

OHIO E.P.A.

FEB -3 2014

BEFORE THE
OHIO ENVIRONMENTAL PROTECTION AGENCY

ENTERED DIRECTOR'S JOURNAL

In the Matter of:

Metropolitan Sewer District of Greater Cincinnati
1600 Gest Street
Cincinnati, Ohio 45204

Director's Final
Findings and Orders

By the City of Cincinnati, Agent for the
Board of County Commissioners of
Hamilton County, Ohio as described in a
1968 Agreement and its amendments

I certify this to be a true and accurate copy of the
official documents as filed in the records of the Ohio
Environmental Protection Agency.

Respondent

By: DMG Cassler Date: 2-3-14

PREAMBLE

It is agreed by the parties hereto as follows:

I. JURISDICTION

These Director's Final Findings and Orders (Orders) are issued to the Metropolitan Sewer District of Greater Cincinnati, which is a County Sewer District established under Ohio Revised Code (ORC) Chapter 6117, and is managed by the City of Cincinnati as agent, as described in a 1968 Agreement and its amendments, for the Board of County Commissioners of Hamilton County, Ohio (Respondent) pursuant to the authority vested in the Director of the Ohio Environmental Protection Agency (Ohio EPA) under ORC §§ 3734.13, 3745.01, and 3745.12.

II. PARTIES BOUND

These Orders shall apply to and be binding upon Respondent, agents and successors in interest liable under Ohio law. No change in ownership of the Facilities shall in any way alter Respondent's obligations under these Orders.

III. DEFINITIONS

Unless otherwise stated, all terms used in these Orders shall have the same meaning as defined in ORC Chapter 3734. and the rules promulgated thereunder.

IV. FINDINGS

All of the findings necessary for the issuance of these Orders pursuant to ORC §§ 3734.13, 3745.01 and 3745.12 have been made and are outlined below. Nothing in the findings shall be considered to be an admission by Respondent of any matter of law or fact in any proceeding either civil or criminal. The Director of Ohio EPA has determined the following findings:

1. Respondent is a "person" as defined in ORC § 3734.01(G) and Ohio Administrative Code (OAC) rule 3745-50-10(A).
2. Respondent operates several wastewater treatment plants (Facilities), including the Mill Creek Wastewater Treatment Plant located at 1600 Gest Street, Cincinnati, Hamilton County, Ohio (Mill Creek Facility), and the Little Miami Wastewater Treatment Plant located at 225 Wilmer Avenue, Cincinnati, Hamilton County, Ohio (Little Miami Facility). Respondent manages the Facilities pursuant to a 1968 Agreement and its amendments.
3. At the Little Miami Facility, Respondent generates "hazardous waste" as that term is defined by ORC § 3734.01(J) and OAC rules 3745-50-10(A) and 3745-51-03. Respondent normally generates hazardous waste in quantities less than one hundred (100) kilograms per month. A hazardous waste generator which generates hazardous waste in this quantity is commonly referred to as a "conditionally exempt small quantity generator." Respondent notified of its hazardous waste activities and received U.S. EPA ID number OHD 000723437.
4. In October 2012, at the Little Miami Facility, Respondent generated approximately one hundred (100) pounds of spent elemental mercury contained in ten (10) air flow meters (spent flow meters) which were characteristically hazardous for mercury, D009, as described in OAC rule 3745-51-24. Respondent accumulated the spent flow meters until June 22, 2013, when at such time Respondent caused the transportation of nine (9) of the spent flow meters to the Mill Creek Facility. The Mill Creek Facility does not hold a hazardous waste facility installation and operation permit and is not otherwise authorized to receive hazardous waste. During the loading and transportation of the spent flow meters from the Little Miami Facility and storage of the spent flow meters at the Mill Creek Facility, Respondent caused the release of up to approximately fifty (50) pounds of spent elemental mercury along the roads and at the Mill Creek Facility.
5. In response to the releases of spent elemental mercury as described in Finding No. 4. of these Orders, Respondent contracted with an environmental remedial consultant to address the releases.

