

**SUPPLEMENTAL FLOODPLAIN SOIL INVESTIGATION
REPORT**

FORMER NEPERA HARRIMAN SITE

**HARRIMAN, NEW YORK
SITE NO. 3-36-006**

Prepared for:

Nepera, Inc., Warner-Lambert Company, LLC
(Corporate Defendants)

and

ELT Harriman, LLC

September 2023

Prepared by

Cornerstone Engineering and Geology, PLLC

and

Brown and Caldwell Associates

**Supplemental Floodplain Soil Investigation Report
Former Nepera Harriman Site
Harriman, New York**

CERTIFICATION STATEMENT

I Erich Zimmerman certify that I am currently a NYS registered professional engineer as defined in 6 NYCRR Part 375 and that this Supplemental Floodplain Soil Investigation Report was prepared in accordance with all applicable statutes and regulations and in substantial conformance with the DER Technical Guidance for Site Investigation and Remediation (DER-10).

CORNERSTONE ENGINEERING AND GEOLOGY, PLLC.



Erich Zimmerman, P.E.

NYS PE License No. 081831

9/29/2023
Date

TABLE OF CONTENTS

1	INTRODUCTION	1-1
2	BACKGROUND AND PHYSICAL SETTING	2-1
2.1	SITE LOCATION.....	2-1
2.2	SITE HISTORY	2-1
2.3	PREVIOUS INVESTIGATIONS.....	2-2
2.3.1	<i>West Branch of the Ramapo River and Adjacent Stream Banks</i>	<i>2-2</i>
3	SCOPE OF WORK	3-1
3.1	INVESTIGATION ACTIVITIES	3-1
3.2	SAMPLING METHODOLOGY	3-1
3.3	DEVIATIONS FROM THE APPROVED WORK PLAN.....	3-2
4	RESULTS OF SAMPLING	4-1
4.1	TOTAL MERCURY RESULTS: 0 TO 2 FEET BELOW GROUND SURFACE.....	4-1
4.2	TOTAL MERCURY RESULTS: 2 TO 5 FEET BELOW GROUND SURFACE.....	4-2
4.3	TOTAL MERCURY RESULTS: 5 TO 8+ FEET BELOW GROUND SURFACE.....	4-2
4.4	WASTE CHARACTERIZATION RESULTS	4-3
4.5	EXTENT OF CALCIUM SULFATE MATERIAL	4-3
4.6	SUMMARY OF RESULTS.....	4-5
4.7	DATA USABILITY REVIEW	4-6
5	CONCLUSIONS	5-1
6	RESERVATION OF RIGHTS	6-1
7	REFERENCES	7-1

APPENDICES

A – ANALYTICAL LABORATORY REPORTS

B – DATA USABILITY SUMMARY REPORTS

LIST OF TABLES AND FIGURES

Tables

- 4-1 Mercury Concentrations in Flood Plain Soil Samples
- 4-2 Waste Characterization Sample Results

Figures

- 1-1 Site Location Map
- 2-1 Prior Mercury Sampling Results - Sediment and Riverbank Soil Samples
- 2-2 Prior Mercury Sampling Results - Lagoon Embankment Soil Samples
- 3-1 Proposed Soil Sampling Locations – 50 Foot Grid
- 4-1 Mercury Results for 0 – 2 Foot Interval – 50 Foot Grid
- 4-2 Mercury Results for 2 – 5 Foot Interval – 50 Foot Grid
- 4-3 Mercury Results for 5 – 8+ Foot Interval – 50 Foot Grid
- 4-4 Identified Calcium Sulfate

ACRONYMS

BGS – Below Ground Surface
CMS – Corrective Measures Survey
CSR -Site-wide Characterization Summary Report
FS – Feasibility Study
IRM – Interim Remedial Measure
Mg/kg – milligrams per kilogram
NFA – No Further Action
NYSDEC – New York State Department of Environmental Conservation
QA/QC = Quality Assurance/Quality Control
RCRA – Resource Conservation Recovery Act
RFI – RCRA Facility Investigation Report
RI – Remedial Investigation
ROD – Record of Decision
SCO – Soil Cleanup Objective
SPDES – State Pollutant Discharge Elimination System
SSE – Selective Sequential Extraction
SVOC – Semi-volatile Organic Compound
TAL – Target Analyte List
TCL – Target Compound List
TCLP - Toxicity Characteristic Leachate Procedure
VOC – Volatile Organic Compound

1 INTRODUCTION

This Supplemental Floodplain Soil Investigation Report has been prepared by Cornerstone Engineering and Geology, PLLC (CEG) on behalf of Nepera, Inc. and Warner-Lambert Company, LLC (the Corporate Defendants) and ELT Harriman, LLC (ELT Harriman) for the Former Nepera Harriman Site (the Site) located in Harriman, New York (Figure 1-1). Prior sampling of surface water, sediments, and riverbank soils within and adjacent to the West Branch of the Ramapo River within the Site vicinity conducted pursuant to the 2014 Stipulation and Order identified total mercury within soil samples at concentrations above the New York State Department of Environmental Conservation (NYSDEC) unrestricted use ecological protection standard. Subsequent communications from the NYSDEC indicated that mercury concentrations in river sediment adjacent to the Site did not require further action (NYSDEC, 2016).

The NYSDEC provided a summary document outlining its position regarding outstanding issues in a document submitted to the Corporate Defendants and ELT Harriman dated August 18, 2021. Communications and correspondence from the NYSDEC memorialized within the August 18, 2021 document also confirmed that mercury concentrations identified within the north riverbank of the West Branch of the Ramapo River are not related to site activities, and that future actions by the Corporate Defendants and/or ELT Harriman would be limited to potential impacts within the south riverbank of the West Branch of the Ramapo River and associated south riverbank floodplain. A conference call was held between the NYSDEC, the Corporate Defendants and ELT Harriman on December 6, 2021 to discuss and resolve outstanding issues, and the Corporate Defendants and ELT Harriman provided a formal response to the outstanding issues identified by the NYSDEC on January 13, 2022.

In response to several issues discussed during the December 6, 2021 joint conference call, the Corporate Defendants and ELT Harriman proposed to perform additional soil sampling within the floodplain along the south bank of the Ramapo River to better delineate the horizontal and vertical extent of potential mercury impacts in support of the Parking Lot Area and Lagoon Area Feasibility Studies. A work plan for the performance of this additional soil sampling was provided to the Department on April 1, 2022 (Cornerstone 2022), and comments were received from the Department on May 5, 2022. A revised work plan was submitted to the Department on May 19, 2022 and approved by the Department on May 20, 2022. Soil sampling outlined within this document has been completed in general conformance with the approved May 19, 2022 work plan.

Section 2 of this report presents an overview of the Site with respect to location, site history, prior site investigations, contaminants of concern, and prior remedial actions. Section 3 presents the scope of work as well as quality assurance and quality control requirements. Section 4 outlines the results of the work.

2 BACKGROUND AND PHYSICAL SETTING

The following sections provide an overview of the physical setting of the Site as it relates to the elements of the supplemental work, as well as a description of the contaminants of concern and the Site history. Additional detail can be found in the “Former Nepera Facility Site-Wide Characterization Summary Report,” (CSR) Brown and Caldwell Associates and Cornerstone Engineering and Land Surveying, PLLC, March 2011.

2.1 Site Location

The Former Nepera Harriman Site is located in the Village of Harriman, Orange County, New York (Figure 1-1 Site Location Map). The southwest portion of the Site is in the Town/Village of Woodbury. The boundaries of the Site include: NYS Route 17 to the northwest, West Branch of the Ramapo River to the northeast, and an undeveloped parcel of land (the “Avon parcel”) to the south, currently owned by ELT Harriman. The Site encompasses approximately 28 acres and consists of two general areas: (1) approximately 10 acres located to the northeast of Arden House Road, on which the former administrative offices, a parking lot, and the former wastewater lagoon (now the State Pollutant Discharge Elimination System (SPDES) lagoon) are located, and (2) approximately 18 acres to the southwest of Arden House Road, on which the former manufacturing facilities were located.

2.2 Site History

The Former Nepera Harriman Site is currently owned by ELT Harriman. A detailed history of the Site was presented in the Site-Wide CSR.

The Site was previously used to manufacture fine and bulk pharmaceutical chemicals from 1942 to 2005. During the period 1945 through 2005 chemical by-products were incinerated on the Site. The on-site incinerator was shut down in 2005 under the site RCRA program. RCRA corrective action continues under the permit issued to the current owner. Calcium sulfate material, generated as a byproduct of the manufacturing processes, was disposed in the northwestern portion of the Site that included the former administration building and the parking lot. As a result of the 1997 ROD for the State Superfund program this area was allowed to remain paved with controls to prevent surface erosion into the adjacent West Branch of the Ramapo River. Additional erosion control measures were installed in the floodplain and embankment adjacent to the parking lot as a further interim remedy in 2005 and has been functioning well to prevent migration. Drums were buried in areas located proximate to the southern boundary of the Site. These drums were subsequently removed in the mid-1980s, followed by additional soils removal in 2001 with No Further Action (NFA) approved by the Department.

The existing wastewater lagoon was constructed in the 1960s, southeast of the parking lot. The lagoon is reportedly lined with compacted clay and has a storage capacity of 5.5 million gallons. The lagoon had served as a settling pond for aluminum hydroxide and

magnesium silicate precipitates generated during the manufacturing process. Additionally, wastewater consisting of boiler blowdown, and non-contact cooling water, storm water runoff and treated groundwater, were also discharged to the lagoon prior to the plant shutdown. The lagoon currently stores stormwater runoff and discharges to the West Branch of the Ramapo River under a SPDES permit. The original SPDES permit expired in 2010, and the current property owner, ELT Harriman, applied for a new SPDES permit which was subsequently issued on August 26, 2011. Throughout the history of the use of the SPDES lagoon, permitted mercury discharges have been monitored.

2.3 Previous Investigations

As a result of past investigations (described below), the nature and extent of contamination at the Site has been extensively evaluated. A detailed summary of the investigations at the Site is presented in the Site-Wide CSR, (BC/CEG, 2011), and in the Supplemental Remedial Investigation (RI) Reports submitted separately by the Corporate Defendants and ELT Harriman (CEG, 2014) (B&C, 2014). The following is a summary of previous investigations, with a focus on work related to this supplemental investigation of the soils adjacent to the south bank of the West Branch of the Ramapo River.

2.3.1 West Branch of the Ramapo River and Adjacent Stream Banks

Surface water and sediment sampling was conducted in the West Branch of the Ramapo River as part of Remedial Investigation (RI) activities (*Remedial Investigation/Feasibility Study – Harriman Site, Village of Harriman, Orange County, New York, Conestoga-Rovers Associates*, July, 1995). Sampling results indicated that there was no measurable impact from site contaminants on water quality within the West Branch of the Ramapo River. A Fish Study of the West Branch of the Ramapo River was also conducted by the NYSDEC with a focus on mercury. The results of the fish tissue testing did not indicate mercury concentrations above fish consumption advisory levels. The NYSDEC also concluded that while there were differences in fish tissue mercury concentrations between up- and downstream locations, there was insufficient information regarding the downstream mercury levels (e.g., at Sloatsburg) to assess whether the Orange County Sewer District outfalls, the Site, or other environmental factors were the cause.

In 2001, Arcadis performed a test pit investigation along the stream bank of the West Branch of the Ramapo River. The purpose of the test pit investigation was to better define the limits of the calcium sulfate material along the stream bank. The results of the stream bank test pits were used to guide the installation of erosion controls as an interim remedial measure (IRM), along the West Branch of the Ramapo River where the calcium sulfate material exists. The IRM erosion control cover consists of a geotextile secured with soil staples and a gravel cover. The IRM has been continuously inspected and maintained since its installation in 2005, and with continued inspection and maintenance has demonstrated its effectiveness as a long-term remedial measure (including after a number of extreme

storm events) for containment of the calcium sulfate material so that it does not migrate via sediment transport to surface water.

A supplemental Remedial Investigation was conducted by Cornerstone Environmental Group (CEG) pursuant to the 2014 Stipulation and Order (*Supplemental Remedial Investigation Report – Former Nepera Harriman Site, Harriman, New York, Cornerstone Engineering & Land Surveying, PLLC, November 2014*) to more fully delineate potential impacts within the West Branch of the Ramapo River and along the north and south riverbanks.

Sediment, surface water, and riverbank soil samples were collected from locations set along seven (7) transects to provide co-located data for comparative purposes. Transects were established generally at 200-foot intervals, starting from the northwest corner of the Site, downstream from the point at which the effluent from the Orange County Sewer District #1 wastewater treatment plant discharges to the West Branch of the Ramapo River (which is approximately 20 feet upstream of the Site boundary), to approximately 1,200 feet downstream of that point, as shown on Figure 2-1.

Riverbank soil samples were generally collected from depths of 0'-2", 2'-6", and 18"-24" intervals below ground surface (bgs) at each location and analyzed for Target Compound List (TCL) volatile organic compounds (VOCs) and semi-volatile organic compounds (SVOCs), and Target Analyte List (TAL) Metals. Samples were also collected from depths of 0'-2", 2'-6" and 12"-24" bgs at locations RBS-2, RBS-4 and RBS-6 and analyzed solely for mercury. Analytical results are presented in the 2014 Supplemental RI Report, and may be summarized as follows:

- VOCs were generally non-detect with all results below the Subpart 375-6 Soil Cleanup Objectives (SCOs);
- Only two SVOCs were reported above the Restricted Residential SCOs in two samples, and only one SVOC (benzo(a)pyrene) was reported above all SCOs (Restricted Residential, Commercial and Industrial), in three samples. No other SVOCs were detected at concentrations above SCOs; and
- Metals other than mercury were not identified at concentrations above SCOs.

Mercury was detected at each of the sampling locations (see Figure 2-1). The highest concentrations were reported at the location near the center of the parking lot boundary, ranging from 51.6 to 414 mg/kg, and at the location near the north-east corner of the parking lot area ranging from 27.6 to 30.9 mg/kg. Concentrations farther downstream from the Site ranged from 0.1 mg/kg to 28 mg/kg. The average mercury concentration identified in riverbank soil was 31.0 mg/kg.

Mercury concentrations in soil throughout the Site based on the 1995 Remedial Investigation (Conestoga-Rovers & Associates, 1995) averaged 30.0 mg/kg. Mercury concentrations in soil identified during the 2007 RCRA Facility Investigation (RFI) performed by Brown and Caldwell (Brown and Caldwell, 2007) averaged 40.6 mg/kg; therefore, the stream bank results obtained during the 2014 supplemental RI were similar to and generally less than site-wide soil concentrations observed during the 1995 RI and the 2007 RFI. No visible calcium sulfate material was observed at the riverbank sampling locations.

Additional soil sampling was conducted within the vicinity of the SPDES lagoon as part of the Supplemental RI. Soil samples were taken on an approximate 50-foot grid along the area between the SPDES lagoon berm and the West Branch of the Ramapo River, as shown on Figure 2-2. The sample intervals were targeted to assess potential contaminant transport from surface water runoff, seepage, or subsurface flow from the lagoon to the river. As such, surficial soil samples were collected from each of the sampling locations along the length of the SPDES lagoon's berm, approximately 1/3rd of the way down, where the phreatic surface would be anticipated to develop when the SPDES lagoon was at capacity. In addition, a set of samples was taken at the toe of the berm, where seepage from the SPDES lagoon would have most likely manifested, if it were to have occurred. All samples were analyzed for TCL VOCs/SVOCs and TAL metals.

Results of the 2014 investigation indicated the following:

- VOCs were not detected at concentrations above SCOs;
- SVOCs were generally present at concentrations below applicable SCOs; and
- Arsenic was reported at a concentration above SCOs in one sample, while other metals, excepting mercury, were below applicable SCOs.

Mercury was detected in 27 out of the 32 samples collected from the SPDES lagoon berm (at concentrations up to 107 mg/kg) and was present above the unrestricted use ecological protection SCO of 0.18 mg/kg in 26 out of 32 samples. The average mercury concentration identified within the lagoon berm soil was 14.1 mg/kg. The highest concentrations were found at locations LS-15 and LS-16 near the northwest end of the SPDES lagoon. Calcium sulfate was not identified in any of the samples obtained within the SPDES lagoon berm.

3 SCOPE OF WORK

3.1 Investigation Activities

CEG mobilized to the Site, and during the period from June 29, 2022 through July 1, 2022 cleared the floodplain area along the southern Ramapo Riverbank proposed for sampling using a brush hog. Soil sampling locations (see Figure 3-1) were also identified during this period by placing stakes within the floodplain within approximately 50-foot transects. Mid-point locations within each transect were also identified for sampling and potential analyses based on initial results.

Soil sampling was conducted during the period from July 18 – 28, 2022. Samples were collected by advancing a 4-foot Macro-core® sampler using a direct-push rig operated by AWT Environmental Services of Sayreville, New Jersey.

3.2 Sampling Methodology

Soil samples were obtained at each boring location from the surface to eight feet bgs, and at one location (MH-FP-005) to a depth of 12 feet to define the limit of calcium sulfate material. Soil cores were screened in the field for VOCs using a photoionization detector after cutting the disposable acetate sleeve and logged by a geologist to characterize soil and/or fill lithology. Field notes were maintained in a field logbook. Soil samples were obtained, where possible, from 0-6 inches bgs and 6-12 inches bgs for evaluation of impacts to ecological receptors, and from one-foot depth intervals (1-2 feet, 2-3 feet, etc.) below this depth to a depth of at least eight feet below ground surface. Samples were homogenized in a stainless-steel bowl, placed in laboratory-supplied jars, placed on ice and submitted to SGS Laboratories of Dayton, New Jersey for total mercury by USEPA Method SW846 7471B. Calcium sulfate material, where encountered, was noted in the sampling log; but was not homogenized into surrounding soil/fill material as it was understood this material contains mercury at elevated concentrations though it is present in an immobile sulfate salt form. Sampling continued at MH-FP-005, where calcium sulfate material was encountered to a depth greater than eight feet, to delineate the extent of calcium sulfate material at that location.

Quality assurance/quality control samples were collected at a frequency of one duplicate for each 20 samples obtained, along with daily field sampling blanks. Samples were also obtained at discrete locations within the 1-2-foot depth interval and submitted for waste characterization analysis at a frequency of approximately one sample for each 500 tons of soil/fill material to assist with characterization of this material for disposal.

3.3 Deviations from the Approved Work Plan

In general, sampling activities were conducted in accordance with the approved work plan; however, due to the narrow width of the floodplain, topography, and proximity of the riverbank within the western reach of the floodplain, proposed sampling locations within the two western-most transects could not be accessed by the direct-push rig, and only the mid-point samples could be collected from the next two transects. Proposed locations that were not sampled are identified in the figures presented in Section 4.0 with an “NA” indicating the location was not accessible.

4 RESULTS OF SAMPLING

Results of sampling are summarized within Table 4-1 and shown on Figures 4-1, 4-2 and 4-3. The locations where calcium sulfate material was encountered are identified on Figure 4-4. Analytical reports are provided in Appendix A. A total of 408 samples were obtained from 48 locations within the floodplain. Of this total, 126 samples from 14 sampling locations were mid-point samples within a given transect (MH-FP-004, MH-FP-007, MH-FP-010, MH-FP-013, MH-FP-016, MH-FP-019, MH-FP-022, MH-FP-025, MH-FP-028, MH-FP-031, MH-FP-035, MH-FP-039, MH-FP-043 and MH-FP-047) and were held pending initial results for the other samples in the transect. Upon review of field notes and/or initial results, samples from 11 of the 14 mid-point sampling locations were submitted for total mercury analyses. Samples from three of the 14 locations (MH-FP-004, MH-FP-007 and MH-FP-010) were not submitted for analyses based on the visual presence of calcium sulfate material identified throughout the soil column. A total of 381 samples were submitted for total mercury analyses.

Given the large number of sample results (381) and difficulty in showing sample results legibly on a single figure, the results of sampling have been broken down into results from 0-2 feet bgs, 2-5 feet bgs and 5-8+ feet bgs. A shallow initial depth interval of 0-2 feet bgs was chosen for evaluation as this is the depth interval generally accepted as accessible to ecological receptors, which is the focus for the NYSDEC unrestricted ecological protection SCO (ecological) of 0.18 mg/kg for elemental mercury. Soil below this depth is more appropriately compared to the commercial or industrial use SCOs of 2.8 mg/kg and 5.7 mg/kg, respectively. In the sections that follow, the results of sampling will therefore be compared to the unrestricted use ecological protection SCO of 0.18 mg/kg for the 0-2 feet bgs interval, and to the restricted commercial and industrial use scenario SCOs of 2.8 mg/kg and 5.7 mg/kg, respectively, for the 2-5 and 5-8+ feet bgs intervals.

4.1 Total Mercury Results: 0 to 2 Feet Below Ground Surface

As indicated on Figure 4-1, mercury was identified within 127 of the 134 samples obtained from a depth of 0-2 feet bgs at concentrations above the unrestricted ecological protection SCO of 0.18 mg/kg. Mercury concentrations within the top two feet ranged from 0.015 mg/kg within sample MH-FP-027 (1-2 ft bgs) to 847 mg/kg within sample MH-FP-005 (1-2 ft bgs) located immediately north of the parking lot. It should be noted that discrete layers of calcium sulfate material were identified within the soil column at sampling location MH-FP-005 to a depth of approximately 8.5 feet bgs so the elevated mercury concentration at this location was not unexpected. As shown in Figure 4-1, the lateral extent of soils with mercury concentrations greater than the SCO of 0.18 mg/kg is not fully delineated to the east based on the results of sampling conducted during this investigation; however, soil samples were obtained to the east of this location during the 2008 Supplemental RCRA Facility Investigation (RFI) performed by Brown and Caldwell (Brown and Caldwell, 2008). As indicated within that report, samples SB-12 and SB-13, located immediately to the east of the plant site fence line, contained total mercury at concentrations of 0.072 mg/kg and 0.032 mg/kg, respectively, within the depth interval of

0-2 inches below ground surface. Mercury concentrations for these two samples within the depth interval of 2-24 inches were 0.062 mg/kg and 0.018 mg/kg, respectively. Each of these concentrations is below the SCO of 0.18 mg/kg. The lateral extent of soils with mercury concentrations greater than the SCO of 0.18 mg/kg is therefore fully delineated based on the results of soil investigations completed to date at the site.

The average total mercury concentration from 0-2 feet bgs within the floodplain was 30.2 mg/kg, which is above the unrestricted use ecological protection SCO of 0.18 mg/kg. It also exceeds the restricted, industrial use SCO of 5.7 mg/kg for protection of public health. The average mercury concentration within the floodplain for the 0-2-feet bgs interval for those sample locations where calcium sulfate was not visually identified within the soil column was 16.5 mg/kg.

4.2 Total Mercury Results: 2 to 5 Feet Below Ground Surface

Results of sampling are summarized within Table 4-1 and shown on Figure 4-2. As indicated on Figure 4-2, mercury was identified within 49 of the 135 samples obtained from a depth of 2-5 feet bgs at concentrations above the restricted commercial SCO of 2.8 mg/kg. A total of 40 of 135 samples contained mercury at a concentration above the restricted industrial SCO of 5.7 mg/kg. The frequency of mercury detections above restricted commercial and industrial use SCOs reduced to 40 out of 126 samples (31.7%) and 31 out of 126 samples (24.6%), respectively, for those samples where calcium sulfate was not visually identified within the soil column. Mercury concentrations within this depth interval ranged from not detectable in the 3-4 feet bgs interval at MH-FP-016 and MH-FP-027 to 1,260 mg/kg in sample MH-FP-008 (3-4 feet bgs). Layers of calcium sulfate material were identified within the soil column at this location to a depth of approximately four feet bgs so the elevated mercury concentration at this location was not unexpected. Visible calcium sulfate material layers were also present at locations MH-FP-003 and MH-FP-005. As shown on Figure 4-2, the lateral extent of soils with mercury concentrations greater than the SCO of 5.7 mg/kg is not fully delineated to the east for this depth interval.

The average total mercury concentration from 2-5 feet bgs within the floodplain was 43.6 mg/kg, which is above the restricted, industrial use SCO of 5.7 mg/kg for protection of public health. The average total mercury concentration within the floodplain for the 2-5-feet bgs interval for those sample locations where calcium sulfate material was not visually identified within the soil column was 11.7 mg/kg.

4.3 Total Mercury Results: 5 to 8+ Feet Below Ground Surface

Results of sampling are summarized within Table 4-1 and shown on Figure 4-3. As indicated on Figure 4-3, mercury was identified within 21 of the 139 samples obtained from depths of five feet bgs or greater at concentrations above the restricted commercial SCO of 2.8 mg/kg. A total of 15 of 139 samples contained total mercury at a concentration above the restricted industrial SCO of 5.7 mg/kg. The frequency of mercury detections

above restricted commercial and industrial use SCOs dropped to 11 out of 128 samples (8.5%) and five out of 128 samples (3.9%), respectively, for those samples where calcium sulfate material was not visually identified within the soil column. Mercury concentrations within this depth interval ranged from not detectable in numerous (17) samples to 1,100 mg/kg in sample MH-FP-005 (7-8 feet bgs). As indicated above, calcium sulfate material was identified within the soil column at this location so the elevated mercury concentration at this location was not unexpected. As shown on Figure 4-3, the lateral extent of soils with mercury concentrations greater than the SCO of 5.7 mg/kg is not fully delineated to the east for this depth interval.

The average total mercury concentration at depths below five feet bgs within the floodplain was 28.9 mg/kg, which is above the restricted, industrial use SCO of 5.7 mg/kg for protection of public health. The average total mercury concentration within the floodplain for the 5-8+-feet bgs interval for those sample locations where calcium sulfate was not visually identified within the soil column was 4.9 mg/kg, which is above the restricted use, commercial SCO of 2.8 mg/kg; but below the restricted use SCO of 5.7 mg/kg.

4.4 Waste Characterization Results

The results of the waste characterization samples are summarized within Table 4-2. Of the 11 samples analyzed for waste characterization, five of the locations (WC-02 through WC-06) exceeded Toxicity Characteristic Leachate Procedure (TCLP) criteria for barium. These samples were collected from locations MH-FP-016, MH-FP-018, MH-FP-022, MH-FP-026 and MH-FP-030 and are all located between the lagoon and the West Branch of the Ramapo River. This was unexpected since less than 1% of soil samples obtained during the 2007 RFI (Brown and Caldwell, 2007) contained barium at concentrations exceeding the unrestricted use SCO. This area will require further assessment during development of proposed remedial actions. Notably, none of the waste characterization samples exceeded TCLP criteria for mercury, which provides further evidence that the mercury at the Site is present primarily as a salt, which is far more immobile, and less available for biological uptake as compared to elemental mercury.

4.5 Extent of Calcium Sulfate Material

Calcium sulfate material was identified at six (MH-FP-003, MH-FP-004, MH-FP-005, MH-FP-007, MH-FP-008 and MH-FP-010) of 48 locations sampled during this supplemental investigation as shown on Figure 4-4. Calcium sulfate material was visible consistently throughout the soil column at sampling locations MH-FP-004, MH-FP-007 and MH-FP-010; but only in discrete layers and/or mixed with soil at locations MH-FP-003, MH-FP-005 and MH-FP-008. Based on this supplemental investigation, calcium sulfate material was found to be limited in area to immediately to the northeast of the parking lot. This is consistent with the results of prior investigations. The calcium sulfate is easily distinguished from surrounding soil given its white appearance and consistency ranging from stiff clay to a thick slurry.

