

2. Respondent is an "owner" or "property owner" as that term is defined under OAC Rule 3745-27-01(O)(7).
3. Respondent is an "operator" or "facility operator" as that term is defined under OAC Rule 3745-27-01(O)(5).
4. Respondent is a "person" as that term is defined under OAC Rule 3745-27-01(P)(3).
5. ORC Section 3734.02(E)(2) provides that "no person shall . . . use a solid waste facility for the . . . disposal of any hazardous waste, without a hazardous waste facility installation and operation permit issued in accordance with section 3734.05 of the Revised Code[.]"
6. ORC Section 3734.15(C) states that "[n]o person shall accept for . . . disposal any hazardous waste from an unregistered transporter."
7. Pursuant to ORC Section 3734.17, "[n]o person shall accept for . . . disposal any hazardous waste whose generator has violated any of the rules adopted by the director of environmental protection in accordance with divisions (B) or (I) of section 3734.12 of the Revised Code with respect to the waste." That section further provides that "[a]ny person who accepts for . . . disposal any hazardous waste and who violates any of the rules adopted by the director in accordance with divisions (D), (I), and (J) of section 3734.12 of the Revised Code shall be liable for any damage or injury caused by the violation and for the costs of rectifying the violation and conditions caused by the violation in addition to any civil penalties or criminal fines imposed for the violation under section 3734.13 or 3734.99 of the Revised Code.
8. Respondent's PTI #05-11554, issued on December 30, 2004, specifically states that "[w]aste materials that are not accepted at the [Facility] include hazardous wastes . . ."
9. OAC Rule 3745-27-19(B)(2) requires that the owner or operator "conduct all construction and operation at a sanitary landfill facility in strict compliance with the applicable authorizing document, including permit to install[.]"
10. Pursuant to OAC Rule 3745-27-19(E)(8)(c), the owner or operator shall neither accept for disposal nor dispose of hazardous waste at a sanitary landfill facility.
11. On June 22, 2013, Respondent accepted and disposed of nine air flow meters containing mercury, a D009 characteristic hazardous waste, at the Facility. The nine air flow meters originated from the Metropolitan Sewer District of Greater

Cincinnati's ("MSD") Little Miami Waste Water Treatment Plant. Respondent asserts that, at the time of disposal, Respondent was unaware that the flow meters from MSD contained mercury.

12. On June 24, 2013, MSD notified Respondent that the flow meters it delivered to the Facility contained mercury. On June 24, 2013, Respondent contacted Ohio EPA's Southwest District Office, Division of Materials and Waste Management ("SWDO-DMWM") and self-reported the acceptance and disposal of the air flow meters.
13. On July 2, 2013, SWDO-DMWM sent a notice of violation ("NOV") letter to Respondent that identified the following violations associated with the acceptance and disposal of hazardous waste at the Facility:
 - A. OAC Rule 3745-27-19(E)(8)(c);
 - B. ORC Section 3734.02(E)(2);
 - C. ORC Section 3734.17;
 - D. ORC Section 3734.15(C);
 - E. PTI Number 05-11554; and
 - F. OAC Rule 3745-27-19(B)(2).
14. On October 3, 2013, Ohio EPA met with Respondent, the MSD, and its consultant, Cardno ATC ("Cardno"), to discuss the Site Investigation Workplan.
15. On October 7, 2013, Cardno, on behalf of MSD, prepared and submitted to Ohio EPA an investigation plan to locate the mercury and flow meters and associated mercury impacted materials at the Facility. The investigation began on October 10, 2013 and ended on October 15, 2013.
16. On November 11, 2013, Cardno, on behalf of MSD, prepared and submitted to Ohio EPA a final report titled Site Investigation, which contained the results of the investigation and showed the presence of mercury in the area investigated at the Facility.¹

¹According to the November 11, 2013 Site Investigation, Section 5, Page 8, "Findings from this study identified an area of significantly elevated mercury vapor concentrations in the northwest portion of the area of potential flow meter disposition."