6. On or about June 22, 2013, Respondent transported the spent flow meters to the Rumpke Sanitary Landfill, Inc., located at 10795 Hughes Road, Hamilton County, Cincinnati, Ohio for disposal. Rumpke Sanitary Landfill, Inc. owns and operates a "sanitary landfill" as defined in OAC rule 3745-27-01(S)(4). Rumpke Sanitary Landfill, Inc. does not hold a hazardous waste facility installation and operation permit and is not otherwise authorized to receive hazardous waste.
7. On or about June 22, 2013, Rumpke Sanitary Landfill, Inc. reported to Ohio EPA the acceptance and disposal of the spent flow meters.
8. In response to the report referenced in Finding No. 7. of these Orders, Ohio EPA conducted a compliance evaluation inspection of the Little Miami Facility and Mill Creek Facility. As a result of the inspection, Ohio EPA determined that Respondent, *inter alia*:
 - a. Failed to properly determine if a waste was hazardous waste, in violation of OAC rule 3745-52-11. Respondent failed to determine if the spent elemental mercury in the spent flow meters was a characteristically hazardous waste, mercury, D009, as described in OAC rule 3745-51-24; and
 - b. Caused hazardous waste to be transported and disposed of at an unauthorized facility, in violation of ORC § 3734.02(F). Respondent transported and disposed of the spent flow meters at Rumpke Sanitary Landfill, Inc. Rumpke Sanitary Landfill, Inc. does not hold a hazardous waste facility installation and operation permit and is not otherwise authorized to accept hazardous waste.
9. By letters dated July 30, 2013 and July 31, 2013, Ohio EPA notified Respondent of the violations referenced in Finding No. 8. of these Orders.
10. Based upon the information described in Finding No. 4. of these Orders, the Director has determined Respondent, at the Mill Creek Facility, unlawfully established and operated a hazardous waste facility without a hazardous waste facility installation and operation permit, in violation of ORC § 3734.02(E) and (F), through the storage of hazardous waste spent flow meters received from the Little Miami Facility. The Director has further determined that no further action is required with regard to the violation of OAC rule 3745-52-11 referenced in Finding No. 8.a. of these Orders.
11. In correspondence dated August 16, 2013, August 29, 2013 and subsequent communications, Respondent provided information to Ohio EPA regarding the response taken to address the disposal of the mercury from the spent flow

meters at Rumpke Sanitary Landfill, Inc. as well as what preventative steps Respondent has implemented to prevent future mismanagement of hazardous waste. These preventative measures include new waste management procedures including evaluation and tracking processes, new environmental procedure evaluations to ensure proper waste handling occurs, and new training regarding these measures. Additionally, new training plans will be developed and implemented for all levels of the organization to ensure understanding and accountability. Respondent has also drafted a new job classification for a Regulatory and Safety Compliance Manager to oversee these areas. Furthermore, Respondent described the remedial efforts taken to address the release of spent elemental mercury along the roads and at the Little Miami and Mill Creek Facilities.

12. On October 7, 2013, Respondent, through its contractor Cardno ATC, submitted to Ohio EPA an investigation plan to locate the spent elemental mercury and the spent flow meters at Rumpke Sanitary Landfill, Inc. Respondent, through Cardno ATC, commenced an investigation on October 10, 2013. The investigation concluded on October 15, 2013.
13. On November 11, 2013, Respondent, through Cardno ATC, submitted to Ohio EPA a final report titled *Site Investigation*, which contained the results of the investigation referenced in Finding No. 12. of these Orders. The report identified an area of significantly elevated mercury vapor concentrations in the northwest portion of the area of potential spent flow meter disposition.
14. Based upon the investigation and subsequent communication with Ohio EPA, Respondent, on December 5, 2013, submitted to Ohio EPA a document titled *Excavation Workplan – Draft* to address the area of concern identified by the investigation.
15. On December 17, 2013, Respondent, through Cardno ATC, submitted to Ohio EPA a final document dated December 9, 2013 and entitled *Excavation Workplan*. The December 9, 2013 *Excavation Workplan* is attached hereto as Attachment A and is incorporated herein by reference.
16. By letter dated January 8, 2014, Ohio EPA notified Respondent of a violation of ORC § 3750.06 for failure to report the mercury release at the Facilities. The release occurred June 22, 2013 and was not reported until June 24, 2013. Ohio EPA's past costs for oversight of the release total approximately \$26,183.01.

