od: EP/	A 7471			
Mercury	1.7	mg/kg	0.40	0.11	10	07/25/22 09:54	07/26/22 07:36	7439-97-6	
Percent Moisture	Analytical Pace Anal	Method: AST	M D2974-87 s - Green Bay	/					
Percent Moisture	14.3	%	0.10	0.10	1		07/15/22 13:34		


Project: 209-4221563 WM MERCURY WASTE

Pace Project No.: 40248114

Sample: SP5SE2S	Lab ID:	40248114031	Collected	l: 07/12/22	2 16:45	Received: 07/	14/22 10:05 Ma	trix: Solid			
Results reported on a "dry weight	t" basis and are	e adjusted for	percent mo	isture, san	nple si	ze and any diluti	ons.				
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual		
7471 Mercury	Analytical Method: EPA 7471 Preparation Method: EPA 7471 Pace Analytical Services - Green Bay										
Mercury	7.0	mg/kg	0.42	0.12	10	07/25/22 09:54	07/26/22 07:39	7439-97-6			
Percent Moisture	Analytical Method: ASTM D2974-87 Pace Analytical Services - Green Bay										
Percent Moisture	18.5	%	0.10	0.10	1		07/15/22 13:34				



Project: 209-4221563 WM MERCURY WASTE

Pace Project No.: 40248114

Sample: SP5SE2BS	Lab ID:	40248114032	Collected	I: 07/12/22	2 16:50	Received: 07/	14/22 10:05 Ma	atrix: Solid			
Results reported on a "dry weig	ght" basis and are	e adjusted for	percent mo	isture, san	nple si	ize and any diluti	ons.				
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual		
7471 Mercury	Analytical Pace Anal	Method: EPA 7 ytical Services	7471 Prepar - Green Bay	ation Metho	od: EP/	A 7471					
Mercury	0.87	mg/kg	0.39	0.11	10	07/25/22 09:54	07/26/22 07:41	7439-97-6			
Percent Moisture	Analytical Pace Anal	Analytical Method: ASTM D2974-87 Pace Analytical Services - Green Bay									
Percent Moisture	12.3	%	0.10	0.10	1		07/15/22 13:34				



Project: 209-4221563 WM MERCURY WASTE

Pace Project No.: 40248114

Sample: SP5SE3S	Lab ID:	40248114033	Collected	I: 07/12/22	2 17:05	Received: 07/	14/22 10:05 Ma	atrix: Solid			
Results reported on a "dry weight	" basis and are	e adjusted for	r percent mo	isture, sar	nple si	ize and any diluti	ons.				
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual		
7471 Mercury	Analytical Method: EPA 7471 Preparation Method: EPA 7471 Pace Analytical Services - Green Bay										
Mercury	3.4	mg/kg	0.40	0.11	10	07/25/22 09:54	07/26/22 07:43	7439-97-6			
Percent Moisture	Analytical Method: ASTM D2974-87 Pace Analytical Services - Green Bay										
Percent Moisture	13.8	%	0.10	0.10	1		07/15/22 13:34				



Project: 209-4221563 WM MERCURY WASTE

Pace Project No.: 40248114

Sample: SP5SE3BS	Lab ID:	40248114034	Collected	d: 07/12/22	2 17:10	Received: 07/	14/22 10:05 Ma	atrix: Solid		
Results reported on a "dry weigh	nt" basis and are	e adjusted for	percent mo	oisture, sar	nple s	ize and any diluti	ons.			
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual	
471 Mercury Analytical Method: EPA 7471 Preparation Method: EPA 7471 Pace Analytical Services - Green Bay										
Mercury	0.57	mg/kg	0.36	0.10	10	07/25/22 09:54	07/26/22 07:46	7439-97-6	1q	
Percent Moisture	Analytical Method: ASTM D2974-87 Pace Analytical Services - Green Bay									
Percent Moisture	11.0	%	0.10	0.10	1		07/15/22 13:34			



Qual

ANALYTICAL RESULTS

Project:	209-4221563 WM MERCURY WASTE
1 10/000	LOO ILLIGOO IIIII MERCOORTI III COTE

Pace Project No.: 40248114

Sample: RINSE #1	Lab ID:	Lab ID: 40248114035		d: 07/12/22	2 11:30	Received: 07/14/22 10:05 Matrix: Water				
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.		
7470 Mercury	Analytical Method: EPA 7470 Preparation Method: EPA 7470 Pace Analytical Services - Green Bay									
Mercury	<0.066	ug/L	0.20	0.066	1	07/27/22 10:25	07/28/22 06:53	7439-97-6		



Qual

ANALYTICAL RESULTS

Project:	209-4221563 WM MERCURY WASTE
1 10/000	LOO ILLIGOO IIIII MERCOORTI III COTE

Pace Project No.: 40248114

Sample: RINSE #2	Lab ID:	40248114036	Collected	l: 07/12/22	2 13:00	Received: 07/	14/22 10:05 Ma	atrix: Water		
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.		
7470 Mercury	Analytical Method: EPA 7470 Preparation Method: EPA 7470 Pace Analytical Services - Green Bay									
Mercury	<0.066	ug/L	0.20	0.066	1	07/27/22 10:25	07/28/22 06:55	7439-97-6		



Project:	209-4221563 WM MERCURY WASTE
1 10/000	LOO ILLIGOO IIIII MERCOORTI III COTE

Pace Project No.: 40248114

Sample: RINSE #3	Lab ID: 40248114037		Collected: 07/12/22 15:40			Received: 07/	14/22 10:05 Ma	Aatrix: Water	
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
7470 Mercury	Analytical	Method: EPA 7	470 Prepa	ration Meth	od: EPA	7470			
	Pace Anal	lytical Services	- Green Ba	у					
Mercury	<0.066	ug/L	0.20	0.066	1	07/27/22 10:25	07/28/22 06:57	7439-97-6	



Project:	209-4221563 WM MERCURY WASTE
1 10/000	LOO ILLIGOO IIIII MERCOORTI III COTE

Pace Project No.: 40248114

Sample: RINSE #4	Lab ID:	Lab ID: 40248114038		Collected: 07/12/22 17:20			14/22 10:05 Ma	Aatrix: Water	
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
7470 Mercury	Analytical	Method: EPA 7	'470 Prepa	ration Meth	od: EPA	7470			
	Pace Ana	lytical Services	- Green Ba	у					
Mercury	<0.066	ug/L	0.20	0.066	1	07/27/22 10:25	07/28/22 07:04	7439-97-6	



Project:	209-4221563 WM	MERCURY WAS	TE									
Pace Project No.:	40248114											
QC Batch:	421864		Anal	ysis Metho	od:	EPA 7470						
QC Batch Method:	EPA 7470		Anal	ysis Descr	iption:	7470 Mercu	iry					
			Labo	oratory:		Pace Analy	ical Servic	es - Green	Bay			
Associated Lab Sam	nples: 402481140	35, 4024811403	6, 4024811	4037, 402	48114038							
METHOD BLANK:	2429937			Matrix: W	/ater							
Associated Lab Sam	nples: 402481140	35, 4024811403	6, 4024811	4037, 402	48114038							
			Bla	nk	Reporting							
Param	neter	Units	Res	sult	Limit	Anal	yzed	Qualifier	s			
Mercury		ug/L		<0.066	0.2	20 07/28/2	2 06:41					
LABORATORY CON	ITROL SAMPLE:	2429938										
_			Spike	L(CS	LCS	% R	ec				
Param	neter	Units	Conc.	Re	sult	% Rec	Limi	ts (Qualifiers			
Mercury		ug/L		5	4.9	9	9 8	85-115				
MATRIX SPIKE & M	ATRIX SPIKE DUP	LICATE: 2429	939		2429940)						
		40048064004	MS	MSD	MC	MCD	MC	MOD			May	
Parameter	Units	Result	Conc.	Conc.	Result	Result	% Rec	% Rec	2% Rec	RPD	RPD	Qual
Mercury	ug/L	<0.066	5	5	4.9	4.9	98	98	85-115	0	20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.



Project:	209-42215	63 WM N	IERCURY WAS	TE									
Pace Project No .:	40248114												
QC Batch:	421038			Ana	lysis Metho	d:	EPA 7471						
QC Batch Method:	EPA 7471	I		Ana	lysis Descri	iption:	7471 Mercu	ry					
				Labo	oratory:		Pace Analyt	ical Service	es - Green	Bay			
Associated Lab San	nples: 40 40 40	2481140 2481140 2481140	01, 4024811400 08, 4024811400 15, 4024811401	2, 4024811 9, 4024811 6, 4024811	14003, 4024 14010, 4024 14017, 4024	48114004, 48114011, 48114018,	4024811400 4024811401 4024811401	5, 4024811 2, 4024811 9, 4024811	4006, 402 4013, 402 4020	48114007, 48114014,			
METHOD BLANK:	2425366				Matrix: S	olid							
Associated Lab San	nples: 40 40 40	2481140 2481140 2481140	01, 4024811400 08, 4024811400 15, 4024811401	2, 4024811 9, 4024811 6, 4024811	14003, 4024 14010, 4024 14017, 4024	48114004, 48114011, 48114018,	4024811400 4024811401 4024811401	5, 4024811 2, 4024811 9, 4024811	4006, 402 4013, 402 4020	48114007, 48114014,			
5				Bla	ank	Reporting			0				
Paran	neter		Units		Suit	Limit	Analy	/zed	Qualifier	S			
Mercury			mg/kg		<0.010	0.03	35 07/19/22	2 10:49					
LABORATORY COM	NTROL SAM	1PLE:	2425367										
				Spike	e LC	CS	LCS	% Re	ec				
Paran	neter		Units	Conc.	. Re:	sult	% Rec	Limi	ts	Qualifiers	_		
Mercury			mg/kg	0.	83	0.85	102	2 8	35-115				
MATRIX SPIKE & N	IATRIX SPI	KE DUPL	ICATE: 2425	368		242536	9						
				MS	MSD								
Parameter	r	Units	40248114001 Result	Spike Conc.	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Mercury		mg/kg	3.8	1	0.98	3.2	3.5	-59	-36	85-115	7	20	MO

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.



Project:	209-422	21563 WM N	IERCURY WAS	TE									
Pace Project No.:	402481	14											
QC Batch:	42160)3		Analy	sis Metho	d:	EPA 7471						
QC Batch Method:	EPA 7	471		Analy	/sis Descri	ption:	7471 Merc	ury					
				Labo	ratory:		Pace Anal	ytical Servic	es - Green	n Bay			
Associated Lab Sar	mples:	4024811402 4024811402	21, 40248114022 28, 40248114029	2, 4024811 9, 4024811	4023, 4024 4030, 4024	48114024, 48114031,	402481140 402481140)25, 402481)32, 402481	14026, 402 14033, 402	248114027, 248114034			
METHOD BLANK:	242889	4			Matrix: So	olid							
Associated Lab Sar	mples:	4024811402 4024811402	21, 40248114022 28, 40248114029	2, 4024811 9, 4024811 Blar	4023, 4024 4030, 4024 nk	48114024, 48114031, Reporting	402481140 402481140)25, 402481)32, 402481	14026, 402 14033, 402	248114027, 248114034			
Para	meter		Units	Res	ult	Limit	Ana	alyzed	Qualifier	rs			
Mercury			mg/kg		<0.010	0.03	35 07/26/	22 06:50					
LABORATORY CO	NTROL S	SAMPLE: 2	2428895										
				Spike	LC	S	LCS	% R	ec				
Parar	meter		Units	Conc.	Res	sult	% Rec	Lim	its	Qualifiers	_		
Mercury			mg/kg	0.8	3	0.87	1	04	85-115				
MATRIX SPIKE & M	MATRIX S	PIKE DUPL	ICATE: 24288	396 MS	MSD	242889	7						
			40248608005	Spike	Spike	MS	MSD	MS	MSD	% Rec		Max	
Paramete	er	Units	Result	Conc.	Conc.	Result	Result	% Rec	% Rec	Limits	RPD	RPD	Qual
Mercury		mg/kg	<0.011	0.96	0.96	1.0	1.0	102	103	85-115	1	20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.



Project: Pace Project No.:	209-4221563 WM N 40248114	IERCURY WAST	E					
QC Batch:	420944		Analysis Meth	od:	ASTM D2974-87			
QC Batch Method:	ASTM D2974-87		Analysis Desc	ription:	Dry Weight/Perce	nt Moisture		
			Laboratory:		Pace Analytical S	ervices - Gree	en Bay	
Associated Lab Sar	mples: 402481140	01, 40248114002	, 40248114003, 402	248114004				
SAMPLE DUPLICA	TE: 2424575							
			40248086002	Dup		Max		
Parar	neter	Units	Result	Result	RPD	RPD	Qualifiers	
Percent Moisture	, .	%	4.9	4	.8 1		10	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.



Proiect:	209-4221563 WM MERCURY WASTE

Pace Project No.: 40248114

QC Batch:	420949	Analysis Method:	ASTM D2974-87	
QC Batch Method:	ASTM D2974-87	Analysis Description:	Dry Weight/Percent Moisture	
		Laboratory:	Pace Analytical Services - Green Bay	
Associated Lab Samp	les: 40248114005, 4 40248114012, 4 40248114019, 4	0248114006, 40248114007, 40248114008 0248114013, 40248114014, 40248114015 0248114020, 40248114021, 40248114022	, 40248114009, 40248114010, 40248114011, , 40248114016, 40248114017, 40248114018, , 40248114023	

SAMPLE DUPLICATE: 2424609						
		40248125004	Dup		Max	
Parameter	Units	Result	Result	RPD	RPD	Qualifiers
Percent Moisture	%	13.3	13.1	1	10	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.



Percent Moisture

QUALITY CONTROL DATA

Project: Pace Project No.:	209-422 402481	21563 WM ME 14	RCURY WAST	E					
QC Batch:	42095	2		Analysis Meth	nod:	ASTM D2974-87			
QC Batch Method:	ASTM	D2974-87		Analysis Deso	cription:	Dry Weight/Perce	nt Moisture		
				Laboratory:		Pace Analytical S	ervices - Green	Вау	
Associated Lab Sar	nples:	40248114024, 40248114031,	40248114025, 40248114032,	40248114026, 40 40248114033, 40)248114027,)248114034	40248114028, 402	248114029, 402	48114030,	
SAMPLE DUPLICA	TE: 24	24678							
				40248124001	Dup		Max		
Parar	neter		Units	Result	Result	RPD	RPD	Qualifiers	

16.5

3

10

17.0

%

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.



QUALIFIERS

Project: 209-4221563 WM MERCURY WASTE

Pace Project No.: 40248114

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above LOD.

J - Estimated concentration at or above the LOD and below the LOQ.

LOD - Limit of Detection adjusted for dilution factor, percent moisture, initial weight and final volume.

LOQ - Limit of Quantitation adjusted for dilution factor, percent moisture, initial weight and final volume.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected at or above the adjusted LOD.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

ANALYTE QUALIFIERS

1q Analyte was measured in the associated method blank at a concentration of -0.013mg/kg.