It should be noted that 10 locations within the four western-most transects were inaccessible to the direct-push rig due to topography. These areas are identified on Figures 4-1 through 4-4. Based on the visual identification of calcium sulfate during a site visit conducted during July 2022, calcium sulfate is anticipated to extend along the northern edge of the parking lot as identified during an investigation conducted by Cornerstone during 2010 and Arcadis during 2001, as shown on Figure 4-4.

The volume of calcium sulfate material, including soil containing intermingled calcium sulfate material (identified within sampling locations MH-FP-003, 005 and 008) within the floodplain is estimated to be approximately 1,574 cubic yards. The volume of calcium sulfate material was estimated as follows:

- 0-2 feet bgs: 463 cubic yards;
- 2-4 feet bgs: 555 cubic yards;
- 4-6 feet bgs: 278 cubic yards; and
- 6-8+ feet bgs: 278 cubic yards.

To calculate this estimate, the extent of calcium sulfate material (or soil containing calcium sulfate material) was assumed to extend midway between the location where it was observed and the next/adjacent sampling location where it was not observed. As an example, calcium sulfate material was identified within sampling locations MH-FP-003, MH-FP-004 and MH-FP-005; but was not identified within sampling location MH-FP-002 to the east. The extent of calcium sulfate material was therefore assumed to terminate midway between sampling locations MH-FP-003, MH-FP-004 and MH-FP-005, and the transect to the west containing sampling location MH-FP-002. To the east, calcium sulfate material was not identified within sampling locations MH-FP-006 or MH-FP-007; but was identified within the 2–4-foot bgs interval of sampling location MH-FP-008. The extent of calcium sulfate material to the east of sampling locations MH-FP-003, MH-FP-004 and MH-FP-005 was therefore assumed to terminate midway between the sampling locations MH-FP-003, MH-FP-004 and MH-FP-005, and sampling locations MH-FP-006, MH-FP-007 and MH-FP-008 except for the depth interval from 2-4 feet bgs where calcium sulfate material was identified within sampling location MH-FP-008. The extent of calcium sulfate material to the west of MH-FP-008 was therefore estimated to terminate between MH-FP-008 and MH-FP-011 within the 2-4-feet bgs sampling interval.

The volume of calcium sulfate along the northern boundary of the parking area and to the east of MH-FP-003 and MH-FP-005 (calcium sulfate identified previously by Cornerstone in 2010 and Arcadis in 2001) was conservatively estimated to be 100 feet long, by 25 feet wide by 4 feet thick.

Based on an approximate area of the floodplain subject to this investigation of 70,830 ft², the estimated volume of soil/fill material for every two feet of depth is approximately 5,250 cubic yards. The estimated volume of calcium sulfate identified within the floodplain therefore ranges from 5.3% to 10.6% as shown below.

Summary of Calcium Sulfate Material Volume by Depth Interval			
Depth Interval (bgs)	Calcium Sulfate Volume (CY)	Floodplain Soil Volume (CY)	Percentage of Calcium Sulfate
0 - 2 feet	463	5,250	8.8
2 - 4 feet	555	5,250	10.6
4 - 6 feet	278	5,250	5.3
6-8+ feet	278	5,250	5.3
Average Percentage of Calcium Sulfate in Floodplain Soil			7.5

4.6 Summary of Results

Results of the floodplain soil investigation indicated that total mercury concentrations in soil above the unrestricted use ecological protection SCO of 0.18 mg/kg are present in 95% of the samples collected within the 0-2-feet interval bgs, 77% of the samples collected from the 2-5-feet interval bgs, and 45% of the samples collected at depths of five feet bgs or greater. The frequency of mercury detections above restricted commercial and industrial use SCOs within the 2-5-feet bgs interval was 31.7% and 24.6%, respectively, for those samples where calcium sulfate was not visually identified within the soil column. The frequency of mercury detections above restricted commercial and industrial use SCOs within the 5-8+-feet bgs interval was 8.5% and 3.9%, respectively, for those samples where calcium sulfate material was not visually identified within the soil column.

At three locations (MH-FP-004, MH-FP-007 and MH-FP-010) calcium sulfate material was visible throughout the sampled soil column, and at three additional locations (MH-FP-003, MH-FP-005 and MH-FP-008) calcium sulfate material was visible in discrete layers and/or mixed with soil. All these locations (MH-FP-003, MH-FP-004, MH-FP-005, MH-FP-007, MH-FP-008 and MH-FP-010) are located off the northeast corner of the parking lot, where calcium sulfate material has been previously identified. Additional locations to the east of MH-FP-003 and MH-FP-005 were inaccessible to the direct-push rig; however, calcium sulfate was identified in those areas by prior investigations.

The average mercury concentration identified in soil within the floodplain for those samples where calcium sulfate was not detected was 11.0 mg/kg, which is similar to the average concentration identified within lagoon berm soils (14.0 mg/kg) during the 2014 supplemental RI. These concentrations are less than the average mercury concentrations identified across the Site during the 1995 RI and 2007 RFI.

The average mercury concentration identified in soil during the supplemental floodplain investigation where calcium sulfate was not detected (11.0 mg/kg) is approximately an order of magnitude less than the concentration of mercury identified within calcium sulfate during the 2010 parking lot investigation conducted by Cornerstone (Cornerstone, 2010). Mercury concentrations identified during this investigation ranged from 356 mg/kg to 598 mg/kg for composite samples prepared across 55 sampling locations. The calcium sulfate is easily distinguished from surrounding soil given it's white appearance and consistency ranging from stiff clay to a thick slurry.

4.7 Data Usability Review

Laboratory data packages JD48570, JD48642, JD48789, JD48790, JD48859, JD48935, JD49007 and JD49152, provided to Cornerstone by SGS Laboratories during the period from July 29 through September 2, were reviewed for data completeness, custody documentation, holding times, laboratory quality control limits, preparation/ calibration blanks, and method compliance in accordance with the methods outlined within NYSDEC DER-10. Data Usability Summary Reports prepared based on the review of the data are provided within Appendix B.

Quality control (QC) summaries, including method blank summaries, blank spike summaries, matrix spike and duplicate summaries, instrument performance checks, surrogate recovery summaries, and laboratory control sample summaries were reviewed for each data package. Quality control parameters were generally inside the laboratory control limits, except where noted below and justified within data packages. Instrument performance checks indicated acceptable analysis criteria. Reported results of the validated samples were found to be substantiated by the raw data and generated in compliance with the protocol requirements. No data were rejected as a result of the data review.

As indicated within Section 4.0 above, samples from 14 mid-point sampling locations were submitted to the laboratory; but not analyzed pending the review and discussion of results. Upon review of field notes and/or initial results, samples from 11 of the 14 mid-point sampling locations were subsequently analyzed for total mercury; however, the laboratory 28-day hold times for these samples was exceeded by between eight and 15 days. Samples from the following locations exceeded their respective hold times: MH-FP-13, MH-FP-16, MH-FP-19, MH-FP-22, MH-FP-25, MH-FP-28, MH-FP-31, MH-FP-35, MH-FP-39, MH-FP-43 and MH-FP-47. Results of total mercury analyses for these samples should be assumed to be estimated; however, all are determined to be usable for their intended purpose based on the stability of inorganics in soil and the concentrations detected within these samples. All samples within this group have been annotated within Table 4-1 as being analyzed beyond hold time.

Quality assurance/quality control samples were collected at a frequency of one duplicate for each 20 samples obtained, along with daily field sampling blanks. Comparison of the parent/duplicate sample results indicates that, except for the duplicate collected at MH-FP-009 (4-5), the parent/duplicate results were comparable, with greater differences observed at locations with higher concentrations, but consistent with respect to being higher or lower than applicable SCO values. The parent/duplicate results at MH-FP-009 (4-5) were 2.7 mg/kg and 43.5 mg/kg, which is inconsistent with respect to being lower or higher than the restricted industrial SCO of 5.7 mg/kg. The field blanks, obtained by pouring laboratory grade water over the field-cleaned sampling equipment, were also analyzed for mercury and the results were all below method detection limits.

Electronic Data Deliverable (EDD) files in EquiS format will be uploaded to the Department's EquiS site following submittal of this report.

5 CONCLUSIONS

As indicated above, mercury was identified in soil within the floodplain at concentrations above the unrestricted use ecological SCO of 0.18 mg/kg. The average mercury concentration identified in soil during this supplemental floodplain soil investigation was 34.2 mg/kg. This is similar to the concentrations identified in soil across the Site during the 1995 RI and 2007 RFI. The average mercury concentration identified in soil within the floodplain for those samples where calcium sulfate was not detected was 11.0 mg/kg, which is similar to the average concentration identified within lagoon berm soils (14.1 mg/kg) during the 2014 supplemental RI. These concentrations are less than the average mercury concentrations identified across the Site during the 1995 RI and 2007 RFI. Calcium sulfate material was encountered within a localized area immediately adjacent to the northeast corner of the parking lot. This is also consistent with the results of prior investigations at the Site. Calcium sulfate was also identified during prior investigations along the northern edge of the parking lot and east of sampling locations MH-FP-003 and MH-FP-005; however, these locations were inaccessible to the direct-push rig during this investigation. In addition, while five of ten waste characterization samples obtained from across the floodplain exceeded TCLP criteria for barium and will require further evaluation, mercury was not detected in nine of ten leachate samples, despite the use of TCLP, which subjects the samples to more aggressive leaching conditions that would not be encountered in the natural environment.

It should be noted that the unrestricted use SCO is based on elemental mercury rather than a mercury salt. As noted in the 1997 ROD, it has been determined that mercury at the Site is present primarily in a relatively insoluble form and is not a source of dissolved mercury to humans, biota, groundwater, or surface water. As stated in the ROD, "...the primary pathways by which mercury would move through the environment are via erosion of soils and particulate migration through the groundwater."

Multiple lines of evidence support the conclusion that mercury at the Site is present in immobile mercury salt forms (mercury sulfide compounds), as opposed to elemental mercury or more mobile salts. These lines of evidence include water quality data documenting the absence of mercury above applicable water quality standards, knowledge of the manufacturing process that generated the waste and time periods during which waste material were deposited on the Site, observations from soil borings, and mercury speciation work completed during the 2007 RCRA Facility Investigation (RFI) (Brown and Caldwell, 2007). Each of these lines of evidence is discussed further below.

- *Groundwater Quality Data:* Mercury has been detected only intermittently at concentrations above the Class GA groundwater quality criterion of 0.7 ug/l, in MW-24S, and was present at a concentration of only 0.3 ug/l during the June 2022 sampling event. Groundwater quality data are provided in the quarterly progress reports submitted to the NYSDEC.

- *Surface Water Quality Data:* Surface water quality testing performed during the 1995 RI, and subsequent surface water testing by the NYSDEC in 1995 showed the concentrations of mercury were generally consistent between upstream and downstream sampling locations. In addition, seven surface water samples collected during the 2014 Supplemental RI indicated that mercury was not detected in any of the surface water samples. The absence of dissolved mercury in surface water further supports that only low-solubility mercury is present at the Site.
- *Knowledge of Manufacturing Process:* As discussed within the RFI (Brown and Caldwell, 2007), from the late 1940s to approximately 1953, calcium sulfate material, which was used as a catalyst in the manufacturing of niacinamide, was disposed on site. The calcium sulfate material contains inorganic mercury in a form that is highly immobile (mercuric sulfide).
- *Observations from Soil Borings:* During Site investigation activities, including the 1995 RI, the RFI, Supplemental RI, the 2020 Phase I Emerging Contaminant Investigation, and the 2022 Floodplain Soil Investigation, hundreds of soil borings were completed and soil samples collected at the Site. No evidence of elemental mercury (e.g., sheen or mercury beads) was reported in the borings or soil samples.
- *Mercury Speciation:* The fate and transport and potential bioavailability characteristics of mercury in soil were further evaluated in the 2007 RFI through a series of separation and analytical procedures known as sequential extraction. Seven soil samples were sent for mercury speciation by selective sequential extraction (SSE) (Bloom, et. al., 2003)¹ and methyl mercury analysis. The results indicate overall low environmental mobility and bioavailability of mercury.

It is acknowledged that a significant percentage of the total mercury was determined to be in the F4 fraction, which may include elemental mercury. However, the authors note that “other confirming measures, such as the microscopic or macroscopic observation of balls of liquid Hg⁰, or the presence of saturated Hg⁰ in the F1 fraction or headspace...are required to support this conclusion.” Hundreds of soil borings were completed and soil samples were collected across the site over many years during the Remediation Investigation, RCRA Facility Investigation, Supplemental Remedial Investigations, Emerging Contaminant Investigations, and Floodplain Soil Investigation, with no evidence of elemental mercury (e.g., sheen or mercury beads). This is an extensive record indicating that elemental mercury is not present. The absence of significant mercury concentrations in groundwater samples collected from site monitoring wells over the past 30 years is further evidence that the mercury

¹ Bloom, N, Preus, E, Katon, J and M Hiltner 2003. Selective extractions to assess the biogeochemically relevant fractionation of inorganic mercury in sediments and soils. *Analytica Chimica Acta* 479:233–248.

present in calcium sulfate and soil samples is of very low mobility. Per Bloom *et al*, there are other mercury species that may extract as F4, notably mercury chloride (Hg_2Cl_2), as well as humic-bound forms. According to the United States Environmental Protection Agency (USEPA) National Exposure Research Laboratory (NERL)², it is “irrelevant” what compounds are contributing to the fractions, as the method is operationally defined. Thus F4, with its low extractability, is associated with among the lowest mobility and bioavailability of mercury forms. F1 and F2 are considered the bioavailable fractions. Subsequent refinements to the Bloom *et al* method (Fernández-Martínez and Rucandio 2013³) demonstrated excellent accuracy relative to total mercury and confirmed the suitability of the method for predicting environmental mobility. Refer to the RFI and CSR for additional details of the mercury speciation results.

The form of mercury also is relevant for ecological exposure. Bioavailability characteristics affect both human and ecological exposure and risk. USEPA NERL concluded that “Total mercury is a very poor indicator of the toxicological and environmental hazard associated with mercury-contaminated sites.” A recent study of plant uptake⁴ determined that there was no correlation between total Hg content in soil and leaves, but a statistically significant correlation between extractable mercury content and leaves. The literature strongly indicates that the mobility of the mercury present, as evidenced by SSE fraction (F1-F5), is a critical factor in mercury environmental mobility and risk.

- *Fish Study:* A fish study conducted by the NYSDEC concluded that fish in the West Branch of the Ramapo River do not contain elevated concentrations of mercury and that a fish advisory was not necessary. (NYSDEC Fact Sheet, June/July 2001). Further evaluation of the fish study data collected supports the conclusion that mercury in fish tissue is not elevated at the Site in comparison to other local and regional areas. Details regarding the evaluation of the fish study data are provided within the Supplemental RI Report (Cornerstone, 2015).

These multiple lines of evidence support that mercury is present in low-solubility forms of mercury salts and is not leaching from calcium sulfate or mercury-impacted soil and fill materials adjacent from the parking lot and lagoon and is in a form that has low

² Miller *et al* (undated). Speciation of Mercury in Soil by Sequential Extraction. <https://clu-in.org/download/contaminantfocus/mercury/speciation-of-mercury-542asd95.pdf>.

³ Fernández-Martínez, R and I Rucandio 2013. Assessment of a sequential extraction method to evaluate mercury mobility and geochemistry in solid environmental samples.

⁴ He, L and Peng, X 2023. Content and Bioavailability of Hg in a Soil–Tea Plant System in Anxi Area, Southeast China. *Water* 15,179.

environmental mobility and availability. This confirms the ROD statement that the mercury present at the Site exists in an immobile form.

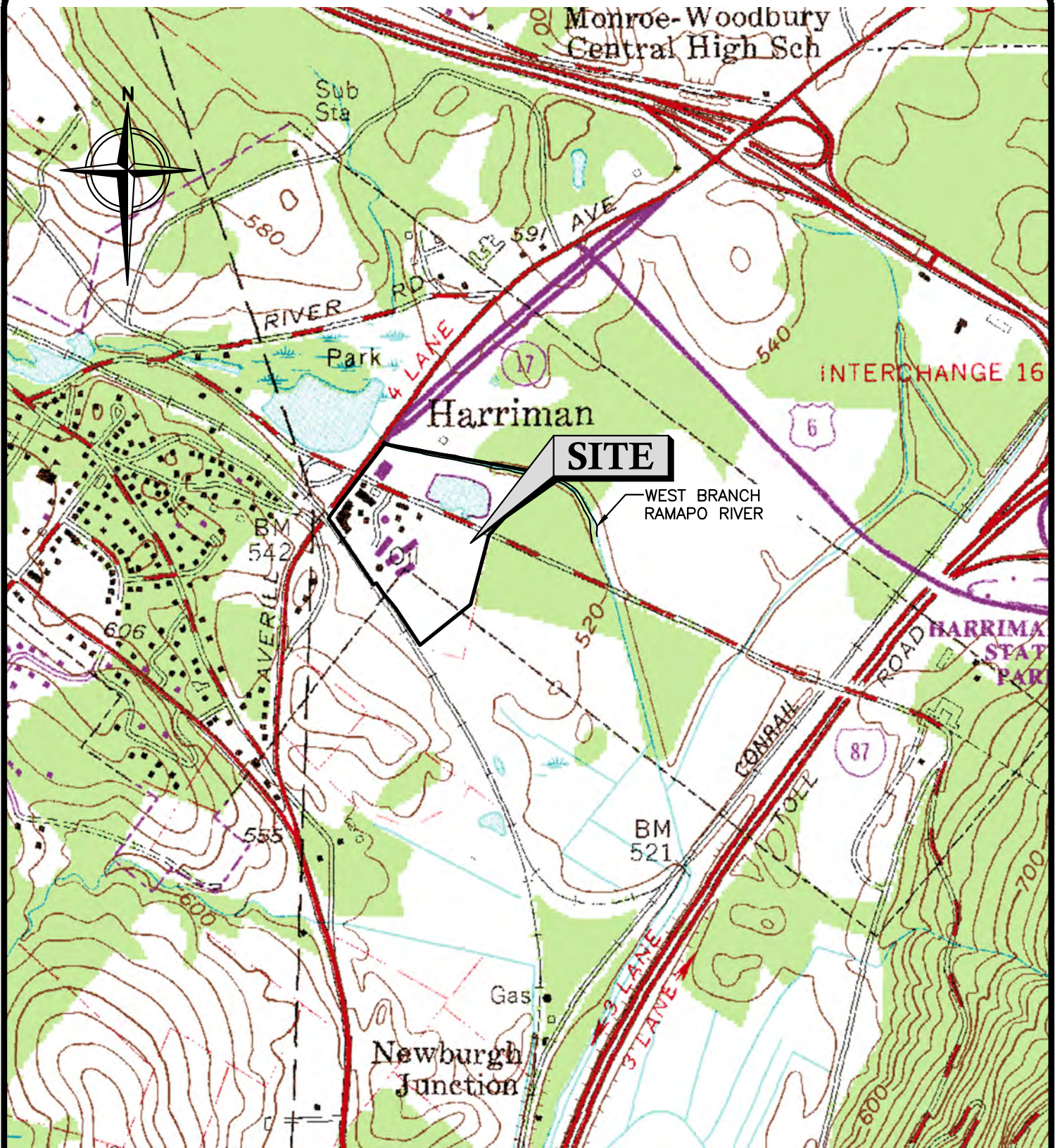
6 RESERVATION OF RIGHTS

The preparation and submission of this Supplemental Floodplain Soil Investigation Report is subject to a full reservation of rights by all the private parties, including ELT Harriman and the Corporate Defendants. Nothing in this report or the discussions and submissions related thereto will be cited or construed in support of or against any position regarding which parties are responsible for any environmental liabilities or remediation at the Site, including without limitation the floodplain area and any of the costs associated with investigation and the potential remediation of the floodplain area or elsewhere on the Site.

7 REFERENCES

- Nicholas S. Bloom, Eve Preus, Jodi Katon, Misti Hiltner, March 2003. "Selective Extractions to Assess the Biogeochemically Relevant Fraction of Inorganic Mercury in Sediments and Soils. *Analytica Chimica Acta*, Volume 479, Pages 233-248."
- Brown and Caldwell Associates, November 2006. "RCRA Facility Investigation Work Plan, NEPERA, a Division of Rutherford Chemicals LLC, Harriman, New York".
- Brown and Caldwell Associates, April 2007. "RCRA Facility Investigation Report, Former Nepera Plant Site, Harriman, New York, EPA ID#: NYD002014595".
- Brown and Caldwell Associates, November 2007. "Phase II RCRA Facility Investigation Work Plan; Former Nepera Plant Site; Harriman, New York".
- Brown and Caldwell Associates, August 2008. "Phase II RCRA Facility Investigation Report, Former Nepera Plant Site, Harriman, New York, EPA ID#: NYD002014595".
- Brown and Caldwell Associates, May 2015. "Supplemental Remedial Investigation Report – Former Nepera Plant Site, Harriman, New York, EPA ID# NYD002014595".
- Conestoga-Rovers & Associates, April 1991. "Remedial Investigation/Feasibility Study Work Plan Addendum, RI/FS Study Program".
- Conestoga-Rovers & Associates, July 1995. "Remedial Investigation – Harriman Site, Village of Harriman, Orange County, New York".
- Cornerstone Environmental Group, April 16, 2010. "Parking Lot Investigation Report".
- Cornerstone Engineering and Land Surveying, PLLC and Brown and Caldwell Associates, March 2011. "Site-Wide Characterization Summary Report, Former Nepera Facility".
- Cornerstone Engineering & Land Surveying, PLLC, November 2014. "Supplemental Remedial Investigation Report – Former Nepera Harriman Site, Harriman, New York".
- Cornerstone Engineering and Geology, PLLC and Brown and Caldwell Associates, May 2022. "Supplemental Soil Investigation Work Plan, Former Nepera Harriman Site, Harriman, New York".
- Dames & Moore, July 13, 1989. "Phase I Hydrogeologic Investigation, Interim Remedial Measures, Nepera Inc., Harriman, New York".
- New York State Department of Environmental Conservation, June/July 2001. "Ramapo River Fish Sampling Investigation".
- New York State Department of Environmental Conservation, March 1997. "Record of Decision, Nepera Inc. – Harriman, Inactive Hazardous Waste Site, Harriman, Orange County, Site No. 336006".
- New York State Department of Environmental Conservation, May 3, 2010. "DER-10/Technical Guidance for Site Investigation and Remediation; NYSDEC Program Policy".

New York State Department of Environmental Conservation, June 7, 2016. “Letter from David Crosby to the Corporate Defendants”.



0 1000 2000
SCALE IN FEET

NOTE:

1. MAP IMAGERY ACQUIRED FROM THE USGS
MONROE NY 7.5 MINUTE QUADRANGLE DATED 1957,
PHOTOREVISED 1981.



PREPARED BY:
CORNERSTONE ENGINEERING AND LAND SURVEYING, PLLC

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

NEPERA, INC. AND WARNER-LAMBERT COMPANY
FORMER NEPERA FACILITY
HARRIMAN, NEW YORK

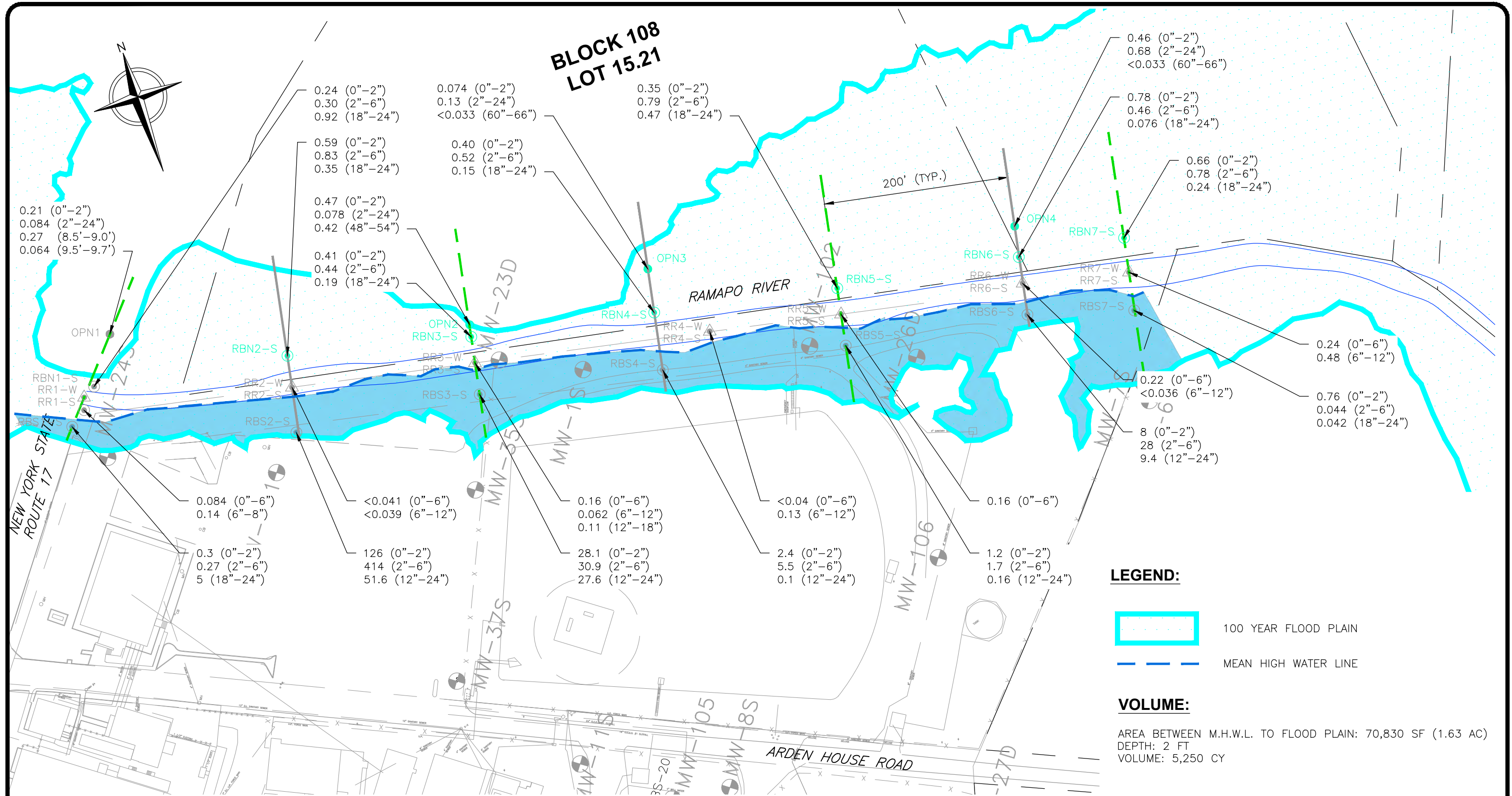
SITE LOCATION MAP

FIGURE NO.

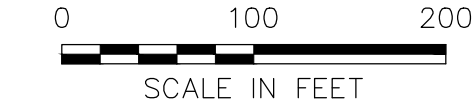
1-1

PROJECT NO.