17. A second meeting between the respective parties was held on November 19, 2013 to discuss the results of the investigation.
18. On December 5, 2013, Cardno, on behalf of MSD, prepared and submitted to Ohio EPA a document titled Excavation Workplan - DRAFT to address the area of concern identified by the investigation at the Facility.
19. On December 6, 2013, Ohio EPA met with Respondent and MSD and its consultant, to discuss the Excavation Workplan.
20. On December 17, 2013, Cardno, on behalf of MSD, prepared and submitted to Ohio EPA a document dated December 9, 2013 and titled Excavation Workplan.
21. The December 9, 2013 Excavation Workplan is attached hereto as Attachment A and incorporated herein by reference.

V. ORDERS

Respondent shall achieve compliance with ORC Chapter 3734. and the rules promulgated thereunder according to the following compliance schedule:

1. Within thirty (30) days after the effective date of these Orders, Respondent shall provide reasonable access for MSD to perform or cause the performance of material excavation at the Facility in accordance with Attachment A.
2. If MSD fails to complete the material excavation or cause the material excavation to be completed in accordance with Attachment A within sixty (60) days after the effective date of these Orders, Respondent shall, not later than one hundred twenty (120) days after the effective date of these Orders or such longer timeframe as established by Ohio EPA in writing, complete the material excavation or cause the material excavation to be completed in accordance with Attachment A.
3. Within ninety (90) days after the effective date of these Orders, Respondent shall perform the following:
 - a. Begin conducting annual internal audits of Respondent's information related to its municipal entity customers to determine if there have been any changes to the entities' waste streams;
 - b. Provide educational outreach to municipal entities with a contract with Respondent for bulk non-hazardous waste disposal at the Facility to include information regarding the statutory prohibition against the

- acceptance and disposal of hazardous wastes at a solid waste landfill and provide reasonable assistance with recognizing waste streams that are not acceptable for disposal at the Facility or that may include hazardous wastes;
- c. Adjust the leachate sampling and testing for mercury from all sumps located in Cell 9 at the Facility as follows:
 - i. For a period of not less than one year, Respondent shall increase the frequency of sampling and testing to not less than monthly. Upon completion of the twelfth monthly sampling and testing event conducted pursuant to this Order, if the sampling and testing results do not reflect an upward trend, Respondent may adjust the frequency of the sampling and testing conducted pursuant to this Order to not less than quarterly.
 - ii. Respondent shall conduct leachate sampling and analysis for mercury pursuant to this Order for not less than five (5) years. If, at the end of the five year period, leachate sampling and test results demonstrate an upward trend, Respondent shall continue quarterly sampling and testing pursuant to this Order.
 - iii. When conducting any leachate sampling and testing pursuant to this Order Respondent shall utilize Method 1631E for low-level mercury, and shall characterize both the sump-specific and site composite samples as either hazardous or non-hazardous waste pursuant to OAC 3745-51-24 Table 1; and
 - d. Perform annual testing for the presence of mercury in sewer discharges from the Facility.
4. Within one hundred twenty (120) days after the effective date of these Orders, Respondent shall commence annual internal training for scale house and working face staff at the Facility on the recognition of labels (such as the mercury label) to possibly prevent the accidental disposal of hazardous wastes at the Facility in the future, and shall add this training to the Respondent's personnel training program.
 5. Within thirty (30) days after the effective date of these Orders, Respondent shall pay to Ohio EPA the amount of five thousand seven hundred dollars (\$5,700) in settlement of Ohio EPA's claim for civil penalties, which may be assessed pursuant to ORC Chapter 3734. Payment shall be made by tendering an official check made payable to "Treasurer, State of Ohio" for the full amount, and shall be deposited in the environmental remediation fund established pursuant to ORC Section 3734.281. Payment shall be mailed to the following address:

Ohio Environmental Protection Agency
Office of Fiscal Administration

P.O. Box 1049
Columbus, Ohio 43216-1049

together with a letter identifying Respondent and the location of the noncompliance detailed in these Findings and Orders. A photocopy of the check shall be sent to

Ohio Environmental Protection Agency
Division of Materials and Waste Management, Supervisor, Processing and
Records Management Unit
P.O. Box 1049
Columbus, Ohio 43216-1049

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 the Chief of 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 from Respondent: "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 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, Respondent's Facility.