M0 Matrix spike recovery and/or matrix spike duplicate recovery was outside laboratory control limits.



QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 209-4221563 WM MERCURY WASTE

Pace Project No.: 40248114

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
40248114035	RINSE #1	EPA 7470	421864	EPA 7470	421903
40248114036	RINSE #2	EPA 7470	421864	EPA 7470	421903
40248114037	RINSE #3	EPA 7470	421864	EPA 7470	421903
40248114038	RINSE #4	EPA 7470	421864	EPA 7470	421903
40248114001	SP1N1S	EPA 7471	421038	EPA 7471	421081
40248114002	SP1N1BS	EPA 7471	421038	EPA 7471	421081
40248114003	SP1N2S	EPA 7471	421038	EPA 7471	421081
40248114004	SP1N2BS	EPA 7471	421038	EPA 7471	421081
40248114005	SP1E1S	EPA 7471	421038	EPA 7471	421081
40248114006	SP1E1BS	EPA 7471	421038	EPA 7471	421081
40248114007	SP1E2S	EPA 7471	421038	EPA 7471	421081
40248114008	SP1E2BS	EPA 7471	421038	EPA 7471	421081
40248114009	SP1W1S	EPA 7471	421038	EPA 7471	421081
40248114010	SP1W1BS	EPA 7471	421038	EPA 7471	421081
40248114011	SP1W2S	EPA 7471	421038	EPA 7471	421081
40248114012	SP1W2BS	EPA 7471	421038	EPA 7471	421081
40248114013	SP4N1S	EPA 7471	421038	EPA 7471	421081
40248114014	SP4N1BS	EPA 7471	421038	EPA 7471	421081
40248114015	SP4N2S	FPA 7471	421038	EPA 7471	421081
40248114016	SP4N2BS	FPA 7471	421038	EPA 7471	421081
40248114017	SP4W1S	EPA 7471	421038	EPA 7471	421081
40248114018	SP4W1BS	EPA 7471	421038	EPA 7471	421081
40248114019	SP4W2S	EPA 7471	421038	EPA 7471	421081
40248114020	SP4W2BS	EPA 7471	421038	EPA 7471	421081
40248114021	SP5NW1S	EPA 7471	421603	EPA 7471	421680
40248114022	SP5NW1BS	FPA 7471	421603	EPA 7471	421680
40248114023	SP5NW2S	FPA 7471	421603	EPA 7471	421680
40248114024	SP5NW2BS	FPA 7471	421603	EPA 7471	421680
40248114025	SP5SW1S	FPA 7471	421603	EPA 7471	421680
40248114026	SP5SW1BS	FPA 7471	421603	EPA 7471	421680
40248114027	SP5SW2S	FPA 7471	421603	EPA 7471	421680
40248114028	SP5SW2BS	FPA 7471	421603	EPA 7471	421680
40248114029	SP5SE1S	FPA 7471	421603	EPA 7471	421680
40248114030	SP5SE1BS	EPA 7471	421603	EPA 7471	421680
40248114031	SP5SE2S	FPA 7471	421603	EPA 7471	421680
40248114032	SP5SE2BS	EPA 7471	421603	EPA 7471	421680
40248114033	SP5SE3S	EPA 7471	421603	EPA 7471	421680
40248114034	SP5SE3BS	EPA 7471	421603	EPA 7471	421680
40248114001	SP1N1S	ASTM D2974-87	420944		
40248114002	SP1N1BS	ASTM D2974-87	420944		
40248114003	SP1N2S	ASTM D2974-87	420944		
40248114004	SP1N2BS	ASTM D2974-87	420944		
40248114005	SP1E1S	ASTM D2974-87	420949		
40248114006	SP1E1BS	ASTM D2974-87	420949		
40248114007	SP1E2S	ASTM D2974-87	420949		
40248114008	SP1E2BS	ASTM D2974-87	420949		
40248114009	SP1W1S	ASTM D2974-87	420949		



QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 209-4221563 WM MERCURY WASTE

Pace Project No.: 40248114

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
40248114010	SP1W1BS	ASTM D2974-87	420949		
40248114011	SP1W2S	ASTM D2974-87	420949		
40248114012	SP1W2BS	ASTM D2974-87	420949		
40248114013	SP4N1S	ASTM D2974-87	420949		
40248114014	SP4N1BS	ASTM D2974-87	420949		
40248114015	SP4N2S	ASTM D2974-87	420949		
40248114016	SP4N2BS	ASTM D2974-87	420949		
40248114017	SP4W1S	ASTM D2974-87	420949		
40248114018	SP4W1BS	ASTM D2974-87	420949		
40248114019	SP4W2S	ASTM D2974-87	420949		
40248114020	SP4W2BS	ASTM D2974-87	420949		
40248114021	SP5NW1S	ASTM D2974-87	420949		
40248114022	SP5NW1BS	ASTM D2974-87	420949		
40248114023	SP5NW2S	ASTM D2974-87	420949		
40248114024	SP5NW2BS	ASTM D2974-87	420952		
40248114025	SP5SW1S	ASTM D2974-87	420952		
40248114026	SP5SW1BS	ASTM D2974-87	420952		
40248114027	SP5SW2S	ASTM D2974-87	420952		
40248114028	SP5SW2BS	ASTM D2974-87	420952		
40248114029	SP5SE1S	ASTM D2974-87	420952		
40248114030	SP5SE1BS	ASTM D2974-87	420952		
40248114031	SP5SE2S	ASTM D2974-87	420952		
40248114032	SP5SE2BS	ASTM D2974-87	420952		
40248114033	SP5SE3S	ASTM D2974-87	420952		
40248114034	SP5SE3BS	ASTM D2974-87	420952		

																		4	DZ48114		
CHAIN-OF-CUSTODY Analytical Request Document Submitting a sample via this chain of custody constitutes acknowledgment and acceptance of the Pace Terms Conditions found at: https://info.pacelabs.com/hubfs/pas-standard-terms.pdf Chain-of-Custody is a LEGAL DOCUMENT - Complete all relevant fields									and	LAB USE ONLY- Affix Workorder/Login Label Here or List Pace Workorder Number or MTJL Log-in Number Here											
Company: Tetra Tech			Billing Inforn	nation: 21	211 Durand	Avenue, U	nion Gro	ove,				A	LL BC	DLD O	UTLI	NED A	ARE/	AS are	for LAB USE ONLY		
ddress: 8413 Excelsior Dr #160, M	adison, WI 5371	.7	WI 53182									Con	tainer Pi	reservati	ve Typ	e **		Lat	o Project Manager:		
Report To: Luke Specketer (luke.sp	ecketer@tetrate	ech.com)	Email To: ssr	nolko@wi	n.com					U ++ Pres	ervativ	e Types:	(1) nitric	acid, (2)	sulfuric	acid, (3) h	ydroch	loric acid,	, (4) sodium hydroxide, (5) zinc acetate,		
opy To: Riley Eklund (riley.eklund(@tetratech.com))	Site Collectio	on Info/Ad	dress: 2121	1 Durand A	venue, L	Jnion		(6) met (C) ami	thanol, moniun	(7) sodiı n hydrox	um bisulf ide, (D) T	ate, (8) so 'SP, (U) Ui	dium th npreser	iosulfate, /ed, (O) O	(9) he ther	kane, (A) a	, (A) ascorbic acid, (B) ammonium sulfate,		
Customer Project Name/Number: 09-4221563			State: WI Co	unty/City:		/e Time Zor	ne Collect	ted: [1		T	4	nalyses				Lat	b Profile/Line: b Sample Receipt Checklist:		
hone: 608-346-1677 mail: uke.specketer@tetratech.com	Site/Facility ID #	#: WM M	ercury Waste	, INC.	Complianc	e Monitoria [] No	ng?											Cu: Cu: Co: Bo:	stody Seals Present/Intact Y NNA stody Signatures Present Y N NA llector Signature Present Y N NA ttles Intact Y N NA		
collected By (print): Riley Eklund	Purchase Order Quote #:	r # : 95794	47		DW PWS II DW Locati	D #: on Code:												Co Su Sa	rrect Bottles Y N NA fficient Volume Y N NA moles Received orbit a Y N NA		
Collected By (signature): <i>Biley</i> Sklund	Turnaround Da	te Require	ed: Standard		Immediate [x]Yes	ely Packed o [] No	on Ice:		3s (G)	ſIJ								VO. US	A - Headspace Acceptable Y N NA DA Regulated Solis Y N NA		
iample Disposal: x] Dispose as appropriate] Return] Archive:	Rush: (Expedite []Same Da []2Day [[]4Day [e Charges ay [] No] 3 Day] 5 Dav	Apply) ext Day		Field Filter [] Yes Analysis:	ed (if applic [x]No	cable):		ic (P) or Gla:	Total Merc								Sai Re Cl Sai pH	mples in Hydding Time Y N NA sidual Chorne Present Y N NA Strips: mple ffk Acceptable Y N NA Stript.		
] Hold: Matrix Codes (Insert in Matrix box Product (P), Soil/Solid (SL), Oil (OL	(below): Drinkin), Wipe (WP), Ai	ıg Water (r (AR), Tis	DW), Ground sue (TS), Bioa	Water (G) ssay (B), V	W), Wastew apor (V), Ot	vater (WW) ther (OT)	,		fype: Plast) 120 ML								Su Le LA	lfide present Y N NA ad Acetate Strips: B UME ONLY:		
Customer Sample ID	Matrix *	Comp / Grab	Collecte Composit Date	ed (or e Start) Time	Compo Date	site End Time	Res Cl	# of Ctns	Container 1	Plastic (P								La	b Sample # / Comments:		
SP1N1S	SL	Grab	7/12/2022	10:30				1		x								Ľ	001		
SP1N1BS	SL	Grab	7/12/2022	10:35				1		x									002		
P1N2S	SL	Grab	7/12/2022	10:40				1		X									003		
P1N2BS	SL	Grab	7/12/2022	10:45				1		x			1					1	004		
P1E1S	SL	Grab	7/12/2022	10:55				1		x					_				005		
SP1E1BS	SL	Grab	7/12/2022	11:00				1		x									Mb		
SP1E2S	SL	Grab	7/12/2022	11:20				1		x									707		
SP1E2BS	SL	Grab	7/12/2022	11:25				1		x									608		
SP1W1S	SL	Grab	7/12/2022	11:40	1			1		x									009		
SP1W1BS	SL	Grab	7/12/2022	11:45				1		x						+			010		
ustomer Remarks / Special Condit	ions / Possible H	łazards:	Type of Ice L Packing Mat Radchem sa	Jsed: erial Used mple(s) sc	Wet : reened (<50	Blue D 00 cpm):	ry N Y N	one			SHO Lab Sam FE	RT HOL Trackin ples rec DEX	DS PRES g #: ceived vi UPS	ENT (<7 a: Client	2 hour	s): Y	N :e Cou	N/A rier	LAB Sample Temperature Info: Temp Blank Received: Y N NA Therm ID#: Cooler 1 Temp Upon Receipt: Cooler 1 Therm Corr. Factor: Cooler 1 Corrected Temp: Comments:		
Relinquished by/Company: VSignati	ure)	Date	r /Time: 13/2022	11:00M	Received b	y/Company	/: (Signati	ure)				Date/T	ime:		Ta	MTJL LA ple #:	B USE	ONLY			
telinquished by/Company: (Signature) Da		Date	Date/Time: 1005 Received by/Company: (Signature) 7/14/22 Jusan Marie Pa					Date/Time: 1005 Acctnum: ACC 7/14/2-2 Prelogin:				/	Trip Blank Received: Y N NA HCL MeOH TSP Other								
Relinquished by/Company: (Signature) Date		Date/Time: Received by/Company: (Signature)					Date/Time: PM: PB:					PN PB	Non Conformance(s): Page: YES / NO of: Page :								