140079



- NOTES:**
- OFF-SITE PROPERTY SAMPLE LOCATIONS WERE NOMINALLY ADJUSTED TO COINCIDE WITH TRANSECT LOCATIONS.
 - SOURCE OF FLOOD PLAIN DATA ACQUIRED FROM FEMA FLOOD PLAIN MAP NUMBERED 36072C0492E, DATED 08/03/2009.
 - TAX MAP INFORMATION ACQUIRED FROM TAX MAP DRAWING NAMED "VILLAGE OF HARRIMAN" DATED 10/26/2004.



Unauthorized alteration or addition to this plan bearing a licensed professional's seal is a violation of Section 7209, Sub-Division 2, of the New York Education Law. Only copies from the original of this plan marked with an original professional's seal shall be considered to be valid true copies.

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

cornerstone PLLC

PREPARED BY:
CORNERSTONE ENGINEERING AND GEOLOGY, PLLC

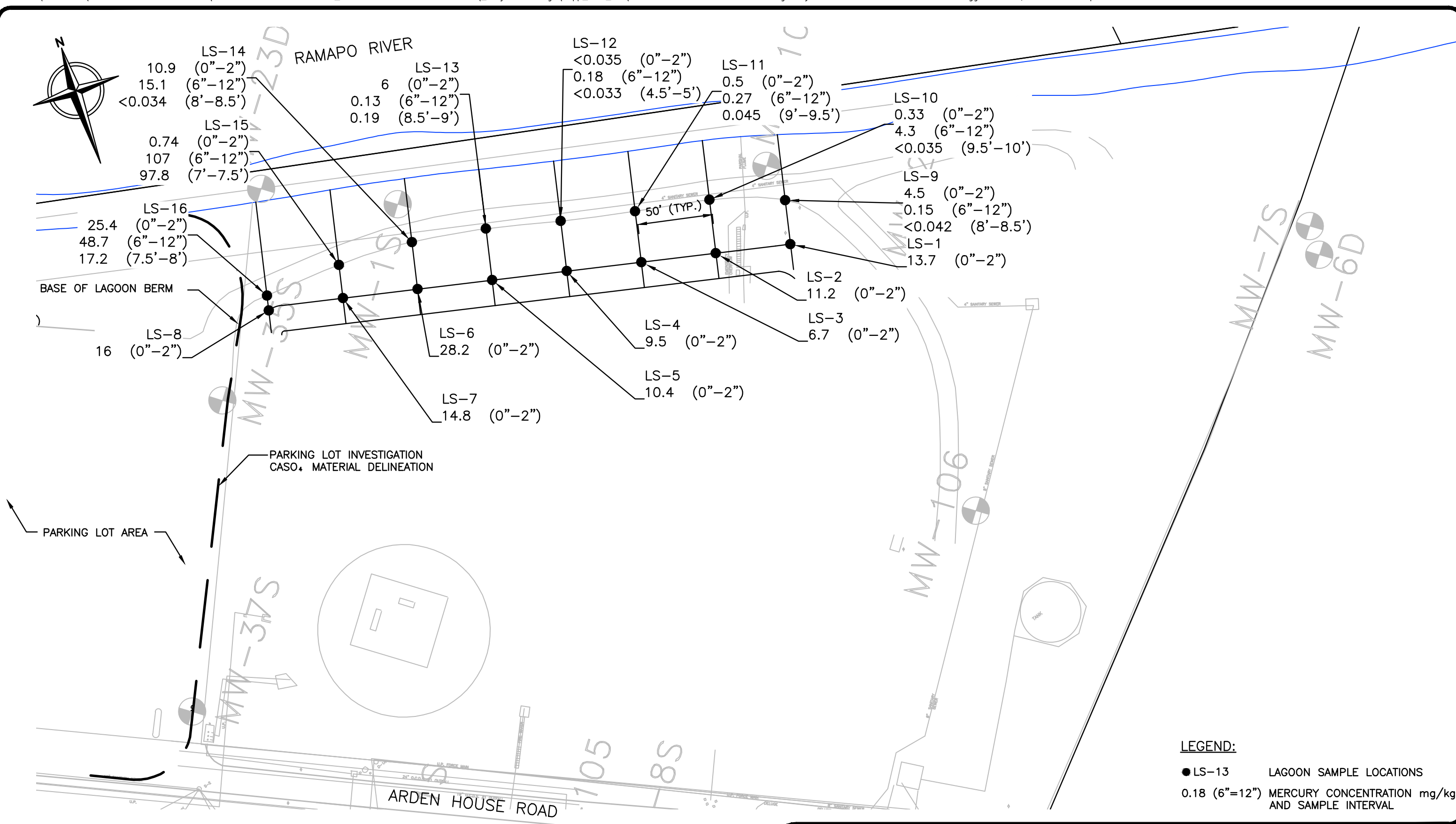
ALL PROFESSIONAL ENGINEERING WORK IS PERFORMED BY DULY LICENSED PROFESSIONAL ENGINEERS UNDER THE APPROPRIATE STATE REGISTERED PROFESSIONAL ENTITY.

NEPERA, INC AND WARNER-LAMBERT CO
HARRIMAN, NEW YORK

PRIOR SAMPLING LOCATIONS

FIGURE NO.
2-1

PROJECT NO.
4213584



0 60 120
SCALE IN FEET

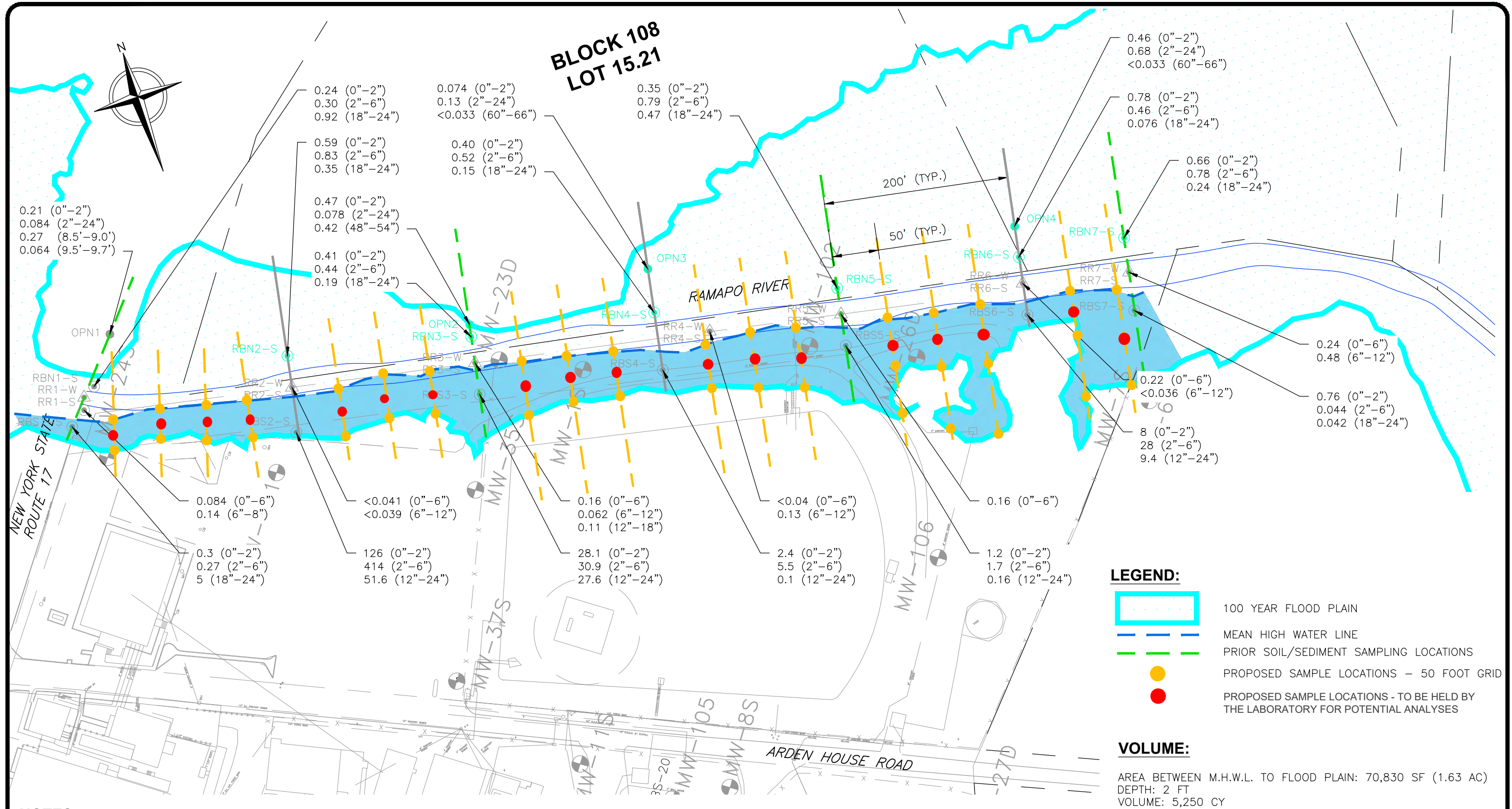
cornerstone
environmental

PREPARED BY:
CORNERSTONE ENGINEERING AND LAND SURVEYING, PLLC

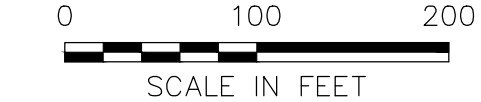
This drawing represents intellectual property of Cornerstone Engineering and Land Surveying, PLLC. Any modification to the original by other than Cornerstone Engineering and Land Surveying, PLLC personnel violates its original purpose and as such is rendered void. Cornerstone Engineering and Land Surveying,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

NEPERA, INC. AND WARNER-LAMBERT COMPANY
FORMER NEPERA FACILITY
HARRIMAN, NEW YORK
LAGOON ENBANKMENT SOIL
SAMPLING LOCATIONS

FIGURE NO.
2-2
PROJECT NO.
140079



- NOTES:**
- OFF-SITE PROPERTY SAMPLE LOCATIONS WERE NOMINALLY ADJUSTED TO COINCIDE WITH TRANSECT LOCATIONS.
 - SOURCE OF FLOOD PLAIN DATA ACQUIRED FROM FEMA FLOOD PLAIN MAP NUMBERED 36072C0492E, DATED 08/03/2009.
 - TAX MAP INFORMATION ACQUIRED FROM TAX MAP DRAWING NAMED "VILLAGE OF HARRIMAN" DATED 10/26/2004.



Unauthorized alteration or addition to this plan bearing a licensed professional's seal is a violation of Section 7209, Sub-Division 2, of the New York Education Law. Only copies from the original of this plan marked with an original professional's seal shall be considered to be valid true copies.

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

cornerstone
PLLC

PREPARED BY:
CORNERSTONE ENGINEERING AND GEOLOGY, PLLC

ALL PROFESSIONAL ENGINEERING WORK IS PERFORMED BY DULY LICENSED PROFESSIONAL ENGINEERS UNDER THE APPROPRIATE STATE REGISTERED PROFESSIONAL ENTITY.

NEPERA, INC AND WARNER-LAMBERT CO
HARRIMAN, NEW YORK

PROPOSED SOIL SAMPLING LOCATIONS
50 - FOOT GRID

FIGURE NO.
3-1

PROJECT NO.
4213584

1. OFF-SITE PROPERTY SAMPLE LOCATIONS WERE NOMINALLY ADJUSTED TO COINCIDE WITH TRANSECT LOCATIONS.
2. SOURCE OF FLOOD PLAIN DATA ACQUIRED FROM FEMA FLOOD PLAIN MAP NUMBERED 36072C0492E, DATED 08/03/2009.
3. TAX MAP INFORMATION ACQUIRED FROM TAX MAP DRAWING NAMED "VILLAGE OF HARRIMAN" DATED 10/26/2004.

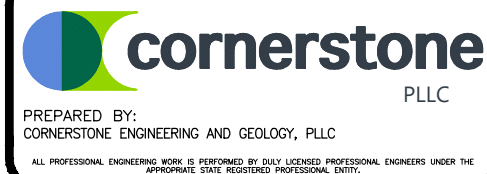
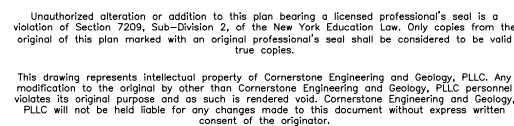
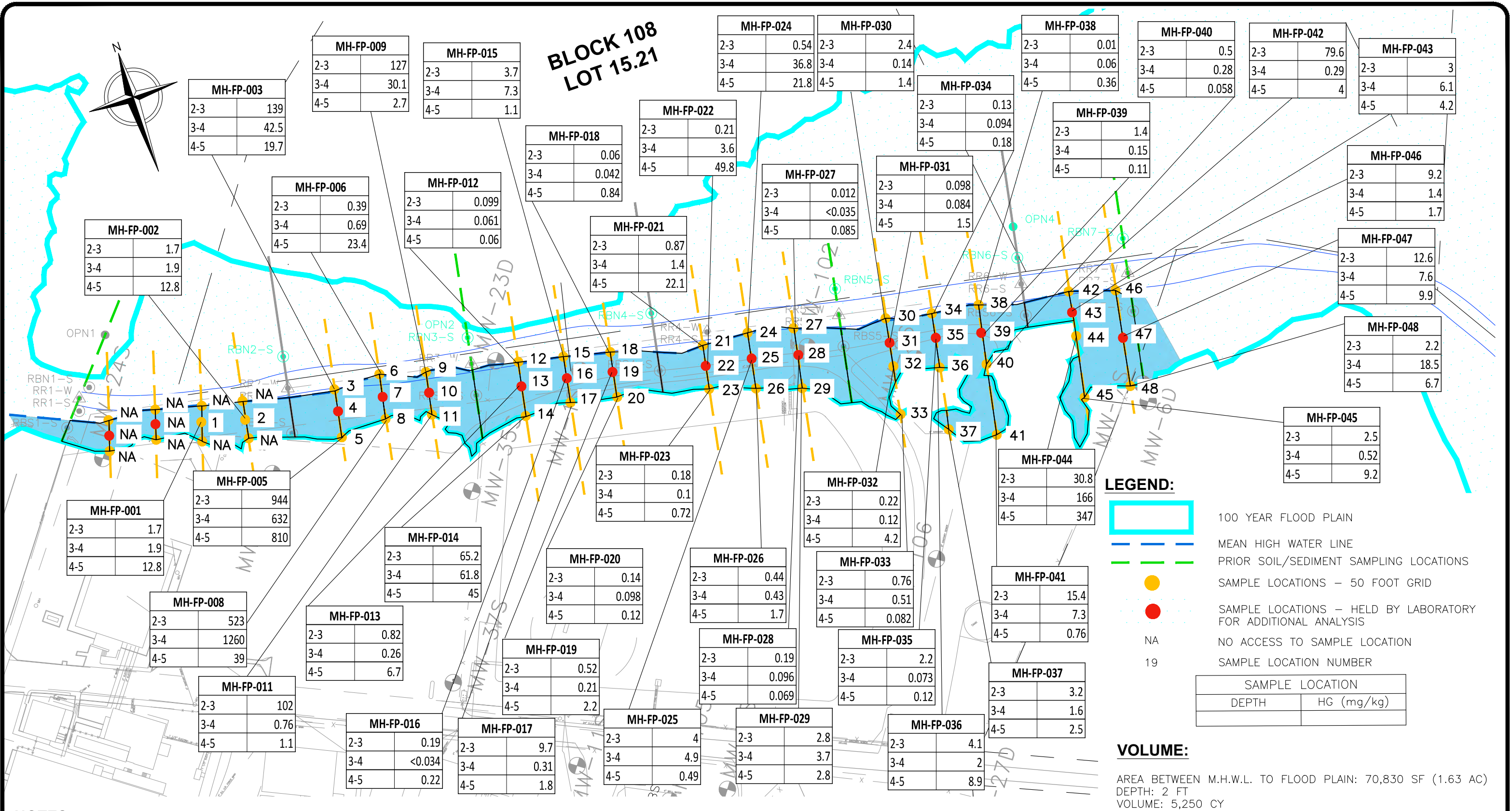
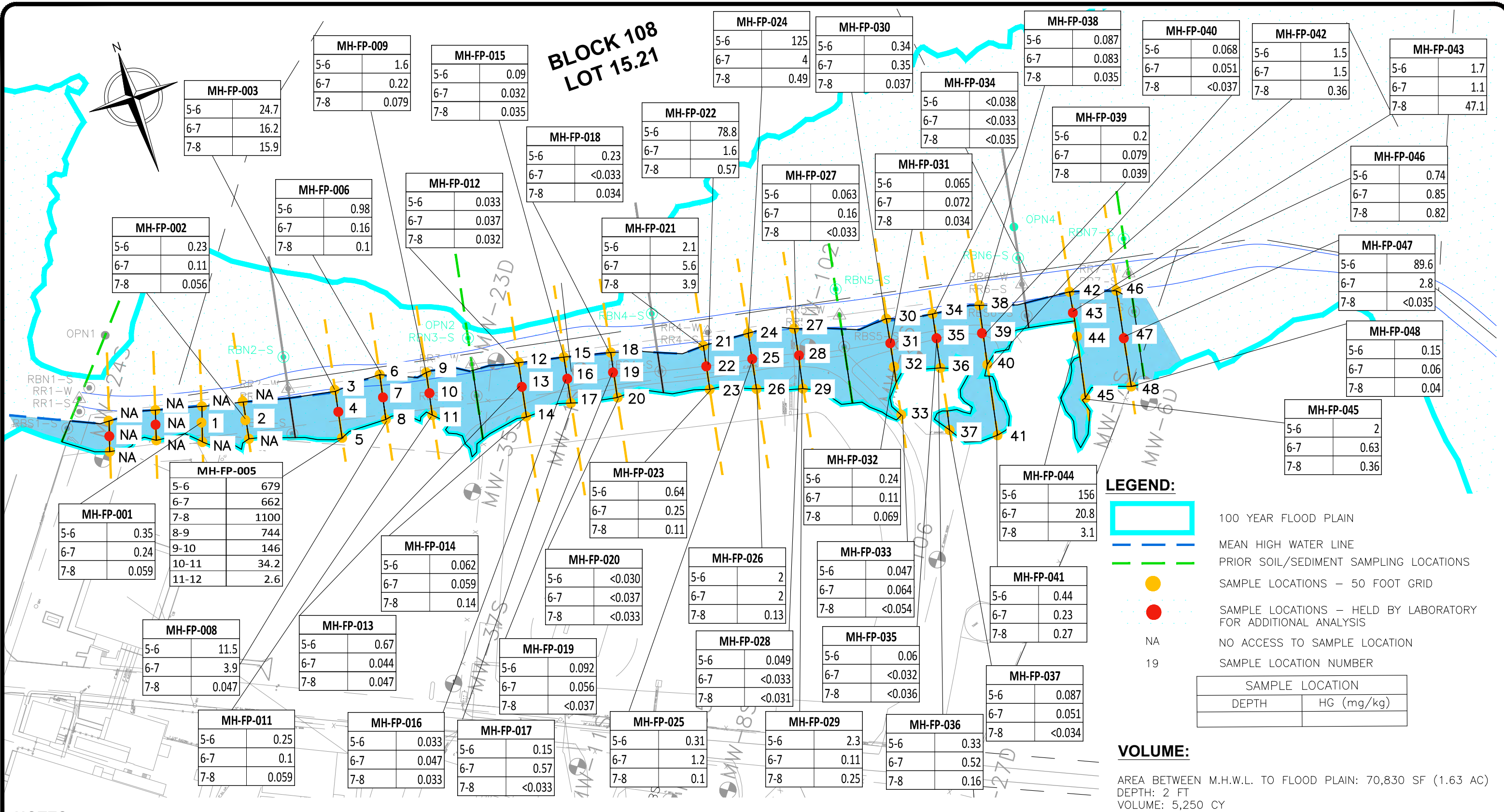


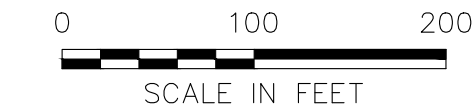
FIGURE NO.
4-1
PROJECT NO.
4213584





NOTES:

- OFF-SITE PROPERTY SAMPLE LOCATIONS WERE NOMINALLY ADJUSTED TO COINCIDE WITH TRANSECT LOCATIONS.
- SOURCE OF FLOOD PLAIN DATA ACQUIRED FROM FEMA FLOOD PLAIN MAP NUMBERED 36072C0492E, DATED 08/03/2009.
- TAX MAP INFORMATION ACQUIRED FROM TAX MAP DRAWING NAMED "VILLAGE OF HARRIMAN" DATED 10/26/2004.



Unauthorized alteration or addition to this plan bearing a licensed professional's seal is a violation of Section 7209, Sub-Division 2, of the New York Education Law. Only copies from the original of this plan marked with an original professional's seal shall be considered to be valid true copies.

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

cornerstone PLLC

PREPARED BY:
CORNERSTONE ENGINEERING AND GEOLOGY, PLLC

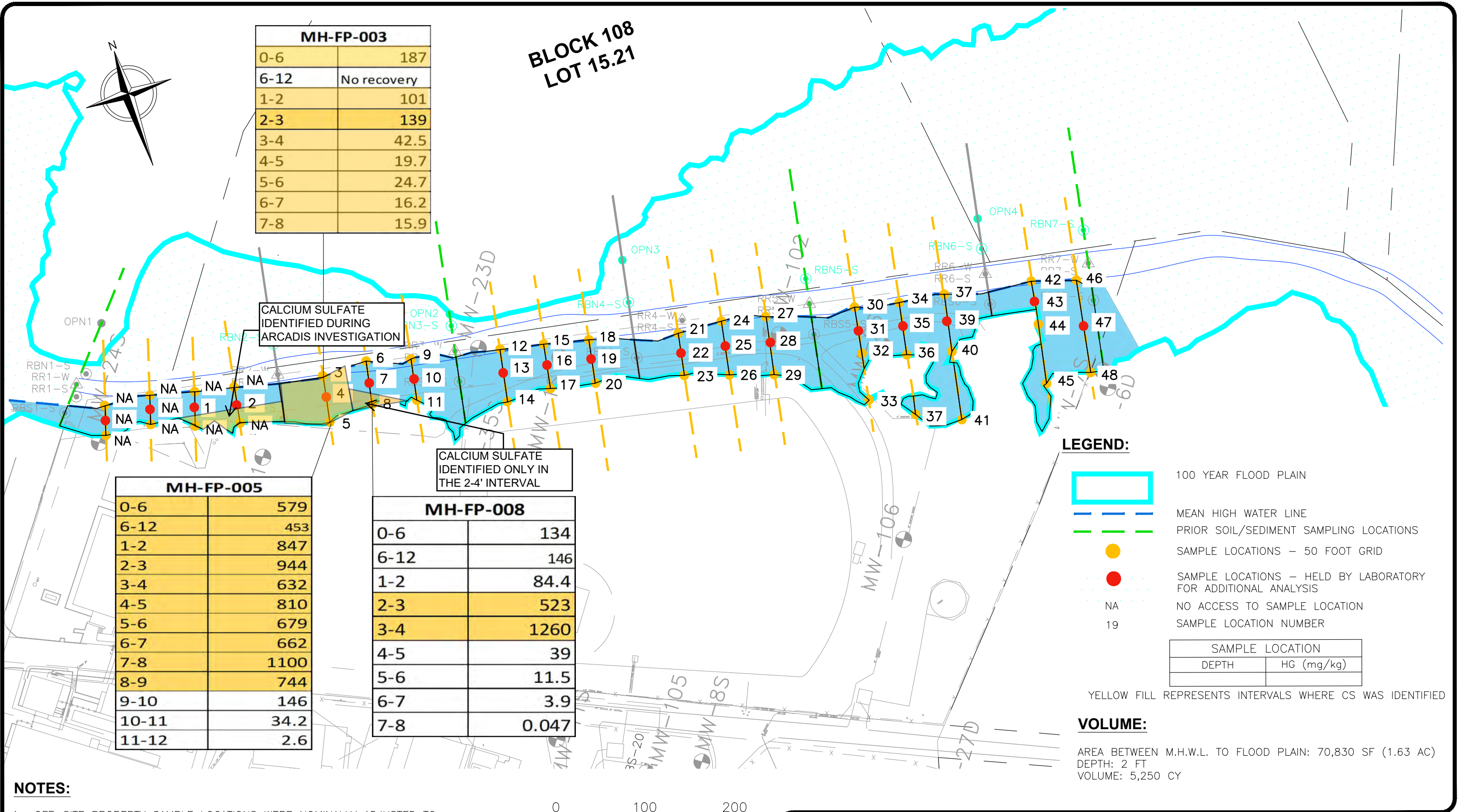
ALL PROFESSIONAL ENGINEERING WORK IS PERFORMED BY DULY LICENSED PROFESSIONAL ENGINEERS UNDER THE APPROPRIATE STATE REGISTERED PROFESSIONAL ENTITY.

NEPERA, INC AND WARNER-LAMBERT CO
HARRIMAN, NEW YORK

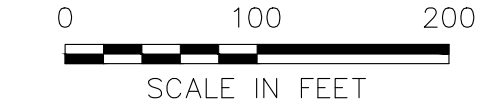
**HG RESULTS 5-8+ FT DEPTH
50 - FOOT GRID**

FIGURE NO.
4-3

PROJECT NO.
4213584



- NOTES:**
1. OFF-SITE PROPERTY SAMPLE LOCATIONS WERE NOMINALLY ADJUSTED TO COINCIDE WITH TRANSECT LOCATIONS.
 2. SOURCE OF FLOOD PLAIN DATA ACQUIRED FROM FEMA FLOOD PLAIN MAP NUMBERED 36072C0492E, DATED 08/03/2009.
 3. TAX MAP INFORMATION ACQUIRED FROM TAX MAP DRAWING NAMED "VILLAGE OF HARRIMAN" DATED 10/26/2004.



Unauthorized alteration or addition to this plan bearing a licensed professional's seal is a violation of Section 7209, Sub-Division 2, of the New York Education Law. Only copies from the original of this plan marked with an original professional's seal shall be considered to be valid true copies.

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

PREPARED BY:
CORNERSTONE ENGINEERING AND GEOLOGY, PLLC

ALL PROFESSIONAL ENGINEERING WORK IS PERFORMED BY DULY LICENSED PROFESSIONAL ENGINEERS UNDER THE APPROPRIATE STATE REGISTERED PROFESSIONAL ENTITY.

NEPERA, INC AND WARNER-LAMBERT CO
HARRIMAN, NEW YORK

**IDENTIFIED CALCLUM SULFATE
HG RESULTS**

FIGURE NO.
4-4

PROJECT NO.
4213584

Appendix A

Analytical laboratory reports

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: JD48570
 Account: CORNNYM - Cornerstone Environmental Group, LLC
 Project: NEPERA, Arden House Road, Harriman, NY

QC Batch ID: MP34248
 Matrix Type: SOLID

Methods: SW846 7471B
 Units: mg/kg

Prep Date: 07/25/22

Metal	JD48622-10 Original MS	SpikeLot HGPWS1	% Rec	QC Limits
-------	---------------------------	--------------------	-------	--------------

Mercury	0.076	0.48	0.313	129.1N(a 80-120
---------	-------	------	-------	-----------------

Associated samples MP34248: JD48570-47, JD48570-48

Results < IDL are shown as zero for calculation purposes

(*) Outside of QC limits

(N) Matrix Spike Rec. outside of QC limits

(anr) Analyte not requested

(a) Spike recovery indicates possible matrix interference and/or sample nonhomogeneity.