V. ORDERS

Respondent shall achieve compliance with Chapter 3734. and 3745. of the ORC

and the regulations promulgated thereunder according to the following compliance schedule:

1. Respondent shall perform all material excavation or cause all material excavation to be performed in accordance with Attachment A.
2. Within thirty (30) days after the effective date of these Orders, Respondent shall commence the material excavation or cause the material excavation to be commenced in accordance with Attachment A.
3. Within sixty (60) days after the effective date of these Orders, Respondent shall complete the material excavation or cause the material excavation to be completed in accordance with Attachment A.
4. Within thirty (30) days after the effective date of these Orders, Respondent shall pay to Ohio EPA the amount of \$26,183.01 in settlement of Ohio EPA's claims for past response costs, which may be assessed pursuant to ORC Chapter 3745, and which shall be deposited into the immediate removal fund established pursuant to ORC § 3745.12. Payment shall be made by tendering an official check in the amount of \$26,183.01 made payable to "Treasurer, State of Ohio." The official check shall be submitted to Ohio EPA, P.O. Box 1049, 50 West Town Street, Suite 700, Columbus, Ohio 43216-1049, together with a letter identifying Respondent, the Facility, and spill ID number: **1306-31-1388**.

VI. TERMINATION

Respondent's obligations under these Orders shall terminate when Respondent certifies in writing and demonstrates to the satisfaction of Ohio EPA that Respondent has performed all obligations under these Orders and Ohio EPA's Division of Materials and Waste Management acknowledges, in writing, the termination of these Orders. If Ohio EPA does not agree that all obligations have been performed, then Ohio EPA will notify Respondent of the obligations that have not been performed, in which case Respondent shall have an opportunity to address any such deficiencies and seek termination as described above.

The certification shall contain the following attestation: "I certify that the information contained in or accompanying this certification is true, accurate and complete."

This certification shall be submitted by Respondent to Ohio EPA and shall be signed by a responsible official of Respondent.

VII. OTHER CLAIMS

Nothing in these Orders shall constitute or be construed as a release from any claim, cause of action or demand in law or equity against any person, firm, partnership or corporation, not a party to these Orders, for any liability arising from, or related to, the operation of Respondent's Facilities.

VIII. OTHER APPLICABLE LAWS

All actions required to be taken pursuant to these Orders shall be undertaken in accordance with the requirements of all applicable local, state and federal laws and regulations. These Orders do not waive or compromise the applicability and enforcement of any other statutes or regulations applicable to Respondent.

IX. MODIFICATIONS

These Orders may be modified by agreement of the parties hereto. Modifications shall be in writing and shall be effective on the date entered in the journal of the Director of Ohio EPA.

X. NOTICE

All documents required to be submitted by Respondent pursuant to these Orders shall be addressed to:

Ohio Environmental Protection Agency
Southwest District Office
Division of Materials and Waste Management
401 East Fifth Street
Dayton, Ohio 45402
Attn: DMWM Manager

and Ohio EPA Central Office at the following address:

For mailings, use the post office box number:

Enforcement Supervisor
Ohio Environmental Protection Agency
Lazarus Government Center
Division of Materials and Waste Management
P.O. Box 1049
Columbus, Ohio 43216-1049
For deliveries to the building:

Enforcement Supervisor
Ohio Environmental Protection Agency
Lazarus Government Center
Division of Materials and Waste Management
50 West Town Street
Columbus, Ohio 43215

or to such persons and addresses as may hereafter be otherwise specified in writing by Ohio EPA.

XI. RESERVATION OF RIGHTS

Ohio EPA reserves its right to pursue criminal enforcement against Respondent for any known criminal violation associated with the facts enumerated herein. Ohio EPA and Respondent each reserve all other rights, privileges, defenses, and causes of action, except as specifically waived in Section XII. of these Orders.

XII. WAIVER

In order to resolve disputed claims, without admission of fact, violation or civil or criminal liability, and in lieu of further civil enforcement action by Ohio EPA for only the violations specifically cited in these Orders, Respondent consents to the issuance of these Orders and agrees to comply with these Orders. Compliance with these Orders shall be a full accord and satisfaction for Respondent's civil liability for the violations specifically cited herein. Nothing herein shall be construed to limit Ohio EPA's right to pursue a criminal enforcement action against Respondent for the violations cited herein or any other known violation of law.

Respondent hereby waives the right to appeal the issuance, terms and conditions, and service of these Orders, and Respondent hereby waives any and all rights Respondent may have to seek administrative or judicial review of these Orders either in law or equity.

Notwithstanding the preceding, Ohio EPA and Respondent agree that if these Orders are appealed by any other party to the Environmental Review Appeals Commission, or any court, Respondent retains the right to intervene and participate in such appeal. In such an event, Respondent shall continue to comply with these Orders notwithstanding such appeal and intervention unless these Orders are stayed, vacated or modified.