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Pace Analytical*	CH Submitting a si	CHAIN-OF-CUSTODY Analytical Request Document Submitting a sample via this chain of custody constitutes acknowledgment and acceptance of the Pace Terms and Conditions found at: https://info.pacelabs.com/hubfs/pas-standard-terms.pdf Chain-of-Custody is a LEGAL DOCUMENT - Complete all relevant fields										LAB USE ONLY- Affix Workorder/Login Label Here or List Pace Workorder Number or MTJL Log-in Number Here										
Company: Tetra Tech	*******		Billing Inform	hation: 217	211 Durand	Avenue, U	nion Gr	rove,				Δ		חוכ	ουτι	INF		FAS :	are f			
ddress: 8413 Excelsior Dr #160, M	ladison, WI 537	17	WI 53182								SAME 7 STOR											
			-							<u> </u>	T		ainer Pi	reserv	ative Ty	/pe **			Labi	roject Manager:		
eport To: Luke Specketer (luke.sp	ecketer@tetrat	ech.com)	Email To: ssm	iolko@wn	n.com					** Pre	l servati	ve Types:	(1) nitric	acid, (2) sulfuri	ic acid,	(3) hydr	ochloric	acid, (4) sodium hydroxide, (5) zinc acetate,		
opy To: Riley Eklund (riley.eklund)	@tetratech.com	1)	Site Collection Grove, WI 53	n Info/Add 3182	dress: 2121	1 Durand A	venue,	Union		(6) me (C) an	ethanol nmoniu	, (7) sodiu m hydrox	im bisulf ide, (D) T	ate, (8) TSP, (U)	sodium Unprese	thiosul erved, (fate, (9) O) Othe	hexane, r	(A) asc	orbic acid, (B) ammonium sulfate,		
ustomer Project Name/Number:			State: WI Cou	unty/City:	Union Grov	/e Time Zor	ne Colle	cted: [1	T	<u> </u>		Analys	es I		<u>r</u>	- <u>r</u>	Lab	Profile/Line:		
09-4221563]PT []MT [<u>i x]</u> CT []ET					1									Cust	ody Seals Present/Intact Y N NX		
hone: 608-346-1677 mail: Wa speckater@tetratech.com	Site/Facility ID	#: WM Me	ercury Waste,	INC.	Compliance [x] Yes	e Monitorir [] No	ng?												Cust Coll Bott	ody Signatures Present Y N NA ector Signature Present Y N NA les Intact N NA		
ollected By (print): Riley Eklund	Purchase Orde	er # : 95794	47	······	DW PWS II	 D #:			1										Corr	ect Bottles Y N NA		
	Quote #:				DW Locatio	on Code:													Sam	cicient volume Y N NA ples Received on Ice Y N NA		
ollected By (signature): Riley	Turnaround D	ate Require	ed: Standard		Immediate	ly Packed c	on Ice:		ତ										VOA	- Headspace Acceptible Y N NA		
ikland	Duch (Free !!	te Chara	Analy		[x]Yes	[]No			lass	l ID	1								Sam	Regulated Solls YN NA Dles in Holding Time YN NA		
ample Disposal: x] Dispose as appropriate	Kusn: (Expedit	ie unarges	Appiy) ext Day			ed (it applic	.apie):		10	Mei									Resi	dual Chlorine Present YN NA		
] Return	[]2 Dav	[]] 3 Dav	Ext Day		[] []	[x]NO			0	tal		а 1 — н							Sam	ole pH Acceptable Y N NA		
] Archive:	[] 4 Day	[] 5 Day			Analysis: _				tic (1	₽									рН 9	Strips:		
J Hold:	L Drinki		(DW) Crownd	Watar (C)					- Las	ž									Lead	d Acetate strips:		
Product (P) Soil/Solid (SL) Oil (OI	(Wine (WP)	ng water (vir (AR) Tis	DW), Ground	water (GV	w), wastew	/ater (ww), ther (OT)	,		pe:	120	1											
	.,, tipe (tit), A		Collecte				Res	# of	- Ę	E									LAB Lab	USE ONMY: Sample # / Comments:		
Customer Sample ID	Matrix *	Grab	Composit	e Start)	Compo	site End	ci	Ctns	aine	tic										.7		
•			Date	Time	Date	Time	1		out	las	1							1				
SP1W2S	SL	Grab	7/12/2022	12:05		1	1	1		X										011		
SP1W2BS	SL	Grab	7/12/2022	12:10	<u>†</u>		1	1		×		++								017		
SPAN1S		Grab	7/12/2022	12:30	<u> </u>		+	1		×	+	++								NA		
SDAN1BS		Grah	7/12/2022	12:35				+		+									1			
		Grah	7/12/2022	12:50	ł	<u> </u>	┼───	+		<u></u> ↓							_			017		
		Grab	7/12/2022	12.50	+		╂	+											-			
SP4NZBS	<u> </u>	Grab	7/12/2022	12:55	<u> </u>	╂────		<u> 1</u>		x							_			016		
SP4W1S	SL	Grab	7/12/2022	14:15	<u> </u>		<u> </u>	1		X										017		
SP4W1BS	SL	Grab	7/12/2022	14:20			<u> </u>	1	ļ	×	_									Dig		
SP4W2S	SL	Grab	7/12/2022	14:40				1		X										Or 9		
SP4W2BS	SL	Grab	7/12/2022	14:45				1		x	_									020		
Customer Remarks / Special Condi	tions / Possible	Hazards:	Type of Ice U	Jsed:	Wet	Blue D	ry	None			SH	ORT HOL	DS PRE	SENT ((<7 2 hoi	urs) :	Y N	N/A		LAB Sample Temperature Info:		
			Packing Mat	erial Used			·				Lab	Trackin	g #:							Temp Blank Received: Y N NA		
			l										-							Cooler 1 Temp Upon Receipt:oC		
			Radchem sa	mole(s) sc	reened (250)() cnm).	Y P				Sar	nples re	ceive d v	/ia:	_		-			Cooler / Therm Corr. Factor:OC Cooler 1 Corrected Temp:OC		
			induction 3d			io epiniji				-	F	EDEX	UPS	Clie	ent Co	ourier	Pace (Courier		Comments:		
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Company: Tetra Tech		cnain-or-C	Billing Inform	ation: 212	211 Durand	Avenue. U	nion Gro	ove,					11 04	ם וח	OUT		ם א ח	EVC	are for LAB LISE ONLY	
Address: 8413 Excelsior Dr #160, M	ladison. WI 537	17	WI 53182									A						EAD	die IOI LAD USE UNLT	
										<u> </u>		Cont	ainer F	reser	vative Ty	ype **			Lab Project Manager:	
eport To: Luke Specketer (luke.sp	ecketer@tetrat	ech.com)	Email To: ssn	nolko@wr	n.com					** Pre	servativ	/e Types:	(1) nitri	ic acid,	(2) sulfu	ric acid,	(3) hydi	 rochloric	ic acid, (4) sodium hydroxide, (5) zinc acetate,	
Copy To: Riley Eklund (riley.eklund	@tetratech.com	1)	Site Collectio	n Info/Ad	dress: 2121	1 Durand A	venue, U	Jnion		(6) me (C) am	thanol, moniu	(7) sodiu n hydrox	ım bisul ide, (D)	lfate, (8 TSP, (L	3) sodium J) Unpres	n thiosul served, (fate, (9) O) Othe	hexane, r	e, (A) ascorbic acid, (B) ammonium sulfate,	
Customer Project Name/Number:			State: WI Co	unty/City:	Union Grov	e Time Zor	ne Collect	ted: [·		Analy	ses				Lab Profile/Line:	
09-4221563]PT []MT	[x]CT []ET														Custody Seals Present/Intact)	(N MA
?hone: 608-346-1677 :mail: 	Site/Facility ID	#: WM M	ercury Waste,	INC.	Complianc [x]Yes	e Monitorir [] No	ng?												Custody Signatures Present S Collector Signature Present S Bottles Intact	ANNA ANNA NNA
ollected By (print): Riley Eklund	Purchase Orde	er # : 95794	47		DW PWS II	D#:		<u> </u>											Correct Bottles Sufficient Volume	YN NA YN NA
Collected By (signature): <i>Riley</i> Sklund): Ridey Turnaround Date Required: Standard Immediately Packed on Ice: [x] Yes [] No Rush: (Expedite Charges Apply) Field Filtered (if applicable):								s (G)	λ'n									Samples Received on Ice VOA - Headspace Acceptable USDA Regulated Soils	YNNA YNNA YNNA
Sample Disposal:	Rush: (Expedite Charges Apply) Field Filtered (if applicable): propriate [] Same Day [] Next Day [] Yes [x] No								Glas	er (Samples in Holding Tipe Residual Chlorine Present	YNNA YNNA
x] Dispose as appropriate	ise as appropriate [] Same Day [] Next Day [] Yes [x] No [] 2 Day [] 3 Day								Ъ	N								1	Cl Strips:	
] Archive:	[] 2 Day [] 3 Day [] 2 Day [] 5 Day Analysis:								(a)	Tota									Sample pH Acceptable	YNNA
] Hold:	[] 4 Day [] 5 Day Analysis: Analysis:								lasti	, z									Sulfide Present	YNNA
Matrix Codes (Insert in Matrix bo Product (P), Soil/Solid (SL), Oil (Ol	cs (Insert in Matrix box below): Drinking Water (DW), Ground Water (GW), Wastewater (WW), Soil/Solid (SL), Oil (OL), Wipe (WP), Air (AR), Tissue (TS), Bioassay (B), Vapor (V), Other (OT)) 120									Lead Acetate Strips:	
Customer Sample ID	Matrix *	Comp / Grab	Collecte Composit Date	: (TS), Bioassay (B), Vapor (V), Other (OT) Collected (or Composite Start) Date Time Date Time															Lab Sample # / Comments:	
SP5NW1S	SL	Grab	7/12/2022	15:05		1		1	Ĭ	x									021	
SP5NW1BS	SL	Grab	7/12/2022	15:10				1		x									022	
SP5NW2S	SL	Grab	7/12/2022	15:30				1		x									123	
SP5NW2BS	SL	Grab	7/12/2022	15:35			11	1		x									024	
SP5SW1S	SL	Grab	7/12/2022	15:55				1		X									675	
SP5SW1BS	SL	Grab	7/12/2022	16:00				1	1	×									026	
SP5SW2S	SL	Grab	7/12/2022	16:10				1		×									(1)7	
SP5SW2BS	SL	Grab	7/12/2022	16:15			1	1		×									()38	
SP5SF1S	SL	Grab	7/12/2022	16:30				1	1	×				÷					679	
SP5SF1RS	SI SI	Grab	7/12/2022	16:35		<u> </u>	+	1		T v									1777	
Customer Remarks / Special Condi	tions / Possible	Hazards:	Type of Ice I	Ised:	.l	J Blue D		lone						FSENT	(<72 bo		V N	N/A	Δ LAB Sample Temperature Info:	
	Packing Material Used: Wet Blue Dry None Packing Material Used:									Lab	Trackin	g #:		(3/2 110	, ui s j ,		iny A	Temp Blank Received: Y Therm ID#:	N NA	
Radchem sample(s) screened (<500 cpm): Y N NA								NA			San	nples red EDEX	ceived UPS	via: Cli	ent Co	ourier	Pace	Courier	Cooler 1 Therm Corr. Fact Cooler 1 Corrected Temp:	or:oC oC
Relinquished by/Company (Signat	ure)	Date	e/Time: 13/2,122 11	:00 Am	Received b	y/Company	/: (Signat	ure)		~		Date/T	ime:			MT. Table #	JL LAB	USE ON		
telinquished by/Company (Signature) Date/Time: 1005 Received by/Company: (Signature)							24	\mathcal{D}	0	Date/T		/(7.	25	Acctnu Templa	m: ate:	/	Trip Blank Received: Y N HCL MeOH TSP Ot	NA her		
Relinquished by/Company: (Signat	Image: Text of the second s						/: (Signat	wrg)	<u> </u>	uy		Date/T	1100 ime:			PM: PM: PB:	/		Non Conformance(s): Page: YES / NO of:	Po.