Annotated Analytical Data

Report of Analysis

Client Sample ID:	MH-FP-005-10-11	Date Sampled:	07/18/22
Lab Sample ID:	JD48570-47	Date Received:	07/19/22
Matrix:	SO - Soil	Percent Solids:	74.1
Project:	NEPERA, Arden House Road, Harriman, NY		

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Mercury	34.2 J	3.6	mg/kg	100	07/25/22	07/26/22 LM	SW846 7471B ¹	SW846 7471B ²

(1) Instrument QC Batch: MA52776
(2) Prep QC Batch: MP34248

RL = Reporting Limit

Report of Analysis

Client Sample ID:	MH-FP-005-11-12	Date Sampled:	07/18/22
Lab Sample ID:	JD48570-48	Date Received:	07/19/22
Matrix:	SO - Soil	Percent Solids:	84.8
Project:	NEPERA, Arden House Road, Harriman, NY		

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Mercury	2.6 J	0.16	mg/kg	5	07/25/22	07/26/22 LM	SW846 7471B ¹	SW846 7471B ²

(1) Instrument QC Batch: MA52776
(2) Prep QC Batch: MP34248

RL = Reporting Limit

SGS Report JD48642

Annotated Quality Control Results

Leachate Blank Summary

Page 1 of 1

Job Number: JD48642

Account: CORNNYM Cornerstone Environmental Group, LLC

Project: NEPERA, Arden House Road, Harriman, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GP41392-LB16	1A224938.D	5	07/27/22	BK	07/25/22	GP41392	V1A9648

The QC reported here applies to the following samples:

Method: SW846 8260D

JD48642-27

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	2.5	2.1	ug/l	
78-93-3	2-Butanone (MEK)	ND	50	34	ug/l	
56-23-5	Carbon tetrachloride	ND	5.0	2.8	ug/l	
108-90-7	Chlorobenzene	ND	5.0	2.8	ug/l	
67-66-3	Chloroform	9.6	5.0	2.5	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	5.0	2.5	ug/l	
107-06-2	1,2-Dichloroethane	ND	5.0	3.0	ug/l	
75-35-4	1,1-Dichloroethene	ND	5.0	3.0	ug/l	
127-18-4	Tetrachloroethene	ND	5.0	4.5	ug/l	
79-01-6	Trichloroethene	ND	5.0	2.6	ug/l	
75-01-4	Vinyl chloride	ND	5.0	3.9	ug/l	

CAS No.	Surrogate Recoveries	Limits	
1868-53-7	Dibromofluoromethane	100%	76-120%
17060-07-0	1,2-Dichloroethane-D4	106%	64-135%
2037-26-5	Toluene-D8	96%	76-117%
460-00-4	4-Bromofluorobenzene	102%	72-122%

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: JD48642
Account: CORNNYM Cornerstone Environmental Group, LLC
Project: NEPERA, Arden House Road, Harriman, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
JD48166-1AMS	1A224943.D	5	07/27/22	BK	n/a	n/a	V1A9648
JD48166-1AMSD	1A224944.D	5	07/27/22	BK	n/a	n/a	V1A9648
JD48166-1A	1A224939.D	5	07/27/22	BK	07/21/22	GP41348	V1A9648

The QC reported here applies to the following samples: Method: SW846 8260D

JD48642-27

CAS No.	Compound	JD48166-1A ug/l	Spike Q ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
71-43-2	Benzene	ND	250	209	84	250	214	86	2	49-137/12
78-93-3	2-Butanone (MEK)	ND	1000	667	67	1000	667	67	0	52-137/17
56-23-5	Carbon tetrachloride	ND	250	219	88	250	223	89	2	70-132/13
108-90-7	Chlorobenzene	ND	250	208	83	250	209	84	0	68-123/12
67-66-3	Chloroform	8.4	B 250	218	84	250	222	85	2	68-120/13
106-46-7	1,4-Dichlorobenzene	ND	250	225	90	250	228	91	1	72-117/12
107-06-2	1,2-Dichloroethane	ND	250	228	91	250	232	93	2	66-120/13
75-35-4	1,1-Dichloroethene	ND	250	213	85	250	215	86	1	59-133/15
127-18-4	Tetrachloroethene	ND	250	213	85	250	217	87	2	58-132/13
79-01-6	Trichloroethene	ND	250	213	85	250	221	88	4	56-136/12
75-01-4	Vinyl chloride	ND	250	207	83	250	214	86	3	41-156/16

CAS No.	Surrogate Recoveries	MS	MSD	JD48166-1A Limits
1868-53-7	Dibromofluoromethane	102%	102%	102% 76-120%
17060-07-0	1,2-Dichloroethane-D4	102%	101%	107% 64-135%
2037-26-5	Toluene-D8	91%	91%	95% 76-117%
460-00-4	4-Bromofluorobenzene	104%	104%	103% 72-122%

* = Outside of Control Limits.

Leachate Spike Summary

Page 1 of 1

Job Number: JD48642

Account: CORNNYM Cornerstone Environmental Group, LLC

Project: NEPERA, Arden House Road, Harriman, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GP41392-LS16	1A224945.D	5	07/27/22	BK	07/25/22	GP41392	V1A9648
DA47191-1	1A224942.D	5	07/27/22	BK	07/25/22	GP41392	V1A9648

The QC reported here applies to the following samples:

Method: SW846 8260D

JD48642-27

CAS No.	Compound	DA47191-1 ug/l	Spike Q	ug/l	LS ug/l	LS %	Limits
71-43-2	Benzene	ND		250	203	81	49-137
78-93-3	2-Butanone (MEK)	ND		1000	592	59	52-137
56-23-5	Carbon tetrachloride	ND		250	215	86	70-132
108-90-7	Chlorobenzene	ND		250	200	80	68-123
67-66-3	Chloroform	10.2	B	250	208	79	68-120
106-46-7	1,4-Dichlorobenzene	ND		250	216	86	72-117
107-06-2	1,2-Dichloroethane	ND		250	223	89	66-120
75-35-4	1,1-Dichloroethene	ND		250	206	82	59-133
127-18-4	Tetrachloroethene	ND		250	205	82	58-132
79-01-6	Trichloroethene	ND		250	204	82	56-136
75-01-4	Vinyl chloride	ND		250	206	82	41-156

CAS No.	Surrogate Recoveries	LS	DA47191-1	Limits
1868-53-7	Dibromofluoromethane	100%	101%	76-120%
17060-07-0	1,2-Dichloroethane-D4	100%	107%	64-135%
2037-26-5	Toluene-D8	91%	96%	76-117%
460-00-4	4-Bromofluorobenzene	103%	102%	72-122%

* = Outside of Control Limits.

Blank Spike Summary

Page 1 of 1

Job Number: JD48642

Account: CORNNYM Cornerstone Environmental Group, LLC

Project: NEPERA, Arden House Road, Harriman, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP40972-BS1	F208510.D	1	07/27/22	CS	07/26/22	OP40972	EF9185

The QC reported here applies to the following samples:

Method: SW846 8270E

JD48642-27

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
95-48-7	2-Methylphenol	50	30.6	61	26-101
	3&4-Methylphenol	100	60.6	61	23-98
87-86-5	Pentachlorophenol	100	80.0	80	37-147
95-95-4	2,4,5-Trichlorophenol	50	44.3	89	39-125
88-06-2	2,4,6-Trichlorophenol	50	40.1	80	40-127
106-46-7	1,4-Dichlorobenzene	50	26.7	53	25-101
121-14-2	2,4-Dinitrotoluene	50	48.5	97	47-128
118-74-1	Hexachlorobenzene	50	41.5	83	46-113
87-68-3	Hexachlorobutadiene	50	26.2	52	17-111
67-72-1	Hexachloroethane	50	26.2	52	18-101
98-95-3	Nitrobenzene	50	33.2	66	36-120
110-86-1	Pyridine	50	3.8	8* a	10-78

CAS No.	Surrogate Recoveries	BSP	Limits
367-12-4	2-Fluorophenol	46%	10-73%
4165-62-2	Phenol-d5	33%	10-64%
118-79-6	2,4,6-Tribromophenol	89%	31-130%
4165-60-0	Nitrobenzene-d5	72%	28-126%
321-60-8	2-Fluorobiphenyl	76%	26-114%
1718-51-0	Terphenyl-d14	78%	16-122%

(a) Outside of in house control limits.

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Page 1 of 1

Job Number: JD48642

Account: CORNNYM Cornerstone Environmental Group, LLC

Project: NEPERA, Arden House Road, Harriman, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP40972-MS	F208511.D	1	07/27/22	CS	07/26/22	OP40972	EF9185
OP40972-MSD	F208512.D	1	07/27/22	CS	07/26/22	OP40972	EF9185
JD48642-27 ^a	F208513.D	1	07/27/22	CS	07/26/22	OP40972	EF9185

The QC reported here applies to the following samples:

Method: SW846 8270E

JD48642-27

CAS No.	Compound	JD48642-27 ug/l	Spike Q	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
95-48-7	2-Methylphenol	ND	500	277	55	500	224	45	21	10-130/32
	3&4-Methylphenol	ND	1000	537	54	1000	430	43	22	10-128/36
87-86-5	Pentachlorophenol	ND	1000	760	76	1000	732	73	4	29-154/32
95-95-4	2,4,5-Trichlorophenol	ND	500	403	81	500	398	80	1	33-130/22
88-06-2	2,4,6-Trichlorophenol	ND	500	371	74	500	362	72	2	35-129/26
106-46-7	1,4-Dichlorobenzene	ND	500	303	61	500	233	47	26	10-155/26
121-14-2	2,4-Dinitrotoluene	ND	500	446	89	500	441	88	1	21-160/23
118-74-1	Hexachlorobenzene	ND	500	380	76	500	365	73	4	40-120/21
87-68-3	Hexachlorobutadiene	ND	500	303	61	500	228	46	28* ^b	10-129/24
67-72-1	Hexachloroethane	ND	500	304	61	500	221	44	32* ^b	10-120/26
98-95-3	Nitrobenzene	ND	500	340	68	500	299	60	13	26-138/26
110-86-1	Pyridine	ND	500	111	22	500	125	25	12	10-94/49

CAS No.	Surrogate Recoveries	MS	MSD	JD48642-27	Limits
367-12-4	2-Fluorophenol	43%	30%	33%	10-73%
4165-62-2	Phenol-d5	30%	21%	22%	10-64%
118-79-6	2,4,6-Tribromophenol	79%	79%	71%	31-130%
4165-60-0	Nitrobenzene-d5	72%	62%	64%	28-126%
321-60-8	2-Fluorobiphenyl	71%	65%	61%	26-114%
1718-51-0	Terphenyl-d14	82%	79%	72%	16-122%

(a) TCLP temperature out for 17 hours.

(b) Analytical precision exceeds in-house control limits.

* = Outside of Control Limits.

Leachate Spike Summary

Page 1 of 1

Job Number: JD48642

Account: CORNNYM Cornerstone Environmental Group, LLC

Project: NEPERA, Arden House Road, Harriman, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP40972-LS19	F208511.D	1	07/27/22	CS	07/26/22	OP40972	EF9185
JD48642-27 ^a	F208513.D	1	07/27/22	CS	07/26/22	OP40972	EF9185

The QC reported here applies to the following samples:

Method: SW846 8270E

JD48642-27

CAS No.	Compound	JD48642-27 ug/l	Spike Q	LS ug/l	LS %	Limits
95-48-7	2-Methylphenol	ND	500	277	55	10-130
	3&4-Methylphenol	ND	1000	537	54	10-128
87-86-5	Pentachlorophenol	ND	1000	760	76	29-154
95-95-4	2,4,5-Trichlorophenol	ND	500	403	81	33-130
88-06-2	2,4,6-Trichlorophenol	ND	500	371	74	35-129
106-46-7	1,4-Dichlorobenzene	ND	500	303	61	10-155
121-14-2	2,4-Dinitrotoluene	ND	500	446	89	21-160
118-74-1	Hexachlorobenzene	ND	500	380	76	40-120
87-68-3	Hexachlorobutadiene	ND	500	303	61	10-129
67-72-1	Hexachloroethane	ND	500	304	61	10-120
98-95-3	Nitrobenzene	ND	500	340	68	26-138
110-86-1	Pyridine	ND	500	111	22	10-94

CAS No.	Surrogate Recoveries	LS	JD48642-27	Limits
367-12-4	2-Fluorophenol	43%	33%	10-73%
4165-62-2	Phenol-d5	30%	22%	10-64%
118-79-6	2,4,6-Tribromophenol	79%	71%	31-130%
4165-60-0	Nitrobenzene-d5	72%	64%	28-126%
321-60-8	2-Fluorobiphenyl	71%	61%	26-114%
1718-51-0	Terphenyl-d14	82%	72%	16-122%

(a) TCLP temperature out for 17 hours.

* = Outside of Control Limits.

Leachate Blank Summary

Job Number: JD48642
Account: CORNNYM Cornerstone Environmental Group, LLC
Project: NEPERA, Arden House Road, Harriman, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP40973-LB19 ^a	OA160892.D	1	07/28/22	CP	07/27/22	OP40973	GOA5672

The QC reported here applies to the following samples: Method: SW846 8151A

JD48642-27

CAS No.	Compound	Result	RL	MDL	Units	Q
94-75-7	2,4-D	ND	3.3	0.98	ug/l	
93-72-1	2,4,5-TP (Silvex)	0.42	1.0	0.20	ug/l	J

CAS No.	Surrogate Recoveries	Limits
19719-28-9	2,4-DCAA	47% 13-169%
19719-28-9	2,4-DCAA	49% 13-169%

(a) The leaching temperature was temporarily out of range for 17 hours.

Leachate Blank Summary

Job Number: JD48642
Account: CORNNYM Cornerstone Environmental Group, LLC
Project: NEPERA, Arden House Road, Harriman, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP40974-LB19 ^a	4G9727428.D	1	07/27/22	CP	07/26/22	OP40974	G4G3863

The QC reported here applies to the following samples: Method: SW846 8081B

JD48642-27

CAS No.	Compound	Result	RL	MDL	Units	Q
58-89-9	gamma-BHC (Lindane)	0.070	0.067	0.040	ug/l	
12789-03-6	Chlordane	ND	3.3	1.4	ug/l	
72-20-8	Endrin	ND	0.067	0.040	ug/l	
76-44-8	Heptachlor	ND	0.067	0.030	ug/l	
1024-57-3	Heptachlor epoxide	ND	0.067	0.040	ug/l	
72-43-5	Methoxychlor	ND	0.13	0.045	ug/l	
8001-35-2	Toxaphene	ND	1.7	1.1	ug/l	

CAS No.	Surrogate Recoveries	Limits
877-09-8	Tetrachloro-m-xylene	165%* ^b 30-137%
877-09-8	Tetrachloro-m-xylene	155%* ^b 30-137%
2051-24-3	Decachlorobiphenyl	138%* ^b 10-137%
2051-24-3	Decachlorobiphenyl	142%* ^b 10-137%

(a) The leaching temperature was temporarily out of range for 17 hours.
(b) Outside of in house control limits.

Blank Spike Summary

Page 1 of 1

Job Number: JD48642

Account: CORNNYM Cornerstone Environmental Group, LLC

Project: NEPERA, Arden House Road, Harriman, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP40974-BS1	4G9727427.D	1	07/26/22	CP	07/26/22	OP40974	G4G3863

The QC reported here applies to the following samples:

Method: SW846 8081B

JD48642-27

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
58-89-9	gamma-BHC (Lindane)	0.167	0.24	144	37-178
72-20-8	Endrin	0.167	0.26	156	45-182
76-44-8	Heptachlor	0.167	0.29	174* a	26-172
1024-57-3	Heptachlor epoxide	0.167	0.25	150 b	43-173
72-43-5	Methoxychlor	0.167	0.43	258* a	40-192

CAS No.	Surrogate Recoveries	BSP	Limits
877-09-8	Tetrachloro-m-xylene	173%* a	30-137%
877-09-8	Tetrachloro-m-xylene	115%	30-137%
2051-24-3	Decachlorobiphenyl	140%* a	10-137%
2051-24-3	Decachlorobiphenyl	94%	10-137%

(a) Outside of in house control limits.

(b) Reported from the 2nd signal. The %D of the CCV on the 1st signal exceeds the method criteria of 20%, so it being used for confirmation only.

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Page 1 of 1

Job Number: JD48642

Account: CORNNYM Cornerstone Environmental Group, LLC

Project: NEPERA, Arden House Road, Harriman, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP40974-MS	4G9727432.D	1	07/27/22	CP	07/26/22	OP40974	G4G3863
OP40974-MSD	4G9727433.D	1	07/27/22	CP	07/26/22	OP40974	G4G3863
JD48642-27 ^a	4G9727431.D	1	07/27/22	CP	07/26/22	OP40974	G4G3863

The QC reported here applies to the following samples:

Method: SW846 8081B

JD48642-27

CAS No.	Compound	JD48642-27 ug/l	Spike Q	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD	
58-89-9	gamma-BHC (Lindane)	ND		1.67	1.0	60	1.67	1.5	90	40	39-160/97
12789-03-6	Chlordane	ND			ND		ND			nc	81-123/10
72-20-8	Endrin	ND		1.67	1.1	66	1.67	1.5	90	31	43-169/95
76-44-8	Heptachlor	0.048	J	1.67	1.1	62	1.67	1.4	80	24	35-152/102
1024-57-3	Heptachlor epoxide	ND		1.67	1.1	66 ^b	1.67	1.1	66 ^b	0 ^b	42-159/96
72-43-5	Methoxychlor	ND		1.67	1.9	114	1.67	4.9	294* ^c	88	47-170/99
8001-35-2	Toxaphene	ND			ND		ND			nc	50-150/8

CAS No.	Surrogate Recoveries	MS	MSD	JD48642-27	Limits
877-09-8	Tetrachloro-m-xylene	57%	65%	87%	30-137%
877-09-8	Tetrachloro-m-xylene	52%	48%	85%	30-137%
2051-24-3	Decachlorobiphenyl	57%	100%	91%	10-137%
2051-24-3	Decachlorobiphenyl	56%	58%	86%	10-137%

(a) The leaching temperature was temporarily out of range for 17 hours.

(b) Reported from the 2nd signal. The %D of the CCV on the 1st signal exceeds the method criteria of 20%, so it being used for confirmation only.

(c) Outside of in house control limits.

* = Outside of Control Limits.

Surrogate Recovery Summary

Job Number: JD48642
Account: CORNNYM Cornerstone Environmental Group, LLC
Project: NEPERA, Arden House Road, Harriman, NY

Method: SW846 8081B	Matrix: LEACHATE
---------------------	------------------

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1 ^a	S1 ^b	S2 ^a	S2 ^b
JD48642-27	4G9727431.D	87	85	91	86
OP40974-BS1	4G9727427.D	173* ^c	115	140* ^c	94
OP40974-LB19	4G9727428.D	165* ^c	155* ^c	138* ^c	142* ^c
OP40974-LS19	4G9727432.D	57	52	57	56
OP40974-MB1	4G9727426.D	50	42	54	47
OP40974-MS	4G9727432.D	57	52	57	56
OP40974-MSD	4G9727433.D	65	48	100	58

Surrogate Compounds	Recovery Limits
S1 = Tetrachloro-m-xylene	30-137%
S2 = Decachlorobiphenyl	10-137%

- (a) Recovery from GC signal #1
- (b) Recovery from GC signal #2
- (c) Outside of in house control limits.

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: JD48642
 Account: CORNNYM - Cornerstone Environmental Group, LLC
 Project: NEPERA, Arden House Road, Harriman, NY

QC Batch ID: MP34270
 Matrix Type: SOLID

Methods: SW846 7471B
 Units: mg/kg

Prep Date: 07/27/22

Metal	JD48642-5 Original MSD	Spike lot HGPWS1	% Rec	MSD RPD	QC Limit
-------	---------------------------	---------------------	-------	------------	-------------

Mercury	0.69	1.1	0.341	120.2N(a 0.0	20
---------	------	-----	-------	--------------	----

Associated samples MP34270: JD48642-5, JD48642-6, JD48642-7, JD48642-8, JD48642-9, JD48642-16, JD48642-17, JD48642-18, JD48642-19, JD48642-20, JD48642-21, JD48642-22, JD48642-23, JD48642-24, JD48642-25, JD48642-26, JD48642-28, JD48642-29, JD48642-30, JD48642-31

Results < IDL are shown as zero for calculation purposes

(*) Outside of QC limits

(N) Matrix Spike Rec. outside of QC limits

(anr) Analyte not requested

(a) Spike recovery indicates possible matrix interference and/or sample nonhomogeneity.

8.4.2

8

Annotated Analytical Data

Report of Analysis

Client Sample ID:	MH-FP-006-3-4	Date Sampled:	07/19/22
Lab Sample ID:	JD48642-5	Date Received:	07/20/22
Matrix:	SO - Soil	Percent Solids:	84.3
Project:	NEPERA, Arden House Road, Harriman, NY		

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Mercury	0.69 J	0.036	mg/kg	1	07/27/22	07/27/22 LM	SW846 7471B ¹	SW846 7471B ²

(1) Instrument QC Batch: MA52773
(2) Prep QC Batch: MP34270

RL = Reporting Limit

Report of Analysis

Client Sample ID:	MH-FP-006-4-5	Date Sampled:	07/19/22
Lab Sample ID:	JD48642-6	Date Received:	07/20/22
Matrix:	SO - Soil	Percent Solids:	75.5
Project:	NEPERA, Arden House Road, Harriman, NY		

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Mercury	23.4 J	2.0	mg/kg	50	07/27/22	07/28/22 LM	SW846 7471B ¹	SW846 7471B ²

(1) Instrument QC Batch: MA52781
(2) Prep QC Batch: MP34270

RL = Reporting Limit

Report of Analysis

Client Sample ID:	MH-FP-006-5-6	Date Sampled:	07/19/22
Lab Sample ID:	JD48642-7	Date Received:	07/20/22
Matrix:	SO - Soil	Percent Solids:	69.8
Project:	NEPERA, Arden House Road, Harriman, NY		

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Mercury	0.98 J	0.046	mg/kg	1	07/27/22	07/27/22 LM	SW846 7471B ¹	SW846 7471B ²

(1) Instrument QC Batch: MA52773
(2) Prep QC Batch: MP34270

RL = Reporting Limit

Report of Analysis

Client Sample ID:	MH-FP-006-6-7	Date Sampled:	07/19/22
Lab Sample ID:	JD48642-8	Date Received:	07/20/22
Matrix:	SO - Soil	Percent Solids:	82.0
Project:	NEPERA, Arden House Road, Harriman, NY		

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Mercury	0.16 J	0.038	mg/kg	1	07/27/22	07/27/22 LM	SW846 7471B ¹	SW846 7471B ²

(1) Instrument QC Batch: MA52773
(2) Prep QC Batch: MP34270

RL = Reporting Limit

Report of Analysis

Client Sample ID:	MH-FP-006-7-8	Date Sampled:	07/19/22
Lab Sample ID:	JD48642-9	Date Received:	07/20/22
Matrix:	SO - Soil	Percent Solids:	80.1
Project:	NEPERA, Arden House Road, Harriman, NY		

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Mercury	0.10 J	0.040	mg/kg	1	07/27/22	07/27/22 LM	SW846 7471B ¹	SW846 7471B ²

(1) Instrument QC Batch: MA52773
(2) Prep QC Batch: MP34270

RL = Reporting Limit

Report of Analysis

Client Sample ID:	MH-FP-008-0-6	Date Sampled:	07/19/22
Lab Sample ID:	JD48642-16	Date Received:	07/20/22
Matrix:	SO - Soil	Percent Solids:	70.2
Project:	NEPERA, Arden House Road, Harriman, NY		

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Mercury	134 J	8.6	mg/kg	200	07/27/22	07/28/22 LM	SW846 7471B ¹	SW846 7471B ²

(1) Instrument QC Batch: MA52781
(2) Prep QC Batch: MP34270

RL = Reporting Limit

Report of Analysis

Client Sample ID:	MH-FP-008-6-12	Date Sampled:	07/19/22
Lab Sample ID:	JD48642-17	Date Received:	07/20/22
Matrix:	SO - Soil	Percent Solids:	81.1
Project:	NEPERA, Arden House Road, Harriman, NY		

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Mercury	146 J	19	mg/kg	500	07/27/22	07/28/22 LM	SW846 7471B ¹	SW846 7471B ²

(1) Instrument QC Batch: MA52781
(2) Prep QC Batch: MP34270

RL = Reporting Limit

Report of Analysis

Client Sample ID:	MH-FP-008-1-2	Date Sampled:	07/19/22
Lab Sample ID:	JD48642-18	Date Received:	07/20/22
Matrix:	SO - Soil	Percent Solids:	81.8
Project:	NEPERA, Arden House Road, Harriman, NY		

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Mercury	84.4 J	7.5	mg/kg	200	07/27/22	07/28/22 LM	SW846 7471B ¹	SW846 7471B ²

(1) Instrument QC Batch: MA52781
(2) Prep QC Batch: MP34270

RL = Reporting Limit

Report of Analysis

Client Sample ID:	MH-FP-008-2-3	Date Sampled:	07/19/22
Lab Sample ID:	JD48642-19	Date Received:	07/20/22
Matrix:	SO - Soil	Percent Solids:	65.0
Project:	NEPERA, Arden House Road, Harriman, NY		

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Mercury	523 J	43	mg/kg	1000	07/27/22	07/28/22 LM	SW846 7471B ¹	SW846 7471B ²

(1) Instrument QC Batch: MA52781
(2) Prep QC Batch: MP34270

RL = Reporting Limit

Report of Analysis

Client Sample ID:	MH-FP-008-3-4	Date Sampled:	07/19/22
Lab Sample ID:	JD48642-20	Date Received:	07/20/22
Matrix:	SO - Soil	Percent Solids:	59.7
Project:	NEPERA, Arden House Road, Harriman, NY		

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Mercury	1260 J	88	mg/kg	2000	07/27/22	07/28/22 LM	SW846 7471B ¹	SW846 7471B ²

(1) Instrument QC Batch: MA52781
(2) Prep QC Batch: MP34270

RL = Reporting Limit

Report of Analysis

Client Sample ID:	MH-FP-008-4-5		
Lab Sample ID:	JD48642-21	Date Sampled:	07/19/22
Matrix:	SO - Soil	Date Received:	07/20/22
		Percent Solids:	81.8
Project:	NEPERA, Arden House Road, Harriman, NY		

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Mercury	39.0 J	1.8	mg/kg	50	07/27/22	07/28/22 LM	SW846 7471B ¹	SW846 7471B ²

(1) Instrument QC Batch: MA52781
(2) Prep QC Batch: MP34270

RL = Reporting Limit

Report of Analysis

Client Sample ID:	MH-FP-008-5-6	Date Sampled:	07/19/22
Lab Sample ID:	JD48642-22	Date Received:	07/20/22
Matrix:	SO - Soil	Percent Solids:	78.2
Project:	NEPERA, Arden House Road, Harriman, NY		

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Mercury	11.5 J	2.0	mg/kg	50	07/27/22	07/28/22 LM	SW846 7471B ¹	SW846 7471B ²