XIII. EFFECTIVE DATE

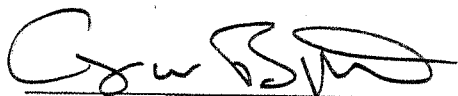
The effective date of these Orders is the date these Orders are entered into the Ohio EPA Director's journal.

XIV. SIGNATORY AUTHORITY

Each undersigned representative of a party to these Orders certifies that he or she is fully authorized to enter into these Orders and to legally bind such party to these Orders.

IT IS SO ORDERED AND AGREED:

Ohio Environmental Protection Agency



Craig W. Butler
Interim Director

February 3, 2014

Date

IT IS SO AGREED:

Metropolitan Sewer District of Greater Cincinnati
By the City of Cincinnati, Agent for the Board of County
Commissioners of Hamilton County, Ohio as described in a
1968 Agreement and its amendments



Signature

1/16/2014

Date

TERRANCE NESTOR
Printed or Typed Name

ACTING CITY SOLICITOR
Title

Consented to by Board of County Commissioners
of Hamilton County, Ohio

Christian Sigman
Signature

1/15/14
Date

Christian Sigman
Printed or Typed Name

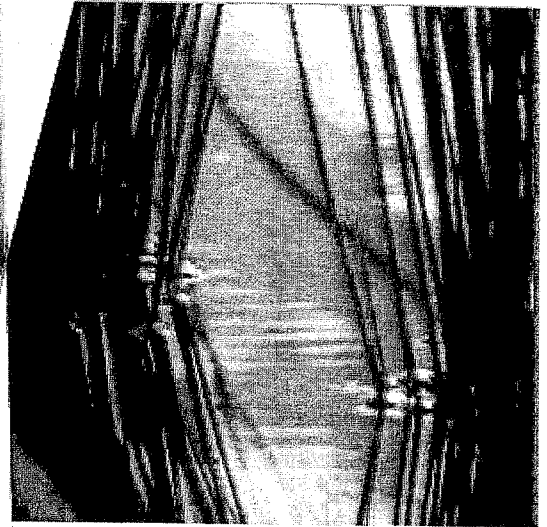
County Administrator
Title

Attachment A

Excavation Workplan -

Rumpke Sanitary Landfill
Cincinnati, Ohio

Cardno ATC Project No. 072.05876.0975



Metropolitan Sewer District
Attn: Mr. Thomas Kutcher
1600 Gest Street
Cincinnati, Ohio 45204

December 9, 2013

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1 Introduction

This excavation workplan has been prepared to address potentially mercury-impacted waste relative to the disposal of mercury-containing flow meters and associated mercury impact at the Rumpke Sanitary Landfill at 10795 Hughes Road, Cincinnati, Ohio (the "Facility"). The location of the Facility is shown in Figure 1. Recently completed Site Investigation quantified a localized area of elevated mercury vapor concentrations in the northwest portion of the area of potential flow meter disposition. This workplan has been prepared to provide a detailed specification for remedial activities to remove material at the location believed to include the flow meters and associated mercury impact of significance.

Site investigation findings identified a definitive "hot spot" in the northwestern portion of the potential disposal area, where mercury vapor concentrations were quantified in excess of 45,730 parts per trillion (ppt) in adjacent borings. These concentrations are more than double the next highest readings, suggesting the presence of the flow meters and associated mercury impact at that location. Background concentrations of up to 15,590 ppt mercury were quantified in the non-affected area.

2 Excavation Options

Two fundamental removal methods were evaluated: vacuum excavation and mechanical excavation. Each is discussed below.

Vacuum excavation would utilize a vacuum truck, commonly referred to as a Vactor, which utilizes high volume vacuum to excavate downward in a straight line from the surface to identified hot spots. The greatest benefit of Vactor excavation would be the low volume of waste generated since the vacuum creates a direct hole, approximately 10 to 12 inches in diameter, to the desired depth (only approximately 0.6 cubic yards of waste would be extracted per 20 foot hole). However, the negative aspect of this approach is the size limitations (anything larger than 10 or 12 inches in any dimension will prevent further excavation). The landfill will have debris larger than the Vactor can extract, making the likelihood of reaching the desired depth very low. In addition, the "hot spots" are likely much larger than 12" in diameter. In order to excavate an area 25' x 25', approximately 625 direct holes will have to be executed. The probably inability to reach the desired depth, lack of ability to recover the flow meters (based on their size) and the general inefficiency of this approach (size and sheer number of holes required) make this approach not feasible for this project.