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Pace Analytical*	CH Submitting a si	IAIN-OF ample via this Conditions	-CUSTODY chain of custody c s found at: https://	onstitutes ac	tical Req knowledgment s.com/hubfs/pa	JUEST DO and acceptanc is-standard-ten	cume e of the P ms.pdf	ent Pace Terms	and			LAB US	SE ONL	Y- Aff	ix Wor	korde N	er/Log ATJL Lo	in Lab og-in I	el Her Numbe	e or List Pace Workorder Number or er Here
ompany: Tetra Tech			Billing Inform	ation: 217	211 Durand	Avenue, U	nion G	rove,												are for LAB LISE ONLY
ddress: 8413 Excelsior Dr #160. N	ladison. WI 537	17	WI 53182						l			P							:AJ 6	
· · · · · · · · · · · · · · · · · · ·			ļ							<u> </u>	<u> </u>	Con	tainer I	Preser	rvative	Type	**		r	Lab Project Manager:
eport To: Luke Specketer (luke.sp	ecketer@tetrat	:ech.com)	Email To: ssm	olko@wn	n.com					** Pr	eservati	ve Types	: (1) nitr	ric acid	, (2) sul	furic a	cid, (3)	hydrod	chloric a	acid, (4) sodium hydroxide, (5) zinc acetate,
opy To: Riley Eklund (riley.eklund)	@tetratech.com	1)	Site Collection Grove, WI 53	n Info/Add	dress: 2121	1 Durand A	venue,	, Union		(6) me (C) an	ethanol nmoniu	, (7) sodi m hydro:	um bisu xide, (D)	lfate, () TSP, (8) sodiu U) Unpr	um thie reserve	osulfate ed, (O)	e, (9) h Other	exane,	(A) ascorbic acid, (B) ammonium sulfate,
ustomer Project Name/Number:	····		State: WI Cou	unty/City:	Union Grov	ve Time Zor	ne Colle	cted: [1			r-	Analy	/ses			r	1	Lab Profile/Line:
09-4221563]PT []MT [_ x]CT {]ET				·	4										Custody Seals Present/Intact Y N NA
hone: 608-346-16// nail: .ko sposkotor@totrotoch.com	Site/Facility ID	#: WM M(ercury Waste,	INC.	Compliance [x] Yes	e Monitorir [] No	ıg?													Custody Signatures Presenty N NA Collector Signature Presenty N NA Bottles Intacty N NA
bllected By (print): Riley Eklund	Purchase Orde	er # : 95794	47	<u> </u>	DW PWS II	D #:			1					2 ¹						Correct Bottles Y N NA Sufficient Volume Y N NA
ollected By (signature): <i>Riley</i> Kland	Turnaround Da	ate Require	ed: Stand ard		Immediate	ly Packed c	on Ice:		s (G)	Δ'n										VOA - Headspace Acceptable Y N NA USDA Regulated Soils Y N NA
ample Disposal:	Rush: (Expedi	te Charges	Apply)		Field Filter	ed (if applic	cable):		Glas	erc										Samples in Holding Time Y N NA Residual Chlorine Present Y N NA
Dispose as appropriate	[] Same D	ay []N	ext Day		[]Yes	[x]No	5	W				1						Cl Strips:		
j keturn] Archive:	[] 2 Day [] 3 Day					(d)	[ota										Sample pH Acceptable Y N NA		
] Hold:	[]4 Day [J 5 Day			Analysis: _	astic	15										Sulfide resent Y N NA			
Matrix Codes (Insert in Matrix box Product (P), Soil/Solid (SL), Oil (OI	x below): Drinki L), Wipe (WP), A	ng Water (\ir (AR), Tis	DW), Ground sue (TS), Bioa	Water (G\ ssay (B), V	N), Wastew 'apor (V), Of	/ater (WW), ther (OT)	Type: Pl) 120 A										Lead Acetate Strips: LAB USE ONLY:		
Sector and Consults ID	1.1.1.1	Comp/	Collecte	d (or	Compc	site End	Res	ner	ic (F										Lab Sample # / Comments:	
ustomer sample iD	Watrix *	Grab	Date	Time	Date	Time			Conta	Plast										U
SP5SE2S	SL	Grab	7/12/2022	16:45				1		x										031
SP5SE2BS	SL	Grab	7/12/2022	16:50				1		x										032
SP5SE3S	SL	Grab	7/12/2022	17:05		1		1	1	x										033
SP5SE3BS	SL	Grab	7/12/2022	17:10				1		x										034
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	1				Constanting of the local															
Customer Remarks / Special Condi	tions / Possible	Hazards:	Type of Ice U	lsed:	Wet	Blue D	rγ	None			SH	ORT HO	LDS PR	ESENT	(<72	hours): Y	N	N/A	LAB Sample Temperature Info:
			Packing Material Used:								Lat	Trackir	ng #:							Therm ID#:
										<u></u>										Cooler 1 Temp Upon Receipt:oC
			Radchem sa	mple(s) sc	reened (<5(00 cpm):	YN	NA NA			Sai	npies re EDFX	ceived: 2911	i via: S Ci	ient	Couri	ier P	ace Cr	ourier	Cooler 1 Corrected Temp:OC
Relinquished by/Contrany: (Signat		In_+	e/Time:		Received h	w/Company	v (Cia-	atural	-	an analar a			Cime:							Comments:
	uiej	7/	13/2022 II: w Ary									Date/1	inne:			Tab	le #:			<u> </u>
Relinquished by/Company (Signat	ture)	Dat/	e/Time:		77		Date/	Time:		~	Acc	tnum:			Trip Blank Received: Y N NA					
Fod W	•	7/	14/22		LV1	1 mil	K	1111	27	Pai	ll .	-/14	rh	10	ØŚ	Ten	nplate	:	/	HCL MeOH TSP Other
Relinguished by/Company: (Signat	ture)		e/Time		Received	V/Company	UV v: (Sign		<u>v</u>			Date/	لرحن ا Time	/					/ .	Non Conformance(s): Page:
			- <i>i</i> , inite.			-W combany	1. (981)	(')				Date/				PB:	· ,	/		YES / NO lof:
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Pace Analytical*	CH Submitting a s	HAIN-OF ample via this Condition Chain-of-C	-CUSTOD chain of custody of found at: https:// Custody is a LEG	Y Analy constitutes ac /info.pacelab AL DOCUM	rtical Re cknowledgmer s.com/hubfs/p ENT - Compl	quest Do nt and acceptan pas-standard-te lete all releva	CLUME ce of the Pa ms.pdf nt fields	ent ace Terms	and			LAB U	SE ONL'	Y- Affix	k Work	korder/Lc MTJL	ogin La Log-in	bel Her Numbe	e or List Pace Workorder Number or er Here
Company: Tetra Tech			Billing Inform	nation: 21	211 Duran	d Avenue, l	Jnion Gr	rove,				A	LL B	OLD	001	TLINEC) ARi	EAS a	re for LAB USE ONLY
Address: 8413 Excelsior Dr #160, N	1adison, WI 537	'17	WI 53182									Con	tainer l	Preserv	ative	Type **			Lab Project Manager:
Report To: Luke Specketer (luke.sp	becketer@tetra	t ech.co m)	Email To: ssn	nolko@w	m.com					1 ** Pres	ervativ	/e Types	: (1) nitri	ic acid, ((2) sulfu	uric acid, (1	3) hydro	chloric a	acid, (4) sodium hydroxide, (5) zinc acetate,
Copy To: Riley Eklund (riley.eklund	@tetratech.com	n)	Site Collectio Grove, WI 53	on Info/Ad 3182	dress: 212:	11 Durand /	Avenue,	Union		(6) met (C) amr	thanol, moniur	, (7) sodi n hydro;	ium bisu xide, (D)	ilfate, (8) TSP, (U)	8) sodiui) Unpre	m thiosulfः eserved, (C	ate, (9))) Other	hexane, ((A) ascorbic acid, (B) ammonium sulfate,
Customer Project Name/Number: 209-4221563			State: WI Co]PT []MT	unty/City: [x]CT [Union Gro	ove Time Zo	ne Colle	cted: [1		[]		Analys	ses		T		Lab Profile/Line: Lab Sample Receipt Checklist:
Phone: 608-346-1677 Email: luke.specketer@tetratech.com	Site/Facility ID	#: WM M	ercury Waste	, INC.	- Complian [x]Yes	ice Monitori [] No	ing?												Custody Seals Fresent/Intact Y N NA Custody Signatures Present Y N NA Collector Signature Present Y N NA Bottles Intact Y N NA
Collected By (print): Riley Eklund	Purchase Orde Quote #:	er # : 9579	47	DW PWS ID #: DW Location Code: rd Immediately Packed on Ice: [x] Yes [] No															Correct Bottles Y N NA Sufficient Volume Y N NA Samples Received on Unit V N NA
Collected By (signature): <i>Riley</i> Eklund	Turnaround D	ate Requir	ed: Standard	ard Immediately Packed on Ice: O [x] Yes] No X Field Filtered (if applicable): O															VOA - Headspace Accept the Y N NA USDA Regulated Solas Y N NA
Sample Disposal: (x) Dispose as appropriate () Return () Archive:	Rush: (Expedi [] Same D [] 2 Day	te Charges Day [] N [] 3 Day	Apply) ext Day	Field Filtered (if applicable): 6 []Yes [x]No Analysis: 1						^r otal Merc									samples in Holding Time Y N NA Residual Chlorine Present Y N NA Cl Strips: Sample pH Acceptable Y N NA
[] Hold: * Matrix Codes (Insert in Matrix bo	x below): Drinki	ing Water (DW), Ground	Analysis: Ground Water (GW), Wastewater (WW), S), Bioassay (B), Vapor (V), Other (OT)															Sulfide Present Y N NA Lead Acetate Strips:
Product (P), Soil/Solid (SL), Oil (O	L), Wipe (WP), A	Air (AR), Tis	sue (TS), Bioa	ssay (B), V	/apor (V), C	Å Å	P) 2	Į								LAB USE ONLY: Lab Sample # / Comments:			
Customer Sample ID	Matrix *	Grab	Composit Date	Collected (or Composite End Cl Ctns End Cl						lastic (
Rinse #1	ww	Grab	7/12/2022	11:30	1	-	+	1	\vdash	X		┼──┤					+	+	125
Rinse #2	ww	Grab	7/12/2022	13:00		1	1	<u> </u>	+	×	<u>├</u> ``	\vdash	└── ┃		\rightarrow		+	1-1	121
Rinse #3	ww	Grab	7/12/2022	15:40	1	1	1	1	1	x		┼──┤			+		+		127
Rinse #4	ww	Grab	7/12/2022	17:20			<u> </u>	1	<u> </u>	×					_		+		038
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Customer Remarks / Special Cond	itions / Possible	Hazards:	Type of Ice L	Jsed:	Wet	Blue ()ry M	None			SHO	IRT HOI	LDS PRE	ESENT ((< 7 2 h	ours) :	Y N	N/A	LAB Sample Temperature Info:
			Packing Material Used:							Lab	Trackin	ng #:						Temp Blank Received: Y N NA Therm ID#: Cooler 1 Temp Upon Receipt:oC	
			Radchem sample(s) screened (<500 cpm): Y N NA							Sam FE	nples re EDEX	ceived UPS	via: Clie	ent C	Courier 1	Pace Co	ourier	Cooler 1 Therm Corr. Factor:oC Cooler 1 Corrected Temp:oC mments:	
Relinquished by/Company (Signat	ture)	Date	Time: 3/2022 LS: AN Received by/Company: (Signature)								Date/1	Time:			MTJL Table #:	. LAB U	SE ONL	Ä	
Mos Ellen		Dat	e/Time:	: 105 Received by/Company: (Signature)) [Date/1	Time:	1	x	Acctnun	า:		Trip Blank Received: Y N NA
Relinquished by/Company (Signat	ture)	7	114/22	jus N	nquished by/Company! (Signature) Date/Time: Received by/Company: (Signature)							7/14	1/22	r 10	6	Templat Prelogin	e: ∶∡		HCL MeOH TSP Other

DC#_Title: ENV-FRM-GBAY-0035 v01_Sample Preservation Receipt Form Revision: 3 | Effective Date: | Issued by: Green Bay



Qualtrax Document ID: 41307

Pace Analytical Services, LLC

DC#_Title: ENV-FRM-GBAY-0035 v01_Sample Preservation Receipt Form Revision: 3 | Effective Date: | Issued by: Green Bay

- C					•.					Lab	Lot# c	of pH p	paper	101	33	///	La	b Std	#ID of	prese	rvatio	n (if pł	1 adju	sted):					comp	leted	<u>EU</u>	Time:	
				Gl	ass]				Plas	tic				Vi	als			[Ji	ars		Ge	nera	1	* (>6mm) *	5	Act oH ≥9	5	8	djusted	Volume
ice b #	AG1U	BG1U	AG1H	AG4S	AG4U	AG5U	AG2S	BG3U	BP1U	BP3U	BP3B	BP3N	BP3S	VG9A	DG9T	VG9U	VG9H	VG9M	VG9D	JGFU	JG9U	WGFU	WPFU	SP5T	ZPLC	GN	voA Vials	H2SO4 pH	NaOH+Zn	HOHORN	HNO3 pH	pH after ac	(mL)
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1H [•]	1 lite	er arr	ber g	lass	HCL			B	P3B	250	mL p	lastic	NaO	Н		v v	9U	40 n	nL cle	ar via	al unp	res		w	GFU	4 oz	clear	r jar u	Inpres	;			
4S	125	mL a	imbei	glas	s H2	SO4		BF	P3N	250	mL p	lastic	HNO	3			99H	40 п	nL cle	ar via	I HCl	-		W	PFU	4 oz	plasi	tic jar	unpre	es			1
	120	m∟a mLa	imbei	gias diae	s unp	ores			-38	250	mL p	astic	H2S	04			59M	40 n	nL cle	ar via	al Met	Л			251	120	mL p	lastic	na i	niosu	Ifate		

Qualtrax Document ID: 41307

Pace Analytical Services, LLC

DC#_Title: ENV-FRM-GBAY-0014 v02_SCUR Revision: 3 | Effective Date: | Issued by: Green Bay

Sample Condition U	pon Receipt Form (SCUR)
Client Name: Tetra Tet	h Project #: WO#: 40248114
Client Pace Other:	
Tracking #: 2754 9260 5817	40248114
Custody Seal on Cooler/Box Present: yes X no Seals int	act: 🔲 yes 🔲 no
Custody Seal on Samples Present: [] yes no Seals int	act: 🔲 yes 🔲 no
Packing Material: 🕅 Bubble Wrap 🖉 Bubble Bags 🔲 N	lone 🚺 Other
Thermometer Used <u>SR - Type of Ice</u>	The Blue Dry None Samples on ice, cooling process has begun
Cooler Temperature Uncorr: 5 /Corr: 0	7/1/22 $7/2$
Temp Blank Present: 🕅 yes 🔲 no Biologic	al Tissue is Frozen: yes no Date: //nitials:
Temp should be above freezing to 6° C. Biota Samples may be received at $\leq 0^{\circ}$ C if shipped on Dry Ice.	Labeled By Initials:
Chain of Custody Present:	N/A 1.
Chain of Custody Filled Out:	N/A 2. Patt 7/14/22
Chain of Custody Relinquished:	
Sampler Name & Signature on COC:	N/A 4.
Samples Arrived within Hold Time:	5.
- VOA Samples frozen upon receipt	Date/Time:
Short Hold Time Analysis (<72hr):	6.
Rush Turn Around Time Requested: Ves	7.
Sufficient Volume:	8.
For Analysis: 🕅 Yes 🛛 No 🛛 MS/MSD: 🗆 Yes 🕼 No 🗆	N/A
Correct Containers Used: DiYes DNo	9.
-Pace Containers Used:	N/A
-Pace IR Containers Used:	N/A
Containers Intact:	10.
Filtered volume received for Dissolved tests	N/A 11.
Sample Labels match COC:	N/A 12.
-Includes date/time/ID/Analysis Matrix:	
Trip Blank Present: 🛛 Yes 🗅 No 🛱	N/A 13.
Trip Blank Custody Seals Present	RUA
Pace Trip Blank Lot # (if purchased):	
Client Notification/ Resolution: Person Contacted: Da Comments/ Resolution:	If checked, see attached form for additional comments

PM Review is documented electronically in LIMs. By releasing the project, the PM acknowledges they have reviewed the sample login

Page 3 of 3

Qualtrax Document ID: 41292

Pace Analytical Services, LLC



Pace Analytical Services, LLC 1241 Bellevue Street - Suite 9 Green Bay, WI 54302 (920)469-2436

August 22, 2022

Luke Specketer TETRATECH - Madison 8413 Excelsior Drive Madison, WI 53717

RE: Project: 209-4221563 WM MERCURY SOL. Pace Project No.: 40250049

Dear Luke Specketer:

Enclosed are the analytical results for sample(s) received by the laboratory on August 18, 2022. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

The test results provided in this final report were generated by each of the following laboratories within the Pace Network: • Pace Analytical Services - Green Bay

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Day Milery

Dan Milewsky dan.milewsky@pacelabs.com (920)469-2436 Project Manager

Enclosures





Pace Analytical Services, LLC 1241 Bellevue Street - Suite 9 Green Bay, WI 54302 (920)469-2436

CERTIFICATIONS

Project: 209-4221563 WM MERCURY SOL.

Pace Project No.: 40250049

Pace Analytical Services Green Bay

1241 Bellevue Street, Green Bay, WI 54302 Florida/NELAP Certification #: E87948 Illinois Certification #: 200050 Kentucky UST Certification #: 82 Louisiana Certification #: 04168 Minnesota Certification #: 055-999-334 New York Certification #: 12064 North Dakota Certification #: R-150 Virginia VELAP ID: 460263 South Carolina Certification #: 83006001 Texas Certification #: T104704529-14-1 Wisconsin Certification #: 405132750 Wisconsin DATCP Certification #: 105-444 USDA Soil Permit #: P330-16-00157 Federal Fish & Wildlife Permit #: LE51774A-0



SAMPLE SUMMARY

Project: 209-4221563 WM MERCURY SOL.

Pace Project No.: 40250049

Lab ID	Sample ID	Matrix	Date Collected	Date Received
40250049001	4N1	Solid	08/17/22 11:20	08/18/22 09:25
40250049002	4N1B	Solid	08/17/22 11:30	08/18/22 09:25



SAMPLE ANALYTE COUNT

Project: 209-4221563 WM MERCURY SOL.

Pace Project No.: 40250049

Lab ID	Sample ID	Method	Analysts	Analytes Reported
40250049001	4N1	EPA 7471	AJT	1
		ASTM D2974-87	PDV	1
40250049002	4N1B	EPA 7471	AJT	1
		ASTM D2974-87	PDV	1

PASI-G = Pace Analytical Services - Green Bay



SUMMARY OF DETECTION

Project: 209-4221563 WM MERCURY SOL.

Pace Project No.: 40250049

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
40250049001	4N1					
EPA 7471 ASTM D2974-87	Mercury Percent Moisture	0.038J 15.2	mg/kg %	0.041 0.10	08/22/22 09:47 08/19/22 11:02	
40250049002 EPA 7471	4N1B Mercurv	11.9	ma/ka	0.37	08/22/22 10:17	
ASTM D2974-87	Percent Moisture	12.0	%	0.10	08/19/22 11:02	



Project: 209-4221563 WM MERCURY SOL.

Pace Project No.: 40250049

Sample: 4N1	Lab ID:	40250049001	Collected	: 08/17/22	2 11:20	Received: 08/	18/22 09:25 Ma	atrix: Solid	
Results reported on a "dry weight	t" basis and are	adjusted for	r percent mo	isture, san	nple s	ize and any diluti	ons.		
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
7471 Mercury	Analytical Pace Anal	Method: EPA ytical Services	7471 Prepara s - Green Bay	ation Metho	od: EP	A 7471			
Mercury	0.038J	mg/kg	0.041	0.012	1	08/22/22 06:26	08/22/22 09:47	7439-97-6	
Percent Moisture	Analytical Pace Anal	Method: ASTI ytical Services	M D2974-87 s - Green Bay	,					
Percent Moisture	15.2	%	0.10	0.10	1		08/19/22 11:02		



Project: 209-4221563 WM MERCURY SOL.