(1) Instrument QC Batch: MA52781
(2) Prep QC Batch: MP34270

RL = Reporting Limit

Report of Analysis

Client Sample ID:	MH-FP-008-6-7	Date Sampled:	07/19/22
Lab Sample ID:	JD48642-23	Date Received:	07/20/22
Matrix:	SO - Soil	Percent Solids:	80.2
Project:	NEPERA, Arden House Road, Harriman, NY		

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Mercury	3.9 J	0.32	mg/kg	10	07/27/22	07/28/22 LM	SW846 7471B ¹	SW846 7471B ²

(1) Instrument QC Batch: MA52781
(2) Prep QC Batch: MP34270

RL = Reporting Limit

Report of Analysis

Client Sample ID:	MH-FP-008-7-8	Date Sampled:	07/19/22
Lab Sample ID:	JD48642-24	Date Received:	07/20/22
Matrix:	SO - Soil	Percent Solids:	88.7
Project:	NEPERA, Arden House Road, Harriman, NY		

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Mercury	0.47 J	0.032	mg/kg	1	07/27/22	07/27/22 LM	SW846 7471B ¹	SW846 7471B ²

(1) Instrument QC Batch: MA52773
(2) Prep QC Batch: MP34270

RL = Reporting Limit

Report of Analysis

Client Sample ID:	DUP-01	Date Sampled:	07/19/22
Lab Sample ID:	JD48642-25	Date Received:	07/20/22
Matrix:	SO - Soil	Percent Solids:	87.0
Project:	NEPERA, Arden House Road, Harriman, NY		

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Mercury	43.5 J	1.9	mg/kg	50	07/27/22	07/28/22 LM	SW846 7471B ¹	SW846 7471B ²

(1) Instrument QC Batch: MA52781
(2) Prep QC Batch: MP34270

RL = Reporting Limit

Report of Analysis

Client Sample ID:	DUP-02	Date Sampled:	07/19/22
Lab Sample ID:	JD48642-26	Date Received:	07/20/22
Matrix:	SO - Soil	Percent Solids:	76.8
Project:	NEPERA, Arden House Road, Harriman, NY		

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Mercury	1.5 J	0.18	mg/kg	5	07/27/22	07/28/22 LM	SW846 7471B ¹	SW846 7471B ²

(1) Instrument QC Batch: MA52781
(2) Prep QC Batch: MP34270

RL = Reporting Limit

Report of Analysis

Client Sample ID:	WC-01					Date Sampled:	07/19/22
Lab Sample ID:	JD48642-27					Date Received:	07/20/22
Matrix:	SO - Soil					Percent Solids:	n/a
Method:	SW846 8260D SW846 1311						
Project:	NEPERA, Arden House Road, Harriman, NY						

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	1A224949.D	5	07/27/22 05:03	BK	07/25/22 09:00	GP41392	V1A9648
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA TCLP Leachate

TCLP Leachate method SW846 1311

CAS No.	Compound	Result	HW#	MCL	RL	MDL	Units	Q
71-43-2	Benzene	ND	D018	0.50	0.0025	0.0021	mg/l	
78-93-3	2-Butanone (MEK) ^a	ND J	D035	200	0.10	0.034	mg/l	
56-23-5	Carbon tetrachloride	ND	D019	0.50	0.0050	0.0028	mg/l	
108-90-7	Chlorobenzene	ND	D021	100	0.0050	0.0028	mg/l	
67-66-3	Chloroform ^b	0.0088	D022	6.0	0.0050	0.0025	mg/l	B
106-46-7	1,4-Dichlorobenzene	ND	D027	7.5	0.0050	0.0025	mg/l	
107-06-2	1,2-Dichloroethane	ND	D028	0.50	0.0050	0.0030	mg/l	
75-35-4	1,1-Dichloroethene	ND	D029	0.70	0.0050	0.0030	mg/l	
127-18-4	Tetrachloroethene	ND	D039	0.70	0.0050	0.0045	mg/l	
79-01-6	Trichloroethene	ND	D040	0.50	0.0050	0.0026	mg/l	
75-01-4	Vinyl chloride	ND	D043	0.20	0.0050	0.0039	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	100%		76-120%
17060-07-0	1,2-Dichloroethane-D4	107%		64-135%
2037-26-5	Toluene-D8	95%		76-117%
460-00-4	4-Bromofluorobenzene	101%		72-122%

(a) Associated CCV outside of control limits low. A sensitivity check was analyzed to demonstrate system suitability to detect affected analyte. Sample was ND.

(b) Indicates analyte found in associated leachate blank.

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
MCL = Maximum Contamination Level (40 CFR 261 7/1/11) B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	WC-01						
Lab Sample ID:	JD48642-27					Date Sampled:	07/19/22
Matrix:	SO - Soil					Date Received:	07/20/22
Method:	SW846 8270E SW846 3510C					Percent Solids:	n/a
Project:	NEPERA, Arden House Road, Harriman, NY						

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 ^a	F208513.D	1	07/27/22 06:41	CS	07/26/22 13:00	OP40972	EF9185
Run #2							

	Initial Volume	Final Volume
Run #1	100 ml	1.0 ml
Run #2		

ABN TCLP Leachate

TCLP Leachate method SW846 1311

CAS No.	Compound	Result	HW#	MCL	RL	MDL	Units	Q
95-48-7	2-Methylphenol	ND	D023	200	0.020	0.0089	mg/l	
	3&4-Methylphenol	ND	D024	200	0.020	0.0088	mg/l	
87-86-5	Pentachlorophenol	ND	D037	100	0.10	0.014	mg/l	
95-95-4	2,4,5-Trichlorophenol	ND	D041	400	0.050	0.013	mg/l	
88-06-2	2,4,6-Trichlorophenol	ND	D042	2.0	0.050	0.0092	mg/l	
106-46-7	1,4-Dichlorobenzene	ND	D027	7.5	0.020	0.0017	mg/l	
121-14-2	2,4-Dinitrotoluene ^b	ND	D030	0.13	0.020	0.0055	mg/l	
118-74-1	Hexachlorobenzene	ND	D032	0.13	0.020	0.0033	mg/l	
87-68-3	Hexachlorobutadiene	ND	D033	0.50	0.010	0.0049	mg/l	
67-72-1	Hexachloroethane	ND	D034	3.0	0.050	0.0039	mg/l	
98-95-3	Nitrobenzene	ND	D036	2.0	0.020	0.0064	mg/l	
110-86-1	Pyridine ^c	ND J	D038	5.0	0.020	0.0039	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	33%		10-73%
4165-62-2	Phenol-d5	22%		10-64%
118-79-6	2,4,6-Tribromophenol	71%		31-130%
4165-60-0	Nitrobenzene-d5	64%		28-126%
321-60-8	2-Fluorobiphenyl	61%		26-114%
1718-51-0	Terphenyl-d14	72%		16-122%

(a) TCLP temperature out for 17 hours.

(b) Associated CCV outside of control limits high, sample was ND.

(c) This compound is outside the control limits biased low in the associated BS.

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
MCL = Maximum Contamination Level (40 CFR 261 7/1/11) B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MH-FP-009-0-6	Date Sampled:	07/19/22
Lab Sample ID:	JD48642-28	Date Received:	07/20/22
Matrix:	SO - Soil	Percent Solids:	79.5
Project:	NEPERA, Arden House Road, Harriman, NY		

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Mercury	6.0 J	0.67	mg/kg	20	07/27/22	07/28/22 LM	SW846 7471B ¹	SW846 7471B ²

(1) Instrument QC Batch: MA52781
(2) Prep QC Batch: MP34270

RL = Reporting Limit

Report of Analysis

Client Sample ID:	MH-FP-009-6-12	Date Sampled:	07/19/22
Lab Sample ID:	JD48642-29	Date Received:	07/20/22
Matrix:	SO - Soil	Percent Solids:	87.5
Project:	NEPERA, Arden House Road, Harriman, NY		

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Mercury	23.9 J	1.8	mg/kg	50	07/27/22	07/28/22 LM	SW846 7471B ¹	SW846 7471B ²

(1) Instrument QC Batch: MA52781
(2) Prep QC Batch: MP34270

RL = Reporting Limit

Report of Analysis

Client Sample ID:	MH-FP-009-1-2	Date Sampled:	07/19/22
Lab Sample ID:	JD48642-30	Date Received:	07/20/22
Matrix:	SO - Soil	Percent Solids:	90.7
Project:	NEPERA, Arden House Road, Harriman, NY		

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Mercury	85.8 J	6.8	mg/kg	200	07/27/22	07/28/22 LM	SW846 7471B ¹	SW846 7471B ²

(1) Instrument QC Batch: MA52781
(2) Prep QC Batch: MP34270

RL = Reporting Limit

Report of Analysis

Client Sample ID:	MH-FP-009-2-3	
Lab Sample ID:	JD48642-31	Date Sampled: 07/19/22
Matrix:	SO - Soil	Date Received: 07/20/22
		Percent Solids: 89.8
Project:	NEPERA, Arden House Road, Harriman, NY	

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Mercury	127 J	17	mg/kg	500	07/27/22	07/28/22 LM	SW846 7471B ¹	SW846 7471B ²

(1) Instrument QC Batch: MA52781
(2) Prep QC Batch: MP34270

RL = Reporting Limit

SGS Report JD48789

Annotated Quality Control Results

Leachate Blank Summary

Page 1 of 1

Job Number: JD48789

Account: CORNNYM Cornerstone Environmental Group, LLC

Project: NEPERA, Arden House Road, Harriman, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GP41460-LB21	1A225081.D	5	07/29/22	NW	07/27/22	GP41460	V1A9653

The QC reported here applies to the following samples:

Method: SW846 8260D

JD48789-24

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	2.5	2.1	ug/l	
78-93-3	2-Butanone (MEK)	ND	50	34	ug/l	
56-23-5	Carbon tetrachloride	ND	5.0	2.8	ug/l	
108-90-7	Chlorobenzene	ND	5.0	2.8	ug/l	
67-66-3	Chloroform	11.3	5.0	2.5	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	5.0	2.5	ug/l	
107-06-2	1,2-Dichloroethane	ND	5.0	3.0	ug/l	
75-35-4	1,1-Dichloroethene	ND	5.0	3.0	ug/l	
127-18-4	Tetrachloroethene	ND	5.0	4.5	ug/l	
79-01-6	Trichloroethene	ND	5.0	2.6	ug/l	
75-01-4	Vinyl chloride	ND	5.0	3.9	ug/l	

CAS No.	Surrogate Recoveries	Limits
1868-53-7	Dibromofluoromethane	102% 76-120%
17060-07-0	1,2-Dichloroethane-D4	109% 64-135%
2037-26-5	Toluene-D8	94% 76-117%
460-00-4	4-Bromofluorobenzene	104% 72-122%

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: JD48789
Account: CORNNYM Cornerstone Environmental Group, LLC
Project: NEPERA, Arden House Road, Harriman, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
JD48602-14AMS	1A225088.D	1	07/29/22	NW	n/a	n/a	V1A9653
JD48602-14AMSD	1A225089.D	1	07/29/22	NW	n/a	n/a	V1A9653
JD48602-14A	1A225084.D	1	07/29/22	NW	07/26/22	GP41432	V1A9653

The QC reported here applies to the following samples:

Method: SW846 8260D

JD48789-24

CAS No.	Compound	JD48602-14ASpike		MS	MS	Spike	MSD	MSD	RPD	Limits
		ug/l	Q	ug/l	%	ug/l	ug/l	%		Rec/RPD
71-43-2	Benzene	ND		50	53.0	106	50	52.7	1	49-137/12
78-93-3	2-Butanone (MEK)	ND		200	211	106	200	214	1	52-137/17
56-23-5	Carbon tetrachloride	ND		50	56.7	113	50	56.6	0	70-132/13
108-90-7	Chlorobenzene	ND		50	50.3	101	50	50.6	1	68-123/12
67-66-3	Chloroform	4.1	B	50	57.0	106	50	57.6	1	68-120/13
106-46-7	1,4-Dichlorobenzene	ND		50	54.0	108	50	54.4	1	72-117/12
107-06-2	1,2-Dichloroethane	ND		50	58.5	117	50	58.7	0	66-120/13
75-35-4	1,1-Dichloroethene	ND		50	49.1	98	50	50.4	3	59-133/15
127-18-4	Tetrachloroethene	ND		50	52.2	104	50	52.1	0	58-132/13
79-01-6	Trichloroethene	ND		50	87.1	174* a	50	89.4	3	56-136/12
75-01-4	Vinyl chloride	ND		50	56.7	113	50	55.8	2	41-156/16

CAS No.	Surrogate Recoveries	MS	MSD	JD48602-14ALimits	
1868-53-7	Dibromofluoromethane	102%	106%	102%	76-120%
17060-07-0	1,2-Dichloroethane-D4	107%	107%	112%	64-135%
2037-26-5	Toluene-D8	89%	87%	93%	76-117%
460-00-4	4-Bromofluorobenzene	106%	105%	103%	72-122%

(a) Outside control limits due to matrix interference.

* = Outside of Control Limits.

Leachate Spike Summary

Page 1 of 1

Job Number: JD48789

Account: CORNNYM Cornerstone Environmental Group, LLC

Project: NEPERA, Arden House Road, Harriman, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GP41460-LS21	1A225090.D	5	07/29/22	NW	07/27/22	GP41460	V1A9653
JD48789-24	1A225083.D	5	07/29/22	NW	07/27/22	GP41460	V1A9653

The QC reported here applies to the following samples:

Method: SW846 8260D

JD48789-24

CAS No.	Compound	JD48789-24 ug/l	Spike Q	ug/l	LS ug/l	LS %	Limits
71-43-2	Benzene	ND		250	228	91	49-137
78-93-3	2-Butanone (MEK)	ND		1000	975	98	52-137
56-23-5	Carbon tetrachloride	ND		250	237	95	70-132
108-90-7	Chlorobenzene	ND		250	222	89	68-123
67-66-3	Chloroform	10.0	B	250	240	92	68-120
106-46-7	1,4-Dichlorobenzene	ND		250	242	97	72-117
107-06-2	1,2-Dichloroethane	ND		250	261	104	66-120
75-35-4	1,1-Dichloroethene	ND		250	214	86	59-133
127-18-4	Tetrachloroethene	ND		250	225	90	58-132
79-01-6	Trichloroethene	ND		250	233	93	56-136
75-01-4	Vinyl chloride	ND		250	219	88	41-156

CAS No.	Surrogate Recoveries	LS	JD48789-24	Limits
1868-53-7	Dibromofluoromethane	104%	104%	76-120%
17060-07-0	1,2-Dichloroethane-D4	105%	112%	64-135%
2037-26-5	Toluene-D8	89%	92%	76-117%
460-00-4	4-Bromofluorobenzene	105%	101%	72-122%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Page 1 of 1

Job Number: JD48789

Account: CORNNYM Cornerstone Environmental Group, LLC

Project: NEPERA, Arden House Road, Harriman, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP41022-MS	P151011.D	1	07/30/22	KLS	07/29/22	OP41022	EP6985
OP41022-MSD	P151012.D	1	07/30/22	KLS	07/29/22	OP41022	EP6985
JD48794-1A	P151003.D	1	07/30/22	KLS	07/29/22	OP41022	EP6985

The QC reported here applies to the following samples:

Method: SW846 8270E

JD48789-24

CAS No.	Compound	JD48794-1A ug/l	Spike Q	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
95-48-7	2-Methylphenol	ND	500	212	42	500	279	56	27	10-130/32
	3&4-Methylphenol	ND	1000	395	40	1000	504	50	24	10-128/36
87-86-5	Pentachlorophenol	ND	1000	593	59	1000	768	77	26	29-154/32
95-95-4	2,4,5-Trichlorophenol	ND	500	312	62	500	420	84	30* a	33-130/22
88-06-2	2,4,6-Trichlorophenol	ND	500	302	60	500	411	82	31* a	35-129/26
106-46-7	1,4-Dichlorobenzene	ND	500	188	38	500	277	55	38* a	10-155/26
121-14-2	2,4-Dinitrotoluene	ND	500	336	67	500	427	85	24* a	21-160/23
118-74-1	Hexachlorobenzene	ND	500	319	64	500	421	84	28* a	40-120/21
87-68-3	Hexachlorobutadiene	ND	500	184	37	500	288	58	44* a	10-129/24
67-72-1	Hexachloroethane	ND	500	177	35	500	262	52	39* a	10-120/26
98-95-3	Nitrobenzene	ND	500	248	50	500	357	71	36* a	26-138/26
110-86-1	Pyridine	ND	500	151	30	500	199	40	27	10-94/49

CAS No.	Surrogate Recoveries	MS	MSD	JD48794-1A	Limits
367-12-4	2-Fluorophenol	30%	41%	48%	10-73%
4165-62-2	Phenol-d5	20%	27%	30%	10-64%
118-79-6	2,4,6-Tribromophenol	75%	99%	89%	31-130%
4165-60-0	Nitrobenzene-d5	52%	77%	71%	28-126%
321-60-8	2-Fluorobiphenyl	56%	78%	74%	26-114%
1718-51-0	Terphenyl-d14	78%	91%	87%	16-122%

(a) Outside of in house control limits.

* = Outside of Control Limits.

Method Blank Summary

Job Number: JD48789
Account: CORNNYM Cornerstone Environmental Group, LLC
Project: NEPERA, Arden House Road, Harriman, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP41023-MB1	3G137474.D	1	08/10/22	RK	08/05/22	OP41023	G3G5032

The QC reported here applies to the following samples: Method: SW846 8151A

JD48789-24

CAS No.	Compound	Result	RL	MDL	Units	Q
94-75-7	2,4-D	ND	0.33	0.098	ug/l	
93-72-1	2,4,5-TP (Silvex)	ND	0.10	0.020	ug/l	

CAS No.	Surrogate Recoveries	Limits
19719-28-9	2,4-DCAA	11%* a 13-169%
19719-28-9	2,4-DCAA	10%* a 13-169%

(a) Outside of in house control limits.

Leachate Blank Summary

Job Number: JD48789
Account: CORNNYM Cornerstone Environmental Group, LLC
Project: NEPERA, Arden House Road, Harriman, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP41024-LB23 ^a	4G9727501.D	1	08/04/22	CP	08/02/22	OP41024	G4G3868

The QC reported here applies to the following samples: Method: SW846 8081B

JD48789-24

CAS No.	Compound	Result	RL	MDL	Units	Q
58-89-9	gamma-BHC (Lindane)	ND	0.067	0.040	ug/l	
12789-03-6	Chlordane	ND	3.3	1.4	ug/l	
72-20-8	Endrin	ND	0.067	0.040	ug/l	
76-44-8	Heptachlor	ND	0.067	0.030	ug/l	
1024-57-3	Heptachlor epoxide	ND	0.067	0.040	ug/l	
72-43-5	Methoxychlor	ND	0.13	0.045	ug/l	
8001-35-2	Toxaphene	ND	1.7	1.1	ug/l	

CAS No.	Surrogate Recoveries	Limits
877-09-8	Tetrachloro-m-xylene	66% 30-137%
877-09-8	Tetrachloro-m-xylene	62% 30-137%
2051-24-3	Decachlorobiphenyl	80% 10-137%
2051-24-3	Decachlorobiphenyl	78% 10-137%

(a) The leaching temperature was temporarily out of range for 16 hours.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: JD48789
Account: CORNNYM Cornerstone Environmental Group, LLC
Project: NEPERA, Arden House Road, Harriman, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP41023-MS	3G137477.D	1	08/11/22	RK	08/05/22	OP41023	G3G5032
OP41023-MSD	3G137478.D	1	08/11/22	RK	08/05/22	OP41023	G3G5032
JD48794-1A ^a	3G137479.D	1	08/11/22	RK	08/05/22	OP41023	G3G5032

The QC reported here applies to the following samples: Method: SW846 8151A

JD48789-24

CAS No.	Compound	JD48794-1A Spike ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
94-75-7	2,4-D	ND		13.3	ND	0* ^b	13.3	ND	0* ^b	nc	35-196/60
93-72-1	2,4,5-TP (Silvex)	ND		2.67	0.34	13	2.67	0.44	16	26	10-226/52

CAS No.	Surrogate Recoveries	MS	MSD	JD48794-1A Limits
19719-28-9	2,4-DCAA	9%* ^b	9%* ^b	14% 13-169%
19719-28-9	2,4-DCAA	14%	15%	18% 13-169%

(a) The leaching temperature was temporarily out of range for 16 hours.
(b) Outside of in house control limits.

* = Outside of Control Limits.

Leachate Spike Summary

Job Number: JD48789
Account: CORNNYM Cornerstone Environmental Group, LLC
Project: NEPERA, Arden House Road, Harriman, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP41023-LS23	3G137477.D	1	08/11/22	RK	08/05/22	OP41023	G3G5032
JD48794-1A ^a	3G137479.D	1	08/11/22	RK	08/05/22	OP41023	G3G5032

The QC reported here applies to the following samples: Method: SW846 8151A

JD48789-24

CAS No.	Compound	JD48794-1A Spike ug/l	Q	Spike ug/l	LS ug/l	LS %	Limits
94-75-7	2,4-D	ND		13.3	ND	0* ^b	35-196
93-72-1	2,4,5-TP (Silvex)	ND		2.67	0.34	13	10-226

CAS No.	Surrogate Recoveries	LS	JD48794-1A	Limits
19719-28-9	2,4-DCAA	9%* ^b	14%	13-169%
19719-28-9	2,4-DCAA	14%	18%	13-169%

- (a) The leaching temperature was temporarily out of range for 16 hours.
(b) Outside of in house control limits.

* = Outside of Control Limits.

Annotated Analytical Data

Report of Analysis

Client Sample ID:	WC-04						
Lab Sample ID:	JD48789-24					Date Sampled:	07/22/22
Matrix:	SO - Soil					Date Received:	07/22/22
Method:	SW846 8151A SW846 3510C					Percent Solids:	n/a
Project:	NEPERA, Arden House Road, Harriman, NY						

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 ^a	3G137485.D	1	08/11/22 03:26	RK	08/02/22 15:00	OP41023	G3G5032
Run #2 ^b	3G137615.D	1	08/23/22 00:18	CP	08/15/22 10:10	OP41278	G3G5036

	Initial Volume	Final Volume
Run #1	30.0 ml	2.0 ml
Run #2	30.0 ml	2.0 ml

Herbicide TCLP Leachate

TCLP Leachate method SW846 1311

CAS No.	Compound	Result	HW#	MCL	RL	MDL	Units	Q
94-75-7	2,4-D	ND ^J	D016	10	0.0033	0.00098	mg/l	
93-72-1	2,4,5-TP (Silvex)	ND	D017	1.0	0.0010	0.00020	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
19719-28-9	2,4-DCAA	8% ^c	37%	13-169%
19719-28-9	2,4-DCAA	14%	18%	13-169%

(a) The leaching temperature was temporarily out of range for 16 hours.

(b) The leaching temperature was temporarily out of range for 16 hours. Confirmation run.

(c) Outside of in house control limits.

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
MCL = Maximum Contamination Level (40 CFR 261 7/1/11) B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

SGS Report JD48789T

Annotated Quality Control Results

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: JD48789T
 Account: CORNNYM - Cornerstone Environmental Group, LLC
 Project: NEPERA, Arden House Road, Harriman, NY

QC Batch ID: MP34990
 Matrix Type: SOLID

Methods: SW846 7471B
 Units: mg/kg

Prep Date: 09/07/22

Metal	JD48790-66U Original MS	SpikeLot HGPWS1	% Rec	QC Limits
-------	----------------------------	--------------------	-------	--------------

Mercury 0.092 0.64 0.324 168.9N(a 80-120

Associated samples MP34990: JD48789-21T, JD48789-22T, JD48789-23T, JD48789-25T, JD48789-26T, JD48789-27T, JD48789-28T, JD48789-29T, JD48789-30T, JD48789-50T, JD48789-51T, JD48789-52T, JD48789-53T, JD48789-54T, JD48789-55T, JD48789-56T, JD48789-57T

Results < IDL are shown as zero for calculation purposes

(*) Outside of QC limits

(N) Matrix Spike Rec. outside of QC limits

(anr) Analyte not requested

(a) Spike recovery indicates possible matrix interference and/or sample nonhomogeneity.

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: JD48789T
 Account: CORNNYM - Cornerstone Environmental Group, LLC
 Project: NEPERA, Arden House Road, Harriman, NY

QC Batch ID: MP34990
 Matrix Type: SOLID

Methods: SW846 7471B
 Units: mg/kg

Prep Date: 09/07/22

Metal	JD48790-66U Original MSD	Spike lot HGPWS1	% Rec	MSD RPD	QC Limit
Mercury	0.092	0.44	0.34	102.4	37.0 (a) 20

Associated samples MP34990: JD48789-21T, JD48789-22T, JD48789-23T, JD48789-25T, JD48789-26T, JD48789-27T, JD48789-28T, JD48789-29T, JD48789-30T, JD48789-50T, JD48789-51T, JD48789-52T, JD48789-53T, JD48789-54T, JD48789-55T, JD48789-56T, JD48789-57T

Results < IDL are shown as zero for calculation purposes
 (*) Outside of QC limits
 (N) Matrix Spike Rec. outside of QC limits
 (anr) Analyte not requested
 (a) High rpd due to possible sample nonhomogeneity.

Annotated Analytical Data

Report of Analysis

Client Sample ID:	MH-FP-022-0-6	Date Sampled:	07/22/22
Lab Sample ID:	JD48789-21T	Date Received:	07/22/22
Matrix:	SO - Soil	Percent Solids:	90.0
Project:	NEPERA, Arden House Road, Harriman, NY		

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Mercury ^a	0.27 J	0.036	mg/kg	1	09/07/22	09/08/22 LM	SW846 7471B ¹	SW846 7471B ²

- (1) Instrument QC Batch: MA52951
(2) Prep QC Batch: MP34990

(a) Analyzed beyond Holdtime.

RL = Reporting Limit

Report of Analysis

Client Sample ID:	MH-FP-022-6-12	Date Sampled:	07/22/22
Lab Sample ID:	JD48789-22T	Date Received:	07/22/22
Matrix:	SO - Soil	Percent Solids:	82.4
Project:	NEPERA, Arden House Road, Harriman, NY		

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Mercury ^a	0.32 J	0.035	mg/kg	1	09/07/22	09/08/22 LM	SW846 7471B ¹	SW846 7471B ²

- (1) Instrument QC Batch: MA52951
(2) Prep QC Batch: MP34990

(a) Analyzed beyond Holdtime.

RL = Reporting Limit

Report of Analysis

Client Sample ID:	MH-FP-022-1-2	Date Sampled:	07/22/22
Lab Sample ID:	JD48789-23T	Date Received:	07/22/22
Matrix:	SO - Soil	Percent Solids:	83.1
Project:	NEPERA, Arden House Road, Harriman, NY		

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Mercury ^a	0.16 J	0.036	mg/kg	1	09/07/22	09/08/22 LM	SW846 7471B ¹	SW846 7471B ²

(1) Instrument QC Batch: MA52951
(2) Prep QC Batch: MP34990

(a) Analyzed beyond Holdtime.