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 or the Facility.

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 Supervisor

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

XI. RESERVATION OF RIGHTS

Ohio EPA and Respondent each reserve all rights, privileges 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 liability, and in lieu of further 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 liability for the violations specifically cited herein.

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

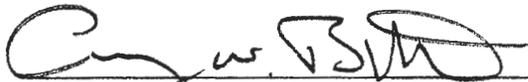
The effective date of the Orders is the date these Orders are entered into the Ohio EPA Director's Journal.

XIV. SIGNATORY AUTHORITY

Each undersigned representative or 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.

ORDERED AND AGREED:

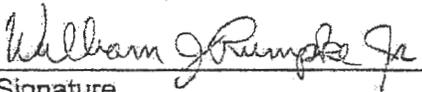
Ohio Environmental Protection Agency



Craig W. Butler, Interim Director

AGREED:

Rumpke Sanitary Landfill, Inc.



Signature

1-17-14
Date

William J Rumpke Jr.
Printed or Typed Name

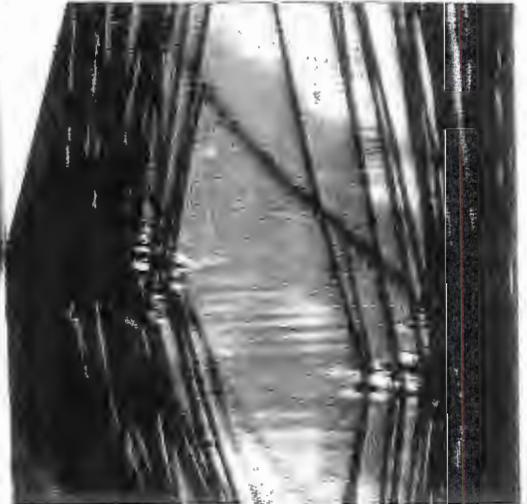
COO
Title

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

Table of Contents

1	Introduction.....	1
2	Excavation Options	2
3	Excavation Plan	3
3.1	Health and Safety	3
3.2	Material Excavation.....	3
3.3	Material Staging and Segregation	4
3.4	Material Transportation and Disposal	4
3.5	Decontamination	4
3.6	Site Restoration	5
4	Project Schedule and Documentation.....	6
5	Signature of Environmental Professionals	7

Figures

Figure 1 – Vicinity Map

Figure 2 – Proposed Excavation

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 feet 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 grappler 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.