Pace Project No.: 40250049

Sample: 4N1B	Lab ID: 4	40250049002	Collected	08/17/22	11:30	Received: 08/	18/22 09:25 Ma	atrix: Solid	
Results reported on a "dry weight"	basis and are	adjusted for	percent moi	sture, san	nple si	ze and any diluti	ons.		
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
7471 Mercury	Analytical N	/lethod: EPA 7	471 Prepara	ation Metho	od: EPA	7471			
	Pace Analy	tical Services	- Green Bay						
Mercury	11.9	mg/kg	0.37	0.11	10	08/22/22 06:26	08/22/22 10:17	7439-97-6	
Percent Moisture	Analytical M	/lethod: ASTM	D2974-87						
	Pace Analy	tical Services	- Green Bay						
Percent Moisture	12.0	%	0.10	0.10	1		08/19/22 11:02		



Project: 209-	4221563 WM I	MERCURY SOL.										
Pace Project No.: 4025	50049											
QC Batch: 423	3909		Analy	ysis Metho	d:	EPA 7471						
QC Batch Method: EP	A 7471		Analy	ysis Descri	iption:	7471 Mercu	ry					
			Labo	ratory:		Pace Analyt	ical Servic	es - Green	Bay			
Associated Lab Samples	402500490	01, 4025004900	2									
METHOD BLANK: 244	364			Matrix: S	olid							
Associated Lab Samples	402500490	01, 4025004900	2									
			Blar	nk	Reporting							
Parameter		Units	Res	ult	Limit	Analy	/zed	Qualifiers	S			
Mercury		mg/kg		<0.010	0.03	5 08/22/22	2 09:42					
LABORATORY CONTRO	L SAMPLE:	2441365										
			Spike	LC	CS	LCS	% R	ес				
Parameter		Units	Conc.	Re	sult	% Rec	Limi	ts (Qualifiers			
Mercury	-	mg/kg	0.8	33	0.83	99	9 8	85-115		_		
MATRIX SPIKE & MATRI	X SPIKE DUPI	LICATE: 2441	366		2441367	7						
		40050040004	MS	MSD					04 D			
Parameter	Unite	40250049001 Result	Spike Сорс	Spike	NIS Result	MSD Result	WS % Rec	MSD % Rec	% Rec	PDD	NIAX PPD	Qual
							/0 Rec					Qual
Mercury	mg/kg	0.038J	0.97	0.98	1.0	1.0	100	99	85-115	0	20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.



Project: Pace Project No.:	209-4221563 WM 40250049	MERCURY SOL.								
QC Batch:	423914		Analysis Meth	od:	ASTM D2974-	87				
QC Batch Method:	ASTM D2974-87		Analysis Desc Laboratory:	cription:	Dry Weight/Pe Pace Analytica	rcent N al Servi	/loisture ces - Gre	en Ba	у	
Associated Lab San	nples: 40250049	001, 40250049002			·				-	
SAMPLE DUPLICA	TE: 2441408									
			40250050012	Dup			Max			
Paran	neter	Units	Result	Result	RPD		RPD		Qualifiers	
Percent Moisture		%	17.9	17	7.4	3		10		

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.



QUALIFIERS

Project: 209-4221563 WM MERCURY SOL.

Pace Project No.: 40250049

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above LOD.

J - Estimated concentration at or above the LOD and below the LOQ.

LOD - Limit of Detection adjusted for dilution factor, percent moisture, initial weight and final volume.

LOQ - Limit of Quantitation adjusted for dilution factor, percent moisture, initial weight and final volume.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected at or above the adjusted LOD.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.



QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 209-4221563 WM MERCURY SOL.

Pace Project No.: 40250049

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch																
40250049001 40250049002	4N1 4N1B	EPA 7471 EPA 7471	423909 423909	EPA 7471 EPA 7471	424010 424010																
40250049001 40250049002	4N1 4N1B	ASTM D2974-87 ASTM D2974-87	423914 423914																		
Pace Analytical*	CH Submitting a s	HAIN-OF ample via this Condition: Chain-of-(-CUSTOD i chain of custody s found at: https:/ Custody is a LEC	Y Analy constitutes a //info.pacelab GAL DOCUM	/tical Rec cknowledgment 25.com/hubfs/pa IENT - Comple	uest Do and acceptance as-standard-ter ete all relevar	and		LAB USE ONLY- Affix Workorder/Login Label Here or List MTJL Log-in Number Here									e or List Pace Workorder Number or Er Here 40250049			
------------------------------------------------------------------------------	---------------------------------------------------------------	--------------------------------------------------------	--------------------------------------------------------------------------	---------------------------------------------------------	--------------------------------------------------------------------------------------	-----------------------------------------------------------------	------------------	--------------	-----------------------------------------------------------------------------------	------------------	---------------------------------------------	---------------------	---------------------	----------------------	--------------------	--------------------	----------------------------	-----------------------------------------------------------	------------------------------------------------	-----------------------------------------------------------------------------------------------------------------------------	--
Company: Tetra Tech			Billing Inform	nation: 84	13 Excelsior	Drive, Suite	e 160,					ŀ	ALL E	3010	οοι	ITLII	NED	ARE	AS a	ire for LAB USE ONLY	
Address: 8413 Excelsior Dr, Suite 1	60, Madison, W	/ 53717	Madison, Wi	153/17						-		Cor	ntainer	Prese	rvativ	е Туре	**			Lab Project Manager:	
Report To: Luke Specketer (luke.sp	ecketer@tetrat	tech.com)	Email To: Lu	ke Specke	ter (luke.sp	ecketer@te	tratech	i.com)		U ** Pre	servati	e Types	s: (1) ni	tric acio	d, (2) su	Ifuric a	icid, (3	hydro	chloric a	cid, (4) sodium hydroxide, (5) zinc acetate,	
Copy To: Riley Eklund (riley.eklund	@tetratech.cor	m)	Site Collectio Grove, WI 5	on Info/Ad 3182	dress: 2121	1 Durand A	venue,	Union		(6) me (C) am	thanol moniu	(7) sodi n hydro	ium bis xide, ([ulfate, 0) TSP, ((8) sod (U) Unp	ium thi preserv	osulfat ed, (O)	e, (9) h Other	exane, (A) ascorbic acid, (B) ammonium sulfate,	
Customer Project Name/Number: 209-4221563			State: WI Co]PT []MT	unty/City:	Union Grov	/e Time Zor	e Colle	cted: [Anal	yses					Lab Profile/Line: Lab Sample Receipt Checklist: Custody Seals Present/Intact Y N ZA	
Phone: 608-346-1677 Email:	Site/Facility ID	#: WM M	ercury Waste	., INC.	Compliance Monitoring? [x] Yes [] No															Custody Signatures Present Y NA Collector Signature Present Y NA	
luke.specketer@tetratech.com Collected By (print): Riley Eklund	Purchase Orde	er # :			DW PWS ID #:															Sofficient Volume	
Collected By (signature): <i>Riley</i> Eklund	Turnaround Da	ate Require	ed: 2 Day	ed: 2 Day Immediately Packed on Ice:						, Liu										Samples Received on ICS Y N NA VOA - Headspace Assertable Y N NA USDA Regulated Solls Y N NA	
Sample Disposal: [X] Dispose as appropriate [] Return [] Archive:	Rush: (Expedit [] Same D [X] 2 Day [] 4 Day	te Charges Jay [] No [] 3 Day [] 5 Day	Apply) ext Day /		Field Filtered (if applicable): 6 [] Yes [x] No Analysis: 32					- Total Merc										Samples in Holding Time, Y N NA Residual Chloding Present Y N NA Cl Strips: Sample pr Acheptania Y N NA PH Stri	
* Matrix Codes (Insert in Matrix bo Product (P), Soil/Solid (SL), Oil (Ol	Water (G ssav (B), \	L Ke GW), Wastewater (WW), Vapor (V). Other (OT)															Lead Acetete Strips:				
Customer Sample ID	Matrix *	Comp / Grab	Collecte Composit Date	ed (or e Start) Time	Compo	site End	Res Cl	# of Ctns	Container Ty	Plastic (P)										LAB USE UNDI: Lab Sample # / Comments:	
4N1	SL	Grab	8/17/2022	11:20 -				1		×										OO	
4N1B	SL	Grab	8/17/2022	11:30	<u> </u>			1		x										002	
· · · · · · · · · · · · · · · · · · ·		<u> </u>																			
										·											
					1				<u> </u>	-											
								<u> </u>													
Customer Remarks / Special Condi	tions / Possible	Hazards:	Type of Ice L Packing Mat	Jsed: :erial Used	Wet I:	Blue Di	$\sum_{i=1}^{N}$	lone			SHC	RT HOI Frackir	LDS PF	ESENT	Г (<7 2	hours	<u>}¥</u>		N/A	Temp Blank Received: Y N NA Therm ID#:	
			Radchem sa	mple(s) sc	reened (<50	Ю срт):	Y N	NA			Samples received via: FEDEX UPS Client C					Couri	er Pa	ace Co	urier	Cooler 1 Temp Upon Receipt:oC Cooler 1 Therm Corr. factor:oC Cooler 1 Corrected Temp:oC Comments:	
Relinquished by/Company: (Signature) Date/Time; Wey EAlm				ne: 7/2672 4:44 Received by/Company: (Signature)							Date/Time:					Tab	MTJL L le #:	AB US	E ONLY	0/	
Relinquished by/Company: (Signat	elinquished by/Company: (Signature) Date/Time Federa 8/8/6)925) attravelet						Date/Time: 8/18/22_092				125	Acc Ten Prei	tnum: nplate: login:			Trip Blenk Received: Y N NA HCL MeOH TSP Other	
Kelinquished by/Company: (Signat	ure)	Date	:/ Lime:		Received by	Received by/Company: (Signature)						Date/Time:			PM: PB:				Von Conformance(s): Page: YES / NO of: Page		

Client Name:	Testratech	
		1

Sample Preservation Receipt Form Project # <u>U0250049</u>

.

Pace Analytical Services, LLC 1241 Bellevue Street, Suite 9 Green Bay, WI 54302

Date/

Initial when

All containers needing preservation have been checked and noted below: □Yes □No W/A

									Lab Lot# of pH paper: Lab Std #										#ID of	ID of preservation (if pH adjusted):							completed: I ii					l ime:	me:
Pace	1U	10	1H	4S	ass 14	5U	2S	3U	10	3U	Plast	tic Ne	35	9A	9T	Via N6	als H6	M6	0D	FU [J J	ars D4	FU	5T 0	enera	1	Vials (>6mm) *	O4 pH ≤2	H+Zn Act pH ≥9	H pH ≥12	03 pH ≤2	ifter adjusted	Volume (mL)
Lab #	AG	BG	AG	AG	AG	AG	AG	BG	ВР	BP	BP	BP	BP	5	DG	5	5	5	5	9	ğ	Ň	ΔÞ	SP	ZPI	U U	VOA	H2S	NaO	NaO	ONH	PH a	
001																																	2.5 / 5 / 10
002																							1		s (gala)								2.5/5/10
003																	1		Ι			Τ											2.5/5/10
004					1 Activities			212-225 1-3125												nde Frederik 18. de ekse 12. de ekse		20.0							1.000				2.5/5/10
005																					1	1	1										2.5/5/10
006					1000				13.68				1.4						1300					sa order					44	1.24			2.5/5/10
007							\square												1								<u>a didaa ah</u>						2.5/5/10
008							ding that is faithfuilte										લાય થયું છે.	1012467	1000				1200		1.00					22.00			2.5/5/10
009							1											1			1												2.5/5/10
010								610466						(a) (6) (6	6	211	210											200				1,840	2.5/5/10
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012	1962, 358 - 1969, 358			12.369	n Stario (1979) March Corre									19970 (Kar	\geq	İ.	10 PEOPLE	-/	În_	10000	474	-		in the second second second second second second second second second second second second second second second	******	97. W	\$-90-04 (d	\$12 ⁰ .19	- (Aparta			*** #*# - \$ ***	2.5/5/10
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014	ĝ.			-24-22		12055				Englis d								\sum	\mathbf{k}		i ages.				1.142								2.5/5/10
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016			6494	9402/535	(A.), (A.),	41.77	149424	0.314789	(and MAR)	e propiosi	s para s	- Rokola Les		01.01 Kale 1.01 Kale	e provin		3. S.	4.00	Line Part	i krysti	\succ		12.1	126.31	1.199								2.5/5/10
017		10000			, solaria il											- 460-100-0	2200			14.000400						0.0038		- Shidate i co		in the first start	10 0 0 7 0 70 000 000		25/5/10
018	Appropriet for		1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.							- 159 - 16 - 199 - 199			1.193				250								12,000	11103					(internal)	1999	25/5/10
019	8506.5		1000.000	3967963	6 (6862.6-8-9		e decisaire	0.000888	44.5018	1. 1990 912	CONCERNENCES	77668803	0.05600	i Kosaaaga	1.65247538	1907-2018 1	- UNERCOL		0.01702	1 20/23382	1. 1942 - 172	1000.00	1 0/3245/3	2.000	\succ		1920-949	-385a s	-23096232	149296893		2/22/09/00/22	25/5/10
020															april 1				1.3	0.00			1.4	121202	1000				a gadas a	121210226			2.5/5/10
		1.0000		812.978 8	6 89 80 JUS	- and a second		2040.0		S I PROUVE		1.1.1022.3		1010 828	02002-07	-	- 48 <u>2</u> 2889	- 27-2050	1 1 2 4 4 4 5	1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.	•	1. 008555		0.000	1.1202.000	(Level)		>	<u> </u>	12.02.8489.02	10 X 2003/8127		a construit de la construit de
Exce	otions	to pro	eserva	ation o	check:	VOA	., Coli	form,	TOC,	TOX,	тон,	0&G,	WID	RO, P	henol	ics, O	ther:			_Hea	dspac	e in V	OA Vi	als (>6	Smm) :	⊡Yes	s⊡No	×N/A	*If ye	s look	in head	Ispace	column
AG1U	U 1 liter amber glass BP1U 1 liter plastic unpres									39A	40 n	nL cle	ear as	scorbi	С		J	GFU	4 oz	amb	er jar	unpre	es										
BG1U	U1 liter clear glass BP3U 250 mL plastic unpres									G9T	40 n	nL arr	ber l	Na Th	nio		J	39U	9 oz	amb	er jar	unpre	es										
	S 125 ml amber glass H2SO4 BP3N 250 ml plastic HNO3									390 391	40 n	nL Cle	ear via	ai unp ai HC	ores			GFU PFII	4 OZ	oz clear jar unpres													
AG4U	4U 120 mL amber glass unpres BP3S 250 mL plastic H2SO4													SP5T 120 ml			0 mL plastic Na Thiosulfate					1											
AG5U	G5U 100 mL amber glass unpres								VG9D 40 mL clear vial DI ZPLC						ziploc bag																		
AG2S	500	mL a	mbei	r glas	s H2	SO4																		1 (GN								
BG3U	250	mL c	lear g	glass	unpr	es																											—