RL = Reporting Limit

Report of Analysis

Client Sample ID: MH-FP-022-2-3

Lab Sample ID: JD48789-25T

Matrix: SO - Soil

Project: NEPERA, Arden House Road, Harriman, NY

Date Sampled: 07/22/22

Date Received: 07/22/22

Percent Solids: 83.1

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Mercury ^a	0.21 J	0.034	mg/kg	1	09/07/22	09/08/22 LM	SW846 7471B ¹	SW846 7471B ²

(1) Instrument QC Batch: MA52951
(2) Prep QC Batch: MP34990

(a) Analyzed beyond Holdtime.

RL = Reporting Limit

Report of Analysis

Client Sample ID:	MH-FP-022-3-4	Date Sampled:	07/22/22
Lab Sample ID:	JD48789-26T	Date Received:	07/22/22
Matrix:	SO - Soil	Percent Solids:	83.1
Project:	NEPERA, Arden House Road, Harriman, NY		

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Mercury ^a	3.6 J	0.39	mg/kg	10	09/07/22	09/08/22 LM	SW846 7471B ¹	SW846 7471B ²

- (1) Instrument QC Batch: MA52951
(2) Prep QC Batch: MP34990

(a) Analyzed beyond Holdtime.

RL = Reporting Limit

Report of Analysis

Client Sample ID: MH-FP-022-4-5

Lab Sample ID: JD48789-27T

Matrix: SO - Soil

Project: NEPERA, Arden House Road, Harriman, NY

Date Sampled: 07/22/22

Date Received: 07/22/22

Percent Solids: 89.0

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Mercury ^a	49.8 J	3.7	mg/kg	100	09/07/22	09/08/22 LM	SW846 7471B ¹	SW846 7471B ²

(1) Instrument QC Batch: MA52951
(2) Prep QC Batch: MP34990

(a) Analyzed beyond Holdtime.

RL = Reporting Limit

Report of Analysis

Client Sample ID:	MH-FP-022-5-6	Date Sampled:	07/22/22
Lab Sample ID:	JD48789-28T	Date Received:	07/22/22
Matrix:	SO - Soil	Percent Solids:	89.1
Project:	NEPERA, Arden House Road, Harriman, NY		

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Mercury ^a	78.8 J	15	mg/kg	500	09/07/22	09/08/22 LM	SW846 7471B ¹	SW846 7471B ²

- (1) Instrument QC Batch: MA52951
(2) Prep QC Batch: MP34990

(a) Analyzed beyond Holdtime.

RL = Reporting Limit

Report of Analysis

Client Sample ID:	MH-FP-022-6-7	Date Sampled:	07/22/22
Lab Sample ID:	JD48789-29T	Date Received:	07/22/22
Matrix:	SO - Soil	Percent Solids:	92.4
Project:	NEPERA, Arden House Road, Harriman, NY		

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Mercury ^a	1.6 J	0.15	mg/kg	5	09/07/22	09/08/22 LM	SW846 7471B ¹	SW846 7471B ²

- (1) Instrument QC Batch: MA52951
(2) Prep QC Batch: MP34990

(a) Analyzed beyond Holdtime.

RL = Reporting Limit

Report of Analysis

Client Sample ID:	MH-FP-022-7-8	Date Sampled:	07/22/22
Lab Sample ID:	JD48789-30T	Date Received:	07/22/22
Matrix:	SO - Soil	Percent Solids:	93.0
Project:	NEPERA, Arden House Road, Harriman, NY		

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Mercury ^a	0.57 J	0.032	mg/kg	1	09/07/22	09/08/22 LM	SW846 7471B ¹	SW846 7471B ²

(1) Instrument QC Batch: MA52951
(2) Prep QC Batch: MP34990

(a) Analyzed beyond Holdtime.

RL = Reporting Limit

Report of Analysis

Client Sample ID:	MH-FP-025-0-6	Date Sampled:	07/22/22
Lab Sample ID:	JD48789-50T	Date Received:	07/22/22
Matrix:	SO - Soil	Percent Solids:	93.4
Project:	NEPERA, Arden House Road, Harriman, NY		

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Mercury ^a	0.28 J	0.035	mg/kg	1	09/07/22	09/08/22 LM	SW846 7471B ¹	SW846 7471B ²

- (1) Instrument QC Batch: MA52951
(2) Prep QC Batch: MP34990

(a) Analyzed beyond Holdtime.

RL = Reporting Limit

Report of Analysis

Client Sample ID:	MH-FP-025-6-12	Date Sampled:	07/22/22
Lab Sample ID:	JD48789-51T	Date Received:	07/22/22
Matrix:	SO - Soil	Percent Solids:	95.8
Project:	NEPERA, Arden House Road, Harriman, NY		

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Mercury ^a	0.035 J	0.033	mg/kg	1	09/07/22	09/08/22 LM	SW846 7471B ¹	SW846 7471B ²

(1) Instrument QC Batch: MA52951
(2) Prep QC Batch: MP34990

(a) Analyzed beyond Holdtime.

RL = Reporting Limit

Report of Analysis

Client Sample ID:	MH-FP-025-1-2	Date Sampled:	07/22/22
Lab Sample ID:	JD48789-52T	Date Received:	07/22/22
Matrix:	SO - Soil	Percent Solids:	94.7
Project:	NEPERA, Arden House Road, Harriman, NY		

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Mercury ^a	0.41 J	0.029	mg/kg	1	09/07/22	09/08/22 LM	SW846 7471B ¹	SW846 7471B ²

- (1) Instrument QC Batch: MA52951
(2) Prep QC Batch: MP34990

(a) Analyzed beyond Holdtime.

RL = Reporting Limit

Report of Analysis

Client Sample ID:	MH-FP-025-2-3	Date Sampled:	07/22/22
Lab Sample ID:	JD48789-53T	Date Received:	07/22/22
Matrix:	SO - Soil	Percent Solids:	96.2
Project:	NEPERA, Arden House Road, Harriman, NY		

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Mercury ^a	4.0 J	0.34	mg/kg	10	09/07/22	09/08/22 LM	SW846 7471B ¹	SW846 7471B ²

(1) Instrument QC Batch: MA52951
(2) Prep QC Batch: MP34990

(a) Analyzed beyond Holdtime.

RL = Reporting Limit

Report of Analysis

Client Sample ID:	MH-FP-025-3-4	Date Sampled:	07/22/22
Lab Sample ID:	JD48789-54T	Date Received:	07/22/22
Matrix:	SO - Soil	Percent Solids:	88.1
Project:	NEPERA, Arden House Road, Harriman, NY		

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Mercury ^a	4.9 J	0.36	mg/kg	10	09/07/22	09/08/22 LM	SW846 7471B ¹	SW846 7471B ²

- (1) Instrument QC Batch: MA52951
(2) Prep QC Batch: MP34990

(a) Analyzed beyond Holdtime.

RL = Reporting Limit

Report of Analysis

Client Sample ID:	MH-FP-025-4-5	Date Sampled:	07/22/22
Lab Sample ID:	JD48789-55T	Date Received:	07/22/22
Matrix:	SO - Soil	Percent Solids:	93.4
Project:	NEPERA, Arden House Road, Harriman, NY		

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Mercury ^a	0.49 J	0.031	mg/kg	1	09/07/22	09/08/22 LM	SW846 7471B ¹	SW846 7471B ²

- (1) Instrument QC Batch: MA52951
(2) Prep QC Batch: MP34990

(a) Analyzed beyond Holdtime.

RL = Reporting Limit

Report of Analysis

Client Sample ID:	MH-FP-025-5-6	Date Sampled:	07/22/22
Lab Sample ID:	JD48789-56T	Date Received:	07/22/22
Matrix:	SO - Soil	Percent Solids:	91.0
Project:	NEPERA, Arden House Road, Harriman, NY		

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Mercury ^a	0.31 J	0.034	mg/kg	1	09/07/22	09/08/22 LM	SW846 7471B ¹	SW846 7471B ²

- (1) Instrument QC Batch: MA52951
(2) Prep QC Batch: MP34990

(a) Analyzed beyond Holdtime.

RL = Reporting Limit

Report of Analysis

Client Sample ID:	MH-FP-025-6-7	Date Sampled:	07/22/22
Lab Sample ID:	JD48789-57T	Date Received:	07/22/22
Matrix:	SO - Soil	Percent Solids:	90.0
Project:	NEPERA, Arden House Road, Harriman, NY		

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Mercury ^a	1.2 J	0.16	mg/kg	5	09/07/22	09/08/22 LM	SW846 7471B ¹	SW846 7471B ²

- (1) Instrument QC Batch: MA52951
(2) Prep QC Batch: MP34990

(a) Analyzed beyond Holdtime.

RL = Reporting Limit

SGS Report JD48790

Annotated Quality Control Results

Leachate Blank Summary

Page 1 of 1

Job Number: JD48790

Account: CORNNYM Cornerstone Environmental Group, LLC

Project: NEPERA, Arden House Road, Harriman, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GP41460-LB21	1A225081.D	5	07/29/22	NW	07/27/22	GP41460	V1A9653

The QC reported here applies to the following samples:

Method: SW846 8260D

JD48790-30, JD48790-50

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	2.5	2.1	ug/l	
78-93-3	2-Butanone (MEK)	ND	50	34	ug/l	
56-23-5	Carbon tetrachloride	ND	5.0	2.8	ug/l	
108-90-7	Chlorobenzene	ND	5.0	2.8	ug/l	
67-66-3	Chloroform	11.3	5.0	2.5	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	5.0	2.5	ug/l	
107-06-2	1,2-Dichloroethane	ND	5.0	3.0	ug/l	
75-35-4	1,1-Dichloroethene	ND	5.0	3.0	ug/l	
127-18-4	Tetrachloroethene	ND	5.0	4.5	ug/l	
79-01-6	Trichloroethene	ND	5.0	2.6	ug/l	
75-01-4	Vinyl chloride	ND	5.0	3.9	ug/l	

CAS No.	Surrogate Recoveries	Limits
1868-53-7	Dibromofluoromethane	102% 76-120%
17060-07-0	1,2-Dichloroethane-D4	109% 64-135%
2037-26-5	Toluene-D8	94% 76-117%
460-00-4	4-Bromofluorobenzene	104% 72-122%

Matrix Spike/Matrix Spike Duplicate Summary

Page 1 of 1

Job Number: JD48790

Account: CORNNYM Cornerstone Environmental Group, LLC

Project: NEPERA, Arden House Road, Harriman, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
JD48602-14AMS	1A225088.D	1	07/29/22	NW	n/a	n/a	V1A9653
JD48602-14AMSD	1A225089.D	1	07/29/22	NW	n/a	n/a	V1A9653
JD48602-14A	1A225084.D	1	07/29/22	NW	07/26/22	GP41432	V1A9653

The QC reported here applies to the following samples:

Method: SW846 8260D

JD48790-30, JD48790-50

CAS No.	Compound	JD48602-14ASpike		MS	MS	Spike	MSD	MSD	RPD	Limits	
		ug/l	Q	ug/l	ug/l	%	ug/l	ug/l		%	Rec/RPD
71-43-2	Benzene	ND		50	53.0	106	50	52.7	105	1	49-137/12
78-93-3	2-Butanone (MEK)	ND		200	211	106	200	214	107	1	52-137/17
56-23-5	Carbon tetrachloride	ND		50	56.7	113	50	56.6	113	0	70-132/13
108-90-7	Chlorobenzene	ND		50	50.3	101	50	50.6	101	1	68-123/12
67-66-3	Chloroform	4.1	B	50	57.0	106	50	57.6	107	1	68-120/13
106-46-7	1,4-Dichlorobenzene	ND		50	54.0	108	50	54.4	109	1	72-117/12
107-06-2	1,2-Dichloroethane	ND		50	58.5	117	50	58.7	117	0	66-120/13
75-35-4	1,1-Dichloroethene	ND		50	49.1	98	50	50.4	101	3	59-133/15
127-18-4	Tetrachloroethene	ND		50	52.2	104	50	52.1	104	0	58-132/13
79-01-6	Trichloroethene	ND		50	87.1	174* a	50	89.4	179* a	3	56-136/12
75-01-4	Vinyl chloride	ND		50	56.7	113	50	55.8	112	2	41-156/16

CAS No.	Surrogate Recoveries	MS	MSD	JD48602-14ALimits	
1868-53-7	Dibromofluoromethane	102%	106%	102%	76-120%
17060-07-0	1,2-Dichloroethane-D4	107%	107%	112%	64-135%
2037-26-5	Toluene-D8	89%	87%	93%	76-117%
460-00-4	4-Bromofluorobenzene	106%	105%	103%	72-122%

(a) Outside control limits due to matrix interference.

* = Outside of Control Limits.

Leachate Spike Summary

Page 1 of 1

Job Number: JD48790

Account: CORNNYM Cornerstone Environmental Group, LLC

Project: NEPERA, Arden House Road, Harriman, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GP41460-LS21	1A225090.D	5	07/29/22	NW	07/27/22	GP41460	V1A9653
JD48789-24	1A225083.D	5	07/29/22	NW	07/27/22	GP41460	V1A9653

The QC reported here applies to the following samples:

Method: SW846 8260D

JD48790-30, JD48790-50

CAS No.	Compound	JD48789-24 ug/l	Spike Q	ug/l	LS ug/l	LS %	Limits
71-43-2	Benzene	ND		250	228	91	49-137
78-93-3	2-Butanone (MEK)	ND		1000	975	98	52-137
56-23-5	Carbon tetrachloride	ND		250	237	95	70-132
108-90-7	Chlorobenzene	ND		250	222	89	68-123
67-66-3	Chloroform	10.0	B	250	240	92	68-120
106-46-7	1,4-Dichlorobenzene	ND		250	242	97	72-117
107-06-2	1,2-Dichloroethane	ND		250	261	104	66-120
75-35-4	1,1-Dichloroethene	ND		250	214	86	59-133
127-18-4	Tetrachloroethene	ND		250	225	90	58-132
79-01-6	Trichloroethene	ND		250	233	93	56-136
75-01-4	Vinyl chloride	ND		250	219	88	41-156

CAS No.	Surrogate Recoveries	LS	JD48789-24	Limits
1868-53-7	Dibromofluoromethane	104%	104%	76-120%
17060-07-0	1,2-Dichloroethane-D4	105%	112%	64-135%
2037-26-5	Toluene-D8	89%	92%	76-117%
460-00-4	4-Bromofluorobenzene	105%	101%	72-122%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Page 1 of 1

Job Number: JD48790

Account: CORNNYM Cornerstone Environmental Group, LLC

Project: NEPERA, Arden House Road, Harriman, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP41022-MS	P151011.D	1	07/30/22	KLS	07/29/22	OP41022	EP6985
OP41022-MSD	P151012.D	1	07/30/22	KLS	07/29/22	OP41022	EP6985
JD48794-1A	P151003.D	1	07/30/22	KLS	07/29/22	OP41022	EP6985

The QC reported here applies to the following samples:

Method: SW846 8270E

JD48790-30, JD48790-50

CAS No.	Compound	JD48794-1A ug/l	Spike Q	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
95-48-7	2-Methylphenol	ND	500	212	42	500	279	56	27	10-130/32
	3&4-Methylphenol	ND	1000	395	40	1000	504	50	24	10-128/36
87-86-5	Pentachlorophenol	ND	1000	593	59	1000	768	77	26	29-154/32
95-95-4	2,4,5-Trichlorophenol	ND	500	312	62	500	420	84	30* a	33-130/22
88-06-2	2,4,6-Trichlorophenol	ND	500	302	60	500	411	82	31* a	35-129/26
106-46-7	1,4-Dichlorobenzene	ND	500	188	38	500	277	55	38* a	10-155/26
121-14-2	2,4-Dinitrotoluene	ND	500	336	67	500	427	85	24* a	21-160/23
118-74-1	Hexachlorobenzene	ND	500	319	64	500	421	84	28* a	40-120/21
87-68-3	Hexachlorobutadiene	ND	500	184	37	500	288	58	44* a	10-129/24
67-72-1	Hexachloroethane	ND	500	177	35	500	262	52	39* a	10-120/26
98-95-3	Nitrobenzene	ND	500	248	50	500	357	71	36* a	26-138/26
110-86-1	Pyridine	ND	500	151	30	500	199	40	27	10-94/49

CAS No.	Surrogate Recoveries	MS	MSD	JD48794-1A	Limits
367-12-4	2-Fluorophenol	30%	41%	48%	10-73%
4165-62-2	Phenol-d5	20%	27%	30%	10-64%
118-79-6	2,4,6-Tribromophenol	75%	99%	89%	31-130%
4165-60-0	Nitrobenzene-d5	52%	77%	71%	28-126%
321-60-8	2-Fluorobiphenyl	56%	78%	74%	26-114%
1718-51-0	Terphenyl-d14	78%	91%	87%	16-122%

(a) Outside of in house control limits.

* = Outside of Control Limits.

Method Blank Summary

Job Number: JD48790
Account: CORNNYM Cornerstone Environmental Group, LLC
Project: NEPERA, Arden House Road, Harriman, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP41023-MB1	3G137474.D	1	08/10/22	RK	08/05/22	OP41023	G3G5032

The QC reported here applies to the following samples: Method: SW846 8151A

JD48790-30, JD48790-50

CAS No.	Compound	Result	RL	MDL	Units	Q
94-75-7	2,4-D	ND	0.33	0.098	ug/l	
93-72-1	2,4,5-TP (Silvex)	ND	0.10	0.020	ug/l	

CAS No.	Surrogate Recoveries	Limits
19719-28-9	2,4-DCAA	11%* a 13-169%
19719-28-9	2,4-DCAA	10%* a 13-169%

(a) Outside of in house control limits.

Leachate Blank Summary

Job Number: JD48790
Account: CORNNYM Cornerstone Environmental Group, LLC
Project: NEPERA, Arden House Road, Harriman, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP41023-LB23 ^a	3G137476.D	1	08/11/22	RK	08/05/22	OP41023	G3G5032

The QC reported here applies to the following samples: Method: SW846 8151A

JD48790-30, JD48790-50

CAS No.	Compound	Result	RL	MDL	Units	Q
94-75-7	2,4-D	ND	3.3	0.98	ug/l	
93-72-1	2,4,5-TP (Silvex)	ND	1.0	0.20	ug/l	

CAS No.	Surrogate Recoveries	Limits
19719-28-9	2,4-DCAA	25% 13-169%
19719-28-9	2,4-DCAA	19% 13-169%

(a) The leaching temperature was temporarily out of range for 16 hours.

7.2.1
7

Blank Spike Summary

Job Number: JD48790
Account: CORNNYM Cornerstone Environmental Group, LLC
Project: NEPERA, Arden House Road, Harriman, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP41023-BS1	3G137475.D	1	08/10/22	RK	08/05/22	OP41023	G3G5032

The QC reported here applies to the following samples: Method: SW846 8151A

JD48790-30, JD48790-50

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
94-75-7	2,4-D	1.33	0.38	28* a	36-158
93-72-1	2,4,5-TP (Silvex)	0.267	0.34	127 b	44-158

CAS No.	Surrogate Recoveries	BSP	Limits
19719-28-9	2,4-DCAA	17%	13-169%
19719-28-9	2,4-DCAA	33%	13-169%

- (a) Outside of in house control limits. Reported from the 2nd signal. The %D of the CCV on the 1st signal exceeds the method criteria of 20%, so it being used for confirmation only.
- (b) Reported from the 2nd signal. The %D of the CCV on the 1st signal exceeds the method criteria of 20%, so it being used for confirmation only.

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: JD48790
Account: CORNNYM Cornerstone Environmental Group, LLC
Project: NEPERA, Arden House Road, Harriman, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP41023-MS	3G137477.D	1	08/11/22	RK	08/05/22	OP41023	G3G5032
OP41023-MSD	3G137478.D	1	08/11/22	RK	08/05/22	OP41023	G3G5032
JD48794-1A ^a	3G137479.D	1	08/11/22	RK	08/05/22	OP41023	G3G5032

The QC reported here applies to the following samples:

Method: SW846 8151A

JD48790-30, JD48790-50

CAS No.	Compound	JD48794-1A ug/l	Spike Q ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
94-75-7	2,4-D	ND	13.3	ND	0* ^b	13.3	ND	0* ^b	nc	35-196/60
93-72-1	2,4,5-TP (Silvex)	ND	2.67	0.34	13	2.67	0.44	16	26	10-226/52

CAS No.	Surrogate Recoveries	MS	MSD	JD48794-1A	Limits
19719-28-9	2,4-DCAA	9%* ^b	9%* ^b	14%	13-169%
19719-28-9	2,4-DCAA	14%	15%	18%	13-169%

(a) The leaching temperature was temporarily out of range for 16 hours.
(b) Outside of in house control limits.

* = Outside of Control Limits.

Leachate Spike Summary

Job Number: JD48790
Account: CORNNYM Cornerstone Environmental Group, LLC
Project: NEPERA, Arden House Road, Harriman, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP41023-LS23	3G137477.D	1	08/11/22	RK	08/05/22	OP41023	G3G5032
JD48794-1A ^a	3G137479.D	1	08/11/22	RK	08/05/22	OP41023	G3G5032

The QC reported here applies to the following samples: Method: SW846 8151A

JD48790-30, JD48790-50

CAS No.	Compound	JD48794-1A Spike ug/l	Q	Spike ug/l	LS ug/l	LS %	Limits
94-75-7	2,4-D	ND		13.3	ND	0* ^b	35-196
93-72-1	2,4,5-TP (Silvex)	ND		2.67	0.34	13	10-226

CAS No.	Surrogate Recoveries	LS	JD48794-1A Limits
19719-28-9	2,4-DCAA	9%* ^b	14% 13-169%
19719-28-9	2,4-DCAA	14%	18% 13-169%

- (a) The leaching temperature was temporarily out of range for 16 hours.
(b) Outside of in house control limits.

* = Outside of Control Limits.

Surrogate Recovery Summary

Job Number: JD48790
Account: CORNNYM Cornerstone Environmental Group, LLC
Project: NEPERA, Arden House Road, Harriman, NY

Method: SW846 8151A	Matrix: LEACHATE
---------------------	------------------

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1 ^a	S1 ^b
JD48790-30	3G137619.D	48	31
JD48790-30	3G137486.D	15	20
JD48790-50	3G137620.D	50	22
JD48790-50	3G137487.D	11* ^c	13
OP41023-BS1	3G137475.D	17	33
OP41023-LB23	3G137476.D	25	19
OP41023-LS23	3G137477.D	9* ^c	14
OP41023-MB1	3G137474.D	11* ^c	10* ^c
OP41023-MS	3G137477.D	9* ^c	14
OP41023-MSD	3G137478.D	9* ^c	15

Surrogate Compounds Recovery Limits

S1 = 2,4-DCAA 13-169%

- (a) Recovery from GC signal #2
- (b) Recovery from GC signal #1
- (c) Outside of in house control limits.

7.6.1
7

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: JD48790
 Account: CORNNYM - Cornerstone Environmental Group, LLC
 Project: NEPERA, Arden House Road, Harriman, NY

QC Batch ID: MP34465
 Matrix Type: SOLID

Methods: SW846 7471B
 Units: mg/kg

Prep Date: 08/04/22

Metal	JD48790-69 Original MS	Spike lot HGPWS1	% Rec	QC Limits
Mercury	0.73	0.77	0.338	11.8N(a) 80-120

Associated samples MP34465: JD48790-69

Results < IDL are shown as zero for calculation purposes

(*) Outside of QC limits

(N) Matrix Spike Rec. outside of QC limits

(anr) Analyte not requested

(a) Spike recovery indicates possible matrix interference and/or sample nonhomogeneity.

8.8.2

8

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: JD48790
 Account: CORNNYM - Cornerstone Environmental Group, LLC
 Project: NEPERA, Arden House Road, Harriman, NY

QC Batch ID: MP34465
 Matrix Type: SOLID

Methods: SW846 7471B
 Units: mg/kg

Prep Date: 08/04/22

Metal	JD48790-69 Original MSD	Spike lot HGPWS1	% Rec	MSD RPD	QC Limit
-------	----------------------------	---------------------	-------	------------	-------------

Mercury 0.73 0.61 0.342 -35.0N(a) 23.2 (b) 20

Associated samples MP34465: JD48790-69

Results < IDL are shown as zero for calculation purposes

(*) Outside of QC limits

(N) Matrix Spike Rec. outside of QC limits

(anr) Analyte not requested

(a) Spike recovery indicates possible matrix interference and/or sample nonhomogeneity.

(b) High rpd due to possible sample nonhomogeneity.

8.8.2
8

Annotated Analytical Data

Report of Analysis

Client Sample ID:	WC-02						
Lab Sample ID:	JD48790-30					Date Sampled:	07/21/22
Matrix:	SO - Soil					Date Received:	07/22/22
Method:	SW846 8151A SW846 3510C					Percent Solids:	n/a
Project:	NEPERA, Arden House Road, Harriman, NY						

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 ^a	3G137486.D	1	08/11/22 03:49	RK	08/02/22 15:00	OP41023	G3G5032
Run #2 ^b	3G137619.D	1	08/23/22 01:48	CP	08/15/22 10:10	OP41278	G3G5036

	Initial Volume	Final Volume
Run #1	30.0 ml	2.0 ml
Run #2	30.0 ml	2.0 ml

Herbicide TCLP Leachate

TCLP Leachate method SW846 1311

CAS No.	Compound	Result	HW#	MCL	RL	MDL	Units	Q
94-75-7	2,4-D	ND J	D016	10	0.0033	0.00098	mg/l	
93-72-1	2,4,5-TP (Silvex)	ND	D017	1.0	0.0010	0.00020	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
19719-28-9	2,4-DCAA	15%	48%	13-169%
19719-28-9	2,4-DCAA	20%	31%	13-169%

(a) The leaching temperature was temporarily out of range for 16 hours.

(b) The leaching temperature was temporarily out of range for 16 hours. Confirmation run.

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
MCL = Maximum Contamination Level (40 CFR 261 7/1/11) B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	WC-03	Date Sampled:	07/21/22
Lab Sample ID:	JD48790-50	Date Received:	07/22/22
Matrix:	SO - Soil	Percent Solids:	n/a
Method:	SW846 8151A SW846 3510C		
Project:	NEPERA, Arden House Road, Harriman, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 ^a	3G137487.D	1	08/11/22 04:11	RK	08/02/22 15:00	OP41023	G3G5032
Run #2 ^b	3G137620.D	1	08/23/22 02:10	CP	08/15/22 10:10	OP41278	G3G5036

	Initial Volume	Final Volume
Run #1	30.0 ml	2.0 ml
Run #2	30.0 ml	2.0 ml

Herbicide TCLP Leachate

TCLP Leachate method SW846 1311

CAS No.	Compound	Result	HW#	MCL	RL	MDL	Units	Q
94-75-7	2,4-D	ND ^J	D016	10	0.0033	0.00098	mg/l	
93-72-1	2,4,5-TP (Silvex)	ND	D017	1.0	0.0010	0.00020	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
19719-28-9	2,4-DCAA	11% ^c	50%	13-169%
19719-28-9	2,4-DCAA	13%	22%	13-169%

(a) The leaching temperature was temporarily out of range for 16 hours.

(b) The leaching temperature was temporarily out of range for 16 hours. Confirmation run.

(c) Outside of in house control limits.