Mechanical excavation utilizing hydraulic excavating equipment to remove material from a solid waste landfill is the commonly utilized and proven technique. Use of an excavator to remove the material would entail equipping the excavator with a thumb to handle the variable debris expected to be encountered in the landfill. By utilizing this method, personnel will not have to enter the work zone, eliminating the risk of exposure or engulfment. This approach would also serve to minimize the "layback"/slope of the excavation, thereby minimizing the amount of waste disturbed/exposed. It is a simple, efficient and effective means of removal that will ensure removal of the flow meters and associated mercury impact with a high level of confidence. As such, it is the removal method that will be implemented at the Facility.

3 Excavation Plan

3.1 Health and Safety

Personnel working on-site will be trained in accordance with OSHA regulations pertaining to working in excavations and possible hazardous atmospheres, commonly known as Hazardous Waste Operations and Emergency Response (HAZWOPER). In addition, all personnel operating equipment will be trained and deemed proficient in the operations and maintenance of the equipment.

On-site personnel will include:

- One Site Supervisor;
- One equipment operator for the excavator,
- One truck driver with a valid Commercial Driver's License to operate a roll-off truck for moving containers around on the Rumpke property,
- Two laborers for spotting the excavator, lining and tarping the roll-off containers, and for general housekeeping of the site; and
- One technician to calibrate and operate the Lumex meter, perform field screening and record results.

Air monitoring will be performed in the area of the excavation. Ambient air will be monitored for landfill gas using a LANDTEC GEM2000+ monitoring device. The monitoring device will be calibrated to monitor for percent methane (CH₄), carbon dioxide (CO₂), hydrogen sulfide (H₂S) and oxygen (O₂). The monitor will be equipped with an audible alarm to alert workers of elevated concentrations of landfill gas. Transient peaks will not automatically trigger action. Action will be taken when elevated levels are consistently exceeded in a 5-minute period.

In addition, the Lumex meter utilized for screening of the material will periodically be utilized to measure the ambient mercury vapor concentrations in the work area. In the event readings are seen at or above 10% of the Performance Exposure Limit (PEL) of mercury, staff personnel will be required to don air purifying respirators equipped with mercury cartridges. The PEL for Mercury is 100,000 parts per trillion, so the action level for upgrading to Level C respiratory protection will be 10,000 parts per trillion.

3.2 Material Excavation

The area to be excavated is approximately 50' wide by 25' long, encompassing the two borings that demonstrated the highest elevated mercury vapor concentrations during the site investigation (borings 9721 and 9722). The 25 x 50 foot area that encompasses these adjacent grids is the area identified for "hot spot" removal, to an anticipated depth of 20-25 feet. The excavation area is shown in Figure 2, including a cross-sectional view.

Material will be excavated using a 330 Caterpillar excavator or equivalent equipped with a thumb or grapple attachment. Excavation will begin within the center of the planned excavation area (grid #'s 9721 and 9722) and work out in one direction at a time.

As the excavation approaches the final planned depths of 20-25 feet bgs, we will evaluate the need to bench the excavations to provide a level surface, allowing the excavator and trained operator to work safely and at maximum efficiency.

The sides of the excavations will be sloped at a minimum 1:1 horizontal to vertical ratio. No personnel or trucks will be required to enter the excavations. It is not anticipated that any shoring of the excavations

will be required. In the event the slope is deemed unstable, Benches will be constructed to support the excavator or increase the horizontal to vertical ratio.

Odor and dust control from the exposed waste will be controlled by using foam to cover the excavation area on a daily basis. At the conclusion of each day or as necessary during excavation, Cardno will employ an odor suppressing foam. The foam proposed is a RUSMAR, Inc. product, AC-667SE, which is designed to meet all the odor control requirements of a municipal solid waste landfill. The foam will be applied in 3 to 7" depths across the open excavation utilizing the RUSMAR applicator PFU400/25.

3.3 Material Staging and Segregation

Excavated materials will be placed in clean, lined, roll-off containers equipped with bows and tarps. Each roll-off container is expected to have approximately 25-30 cubic yards of capacity. Once filled, each roll-off will be covered with the tarp, staged near the excavation but out of the way of operations, and allowed to sit for at least one hour. Each box will be logged, tracked and screened to ensure efficient and timely handling.