F-GB-C-046-Rev.03 (11Feb2020) Sample Preservation Receipt Form

Page 1 of age 13 of 14

	Sample C	Docur	nent Name:	Document	Revised: 26Mar2020
Pace Analytical"	Sample Co	Doci	iment No ·		Author:
1241 Bellevue Street, Green Bay, WI 54302	ENV-F	RM-G	BAY-0014-Rev.00	Pace Gree	en Bay Quality Office
Sample C	Condition	Upoi	n Receipt Form (S	CUR)	
Client Name: Tetratech		-		0#:4	0250049
Courier: 🔲 CS Logistics 🕅 Fed Ex 🛛 🗖 Speede	e 🗖 UPS	Γw	altco		
Client Pace Other:					
Tracking #: 7912 8838 6696			_ 402	250049	
Custody Seal on Cooler/Box Present: 🔲 yes 🏌	no Seals	s intact:	🗖 yes 🔲 no		
Custody Seal on Samples Present: 🗋 yes 🕅	no Seals	s intact:	🗖 yes 🔲 no		
Packing Material: 🔲 Bubble Wrap 🗂 Bubb	le Bags	None	Other		
Thermometer Used <u>SR - 15</u>	Type of Ice	: Wet	Blue Dry None	Samples on	Person examining contents:
	Biol				- R/18/10 19.1
Temp Blank Present: Kyes I no Temp should be above freezing to 6°C.	BIOR	gical i			
Biota Samples may be received at ≤ 0°C if shipped on Dr	y Ice.				Labeled By Initials: + U*
Chain of Custody Present:	AlYes ∐No		1.	<u>.</u>	· · · · · · · · · · · · · · · · · · ·
Chain of Custody Filled Out:	Yes No		2.		
Chain of Custody Relinquished:	Yes □No	□n/A	3.	<u></u>	
Sampler Name & Signature on COC:	Yes □No	□n/A	4.		
Samples Arrived within Hold Time:	XYes □No		5.		
- VOA Samples frozen upon receipt	□Yes □No		Date/Time:		
Short Hold Time Analysis (<72hr):	□Yes XNo		6		
Rush Turn Around Time Requested: 8/18/20	(Ye) XHO	-	7.		
Sufficient Volume:			8.		
For Analysis: ൸es □No MS/MSD:		□n/A			
Correct Containers Used:	XiYes □No		9.		
-Pace Containers Used:	Kyes □No	□n/A			
-Pace IR Containers Used:	□Yes □No				
Containers Intact:	¥Yes □No		10.		
Filtered volume received for Dissolved tests	□Yes □No	XN/A	11.		
Sample Labels match COC:	YYes □No		12.		
-Includes date/time/ID/Analysis Matrix:	6				
Trip Blank Present:	□Yes □No		13.		
Trip Blank Custody Seals Present	□Yes □No				
Pace Trip Blank Lot # (if purchased):	_				
Client Notification/ Resolution:			If checke	ed, see attache	ed form for additional comments
Person Contacted:		_Date/	lime:	<u> </u>	
			· · · · · · · · · · · · · · · · · · ·		

PM Review is documented electronically in LIMs. By releasing the project, the PM acknowledges they have reviewed the sample login

Page_2_ of _2_ Page 14 of 14

Appendix 18. Containment Area Coating Details



Dura Poxy

Features

Composed of 100% epoxy solids, with no odor during application Curing time of 12 to 14 hours Extremely tough and hard, especially when strengthened by adding quartz chips; typically 20 mils thick No shrinkage during curing process No VOC's (Volatile Organic Compounds) Comes in a variety of colors and textures created by adding quartz crystals during application

Uses

Ideal for the food processing industry applications and commercial kitchens because it meets health codes needed for operation

Perfect for multi-tenant buildings because of the lack of odor(s) that neighbors may find objectionable

concrete-floor-coatings.com/100-solids-epoxy/

8/27/2021

Epoxy Coatings For Concrete Floors | Epoxy Commercial Kitchen Flooring | Dura Poxy Warehouse Floor Paint

Necessary for floors with major (> 10 mils) irregularities in the surface

Necessary for floors (or floor areas) requiring maximum resistance to damage from falling tools, forklifts, and similar causes of harm

Necessary for floors requiring maximum skid resistance such as in wet or frosty environments

Ideal for repairing deep cracks and holes in floors or vertical surfaces.

Can be used on walls, ceilings, woodwork and even non-porous surfaces like truck beds, metal silos, etc.

Costs

Cost of materials is about three times that of Dura Seal 400 Heavier shipping weight (per square foot of coverage) than Dura Seal 400

More Details

Dura Poxy is our strongest floor covering. It consists of 100% solid epoxy which gives it maximum strength and no-odor application. Click here for a chart of Dura Poxy basic colors.

Dura Poxy with color quartz has a test strength of 22,000 lbs. per sq. inch in contrast to that of concrete which ranges from 2500 to 4500 lbs. per sq. inch depending on the mix.

The Dura Poxy catalyst is a special "wet surface catalyst" meaning that it will harden even in water. This can be advantageous for facilities like bottlers and food processors that may have water spill during the curing process. It also means that Dura Poxy can be used to make repairs in areas that may have spills or water flow.

Stones and other colored materials such as quartz can be mixed into Dura Poxy to produce a wide variety of terrific looks. Great applications for color quartz are high skid areas like bath, pool, freezer, steps, and other slip-prone areas. The surface is harder than steel so steel wheels will not wear it out. It is more resistant to heat than epoxy by itself.

Appendix 19 Preparedness and Prevention

KANSASVILLE FIRE & RESCUE DEPARTMENT

Dover Township • Racine County

December 3, 2021

Mr. Steve Smolko Waste Management 21211 Durand Ave. Union Grove, WI 53182

Dear Steve,

This letter is provided to allow Waste Management to meet the WDNR documentation requirements for your facility located in the Town of Dover.

The Kansasville Fire & Rescue Department provides fire and emergency medical services to the Town of Dover and the northern portion of the Town of Brighton. We have an ISO rating of 6/9. We work in close partnership with the Union Grove Yorkville and Raymond fire departments. We respond to structure fires with these two partners under an automatic aid agreement.

We also maintain a strong reliance on our mutual aid neighbors beyond Union Grove and Raymond through our Mutual Aid Box Alarm System (MABAS). The MABAS process connects us to nearly unlimited resources. Our fleet consists of two fire engines each carrying 1,000 gallons of water plus two 3,600 gallon tenders. Our first alarm response to your facility would result in at least four fire engines, an aerial platform, four tenders (water tankers) along with various EMS and Command personnel.

We appreciate your efforts to maintain the safety improvements that have been added over the past 12 to 15 years. We have a strong interest in preserving the onsite water supply and drafting capability along with the onsite Command Post space.

Waste Management is in the process of removing the three Mercury boilers and remediating the work spaces. The facility will be used as a temporary storage area for hazardous materials until suitable quantities are amassed for transport to final disposal destinations.

We have reviewed the layout of the facility as presented in the site plans and hazardous waste container storage figures that you provided. We are also familiar with the properties of the hazardous wastes handled at the facility and associated hazards as well as the places where facility personnel would normally be working, internal access routes and possible evacuation routes. Based on that review, the layout of the facility would allow for unobstructed movement of personnel, fire protection equipment, spill control equipment, and decontamination equipment to any area of the facility operation in the event of an emergency.

We value the close working relationship that we currently enjoy with Waste Management and look forward to continuing this relationship as we both go forward. Please let me know if there is anything else that you need from us. Thank you.

Respectfully,

John Dahms, Battalion Chief Kansasville Fire & Rescue Department (262) 939-1674 Johndahms80@gmail.com

CC: Chief Ron Molnar: Waste Management



DATE

21211 Durand Avenue Union Grove, WI 53182-9711

Union Grove/Yorkville Fire & Rescue 700 Main Street Union Grove, WI 53182

Re: Arrangement for Emergency Services WM Waste, Inc. EPA ID# WID00000356; FID# 252195350

Dear Sir or Madam:

WM Waste, Inc. (WM Waste) operates a commercial hazardous waste storage facility which is located at 21211 Durand Avenue in Union Grove, Wisconsin. The facility stores and consolidates containers of various hazardous and universal wastes. These wastes are stored in licensed container storage areas prior to shipment to off-site, appropriately permitted/licensed facilities. The facility is no longer processing mercury for recovery.

In accordance with the requirements of Wisconsin Department of Natural Resources (WDNR) Regulations NR 664.0037, owners and operators of hazardous waste management facilities must attempt to establish agreements with local authorities or entities that may provide assistance in the event of an emergency situation. Arrangements will be made at your request to familiarize you with the layout of the facility, properties of hazardous waste handled at the facility and associated hazards, places where facility personnel would normally be working, entrances to and roads inside the facility and possible evacuation routes.

WM Waste respectfully requests that you complete the enclosed written documentation indicating whether your agency will or cannot provide emergency services should an emergency arise at the facility.

In addition, in accordance with NR 664.0053, if your agency can provide the requested emergency services, WM Waste must provide a copy of the WM Waste Integrated Contingency Plan (ICP) and all future revisions. WM Waste is currently in the process of renewing its operating hazardous waste license and will provide a copy of the updated ICP upon approval by WDNR.

Should you have any questions or require further information, please contact Steven Smolko, Operations Manager, at 262-498-3072.

Sincerely,



21211 Durand Avenue Union Grove, WI 53182-9711

WM Waste, Inc. UNION GROVE FACILITY

ARRANGEMENTS FOR EMERGENCY SERVICES

Please read and check the following statement that applies to your agreement to provide emergency services to the WM Waste, Inc. facility located at 21211 Durand Avenue, Union Grove, Wisconsin, 53182.

□ The Emergency Response Agency <u>will</u> provide emergency services.

□ The Emergency Response Agency <u>cannot</u> provide emergency services.

Additional Comments:

Signature of representative of Emergency Response Agency and Date

Print/Type name of representative of Emergency Response Agency



DATE

21211 Durand Avenue Union Grove, WI 53182-9711

Racine County Office of Emergency Management 730 Wisconsin Avenue Racine, WI 53403

Re: Arrangement for Emergency Services WM Waste, Inc. EPA ID# WID00000356; FID# 252195350

Dear Sir or Madam:

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21211 Durand Avenue Union Grove, WI 53182-9711



DATE

WE Energies 231 W. Michigan Street Milwaukee, WI 53203

Re: Arrangement for Emergency Services WM Waste, Inc. EPA ID# WID00000356; FID# 252195350

Dear Sir or Madam:

WM Waste, Inc. (WM Waste) operates a commercial hazardous waste storage facility which is located at 21211 Durand Avenue in Union Grove, Wisconsin. The facility stores and consolidates containers of various hazardous and universal wastes. These wastes are stored in licensed container storage areas prior to shipment to off-site, appropriately permitted/licensed facilities. The facility is no longer processing mercury for recovery.

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21211 Durand Avenue Union Grove, WI 53182-9711

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Print/Type name of representative of Emergency Response Agency



21211 Durand Avenue Union Grove, WI 53182-9711

DATE

Town of Dove (Kansasville) Fire Department 23730 Durand Avenue Kansasville, WI 53139

Re: Arrangement for Emergency Services WM Waste, Inc. EPA ID# WID00000356; FID# 252195350

Dear Sir or Madam:

WM Waste, Inc. (WM Waste) operates a commercial hazardous waste storage facility which is located at 21211 Durand Avenue in Union Grove, Wisconsin. The facility stores and consolidates containers of various hazardous and universal wastes. These wastes are stored in licensed container storage areas prior to shipment to off-site, appropriately permitted/licensed facilities. The facility is no longer processing mercury for recovery.

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Print/Type name of representative of Emergency Response Agency

21211 Durand Avenue Union Grove, WI 53182-9711



DATE

City of Burlington Fire Department 165 West Washington Street Burlington, WI 53105

Re: Arrangement for Emergency Services WM Waste, Inc. EPA ID# WID00000356; FID# 252195350

Dear Sir or Madam:

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21211 Durand Avenue Union Grove, WI 53182-9711

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Signature of representative of Emergency Response Agency and Date

Print/Type name of representative of Emergency Response Agency





DATE

Town of Burlington Fire Department 32288 Bushnell Road Burlington, WI 53105

Re: **Arrangement for Emergency Services** WM Waste, Inc. EPA ID# WID00000356: FID# 252195350

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21211 Durand Avenue Union Grove, WI 53182-9711



DATE

Memorial Hospital of Burlington 252 McHenry Street Burlington, WI 53105

Re: Arrangement for Emergency Services WM Waste, Inc. EPA ID# WID00000356; FID# 252195350

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Print/Type name of representative of Emergency Response Agency

21211 Durand Avenue Union Grove, WI 53182-9711



DATE

Racine County Sheriff's Office 717 Wisconsin Avenue Racine, WI 53403

Re: Arrangement for Emergency Services WM Waste, Inc. EPA ID# WID00000356; FID# 252195350

Dear Sir or Madam:

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Appendix 20 Soil Monitoring Data