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
MCL = Maximum Contamination Level (40 CFR 261 7/1/11) B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	DUP-05	Date Sampled:	07/21/22
Lab Sample ID:	JD48790-69	Date Received:	07/22/22
Matrix:	SO - Soil	Percent Solids:	90.9
Project:	NEPERA, Arden House Road, Harriman, NY		

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Mercury	0.73 J	0.034	mg/kg	1	08/04/22	08/05/22 LM	SW846 7471B ¹	SW846 7471B ²

(1) Instrument QC Batch: MA52818
(2) Prep QC Batch: MP34465

RL = Reporting Limit

SGS Report JD48790U

Annotated Quality Control Results

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: JD48790U
 Account: CORNNYM - Cornerstone Environmental Group, LLC
 Project: NEPERA, Arden House Road, Harriman, NY

QC Batch ID: MP34989
 Matrix Type: SOLID

Methods: SW846 7471B
 Units: mg/kg

Prep Date: 09/07/22

Metal	JD48790-6U Original MS	SpikeLot HGPWS1	% Rec	QC Limits
-------	---------------------------	--------------------	-------	--------------

Mercury	0.26	0.70	0.344	128.0N	80-120
---------	------	------	-------	--------	--------

Associated samples MP34989: JD48790-6U, JD48790-7U, JD48790-8U, JD48790-9U, JD48790-10U, JD48790-31U, JD48790-32U, JD48790-33U, JD48790-34U, JD48790-35U, JD48790-36U, JD48790-37U, JD48790-38U, JD48790-39U, JD48790-60U, JD48790-61U, JD48790-62U, JD48790-63U, JD48790-64U, JD48790-65U

Results < IDL are shown as zero for calculation purposes
 (*) Outside of QC limits
 (N) Matrix Spike Rec. outside of QC limits
 (anr) Analyte not requested

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: JD48790U
 Account: CORNNYM - Cornerstone Environmental Group, LLC
 Project: NEPERA, Arden House Road, Harriman, NY

QC Batch ID: MP34989
 Matrix Type: SOLID

Methods: SW846 7471B
 Units: mg/kg

Prep Date: 09/07/22

Metal	JD48790-6U Original MSD	Spike lot HGPWS1	% Rec	MSD RPD	QC Limit
-------	----------------------------	---------------------	-------	------------	-------------

Mercury 0.26 1.1 0.376 223.3N(a 44.4 (b) 20

Associated samples MP34989: JD48790-6U, JD48790-7U, JD48790-8U, JD48790-9U, JD48790-10U, JD48790-31U, JD48790-32U, JD48790-33U, JD48790-34U, JD48790-35U, JD48790-36U, JD48790-37U, JD48790-38U, JD48790-39U, JD48790-60U, JD48790-61U, JD48790-62U, JD48790-63U, JD48790-64U, JD48790-65U

Results < IDL are shown as zero for calculation purposes

(*) Outside of QC limits

(N) Matrix Spike Rec. outside of QC limits

(anr) Analyte not requested

(a) Spike recovery indicates possible matrix interference and/or sample nonhomogeneity.

(b) High rpd due to possible sample nonhomogeneity.

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: JD48790U
 Account: CORNNYM - Cornerstone Environmental Group, LLC
 Project: NEPERA, Arden House Road, Harriman, NY

QC Batch ID: MP34990
 Matrix Type: SOLID

Methods: SW846 7471B
 Units: mg/kg

Prep Date: 09/07/22

Metal	JD48790-66U Original MS	Spike lot HGPWS1	% Rec	QC Limits
Mercury	0.092	0.64	0.324	168.9N(a 80-120

Associated samples MP34990: JD48790-66U, JD48790-67U, JD48790-68U

Results < IDL are shown as zero for calculation purposes

(*) Outside of QC limits

(N) Matrix Spike Rec. outside of QC limits

(anr) Analyte not requested

(a) Spike recovery indicates possible matrix interference and/or sample nonhomogeneity.

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: JD48790U
 Account: CORNNYM - Cornerstone Environmental Group, LLC
 Project: NEPERA, Arden House Road, Harriman, NY

QC Batch ID: MP34990
 Matrix Type: SOLID

Methods: SW846 7471B
 Units: mg/kg

Prep Date: 09/07/22

Metal	JD48790-66U Original MSD	Spike lot HGPWS1	% Rec	MSD RPD	QC Limit
Mercury	0.092	0.44	0.34	102.4	37.0 (a) 20

Associated samples MP34990: JD48790-66U, JD48790-67U, JD48790-68U

Results < IDL are shown as zero for calculation purposes
 (*) Outside of QC limits
 (N) Matrix Spike Rec. outside of QC limits
 (anr) Analyte not requested
 (a) High rpd due to possible sample nonhomogeneity.

5.3.2

5

Annotated Analytical Data

Report of Analysis

Client Sample ID:	MH-FP-013-3-4	Date Sampled:	07/21/22
Lab Sample ID:	JD48790-6U	Date Received:	07/22/22
Matrix:	SO - Soil	Percent Solids:	84.9
Project:	NEPERA, Arden House Road, Harriman, NY		

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Mercury ^a	0.26 J	0.034	mg/kg	1	09/07/22	09/08/22 LM	SW846 7471B ¹	SW846 7471B ²

- (1) Instrument QC Batch: MA52951
(2) Prep QC Batch: MP34989

(a) Analyzed beyond Holdtime.

RL = Reporting Limit

Report of Analysis

Client Sample ID:	MH-FP-013-4-5	Date Sampled:	07/21/22
Lab Sample ID:	JD48790-7U	Date Received:	07/22/22
Matrix:	SO - Soil	Percent Solids:	87.5
Project:	NEPERA, Arden House Road, Harriman, NY		

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Mercury ^a	6.7 J	0.64	mg/kg	20	09/07/22	09/08/22 LM	SW846 7471B ¹	SW846 7471B ²

- (1) Instrument QC Batch: MA52951
(2) Prep QC Batch: MP34989

(a) Analyzed beyond Holdtime.

RL = Reporting Limit

Report of Analysis

Client Sample ID:	MH-FP-013-5-6	Date Sampled:	07/21/22
Lab Sample ID:	JD48790-8U	Date Received:	07/22/22
Matrix:	SO - Soil	Percent Solids:	91.1
Project:	NEPERA, Arden House Road, Harriman, NY		

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Mercury ^a	0.67 J	0.032	mg/kg	1	09/07/22	09/08/22 LM	SW846 7471B ¹	SW846 7471B ²

- (1) Instrument QC Batch: MA52951
(2) Prep QC Batch: MP34989

(a) Analyzed beyond Holdtime.

RL = Reporting Limit

Report of Analysis

Client Sample ID:	MH-FP-013-6-7	Date Sampled:	07/21/22
Lab Sample ID:	JD48790-9U	Date Received:	07/22/22
Matrix:	SO - Soil	Percent Solids:	88.2
Project:	NEPERA, Arden House Road, Harriman, NY		

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Mercury ^a	0.044 J	0.034	mg/kg	1	09/07/22	09/08/22 LM	SW846 7471B ¹	SW846 7471B ²

- (1) Instrument QC Batch: MA52951
(2) Prep QC Batch: MP34989

(a) Analyzed beyond Holdtime.

RL = Reporting Limit

Report of Analysis

Client Sample ID:	MH-FP-013-7-8	Date Sampled:	07/21/22
Lab Sample ID:	JD48790-10U	Date Received:	07/22/22
Matrix:	SO - Soil	Percent Solids:	81.9
Project:	NEPERA, Arden House Road, Harriman, NY		

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Mercury ^a	0.047 J	0.032	mg/kg	1	09/07/22	09/08/22 LM	SW846 7471B ¹	SW846 7471B ²

(1) Instrument QC Batch: MA52951
(2) Prep QC Batch: MP34989

(a) Analyzed beyond Holdtime.

RL = Reporting Limit

Report of Analysis

Client Sample ID:	MH-FP-016-0-6	Date Sampled:	07/21/22
Lab Sample ID:	JD48790-31U	Date Received:	07/22/22
Matrix:	SO - Soil	Percent Solids:	90.1
Project:	NEPERA, Arden House Road, Harriman, NY		

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Mercury ^a	0.56 J	0.031	mg/kg	1	09/07/22	09/08/22 LM	SW846 7471B ¹	SW846 7471B ²

- (1) Instrument QC Batch: MA52951
(2) Prep QC Batch: MP34989

(a) Analyzed beyond Holdtime.

RL = Reporting Limit

Report of Analysis

Client Sample ID:	MH-FP-016-6-12	Date Sampled:	07/21/22
Lab Sample ID:	JD48790-32U	Date Received:	07/22/22
Matrix:	SO - Soil	Percent Solids:	91.1
Project:	NEPERA, Arden House Road, Harriman, NY		

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Mercury ^a	7.2 J	0.66	mg/kg	20	09/07/22	09/08/22 LM	SW846 7471B ¹	SW846 7471B ²

- (1) Instrument QC Batch: MA52951
(2) Prep QC Batch: MP34989

(a) Analyzed beyond Holdtime.

RL = Reporting Limit

Report of Analysis

Client Sample ID:	MH-FP-016-1-2	Date Sampled:	07/21/22
Lab Sample ID:	JD48790-33U	Date Received:	07/22/22
Matrix:	SO - Soil	Percent Solids:	89.7
Project:	NEPERA, Arden House Road, Harriman, NY		

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Mercury ^a	5.6 J	0.64	mg/kg	20	09/07/22	09/08/22 LM	SW846 7471B ¹	SW846 7471B ²

- (1) Instrument QC Batch: MA52951
(2) Prep QC Batch: MP34989

(a) Analyzed beyond Holdtime.

RL = Reporting Limit

Report of Analysis

Client Sample ID:	MH-FP-016-2-3	Date Sampled:	07/21/22
Lab Sample ID:	JD48790-34U	Date Received:	07/22/22
Matrix:	SO - Soil	Percent Solids:	87.0
Project:	NEPERA, Arden House Road, Harriman, NY		

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Mercury ^a	0.19 J	0.034	mg/kg	1	09/07/22	09/08/22 LM	SW846 7471B ¹	SW846 7471B ²

- (1) Instrument QC Batch: MA52951
(2) Prep QC Batch: MP34989

(a) Analyzed beyond Holdtime.

RL = Reporting Limit

Report of Analysis

Client Sample ID:	MH-FP-016-4-5	Date Sampled:	07/21/22
Lab Sample ID:	JD48790-36U	Date Received:	07/22/22
Matrix:	SO - Soil	Percent Solids:	93.0
Project:	NEPERA, Arden House Road, Harriman, NY		

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Mercury ^a	0.22 J	0.032	mg/kg	1	09/07/22	09/08/22 LM	SW846 7471B ¹	SW846 7471B ²

- (1) Instrument QC Batch: MA52951
(2) Prep QC Batch: MP34989

(a) Analyzed beyond Holdtime.

RL = Reporting Limit

Report of Analysis

Client Sample ID:	MH-FP-016-5-6	Date Sampled:	07/21/22
Lab Sample ID:	JD48790-37U	Date Received:	07/22/22
Matrix:	SO - Soil	Percent Solids:	89.9
Project:	NEPERA, Arden House Road, Harriman, NY		

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Mercury ^a	0.033 J	0.032	mg/kg	1	09/07/22	09/08/22 LM	SW846 7471B ¹	SW846 7471B ²

- (1) Instrument QC Batch: MA52951
(2) Prep QC Batch: MP34989

(a) Analyzed beyond Holdtime.

RL = Reporting Limit

Report of Analysis

Client Sample ID:	MH-FP-016-6-7	Date Sampled:	07/21/22
Lab Sample ID:	JD48790-38U	Date Received:	07/22/22
Matrix:	SO - Soil	Percent Solids:	89.3
Project:	NEPERA, Arden House Road, Harriman, NY		

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Mercury ^a	0.047 J	0.032	mg/kg	1	09/07/22	09/08/22 LM	SW846 7471B ¹	SW846 7471B ²

- (1) Instrument QC Batch: MA52951
(2) Prep QC Batch: MP34989

(a) Analyzed beyond Holdtime.

RL = Reporting Limit

Report of Analysis

Client Sample ID:	MH-FP-016-7-8	Date Sampled:	07/21/22
Lab Sample ID:	JD48790-39U	Date Received:	07/22/22
Matrix:	SO - Soil	Percent Solids:	90.7
Project:	NEPERA, Arden House Road, Harriman, NY		

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Mercury ^a	0.033 J	0.029	mg/kg	1	09/07/22	09/08/22 LM	SW846 7471B ¹	SW846 7471B ²

- (1) Instrument QC Batch: MA52951
(2) Prep QC Batch: MP34989

(a) Analyzed beyond Holdtime.

RL = Reporting Limit

Report of Analysis

Client Sample ID:	MH-FP-019-0-6	Date Sampled:	07/21/22
Lab Sample ID:	JD48790-60U	Date Received:	07/22/22
Matrix:	SO - Soil	Percent Solids:	90.3
Project:	NEPERA, Arden House Road, Harriman, NY		

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Mercury ^a	0.79 J	0.032	mg/kg	1	09/07/22	09/08/22 LM	SW846 7471B ¹	SW846 7471B ²

- (1) Instrument QC Batch: MA52951
(2) Prep QC Batch: MP34989

(a) Analyzed beyond Holdtime.

RL = Reporting Limit

Report of Analysis

Client Sample ID:	MH-FP-019-6-12	Date Sampled:	07/21/22
Lab Sample ID:	JD48790-61U	Date Received:	07/22/22
Matrix:	SO - Soil	Percent Solids:	84.0
Project:	NEPERA, Arden House Road, Harriman, NY		

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Mercury ^a	7.2 J	0.69	mg/kg	20	09/07/22	09/08/22 LM	SW846 7471B ¹	SW846 7471B ²

- (1) Instrument QC Batch: MA52951
(2) Prep QC Batch: MP34989

(a) Analyzed beyond Holdtime.

RL = Reporting Limit

Report of Analysis

Client Sample ID:	MH-FP-019-1-2	Date Sampled:	07/21/22
Lab Sample ID:	JD48790-62U	Date Received:	07/22/22
Matrix:	SO - Soil	Percent Solids:	84.6
Project:	NEPERA, Arden House Road, Harriman, NY		

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Mercury ^a	0.18 J	0.036	mg/kg	1	09/07/22	09/08/22 LM	SW846 7471B ¹	SW846 7471B ²

- (1) Instrument QC Batch: MA52951
(2) Prep QC Batch: MP34989

(a) Analyzed beyond Holdtime.

RL = Reporting Limit

Report of Analysis

Client Sample ID:	MH-FP-019-2-3	Date Sampled:	07/21/22
Lab Sample ID:	JD48790-63U	Date Received:	07/22/22
Matrix:	SO - Soil	Percent Solids:	88.7
Project:	NEPERA, Arden House Road, Harriman, NY		

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Mercury ^a	0.52 J	0.031	mg/kg	1	09/07/22	09/08/22 LM	SW846 7471B ¹	SW846 7471B ²

- (1) Instrument QC Batch: MA52951
(2) Prep QC Batch: MP34989

(a) Analyzed beyond Holdtime.

RL = Reporting Limit

Report of Analysis

Client Sample ID:	MH-FP-019-3-4	Date Sampled:	07/21/22
Lab Sample ID:	JD48790-64U	Date Received:	07/22/22
Matrix:	SO - Soil	Percent Solids:	91.8
Project:	NEPERA, Arden House Road, Harriman, NY		

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Mercury ^a	0.21 J	0.032	mg/kg	1	09/07/22	09/08/22 LM	SW846 7471B ¹	SW846 7471B ²

- (1) Instrument QC Batch: MA52951
(2) Prep QC Batch: MP34989

(a) Analyzed beyond Holdtime.

RL = Reporting Limit

Report of Analysis

Client Sample ID:	MH-FP-019-4-5	Date Sampled:	07/21/22
Lab Sample ID:	JD48790-65U	Date Received:	07/22/22
Matrix:	SO - Soil	Percent Solids:	89.9
Project:	NEPERA, Arden House Road, Harriman, NY		

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Mercury ^a	2.2 J	0.16	mg/kg	5	09/07/22	09/08/22 LM	SW846 7471B ¹	SW846 7471B ²

- (1) Instrument QC Batch: MA52951
(2) Prep QC Batch: MP34989

(a) Analyzed beyond Holdtime.

RL = Reporting Limit

Report of Analysis

Client Sample ID:	MH-FP-019-5-6	Date Sampled:	07/21/22
Lab Sample ID:	JD48790-66U	Date Received:	07/22/22
Matrix:	SO - Soil	Percent Solids:	88.6
Project:	NEPERA, Arden House Road, Harriman, NY		

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Mercury ^a	0.092 J	0.033	mg/kg	1	09/07/22	09/08/22 LM	SW846 7471B ¹	SW846 7471B ²

- (1) Instrument QC Batch: MA52951
(2) Prep QC Batch: MP34990

(a) Analyzed beyond Holdtime.

RL = Reporting Limit

Report of Analysis

Client Sample ID:	MH-FP-019-6-7	Date Sampled:	07/21/22
Lab Sample ID:	JD48790-67U	Date Received:	07/22/22
Matrix:	SO - Soil	Percent Solids:	84.4
Project:	NEPERA, Arden House Road, Harriman, NY		

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Mercury ^a	0.056 J	0.039	mg/kg	1	09/07/22	09/08/22 LM	SW846 7471B ¹	SW846 7471B ²

- (1) Instrument QC Batch: MA52951
(2) Prep QC Batch: MP34990

(a) Analyzed beyond Holdtime.

RL = Reporting Limit

SGS Report JD48859

Annotated Quality Control Results

Leachate Blank Summary

Page 1 of 1

Job Number: JD48859

Account: CORNNYM Cornerstone Environmental Group, LLC

Project: NEPERA, Arden House Road, Harriman, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GP41497-LB24	1A225259.D	5	08/03/22	NW	07/29/22	GP41497	V1A9659

The QC reported here applies to the following samples:

Method: SW846 8260D

JD48859-11, JD48859-51

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	2.5	2.1	ug/l	
78-93-3	2-Butanone (MEK)	ND	50	34	ug/l	
56-23-5	Carbon tetrachloride	ND	5.0	2.8	ug/l	
108-90-7	Chlorobenzene	ND	5.0	2.8	ug/l	
67-66-3	Chloroform	5.7	5.0	2.5	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	5.0	2.5	ug/l	
107-06-2	1,2-Dichloroethane	ND	5.0	3.0	ug/l	
75-35-4	1,1-Dichloroethene	ND	5.0	3.0	ug/l	
127-18-4	Tetrachloroethene	ND	5.0	4.5	ug/l	
79-01-6	Trichloroethene	ND	5.0	2.6	ug/l	
75-01-4	Vinyl chloride	ND	5.0	3.9	ug/l	

CAS No.	Surrogate Recoveries	Limits
1868-53-7	Dibromofluoromethane	103% 76-120%
17060-07-0	1,2-Dichloroethane-D4	117% 64-135%
2037-26-5	Toluene-D8	95% 76-117%
460-00-4	4-Bromofluorobenzene	102% 72-122%

Matrix Spike/Matrix Spike Duplicate Summary

Page 1 of 1

Job Number: JD48859

Account: CORNNYM Cornerstone Environmental Group, LLC

Project: NEPERA, Arden House Road, Harriman, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP41022-MS	P151011.D	1	07/30/22	KLS	07/29/22	OP41022	EP6985
OP41022-MSD	P151012.D	1	07/30/22	KLS	07/29/22	OP41022	EP6985
JD48794-1A	P151003.D	1	07/30/22	KLS	07/29/22	OP41022	EP6985

The QC reported here applies to the following samples:

Method: SW846 8270E

JD48859-11, JD48859-51

CAS No.	Compound	JD48794-1A ug/l	Spike Q	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
95-48-7	2-Methylphenol	ND	500	212	42	500	279	56	27	10-130/32
	3&4-Methylphenol	ND	1000	395	40	1000	504	50	24	10-128/36
87-86-5	Pentachlorophenol	ND	1000	593	59	1000	768	77	26	29-154/32
95-95-4	2,4,5-Trichlorophenol	ND	500	312	62	500	420	84	30* a	33-130/22
88-06-2	2,4,6-Trichlorophenol	ND	500	302	60	500	411	82	31* a	35-129/26
106-46-7	1,4-Dichlorobenzene	ND	500	188	38	500	277	55	38* a	10-155/26
121-14-2	2,4-Dinitrotoluene	ND	500	336	67	500	427	85	24* a	21-160/23
118-74-1	Hexachlorobenzene	ND	500	319	64	500	421	84	28* a	40-120/21
87-68-3	Hexachlorobutadiene	ND	500	184	37	500	288	58	44* a	10-129/24
67-72-1	Hexachloroethane	ND	500	177	35	500	262	52	39* a	10-120/26
98-95-3	Nitrobenzene	ND	500	248	50	500	357	71	36* a	26-138/26
110-86-1	Pyridine	ND	500	151	30	500	199	40	27	10-94/49

CAS No.	Surrogate Recoveries	MS	MSD	JD48794-1A	Limits
367-12-4	2-Fluorophenol	30%	41%	48%	10-73%
4165-62-2	Phenol-d5	20%	27%	30%	10-64%
118-79-6	2,4,6-Tribromophenol	75%	99%	89%	31-130%
4165-60-0	Nitrobenzene-d5	52%	77%	71%	28-126%
321-60-8	2-Fluorobiphenyl	56%	78%	74%	26-114%
1718-51-0	Terphenyl-d14	78%	91%	87%	16-122%

(a) Outside of in house control limits.

* = Outside of Control Limits.

Method Blank Summary

Job Number: JD48859
Account: CORNNYM Cornerstone Environmental Group, LLC
Project: NEPERA, Arden House Road, Harriman, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP41023-MB1	3G137474.D	1	08/10/22	RK	08/05/22	OP41023	G3G5032

The QC reported here applies to the following samples: Method: SW846 8151A

JD48859-11, JD48859-51

CAS No.	Compound	Result	RL	MDL	Units	Q
94-75-7	2,4-D	ND	0.33	0.098	ug/l	
93-72-1	2,4,5-TP (Silvex)	ND	0.10	0.020	ug/l	

CAS No.	Surrogate Recoveries	Limits
19719-28-9	2,4-DCAA	11%* a 13-169%
19719-28-9	2,4-DCAA	10%* a 13-169%

(a) Outside of in house control limits.

Leachate Blank Summary

Job Number: JD48859
Account: CORNNYM Cornerstone Environmental Group, LLC
Project: NEPERA, Arden House Road, Harriman, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP41023-LB23 ^a	3G137476.D	1	08/11/22	RK	08/05/22	OP41023	G3G5032

The QC reported here applies to the following samples: Method: SW846 8151A

JD48859-11, JD48859-51

CAS No.	Compound	Result	RL	MDL	Units	Q
94-75-7	2,4-D	ND	3.3	0.98	ug/l	
93-72-1	2,4,5-TP (Silvex)	ND	1.0	0.20	ug/l	

CAS No.	Surrogate Recoveries	Limits
19719-28-9	2,4-DCAA	25% 13-169%
19719-28-9	2,4-DCAA	19% 13-169%

(a) The leaching temperature was temporarily out of range for 16 hours.

7.2.1
7

Blank Spike Summary

Job Number: JD48859
Account: CORNNYM Cornerstone Environmental Group, LLC
Project: NEPERA, Arden House Road, Harriman, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP41023-BS1	3G137475.D	1	08/10/22	RK	08/05/22	OP41023	G3G5032

The QC reported here applies to the following samples: Method: SW846 8151A

JD48859-11, JD48859-51

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
94-75-7	2,4-D	1.33	0.38	28* a	36-158
93-72-1	2,4,5-TP (Silvex)	0.267	0.34	127 b	44-158

CAS No.	Surrogate Recoveries	BSP	Limits
19719-28-9	2,4-DCAA	17%	13-169%
19719-28-9	2,4-DCAA	33%	13-169%

- (a) Outside of in house control limits. Reported from the 2nd signal. The %D of the CCV on the 1st signal exceeds the method criteria of 20%, so it being used for confirmation only.
- (b) Reported from the 2nd signal. The %D of the CCV on the 1st signal exceeds the method criteria of 20%, so it being used for confirmation only.

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: JD48859
Account: CORNNYM Cornerstone Environmental Group, LLC
Project: NEPERA, Arden House Road, Harriman, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP41023-MS	3G137477.D	1	08/11/22	RK	08/05/22	OP41023	G3G5032
OP41023-MSD	3G137478.D	1	08/11/22	RK	08/05/22	OP41023	G3G5032
JD48794-1A ^a	3G137479.D	1	08/11/22	RK	08/05/22	OP41023	G3G5032

The QC reported here applies to the following samples: Method: SW846 8151A

JD48859-11, JD48859-51

CAS No.	Compound	JD48794-1A Spike ug/l	Q	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
94-75-7	2,4-D	ND	13.3	ND	0* ^b	13.3	ND	0* ^b	nc	35-196/60
93-72-1	2,4,5-TP (Silvex)	ND	2.67	0.34	13	2.67	0.44	16	26	10-226/52

CAS No.	Surrogate Recoveries	MS	MSD	JD48794-1A Limits
19719-28-9	2,4-DCAA	9%* ^b	9%* ^b	14% 13-169%
19719-28-9	2,4-DCAA	14%	15%	18% 13-169%

(a) The leaching temperature was temporarily out of range for 16 hours.
(b) Outside of in house control limits.

* = Outside of Control Limits.

Leachate Spike Summary

Job Number: JD48859
Account: CORNNYM Cornerstone Environmental Group, LLC
Project: NEPERA, Arden House Road, Harriman, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP41023-LS23	3G137477.D	1	08/11/22	RK	08/05/22	OP41023	G3G5032
JD48794-1A ^a	3G137479.D	1	08/11/22	RK	08/05/22	OP41023	G3G5032

The QC reported here applies to the following samples: Method: SW846 8151A

JD48859-11, JD48859-51

CAS No.	Compound	JD48794-1A Spike ug/l	Q	Spike ug/l	LS ug/l	LS %	Limits
94-75-7	2,4-D	ND		13.3	ND	0* ^b	35-196
93-72-1	2,4,5-TP (Silvex)	ND		2.67	0.34	13	10-226

CAS No.	Surrogate Recoveries	LS	JD48794-1A	Limits
19719-28-9	2,4-DCAA	9%* ^b	14%	13-169%
19719-28-9	2,4-DCAA	14%	18%	13-169%

- (a) The leaching temperature was temporarily out of range for 16 hours.
(b) Outside of in house control limits.

* = Outside of Control Limits.

Surrogate Recovery Summary

Job Number: JD48859
Account: CORNNYM Cornerstone Environmental Group, LLC
Project: NEPERA, Arden House Road, Harriman, NY

Method: SW846 8151A	Matrix: LEACHATE
---------------------	------------------

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1 ^a	S1 ^b
JD48859-11	3G137622.D	33	13
JD48859-11	3G137489.D	6* ^c	10* ^c
JD48859-51	3G137623.D	38	17
JD48859-51	3G137490.D	4* ^c	4* ^c
OP41023-BS1	3G137475.D	17	33
OP41023-LB23	3G137476.D	25	19
OP41023-LS23	3G137477.D	9* ^c	14
OP41023-MB1	3G137474.D	11* ^c	10* ^c
OP41023-MS	3G137477.D	9* ^c	14
OP41023-MSD	3G137478.D	9* ^c	15

Surrogate Compounds Recovery Limits

S1 = 2,4-DCAA 13-169%

- (a) Recovery from GC signal #2
- (b) Recovery from GC signal #1
- (c) Outside of in house control limits.