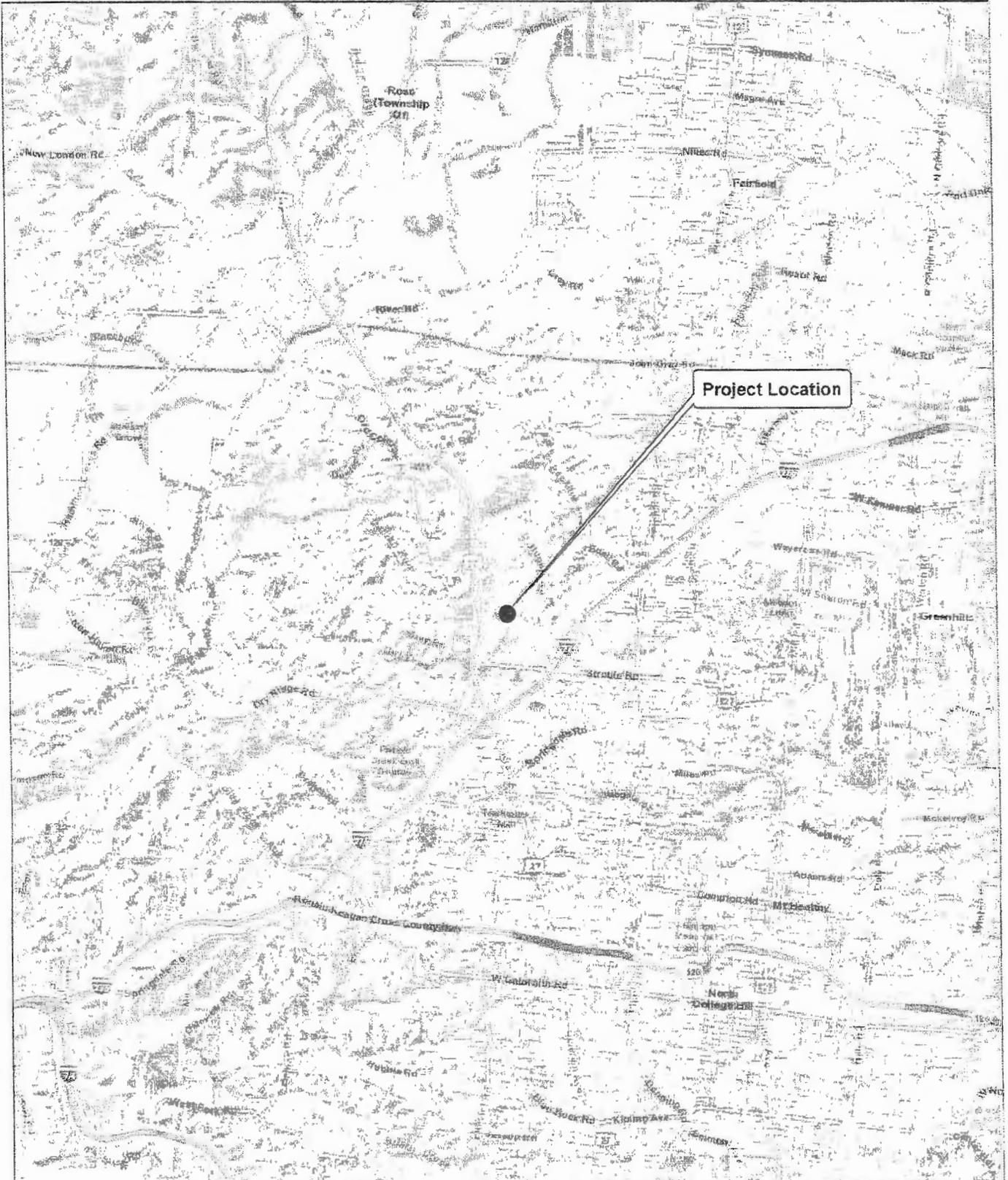


Mike Kinder
Senior Project Manager



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

Figures



Sources: Esri, DeLorme, NAVTEQ, USGS, Intermap, IPC, NRCAN, Esri Japan, METI, Esri China (Hong Kong), Esri (Thailand), TomTom, 2013