After one hour of setting covered, each roll-off will be screened for mercury vapor concentrations utilizing a Lumex RA 915+ mercury analyzer. Each roll-off will be screened in three locations: at both ends and in the middle of the open end. Screening will occur by inserting a clean length of clear tubing (no more than 10 feet in length) down into the roll-off, then inserting the intake of the Lumex meter to the other end of the tubing. If any of the three vapor concentrations exceed 15,590 parts per trillion utilizing the Lumex RA 915+, the roll-off box will be staged at a location chosen by Rumpke to await shipment to the hazardous waste disposal facility as a D009 characteristically hazardous waste.

If the vapor concentrations are less than 15,590 parts per trillion, the material will be directed to an area of the Rumpke landfill for placement into a landfill cell.

3.4 Material Transportation and Disposal

Roll-off boxes of material designated as hazardous waste based on the mercury vapor screening will be disposed of at a Resource Conservation and Recovery Act (RCRA) Part B permitted facility as D009 waste, per discussion with OEPA. Boxes will be labeled after generation, prior to re-location to a staging area designated by Rumpke for temporary storage. It is anticipated that the roll-offs will be removed from the site within 2-3 days of generation.

3.5 Decontamination

The roll-off containers used to stage excavated materials will be lined with polyethylene sheeting prior to placement of potentially impacted materials to minimize or eliminate the need for decontamination of roll-off containers. However, each roll-off returned to the Rumpke facility after storing and delivering hazardous waste will be inspected and screened with the Lumex meter to confirm clean. In the event elevated readings on the meter are obtained, the roll-off container will be cleaned with a water and Alconox detergent mix using brushes and mops and re-screened until acceptable readings are achieved prior to re-use or return to the container vendor.

The excavator will be decontaminated by scraping and brushing to physically remove packed dirt and debris. After gross material removal, the equipment will be screened with the Lumex meter. In the event the equipment is deemed contaminated by the screening, the equipment will be cleaned using a high-pressure hot water or steam sprayer paying particular attention to the tires, tracks, and undercarriages. If necessary the decontamination will be supplemented with cleaning detergents or solvents.

All decontamination fluids will be collected for proper characterization and disposal. Equipment will be allowed to air dry before being removed from the Site.

3.6 Site Restoration

Materials that screen <15,590 ppt mercury will be disposed of on-site at a location to be directed by Rumpke. Rumpke will be responsible for working and covering the waste. Similarly, at the completion of excavation activities, Rumpke will be responsible for filling and covering the excavation area.

4 Project Schedule and Documentation

We estimate that approximately two weeks of preparatory time will be required to procure the roll-off containers, obtain approvals for disposal from the hazardous waste facility and coordinate all resources necessary to execute the scope of work.

We conservatively estimate the area of excavation to be 25' x 50' by 25' deep. This translates into approximately 1,160 cubic yards (cy). Additional material will require removal and screening in order to create the 1:1 slope, resulting in a final total of 4,635 cy of excavated materials. Additionally, the material in the landfill has been compacted; the material will expand upon removal. We are allowing for a two-fold expansion, resulting in a final volume of 9,270 cubic yards, or approximately 371 25-cy roll-off containers to be screened.

We anticipate lining, filling and screening an average of 35-40 roll-off containers per day. Therefore, Cardno expects the material excavation, screening and disposal can be completed in a two week time period.

The work schedule may be adjusted to account for delays caused by inclement weather, equipment malfunction, or other unforeseen conditions. In addition, if a large percentage of the boxes begin screening as hazardous, there may not be enough roll-off boxes available to maintain the 25 boxes per day pace, which could negatively impact the final schedule. Allowing a two-week contingency, we anticipate approximately 4-6 weeks for project completion.

Within one month of the completion of field activities, a report will be prepared to document such activities. The report will include a description of methodology, a log of rolloff boxes and tabular summary of screening data, disposal documentation, and photographic documentation.

5 Signature of Environmental Professionals

This workplan was prepared by Cardno ATC on behalf of the Metropolitan Sewer District of Greater Cincinnati. The workplan has been prepared in accordance with sound science/engineering and methodology as outlined herein are in accordance with standard industry practices and applicable regulatory protocols.



Mike Kinder
Senior Project Manager



Michael J. Luessen, P.G./C.P.
Principal Geologist