WM WASTE, INC. TABLE 20-1 HISTORICAL SOIL SAMPLE ANALYTICAL RESULTS 21211 DURAND AVENUE, UNION GROVE, WI

								2020 Result	
Samala ID	2009 Result	2010 Result	2012 Result	2014 Result	2016 Result	2018 Result	2020 Result	Post	2022 Result
Sample ID	(mg/Kg)	Remediation	(mg/Kg)						
								(mg/Kg)	
A-2	0.141	0.567	0.0898	0.245	0.347	0.277	1.21	NA	0.17
A-2a	0.246	0.475	0.389	0.157	0.412	0.255	3.84	NA	0.62
A-9	0.642	0.615	0.148	0.201	1.25	0.452	0.981	NA	0.066
A-9a	0.0628	0.039	0.028	0.203	0.661	0.212	0.958	NA	0.26
A-9b	0.0861	0.136	5.27	0.144	1.38	0.772	1.95	NA	0.28
A-9c	0.981	0.108	0.0385	0.056	0.46	0.334	1.89	NA	1.1
B-1a	0.125	0.0583					0.175	NA	0.24
B-2	0.0614	0.0656					0.643 J	NA	0.036J
B-2a	0.0358	0.0907					0.306	NA	0.016J
B-2c	0.0874	0.075					0.400 J	NA	NA
B-3		0.232					0.213	NA	0.23
B-9	7.74	0.457	1.08	0.264	0.274	0.152	3.02	NA	0.40
B-9a	0.35	0.282	0.196	2.97	0.108	2.51	2.45	NA	0.24
B-9b	0.644	0.0559	0.784	1.01	3.17	5.49	6.9	NA	0.34
B-9c	5.54	0.581	0.748	0.591	2.67	2.58	3.17	NA	0.32
C-1	0.0752	0.0492					0.359	NA	0.061
C-2a/C-2	0.0353	0.0627					0.755 J	NA	0.077
C-9	4.36	1.41	1.67	1.29	1.61	0.79	10.9	0.31	0.41
D-2	0.25	0.276	0.236	0.165	1.12	0.13	0.232	NA	0.12
D-3	0.15	0.14	0.297	0.206	0.877	0.479	0.039 J	NA	0.19
D-4	0.239	0.0384	0.02	0.062	6.41	1.76	0.681	NA	0.027J
D-4c	0.1110	0.1020	0.0200	0.264	0.818	0.216	1.07	NA	0.039
D-9	2.65	0.889	1.14	2.08	0.876	0.386	2.77	NA	0.95
D-9a	0.253	0.0536	0.0522	0.162	0.135	0.565	2.51	NA	0.15
D-9b	0.364	0.0585	0.112	0.268	0.442	0.978	1.44	NA	0.046
D-9c	0.32	2.36	0.118	3.88	0.729	0.396	5.38	NA	0.29
E-2	0.177	0.122	0.24	0.263	0.147	0.259	0.16	NA	0.076
E-3	0.463	0.489	0.269	0.341	0.92	0.07	0.483	NA	0.14
E-4	0.041	0 0971	0.021	0.031	2.46	0.047	11.9	0.639	0.043
E-4a/E-4c	0.076	0.0681	<0.0311	0.023	2.68	0.323	3.98	NA	0.014J
E-6	0.0859	0.196	0.0733	0.011	0.863	0.542	776	0.591	0.18
E-6a	0.0541	0.0220	0.1600	1.13	2.31	1.74	26.6	2.44	0.26
E-7	0.728	0.0293	<0.0330	9.47	0.842	3.19	0.513 J	NA	0.13
E-7a	0.342	0.0428	0.241	1.63	0.876	1.95	0.612	NA	0.087
E-9	1.98	1.65	1.04	1.39	1.36	2.51	2.09	NA	0.47
E-9a	0.707	0.023	0.135	0.19	1.12	0.993	1.12	NA	0.094
E-9b	0.128	0.0798	0.119	0.891	1.37	0.706	0.323 J	NA	0.18
E-9c	0.126	0.516	0.0978	1.62	1.4	0.256	1.01	NA	0.26
F-1	0.35	0.18	0.225	0.129	0.115	0.149	0.261	NA	0.31
F-2	0.179	0.178	0.163	0.22	0.343	0.121	0.203	NA	0.27
F-3	0.211	0.0837	0.164	0.304	0.101	0.406	0.219	NA	0.36
F-4	0.358	0.311	0.258	0.033	0.997	0.076	0.278	NA	0.094
F-4a	3.08	0.304	0.763	1.04	2.53		1.06	NA	0.35
F-5	2.31	0.279	0.105	< 0.009	0.192	0.542	1.58	NA	1.1
F-5a	2	0.373	0.978	0.12	0.131	0.11	0.589 J	NA	0.69
F-6	3.14	0.0845	0.185	0.069	2.45	0.063	14.8	0.105	0.70
<u>⊢-6a</u>	0.185	0.0619	0.0398	0.176	0.476	0.319	632	0.175	0.26
F-7	0.699	1.12	0.383	5.13	2.07	0.596	39.5	0.83	2.4
F-7a	3.2	0.0918	3.27	0.554	4.15	0.386	0.094		1.3
F-8	2.61	0.843	1.99	0.32	0.885		1.82		2.8
F-9	0.244	1.32	0.133	0.793	0.812	0.121			0.35
F-9a	0.484	0.0395	0.366	0.759	0.768	0.666	0.059		0.30
G-1	0.416	0.248	0.309	0.061	0.062	0.264	0.166		0.45
G-2	0.211	0.0769	0.0785	0.044	0.074	0.231	0.364 J		0.23
G-3	0.137	0.14		0.125	0.193	0.364	0.321		0.32
G-4	0.541	0.513	0.721	0.06	0.152	0.338	U.358 J		0.66
G-5	0.513	0.94	0.34	0.98	0.054	1.33	1.86	NA	4.8
G-6	0.559	0.0607	0.3	0.184	0.086	0.125	1.59	NA	0.29



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								2020 Result	
Sample ID	2009 Result	2010 Result	2012 Result	2014 Result	2016 Result	2018 Result	2020 Result	Post	2022 Result
Sample ID	(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)	Remediation	(mg/Kg)
								(mg/Kg)	
G-7	0.165	0.025	<0.0335	0.792	0.233	0.336	2.47	NA	0.56
G-8	0.348	0.133	0.0511	0.08	0.066	0.312	0.385	NA	0.13
G-9	0.29	0.457	0.449	0.214	0.419	0.249	0.479 J	NA	0.33
G-9a	0.616	1.44	0.0577	0.177	0.401	0.231	0.292 J	NA	0.041J
H-1	0.459	0.254	0.411	0.22	0.064	0.195	0.065 J	NA	0.32
H-2	0.0723	0.0791	0.448	0.103	0.08	0.196	0.133	NA	0.075
H-3	0.252	1.32	0.137	0.097	0.392	0.269	0.275	NA	0.091
H-4	0.5	1.18	0.235	0.502	2.09	0.751	0.122	NA	0.23
H-5	0.445	0.362	0.311	0.251	0.126	1.06	1.45	NA	1.3
H-6	0.0814	0.0758	0.0592	0.415	0.989	0.232	1.18	NA	0.044
H-7	0.332	4.13	0.141	0.155	0.842	0.069	0.460 J	NA	0.24
H-8	0.485	0.191	0.125	0.405	0.221	0.086	0.36	NA	0.36
H-9	0.366	0.202	0.294	0.306	0.271	0.248	0.3	NA	0.37
H-9a	2.26	3.92	0.363	0.124	0.33	0.258	0.615 J	NA	0.20
I-1	0.532	0.162	0.213	0.146	0.099	0.15	0.047 J	NA	0.38
I-2	0.238	0.0956	0.164	0.202	0.066	0.057	0.049 J	NA	0.099
I-3	0.267	0.147	0.16	2.46	0.456	0.052	0.199	NA	0.15
I-4	0.355	0.134	0.111	0.19	0.032	0.252	0.321	NA	0.020J
I-5	0.196	0.0841	0.141	0.16	0.086	0.494	0.044 J	NA	0.16
I-6	0.2340	0.4390	0.3780	0.202	0.607	0.256	0.367	NA	0.20

Notes:

1. Highlighted cells exceeded the site-specific standard of 10 mg/kg.

2. Tetra Tech collected 2022 soil sample results 4-26-2022 through 4-29-2022.

3. Data prior to 2022 excerpted from WM's Release Notification Documentation submitted to the WDNR on 12/9/2020.

4. Soil samples from prior to 2022 were collected by Cardinal Environmental and EMT.

5. Mercury concentration results designated with a "J" qualifier are estimated concentrations greater than the limit of detection and less than the limit of quantitation.

Created by: LS Checked by: RE Appendix 21 Stormwater Monitoring Data

Table 21-1 WM Mercury

Historical Mercury Concentrations in Storm Water Pond

Mercury Results												
Date	Inlet Stream	Outlet Stream										
4/20/2012	0.0631	0.00278										
9/10/2012	0.0166	0.00845										
9/14/2012	0.0244	<0.00125										
12/17/2012	0.0109	0.00153										
5/10/2013	0.00109	0.00079										
9/19/2013	0.00454	0.00109										
8/29/2014	0.00115	0.000895										
9/8/2015	0.0121	0.00209										
11/2/2016	0.0097	0.00396										
10/23/2017	0.0242	0.00926										
10/6/2018	0.0278	0.00032 J										
11/27/2019	0.0989	0.00492										
11/15/2020	<0.0100 Q, S2	<0.0100 Q, S2										

Notes:

J - Estimated Value

Q - One or more quality control results were outside the acceptance limits

S2 - The percent recovery is outside the lab control limits, but within the method acceptable limits.

Data is acceptable for S2

All results reported in milligram per liter

Sample locations are shown on attached figures S-6

Table 21-2 Summary of Historical Storm Water Sediment Sample Mercury Concentrations

Waste Management

							Storm	n Water Por	nd Sedimer	t Samples								
Date	А	В	с	D	D*	E	E*	F	G	н	l Pond Grab	Sample #1 Outlet Side	Sample #2 Inlet Side	Sample #3 Inlet	1	2	3	4
5/23/2012	4.67	0.43	2.98	99.1	-	214.0	-	-	-	-	-	-	-	-	-	-	-	-
7/5/2012	-	-	-	-	-	-	-	16.2	3.03	0.475	8.27	-	-	-	-	-	-	-
7/3/2013	0.097	0.475	9.24	237	1,290	261	359	-	-	-	-	-	-	-	-	-	-	-
8/12/2014	87	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
8/14/2015	-	-	-	-	-	-	-	-	-	-	-	8.4	29.6	55.6	-	-	-	-
10/19/2016	-	-	-	-	-	-	-	-	-	-	-	-	166	-	8.17	30.4	48.7	49.9
10/20/2017	24.8	-	138	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
9/21/2018	-	-	-	-	-	-	-	-	-	-	-	-	-	-	42.3	178	-	-
2019	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2020	41.9	214	503	277	-	-	-	184	26	18.6	-	-	-	-	-	-	-	-

Notes:

ND - Not Detected

NS - Not Sampled

NA - Not Available

All results reported in milligram per kilogram

* notates sludge as matrix

Sample nominclature was taken from analytical results

Sample locations are shown on attached figures S-6

RESPONSE TO DNR COMMENTS DATED DECEMBER 20, 2022 CROSSWALK

WM Waste, Inc. ("WM Waste") submitted the latest version of the FPOR on June 28, 2022. DNR provided updated comments via email dated December 20, 2022. This document includes a reproduction of each DNR comment followed directly by WM Waste's response to each comment in bold. These responses may serve as a "crosswalk" that identify the location within the FPOR where each comment is addressed.

PDF Formatting

- 1. *Since the submittal of the FPOR, the department has developed additional standards for digital submittals of this type. The department recommend that the revised FPOR follow these standards:
 - a. A single portable digital file (PDF) of the entire submittal shall be provided, including a signed and dated transmittal letter and all attachments and appendices.

RESPONSE:

A single portable digital file (PDF) of the entire submittal has been provided with this submittal, including a signed and dated transmittal letter and all attachments and appendices.

b. The single PDF shall be built as a searchable/readable PDF, and/or ran through an optical character recognition (OCR) software (such as Enhance Scans in Adobe Pro), to make the document a searchable/readable PDF.

RESPONSE:

The PDF included in this submittal is searchable/readable.

c. All parts (e.g., sections, subsections) and attachments (e.g., appendices, figures, tables) shall be designated bookmarks in the PDF, and the name of the bookmark should be the name of the part or attachment.

RESPONSE:

All parts (e.g., sections, subsections) and attachments (e.g., appendices, figures, tables) are designated as bookmarks in the PDF, and the name of the bookmark is the name of the FPOR part or attachment.

d. All cross-references to attachments shall be internally hyperlinked to the appropriate attachment (e.g., all references to Appendix A in the body of the FPOR should include a hyperlink to Appendix A).

RESPONSE:

All cross-references to attachments are internally hyperlinked to the appropriate attachment.

e. If requested by the department, digital files of select PDF pages shall be provided in the requested digital format.

If requested by the department, digital files of select PDF pages shall be provided in the requested digital format.

f. All digital files submitted to the department shall be submitted as an email attachment or via a file sharing website acceptable to the department.

RESPONSE:

All digital files submitted to the department have been submitted via a file sharing website (Microsoft OneDrive) acceptable to the department.

g. If requested by the department, select printed pages shall be provided.

RESPONSE:

If requested by the department, select printed pages shall be provided.

Editorial/Minor Revisions

2. *Some new sections (e.g. 3.4, 3.5 and 3.6) are not in the Table of Contents.

RESPONSE:

The FPOR has been reviewed and revised to ensure that all sections are included in the Table of Contents.

3. *In the PDF bookmarks, a number of appendices are mis-labeled as "reserved".

RESPONSE:

The PDF has been reviewed and revised to ensure that all appendices are properly labeled.

4. *In the table of contents, please indicate where the Figures are located.

RESPONSE:

The Table of Contents has been revised to indicate where the Figures are located.

- 5. *Clarifications on Figures A-3 and A-4:
 - a. Remove obsolete items (e.g retort-related equipment west of west building; chiller/pump station is west building)

RESPONSE:

Figures A-3 and A-4 have been updated to remove obsolete items. Please note that chiller pump station and other equipment (e.g., equipment west of west building) are still located in the locations depicted on the figures.

b. Clarify entries shown on north part of west building: "Block Wall" and "14X16 OH Door"

Figures A-3 and A-4 have been updated to remove references to the "Block Wall" and "14X16 OH Door."

6. *Page 11 (item l) says, "Containers that are undergoing Level II analysis or that are rejected (i.e., nonconforming containers) but not immediately shipped back to the generator or other permitted facility will be staged in the quarantine area located in S-3 (containerized wastes) or in S-8 (roll-off box containers) until the discrepancy is resolved or the waste is shipped offsite. However, page 11 (item k) says, "Containers that are rejected and not accepted will remain in the shipping/receiving area until loaded back on the truck". Please reconcile.

RESPONSE:

FPOR Section 4.1.1.4, Item k has been revised as follows, "Containers that are <u>immediately</u> rejected <u>during</u> <u>Initial Screening</u> and not accepted will remain in the shipping/receiving area until <u>promptly</u> loaded back on the truck."

Other Recommendations

7. (Previous comment regarding roll-off inspections has been removed)

RESPONSE:

Response not required.

8. <u>*Staging</u>: Page 14, Items 8.a. and b. seem to allow staged contained to remain in an unlicensed area for more than 24 hours. This is inconsistent with 8.c., which appropriately limits such staging to 24 hours. Please correct.

RESPONSE:

FPOR Section 4.1.1.4, Item 8.b has been revised as follows:

b. Containers prepared to be shipped off-site via the loading dock may be staged until loaded onto an outbound truck by the end of the day following the day they were staged <u>for no more than 24-hours.</u>

- 9. <u>*Varying container types in S-8</u>: Near the top of page 24 of the Crosswalk, WM Wastes says "Figure A-3 and the FPOR have been revised to describe the configuration and capacities of both containerized waste and roll-off boxes within S-8."
 - a. Figure A-3 does not show this. We cannot find any other part of the FPOR that shows container configurations other than the 3-rolloffs on Figure 16-8. The FPOR should present the alternative container configuration that is discussed.

RESPONSE:

Figures A-3, A-4, and 16-8 have been revised to show the configurations and capacities of both containerized waste and roll-off boxes within S-8.

b. Item b on page 49 seems to discuss the use of painted lines for smaller containers in the eastern part of S-8, and refers to Figure 16-8. This section should be clarified.

Figure 16-8 has been revised to show the boundaries (painted lines) for smaller containers that may be stored in S-8.

c. 120 cy is equivalent to about 440 55-gallon drums. If WM Waste is proposing storage of up to 440 drums in S-8, the configuration limits and aisle space controls must be presented.

RESPONSE:

WM Waste is proposing to store up to 160 drums (or 55-gallon Drum Equivalents) as well as three rolloff containers within S-8.

Section 6 of the Part A form (Appendix 1 of the FPOR) has been revised to reflect this additional capacity.

Sections 4.1.1.2, 4.1.1.4, 5.0, and 5.1 of the FPOR have been revised to update the capacity of S-8 and secondary containment discussion for S-8.