Image 2012 NC
 Data Source
 Corning

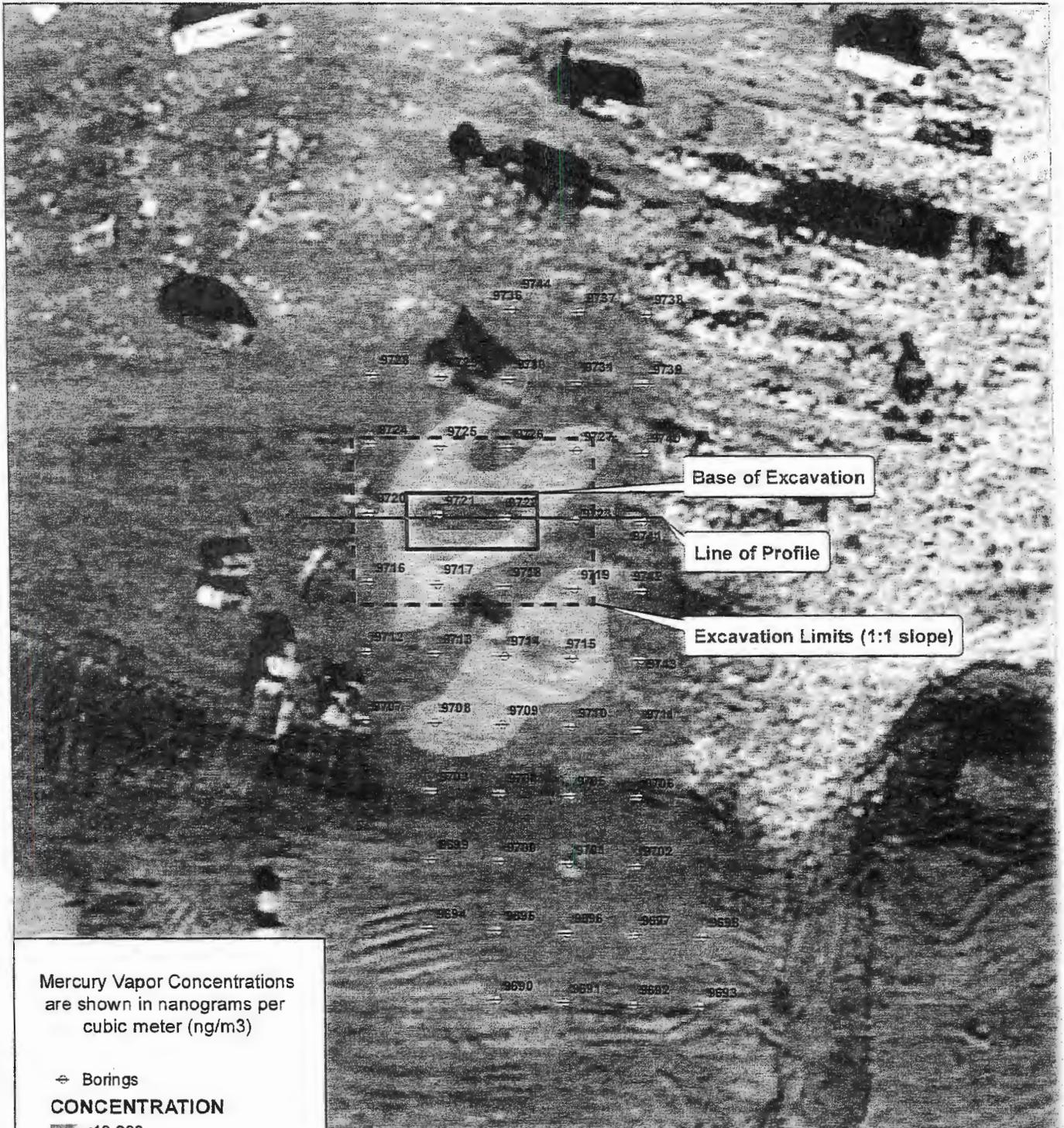
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Figure 1 – Vicinity Map
 11121 Canal Road, Snarrowsville, OH 45741 USA
 Phone (+1) 513 771 2112 Fax (+1) 513 782 6900
 www.corning.com



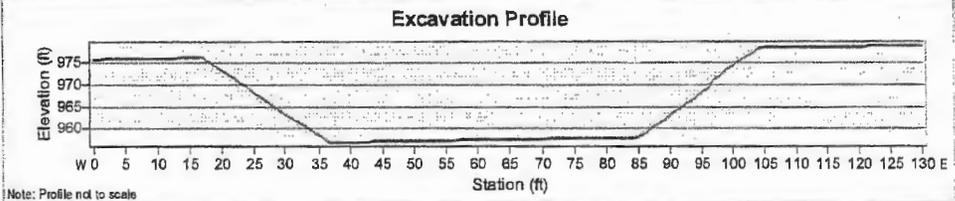
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ATC
 Shaping the Future

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Mercury Vapor Concentrations are shown in nanograms per cubic meter (ng/m³)

- ⊕ Borings
- CONCENTRATION**
- <10,000
- 10,001-20,000
- 20,001-30,000
- 30,001-40,000
- 40,001-50,000
- >50,000



Method 8032-11C
 This method is used to determine the concentration of mercury vapor in air. It involves the use of a pump to draw air through a filter and into a detector. The detector measures the concentration of mercury vapor in the air. This method is used to determine the concentration of mercury vapor in air at various locations around a site.

Figure 2 - Proposed Excavation
 Rumpke Landfill, 30795 Hughes Road, Cincinnati, Ohio



1121 Canal Road, Sharonville, OH 45241 USA
 Phone (513) 515.7711 Fax (513) 515.782.0805
www.gardno.com