Table 8-1 of the Closure Plan (Appendix 8 of the FPOR) has been revised to update the capacity of S-8.

As a result of the maximum inventory increase in S-8, Attachment 8-1 of the Closure Plan has been revised to update the associated increase in estimated closure costs.

The updated configuration showing aisle space controls for drum storage is presented in Figure 16-8. Figure 16-8 has also been revised to note that S-8 may also be used for consolidation of compatible hazardous waste debris, as previously described in Section 4.1.1.4, Item 6 of the FPOR.

d. Regarding the tables on page 6, 12, and 40 that have footnotes discussing the conversion factor of 1 cy = 202 gallons for S-1 through S-7, a similar conversion for varying S-8 containers should be added.

RESPONSE:

Tables in Sections 4.1.1.2, 4.1.1.4, and 5.0 have been revised to add a footnote to S-8 discussing the conversion factor for varying S-8 containers.

e. The Contingency Plan QRG table only identifies roll-off storage in S-8. This should be corrected.

RESPONSE:

The Contingency Plan QRG table has been revised to identify the updated container configuration in S-8. Figures QRG-1 and Figure 4-1 have been updated to reflect the updated configuration in S-8. The QRG was revised to delete a reference to Appendix A of the QRG since there is no Appendix A in the QRG.

- 10. <u>Training</u>
 - a. *The training plan in Appendix 7 identifies only 2 positions. WMWI has explained that it expects more staff as it ramps its business volumes up. We recommend that the FPOR discuss this, and indicate WMWI's plan for updating Appendix 7 as this occurs.

WM Waste will submit Class 1 modifications to add updated job descriptions (Attachment 7-2) and updates to the Training Matrix (Attachment 7-1), as necessary, unless another means to make these updates is approved by DNR. Per discussions with DNR, the FPOR has not been revised.

b. *Section 7.2.0 of the training plan (Appendix 7) establishes that the Facility Manager is designated as the training director. The FPOR should address how training is provided to the Facility Manager.

RESPONSE:

Section 7.2.0 of the Training Plan (Appendix 7) has been revised to note that training is provided to the Facility Manager via computer-based training and/or in-person instruction.

c. Section 7.3.3 describes the corporate-level Approvals department as "outside of the WM Waste facility". Please discuss how WM Waste assures that these individuals are qualified and trained, and how the documents required in NR 664.0016(4) for these individuals are maintained at the facility. *As discussed on 12/16, please add a brief description of how WM assures that these individuals are properly qualified and trained.*

RESPONSE:

WM Waste is assured that these corporate-level personnel are qualified/trained because they undergo a rigorous training at the corporate level to be able to provide waste approvals for the entire company. WM Waste is aware of the training program these professionals complete.

Any records documenting WAM training are stored in WM electronic corporate databases. Such records can be accessed by WM Waste in these systems upon request. WM Waste does not maintain hard copy records of corporate level waste approvals personnel training at the facility as those records are already maintained in corporate electronic recordkeeping systems.

11. <u>*Training – Personnel</u>: (a) We recommend that the training plan be expanded to address qualifications, training, and documentation requirements for non-employees with functions needed to meet NR 664 requirements. This could include for example contractors, vendors, and casual laborers.

RESPONSE

The training plan has been revised to state that all non-WM Waste employees that enter licensed areas must have training in emergency evacuation procedures (see the Training Matrix in Attachment 7-1 of the Training Plan). Section 7-3.1 of the Training Plan has been revised to note that non-WM Waste employees may not handle hazardous waste.

(b) We recommend that the training plan establish that all personnel at the facility receive orientation in the contingency plan in order to react properly in an emergency. This could include for example visitors, contractors, vendors, and casual laborers.

RESPONSE:

The Training Matrix (Attachment 7-1) of the Training Plan has been revised to state that all non-WM Waste employees that enter licensed areas must have training in emergency evacuation procedures.

 <u>*Needs</u>: The FPOR points out that the facility is an existing facility and there are no expansions nor significant changes proposed, rather there are reductions in operations taking place. WMWI cites this reduction as a reason for not needing to complete a separate needs analysis.

Section 289.28, Wis. Stats. states that a "feasibility report *shall* contain an evaluation to justify the need for the proposed facility unless the facility is exempt..." (emphasis added). The use of the word "shall" means that the needs determination is a non-optional requirement. As stated in the department's May 26, 2021 "Notice of Incompleteness" letter, the department has always required the information necessary to make a needs determination as part of the 10-year renewal process. In the FPOR, WMWI indicates a number of proposed reductions (and some reductions that have already taken place) that would constitute a significant change in operations. One example of a change includes a call for a reduction in the licensed storage capacity by removing the previously approved (but never built) areas S-9 through S-11. Another example is that WMWI has ceased mercury recycling (retort) operations and is proposing a trans-shipment operation; in the aforementioned Notice of Incompleteness letter, the department stated that it would like information explaining the need for the proposed storage capacity, in particular the need for storage of up to 23 roll-off containers, given these new operation plans. Another change that has occurred is that WMWI has ceased accepting wastes, and has almost completely eliminated its storage inventory.

For these reasons, we recommend WMWI provide additional information to support a finding of continued need for a facility operating at low volumes. In determining need, the department considers the issues listed in s. 289.28(1)(a) through (d).

(new) Regarding needs, see also DNR's email dated 12/16/22.

Follow-up to today's call.msg

RESPONSE:

The service area for the WM Waste, Inc. facility will be all states in the continental United States. Given the centralized geographic location, this existing facility optimizes WM's ability to serve its nationwide customer base in facilitating the storage and transport logistics for waste streams that WM customers send to WM for ultimate treatment and disposal. Customers have relied on this facility for acceptance, temporary storage, and transshipment of hazardous wastes. Renewal of the facility's operating license is in the public interest because efficient hazardous waste handling is a societal need and this existing facility services that need without the cost and disruption of licensing and building a new or converting an existing facility elsewhere. Due to its location and its existing assets, the WM Waste, Inc. facility is needed to serve WM's existing customer base as well as the aforementioned societal need.

WM Waste, Inc. has seen growth in large-scale projects since its original license was issued in July 2000. There has been a rise in large-scale remediation, decontamination, and clean-up projects. Projects generally involve removing soil and large pieces of equipment, and the most efficient way to move them to a final treatment and disposal facility is through this facility. As such, there is an ongoing need for this facility, even at its reduced operations.

Lastly, WM Waste, Inc. is not increasing the total licensed storage capacity of the facility. In fact, with the closure of four licensed hazardous waste tanks and the withdrawal of three hazardous waste container storage areas that are currently licensed, there will be a significant net decrease in licensed capacity.

13. <u>Corrective Action</u>: On December 2, 2020, WM Waste reported elevated mercury levels found in soils during the August 28, 2020 sampling event. Our program is aware that WMWI is working with the department's R&R
program to address this contamination, and at this time is not identifying any further information that is needed for the FPOR regarding corrective action. The following recommendations related to Section 4.28 of the FPOR.

a. *Section 4.28 states, "Further, this area is being addressed as a spill response/cleanup site, not as a part of facility-wide corrective action." We are unsure of what "facility-wide corrective action" means so we cannot agree with this statement. Therefore, we recommend that this statement be clarified or removed from the FPOR.

RESPONSE:

Section 4.28 of the FPOR has renumbered as Section 4.29. It has been revised to remove the above referenced sentence.

b. We recommend that the FPOR be updated to summarize the remedial investigations and actions that have occurred (and are expected to occur, as appropriate) since March 9, 2022.

RESPONSE:

A copy of the most recent investigation report submitted to DNR is included in Appendix 17. Section 4.28 of the FPOR has been revised to reference the report. Section 4.29 (formerly Section 4.28) has also been revised to note that updated information on this investigation is contained on the BRRTS site at <u>WDNR</u> <u>EM/RR BOTW (wi.gov)</u>.

14. <u>EJ Screen</u> (new): Please correct the discussion of page 43; see WM Waste's email dated 12/12/22.

In an email dated December 5, 2022, DNR commented:

"Page 43 of the FPOR says, "The highest indicator for the area surrounding the facility was at the 53rd state percentile;...". This seems to relate to the "selected variables" in the EJ Screen included in Appendix 12. In its mention of the 80th percentile as a suggested starting point, the EPA report cited in footnote 4 refers to "any of the EJ indexes". Looking at the environmental indicators shown in Appendix 12, there are two values at 93 percentile. Can you explain why these two environmental indicators are not considered in the FPOR's discussion on page 43?"

RESPONSE:

The 53rd state percentile was listed in error and Section 4.25 of the FPOR has been revised to note the 93rd percentile values for PM2.5 and Ozone. These outcomes were, however, indirectly addressed in the submittal.

In the discussion of the demographics for the area, the numbers showed a low minority population and low numbers of people affected by poverty. The demographic evaluation outcome did not indicate the presence of a minority or low-income block group that would have been affected by the 93rd percentile outcomes.

The EJ Screen discussion in Section 4.26 (formerly Section 4.25) of the FPOR has been revised to correct the state percentile indicators and include the above discussion.

In addition, the discussion in the same section stated there were no facility changes which would cause an increase in emissions that would affect either ozone or PM2.5. In fact, the changes described in that section to the (exempt) mercury recovery operations will result in minor emission reductions for both pollutants.

15. <u>Ownership</u> (new): See DNR email dated 12/08/22. After the transaction is completed (projected to occur before 12/31/22), please modify the relevant sections of the FPOR. See DNR email dated 12/16/22.

Follow-up to today's call.msg

RESPONSE:

Since the previous FPOR was submitted, WM Waste purchased a parcel of the property that had been owned by Durand Properties, LLC. The parcel on which the East, West, and South Buildings are located was previously owned by Durand Properties, LLC. On December 12, 2022, WM Waste purchased this parcel and is now the owner of the entire property. A Class 1 Modification was submitted to WDNR on January 25, 2023 to address the ownership change.

As a result of this modification, the FPOR has been revised as follows:

- Section 1.0 has been revised to note that the land previously owned by Durand Properties, LLC has been sold to WM Waste.
- 16. Municipalities: See DNR email dated 12/15/22



Municipalities.msg

RESPONSE:

Section 4.24 has been added to the FPOR. It states: "The local governments having jurisdiction over the WM Waste facility include the Town of Dover and Racine County. Local municipalities having jurisdiction over the general area include the Town of Dover, Racine County, Village of Union Grove and Village of Yorkville."

Please note that as a result of adding Section 4.24, former Sections 4.24 – 4.28 have been renumbered as 4.25 – 4.29, respectively.

17. <u>Wastewater tank system closure:</u> See email string dated 10/3/22. Per discussion on 12/16/22, is known, please discuss WM's closure certification submittal plan in the FPOR. It may be best to located this is FPOR section 4.15.



RESPONSE:

All tanks associated with the wastewater treatment system (Treatment Tank #1, Treatment Tank #2, Storage Tank #1, Storage Tank #2) have been disposed offsite as hazardous waste in a permitted hazardous waste landfill. The secondary containment area associated with the tanks has been rinsed. Rinsate samples are undergoing analysis in accordance with the closure plan at a Wisconsin certified laboratory. Soil samples underneath the secondary containment have been collected and analyzed.

A closure certification report will be submitted to DNR within 60 days upon completion of closure.

18. <u>WAP (new)</u>: Section 9.0 says, "Significant discrepancies in quantity are any of the following:

1 For bulk waste, variations greater than 10% in weight. Such waste shall either be weighed on a facility scale or a 3rd party certified scale and documented.

Please revise, considering the following sorts of observations:

- Some roll-offs will have volume as the unit of measure on the manifest, so this should describe how you will define, and determine, a volume discrepancy.
- For roll-offs will have weight as the unit of measure on the manifest, use of a scale is fine, but it is unclear how tare the weight would be considered.

RESPONSE:

Section 9.0 of the WAP has been revised as follows:

Manifest and bill of lading discrepancies are any of the following:

- 1. Significant discrepancies in quantity are any of the following:
 - a. For bulk waste with weight as the unit of measure on the manifest, variations greater than 10% in weight. Such waste shall either be weighed on a facility scale or a 3rd party certified scale and documented. Tare weight of the container shall be considered. If tare weight of the container is not provided by the generator, it should be determined by researching container vendor specifications. If tare weight cannot be determined by research, the volume of waste in the container shall be requested from the generator.
 - b. For bulk waste with volume as the unit of measure on the manifest, variations greater than 10% of volume based on visual observations of the container contents.
 - c. For bulk waste with both weight and volume as the unit of measure on the manifest, see 1.a and 1.b above.
 - d. For batch waste, any variation in piece count, such as a discrepancy of one drum in a truckload.

Other Review Information

These items are provided for information only. The department is not requesting any specific additional information.

A. <u>Corrective Action</u>: This is for information only; no changes to the FPOR are recommended at this time.

In Item 12 its May, 2021 NOI, the department suggested that the contaminated area may represent a SWMU. In response, section 4.28 of the FPOR describes several reasons why NR 670.014(4) (which identifies the minimum corrective action-related information needed for an FPOR) does not apply because the contamination being addressed under BRRTS #02-52-586974 does not constitute a SWMU. This may be true. However, this may not be particularly important because in any case, no matter what terminology is used, the nature of the contamination reported on December 2, 2020 indicates that corrective action under s. 291.37, Wis, Stats, is appropriate and necessary.

As addressed in the November 21, 2006 MOU between WDNR and EPA, the corrective action process can be managed and executed pursuant to the requirements of the NR 700-series of regulations managed by WNNR's Remediation & Redevelopment (R&R) program. As of this writing, the department's understanding is that site investigations are still underway. The department currently intends to issue certain conditions in the TSDF license related to corrective action and financial assurance for corrective action under s. 291.37, Wis. Adm. Code.

RESPONSE:

No response required.

B. <u>Monitoring</u>: This is for information only; no changes to the FPOR are recommended at this time. WMWI's FPOR transmittal letter says, "Pursuant to this transmittal, we also request to discontinue monitoring required by current license conditions 59-63 since mercury retorting operations have been discontinued and monitoring records indicate no issues which would warrant additional evaluation and/or corrective actions (see discussion in section 4.28 of the revised FPOR). We currently have no plans to modify or discontinue monitoring requirements because BRRTS #02-52-586974 is not resolved. WMWI can always seek a license modification at a later time to modify monitoring requirements.

RESPONSE:

No response required.

Other Revisions

Other revisions have been made to the FPOR to correct typographical errors or to clarify information. These clarifications include:

1. In Section 5.4, the sentence, "The container will then be transferred to the designated storage/staging areas for process (see Section <u>4.1.1.4</u>)" was revised to add the underlined reference.

2. Added section numbers to section references within the FPOR.

3. In Section 5.1, the description of containment systems was revised to state that Attachment 16-1 included secondary containment calculations for the existing container storage areas and Attachment 16-2 included secondary containment calculations for updated container storage area configurations.