7.6.1
7

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: JD48859
 Account: CORNNYM - Cornerstone Environmental Group, LLC
 Project: NEPERA, Arden House Road, Harriman, NY

QC Batch ID: MP34465
 Matrix Type: SOLID

Methods: SW846 7471B
 Units: mg/kg

Prep Date: 08/04/22

Metal	JD48790-69 Original MS	SpikeLot HGPWSi	% Rec	QC Limits
-------	---------------------------	--------------------	-------	--------------

Mercury	0.73	0.77	0.338	11.8N(a) 80-120
---------	------	------	-------	-----------------

Associated samples MP34465: JD48859-2, JD48859-3, JD48859-4, JD48859-5, JD48859-6, JD48859-7, JD48859-8, JD48859-9, JD48859-10, JD48859-12, JD48859-13, JD48859-14, JD48859-15, JD48859-16, JD48859-17, JD48859-18, JD48859-19, JD48859-20, JD48859-21

Results < IDL are shown as zero for calculation purposes

(*) Outside of QC limits

(N) Matrix Spike Rec. outside of QC limits

(anr) Analyte not requested

(a) Spike recovery indicates possible matrix interference and/or sample nonhomogeneity.

8.5.2

8

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: JD48859
 Account: CORNNYM - Cornerstone Environmental Group, LLC
 Project: NEPERA, Arden House Road, Harriman, NY

QC Batch ID: MP34465
 Matrix Type: SOLID

Methods: SW846 7471B
 Units: mg/kg

Prep Date: 08/04/22

Metal	JD48790-69 Original MSD	Spike lot HGPWS1	% Rec	MSD RPD	QC Limit
-------	----------------------------	---------------------	-------	------------	-------------

Mercury 0.73 0.61 0.342 -35.0N(a 23.2 (b) 20

Associated samples MP34465: JD48859-2, JD48859-3, JD48859-4, JD48859-5, JD48859-6, JD48859-7, JD48859-8, JD48859-9, JD48859-10, JD48859-12, JD48859-13, JD48859-14, JD48859-15, JD48859-16, JD48859-17, JD48859-18, JD48859-19, JD48859-20, JD48859-21

Results < IDL are shown as zero for calculation purposes

(*) Outside of QC limits

(N) Matrix Spike Rec. outside of QC limits

(anr) Analyte not requested

(a) Spike recovery indicates possible matrix interference and/or sample nonhomogeneity.

(b) High rpd due to possible sample nonhomogeneity.

8.5.2

8

Annotated Analytical Data

Report of Analysis

Client Sample ID:	MH-FP-026-0-6	Date Sampled:	07/25/22
Lab Sample ID:	JD48859-2	Date Received:	07/25/22
Matrix:	SO - Soil	Percent Solids:	62.4
Project:	NEPERA, Arden House Road, Harriman, NY		

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Mercury	0.74 J	0.051	mg/kg	1	08/04/22	08/05/22 LM	SW846 7471B ¹	SW846 7471B ²

(1) Instrument QC Batch: MA52818
(2) Prep QC Batch: MP34465

RL = Reporting Limit

Report of Analysis

Client Sample ID:	MH-FP-026-6-12	Date Sampled:	07/25/22
Lab Sample ID:	JD48859-3	Date Received:	07/25/22
Matrix:	SO - Soil	Percent Solids:	84.4
Project:	NEPERA, Arden House Road, Harriman, NY		

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Mercury	1.5 J	0.18	mg/kg	5	08/04/22	08/05/22 LM	SW846 7471B ¹	SW846 7471B ²

(1) Instrument QC Batch: MA52818
(2) Prep QC Batch: MP34465

RL = Reporting Limit

Report of Analysis

Client Sample ID:	MH-FP-026-1-2	Date Sampled:	07/25/22
Lab Sample ID:	JD48859-4	Date Received:	07/25/22
Matrix:	SO - Soil	Percent Solids:	86.2
Project:	NEPERA, Arden House Road, Harriman, NY		

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Mercury	8.0 J	1.8	mg/kg	50	08/04/22	08/05/22 LM	SW846 7471B ¹	SW846 7471B ²

(1) Instrument QC Batch: MA52818
(2) Prep QC Batch: MP34465

RL = Reporting Limit

Report of Analysis

Client Sample ID: MH-FP-026-2-3

Lab Sample ID: JD48859-5

Matrix: SO - Soil

Project: NEPERA, Arden House Road, Harriman, NY

Date Sampled: 07/25/22

Date Received: 07/25/22

Percent Solids: 87.3

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Mercury	0.44 J	0.032	mg/kg	1	08/04/22	08/05/22 LM	SW846 7471B ¹	SW846 7471B ²

(1) Instrument QC Batch: MA52818
(2) Prep QC Batch: MP34465

RL = Reporting Limit

Report of Analysis

Client Sample ID:	MH-FP-026-3-4	Date Sampled:	07/25/22
Lab Sample ID:	JD48859-6	Date Received:	07/25/22
Matrix:	SO - Soil	Percent Solids:	83.9
Project:	NEPERA, Arden House Road, Harriman, NY		

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Mercury	0.43 J	0.036	mg/kg	1	08/04/22	08/05/22 LM	SW846 7471B ¹	SW846 7471B ²

(1) Instrument QC Batch: MA52818
(2) Prep QC Batch: MP34465

RL = Reporting Limit

Report of Analysis

Client Sample ID:	MH-FP-026-4-5	Date Sampled:	07/25/22
Lab Sample ID:	JD48859-7	Date Received:	07/25/22
Matrix:	SO - Soil	Percent Solids:	84.0
Project:	NEPERA, Arden House Road, Harriman, NY		

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Mercury	1.7 J	0.19	mg/kg	5	08/04/22	08/05/22 LM	SW846 7471B ¹	SW846 7471B ²

(1) Instrument QC Batch: MA52818
(2) Prep QC Batch: MP34465

RL = Reporting Limit

Report of Analysis

Client Sample ID:	MH-FP-026-5-6	Date Sampled:	07/25/22
Lab Sample ID:	JD48859-8	Date Received:	07/25/22
Matrix:	SO - Soil	Percent Solids:	87.8
Project:	NEPERA, Arden House Road, Harriman, NY		

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Mercury	2.0 J	0.17	mg/kg	5	08/04/22	08/05/22 LM	SW846 7471B ¹	SW846 7471B ²

(1) Instrument QC Batch: MA52818
(2) Prep QC Batch: MP34465

RL = Reporting Limit

Report of Analysis

Client Sample ID:	MH-FP-026-6-7	Date Sampled:	07/25/22
Lab Sample ID:	JD48859-9	Date Received:	07/25/22
Matrix:	SO - Soil	Percent Solids:	89.3
Project:	NEPERA, Arden House Road, Harriman, NY		

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Mercury	2.0 J	0.16	mg/kg	5	08/04/22	08/05/22 LM	SW846 7471B ¹	SW846 7471B ²

(1) Instrument QC Batch: MA52818
(2) Prep QC Batch: MP34465

RL = Reporting Limit

Report of Analysis

Client Sample ID:	MH-FP-026-7-8	Date Sampled:	07/25/22
Lab Sample ID:	JD48859-10	Date Received:	07/25/22
Matrix:	SO - Soil	Percent Solids:	90.9
Project:	NEPERA, Arden House Road, Harriman, NY		

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Mercury	0.13 J	0.029	mg/kg	1	08/04/22	08/05/22 LM	SW846 7471B ¹	SW846 7471B ²

(1) Instrument QC Batch: MA52818
(2) Prep QC Batch: MP34465

RL = Reporting Limit

Report of Analysis

Client Sample ID:	WC-05						
Lab Sample ID:	JD48859-11					Date Sampled:	07/25/22
Matrix:	SO - Soil					Date Received:	07/25/22
Method:	SW846 8151A SW846 3510C					Percent Solids:	n/a
Project:	NEPERA, Arden House Road, Harriman, NY						

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 ^a	3G137489.D	1	08/11/22 04:56	RK	08/02/22 15:00	OP41023	G3G5032
Run #2 ^b	3G137622.D	1	08/23/22 02:55	CP	08/15/22 10:10	OP41278	G3G5036

	Initial Volume	Final Volume
Run #1	30.0 ml	2.0 ml
Run #2	30.0 ml	2.0 ml

Herbicide TCLP Leachate

TCLP Leachate method SW846 1311

CAS No.	Compound	Result	HW#	MCL	RL	MDL	Units	Q
94-75-7	2,4-D	ND ^J	D016	10	0.0033	0.00098	mg/l	
93-72-1	2,4,5-TP (Silvex)	ND	D017	1.0	0.0010	0.00020	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
19719-28-9	2,4-DCAA	6% ^c	33%	13-169%
19719-28-9	2,4-DCAA	10% ^c	13%	13-169%

(a) The leaching temperature was temporarily out of range for 16 hours.

(b) The leaching temperature was temporarily out of range for 16 hours. Confirmation run.

(c) Outside of in house control limits.

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
MCL = Maximum Contamination Level (40 CFR 261 7/1/11) B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	DUP-08	Date Sampled:	07/25/22
Lab Sample ID:	JD48859-12	Date Received:	07/25/22
Matrix:	SO - Soil	Percent Solids:	83.8
Project:	NEPERA, Arden House Road, Harriman, NY		

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Mercury	0.68 J	0.036	mg/kg	1	08/04/22	08/05/22 LM	SW846 7471B ¹	SW846 7471B ²

(1) Instrument QC Batch: MA52818
(2) Prep QC Batch: MP34465

RL = Reporting Limit

Report of Analysis

Client Sample ID:	MH-FP-027-0-6	Date Sampled:	07/25/22
Lab Sample ID:	JD48859-13	Date Received:	07/25/22
Matrix:	SO - Soil	Percent Solids:	84.3
Project:	NEPERA, Arden House Road, Harriman, NY		

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Mercury	1.2 J	0.072	mg/kg	2	08/04/22	08/05/22 LM	SW846 7471B ¹	SW846 7471B ²

(1) Instrument QC Batch: MA52818
(2) Prep QC Batch: MP34465

RL = Reporting Limit

Report of Analysis

Client Sample ID:	MH-FP-027-6-12	
Lab Sample ID:	JD48859-14	Date Sampled: 07/25/22
Matrix:	SO - Soil	Date Received: 07/25/22
		Percent Solids: 84.7
Project:	NEPERA, Arden House Road, Harriman, NY	

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Mercury	0.78 J	0.034	mg/kg	1	08/04/22	08/05/22 LM	SW846 7471B ¹	SW846 7471B ²

(1) Instrument QC Batch: MA52818
(2) Prep QC Batch: MP34465

RL = Reporting Limit

Report of Analysis

Client Sample ID:	MH-FP-027-1-2	Date Sampled:	07/25/22
Lab Sample ID:	JD48859-15	Date Received:	07/25/22
Matrix:	SO - Soil	Percent Solids:	83.9
Project:	NEPERA, Arden House Road, Harriman, NY		

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Mercury	0.15 J	0.034	mg/kg	1	08/04/22	08/05/22 LM	SW846 7471B ¹	SW846 7471B ²

(1) Instrument QC Batch: MA52818
(2) Prep QC Batch: MP34465

RL = Reporting Limit

Report of Analysis

Client Sample ID:	MH-FP-027-2-3	Date Sampled:	07/25/22
Lab Sample ID:	JD48859-16	Date Received:	07/25/22
Matrix:	SO - Soil	Percent Solids:	86.1
Project:	NEPERA, Arden House Road, Harriman, NY		

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Mercury	0.12 J	0.036	mg/kg	1	08/04/22	08/05/22 LM	SW846 7471B ¹	SW846 7471B ²

(1) Instrument QC Batch: MA52818
(2) Prep QC Batch: MP34465

RL = Reporting Limit

Report of Analysis

Client Sample ID:	MH-FP-027-4-5	Date Sampled:	07/25/22
Lab Sample ID:	JD48859-18	Date Received:	07/25/22
Matrix:	SO - Soil	Percent Solids:	90.6
Project:	NEPERA, Arden House Road, Harriman, NY		

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Mercury	0.085 J	0.031	mg/kg	1	08/04/22	08/05/22 LM	SW846 7471B ¹	SW846 7471B ²

(1) Instrument QC Batch: MA52818
(2) Prep QC Batch: MP34465

RL = Reporting Limit

Report of Analysis

Client Sample ID:	MH-FP-027-5-6	Date Sampled:	07/25/22
Lab Sample ID:	JD48859-19	Date Received:	07/25/22
Matrix:	SO - Soil	Percent Solids:	90.1
Project:	NEPERA, Arden House Road, Harriman, NY		

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Mercury	0.063 J	0.033	mg/kg	1	08/04/22	08/05/22 LM	SW846 7471B ¹	SW846 7471B ²

(1) Instrument QC Batch: MA52818
(2) Prep QC Batch: MP34465

RL = Reporting Limit

Report of Analysis

Client Sample ID:	MH-FP-027-6-7	Date Sampled:	07/25/22
Lab Sample ID:	JD48859-20	Date Received:	07/25/22
Matrix:	SO - Soil	Percent Solids:	88.1
Project:	NEPERA, Arden House Road, Harriman, NY		

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Mercury	0.16 J	0.034	mg/kg	1	08/04/22	08/05/22 LM	SW846 7471B ¹	SW846 7471B ²

(1) Instrument QC Batch: MA52818
(2) Prep QC Batch: MP34465

RL = Reporting Limit

Report of Analysis

Client Sample ID:	MH-FP-027-7-8	Date Sampled:	07/25/22
Lab Sample ID:	JD48859-21	Date Received:	07/25/22
Matrix:	SO - Soil	Percent Solids:	87.2
Project:	NEPERA, Arden House Road, Harriman, NY		

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Mercury	< 0.033	0.033	mg/kg	1	08/04/22	08/05/22 LM	SW846 7471B ¹	SW846 7471B ²

(1) Instrument QC Batch: MA52818
(2) Prep QC Batch: MP34465

RL = Reporting Limit

Report of Analysis

Client Sample ID:	WC-06						
Lab Sample ID:	JD48859-51					Date Sampled:	07/25/22
Matrix:	SO - Soil					Date Received:	07/25/22
Method:	SW846 8151A SW846 3510C					Percent Solids:	n/a
Project:	NEPERA, Arden House Road, Harriman, NY						

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 ^a	3G137490.D	1	08/11/22 05:19	RK	08/02/22 15:00	OP41023	G3G5032
Run #2 ^b	3G137623.D	1	08/23/22 03:17	CP	08/15/22 10:10	OP41278	G3G5036

	Initial Volume	Final Volume
Run #1	30.0 ml	2.0 ml
Run #2	30.0 ml	2.0 ml

Herbicide TCLP Leachate

TCLP Leachate method SW846 1311

CAS No.	Compound	Result	HW#	MCL	RL	MDL	Units	Q
94-75-7	2,4-D	ND ^J	D016	10	0.0033	0.00098	mg/l	
93-72-1	2,4,5-TP (Silvex)	ND	D017	1.0	0.0010	0.00020	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
19719-28-9	2,4-DCAA	4% ^c	38%	13-169%
19719-28-9	2,4-DCAA	4% ^c	17%	13-169%

(a) The leaching temperature was temporarily out of range for 16 hours.

(b) The leaching temperature was temporarily out of range for 16 hours. Confirmation run.

(c) Outside of in house control limits.

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
MCL = Maximum Contamination Level (40 CFR 261 7/1/11) B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

SGS Report JD49152

Annotated Quality Control Results

Blank Spike Summary

Page 1 of 1

Job Number: JD49152

Account: CORNNYM Cornerstone Environmental Group, LLC

Project: NEPERA, Arden House Road, Harriman, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V1A9664-BS	1A225436.D	1	08/06/22	NW	n/a	n/a	V1A9664

The QC reported here applies to the following samples:

Method: SW846 8260D

JD49152-21, JD49152-51

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
71-43-2	Benzene	50	44.5	89	80-115
78-93-3	2-Butanone (MEK)	200	114	57* a	61-150
56-23-5	Carbon tetrachloride	50	47.5	95	75-127
108-90-7	Chlorobenzene	50	43.0	86	80-115
67-66-3	Chloroform	50	42.2	84	75-116
106-46-7	1,4-Dichlorobenzene	50	44.3	89	80-114
107-06-2	1,2-Dichloroethane	50	51.0	102	73-117
75-35-4	1,1-Dichloroethene	50	41.5	83	70-124
127-18-4	Tetrachloroethene	50	47.2	94	73-119
79-01-6	Trichloroethene	50	44.9	90	80-118
75-01-4	Vinyl chloride	50	37.1	74	52-146

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	98%	76-120%
17060-07-0	1,2-Dichloroethane-D4	105%	64-135%
2037-26-5	Toluene-D8	88%	76-117%
460-00-4	4-Bromofluorobenzene	97%	72-122%

(a) Outside of in house control limits, but within the marginal exceedance limits.

* = Outside of Control Limits.

Blank Spike Summary

Page 1 of 1

Job Number: JD49152

Account: CORNNYM Cornerstone Environmental Group, LLC

Project: NEPERA, Arden House Road, Harriman, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP41133-BS1	P151096.D	1	08/09/22	CS	08/09/22	OP41133	EP6993

The QC reported here applies to the following samples:

Method: SW846 8270E

JD49152-21, JD49152-51

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
95-48-7	2-Methylphenol	50	16.1	32	26-101
	3&4-Methylphenol	100	31.0	31	23-98
87-86-5	Pentachlorophenol	100	35.4	35* a	37-147
95-95-4	2,4,5-Trichlorophenol	50	18.0	36* a	39-125
88-06-2	2,4,6-Trichlorophenol	50	16.8	34* a	40-127
106-46-7	1,4-Dichlorobenzene	50	14.7	29	25-101
121-14-2	2,4-Dinitrotoluene	50	20.2	40* a	47-128
118-74-1	Hexachlorobenzene	50	16.0	32* a	46-113
87-68-3	Hexachlorobutadiene	50	12.1	24	17-111
67-72-1	Hexachloroethane	50	12.9	26	18-101
98-95-3	Nitrobenzene	50	16.5	33* a	36-120
110-86-1	Pyridine	50	6.6	13	10-78

CAS No.	Surrogate Recoveries	BSP	Limits
367-12-4	2-Fluorophenol	23%	10-73%
4165-62-2	Phenol-d5	17%	10-64%
118-79-6	2,4,6-Tribromophenol	36%	31-130%
4165-60-0	Nitrobenzene-d5	36%	28-126%
321-60-8	2-Fluorobiphenyl	33%	26-114%
1718-51-0	Terphenyl-d14	33%	16-122%

(a) Outside of in house control limits.

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Page 1 of 1

Job Number: JD49152

Account: CORNNYM Cornerstone Environmental Group, LLC

Project: NEPERA, Arden House Road, Harriman, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP41133-MS	P151097.D	1	08/09/22	CS	08/09/22	OP41133	EP6993
OP41133-MSD	P151098.D	1	08/09/22	CS	08/09/22	OP41133	EP6993
JD49001-3A ^a	P151099.D	1	08/09/22	CS	08/09/22	OP41133	EP6993

The QC reported here applies to the following samples:

Method: SW846 8270E

JD49152-21, JD49152-51

CAS No.	Compound	JD49001-3A ug/l	Spike Q ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
95-48-7	2-Methylphenol	ND	500	295	59	500	187	37	45* ^b	10-130/32
	3&4-Methylphenol	ND	1000	579	58	1000	332	33	54* ^b	10-128/36
87-86-5	Pentachlorophenol	ND	1000	736	74	1000	392	39	61* ^b	29-154/32
95-95-4	2,4,5-Trichlorophenol	ND	500	369	74	500	200	40	59* ^b	33-130/22
88-06-2	2,4,6-Trichlorophenol	ND	500	358	72	500	184	37	64* ^b	35-129/26
106-46-7	1,4-Dichlorobenzene	ND	500	246	49	500	148	30	50* ^b	10-155/26
121-14-2	2,4-Dinitrotoluene	ND	500	402	80	500	222	44	58* ^b	21-160/23
118-74-1	Hexachlorobenzene	ND	500	347	69	500	187	37* ^c	60* ^b	40-120/21
87-68-3	Hexachlorobutadiene	ND	500	235	47	500	139	28	51* ^b	10-129/24
67-72-1	Hexachloroethane	ND	500	233	47	500	138	28	51* ^b	10-120/26
98-95-3	Nitrobenzene	ND	500	287	57	500	155	31	60* ^b	26-138/26
110-86-1	Pyridine	ND	500	63.6	13	500	77.5	16	20	10-94/49

CAS No.	Surrogate Recoveries	MS	MSD	JD49001-3A	Limits
367-12-4	2-Fluorophenol	39%	26%	35%	10-73%
4165-62-2	Phenol-d5	30%	17%	23%	10-64%
118-79-6	2,4,6-Tribromophenol	78%	40%	58%	31-130%
4165-60-0	Nitrobenzene-d5	64%	33%	58%	28-126%
321-60-8	2-Fluorobiphenyl	67%	37%	56%	26-114%
1718-51-0	Terphenyl-d14	64%	36%	48%	16-122%

(a) Associated Blank Spike outside control limits biased low for some compounds.

(b) Analytical precision exceeds in-house control limits.

(c) Outside of in house control limits.

* = Outside of Control Limits.

Blank Spike Summary

Job Number: JD49152
Account: CORNNYM Cornerstone Environmental Group, LLC
Project: NEPERA, Arden House Road, Harriman, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP41135-BS1	3G137525.D	1	08/15/22	CP	08/09/22	OP41135	G3G5034

The QC reported here applies to the following samples: Method: SW846 8151A

JD49152-21, JD49152-51

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
94-75-7	2,4-D	1.33	0.17	13* ^a	36-158
93-72-1	2,4,5-TP (Silvex)	0.267	0.41	154 ^b	44-158

CAS No.	Surrogate Recoveries	BSP	Limits
19719-28-9	2,4-DCAA	19%	13-169%
19719-28-9	2,4-DCAA	34%	13-169%

- (a) Outside of in house control limits.
(b) Reported from 2nd signal. 1st signal used for confirmation.

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: JD49152
Account: CORNNYM Cornerstone Environmental Group, LLC
Project: NEPERA, Arden House Road, Harriman, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP41135-MS	3G137526.D	1	08/15/22	CP	08/09/22	OP41135	G3G5034
OP41135-MSD	3G137527.D	1	08/15/22	CP	08/09/22	OP41135	G3G5034
JD49001-3A ^a	3G137531.D	1	08/15/22	CP	08/09/22	OP41135	G3G5034

The QC reported here applies to the following samples:

Method: SW846 8151A

JD49152-21, JD49152-51

CAS No.	Compound	JD49001-3A ug/l	Spike Q	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
94-75-7	2,4-D	ND	13.3	ND	0* ^b	13.3	ND	0* ^b	nc	35-196/60
93-72-1	2,4,5-TP (Silvex)	ND	2.67	1.5	56	2.67	2.4	90	46	10-226/52

CAS No.	Surrogate Recoveries	MS	MSD	JD49001-3A	Limits
19719-28-9	2,4-DCAA	35%	39%	38%	13-169%
19719-28-9	2,4-DCAA	40%	35%	40%	13-169%

- (a) The leaching temperature was temporarily out of range for 16 hours.
(b) Outside of in house control limits.

* = Outside of Control Limits.

Leachate Spike Summary

Job Number: JD49152
Account: CORNNYM Cornerstone Environmental Group, LLC
Project: NEPERA, Arden House Road, Harriman, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP41135-LS2	3G137526.D	1	08/15/22	CP	08/09/22	OP41135	G3G5034
JD49001-3A ^a	3G137531.D	1	08/15/22	CP	08/09/22	OP41135	G3G5034

The QC reported here applies to the following samples: Method: SW846 8151A

JD49152-21, JD49152-51

CAS No.	Compound	JD49001-3A Spike ug/l	Q	Spike ug/l	LS ug/l	LS %	Limits
94-75-7	2,4-D	ND		13.3	ND	0* ^b	35-196
93-72-1	2,4,5-TP (Silvex)	ND		2.67	1.5	56	10-226

CAS No.	Surrogate Recoveries	LS	JD49001-3A	Limits
19719-28-9	2,4-DCAA	35%	38%	13-169%
19719-28-9	2,4-DCAA	40%	40%	13-169%

- (a) The leaching temperature was temporarily out of range for 16 hours.
(b) Outside of in house control limits.

* = Outside of Control Limits.

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: JD49152
 Account: CORNNYM - Cornerstone Environmental Group, LLC
 Project: NEPERA, Arden House Road, Harriman, NY

QC Batch ID: MP34645
 Matrix Type: SOLID

Methods: SW846 7471B
 Units: mg/kg

Prep Date: 08/17/22

Metal	JD49152-19 Original MS	Spike lot HGPWS1	% Rec	QC Limits
Mercury	0.63	0.81	0.379	47.5N(a) 80-120

Associated samples MP34645: JD49152-19, JD49152-20, JD49152-22, JD49152-23, JD49152-24, JD49152-25, JD49152-26, JD49152-27, JD49152-28, JD49152-29, JD49152-30, JD49152-31, JD49152-41, JD49152-42, JD49152-43, JD49152-44, JD49152-45, JD49152-46, JD49152-47, JD49152-48

Results < IDL are shown as zero for calculation purposes
 (*) Outside of QC limits
 (N) Matrix Spike Rec. outside of QC limits
 (anr) Analyte not requested
 (a) Spike recovery indicates possible matrix interference.

8.6.2

8

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: JD49152
 Account: CORNNYM - Cornerstone Environmental Group, LLC
 Project: NEPERA, Arden House Road, Harriman, NY

QC Batch ID: MP34645
 Matrix Type: SOLID

Methods: SW846 7471B
 Units: mg/kg

Prep Date: 08/17/22

Metal	JD49152-19 Original MSD	Spike lot HGPWS1	% Rec	MSD RPD	QC Limit
Mercury	0.63	0.84	0.382	55.0N(a) 3.6	20

Associated samples MP34645: JD49152-19, JD49152-20, JD49152-22, JD49152-23, JD49152-24, JD49152-25, JD49152-26, JD49152-27, JD49152-28, JD49152-29, JD49152-30, JD49152-31, JD49152-41, JD49152-42, JD49152-43, JD49152-44, JD49152-45, JD49152-46, JD49152-47, JD49152-48

Results < IDL are shown as zero for calculation purposes
 (*) Outside of QC limits
 (N) Matrix Spike Rec. outside of QC limits
 (anr) Analyte not requested
 (a) Spike recovery indicates possible matrix interference.

8.6.2

8

Annotated Analytical Data

Report of Analysis

Client Sample ID:	WC-10						
Lab Sample ID:	JD49152-21					Date Sampled:	07/28/22
Matrix:	SO - Soil					Date Received:	07/28/22
Method:	SW846 8270E SW846 3510C					Percent Solids:	n/a
Project:	NEPERA, Arden House Road, Harriman, NY						

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 ^a	P151107.D	1	08/10/22 02:52	CS	08/09/22 10:10	OP41133	EP6993
Run #2							

	Initial Volume	Final Volume
Run #1	100 ml	1.0 ml
Run #2		

ABN TCLP Leachate

TCLP Leachate method SW846 1311

CAS No.	Compound	Result	HW#	MCL	RL	MDL	Units	Q
95-48-7	2-Methylphenol	ND	D023	200	0.020	0.0089	mg/l	
	3&4-Methylphenol	ND	D024	200	0.020	0.0088	mg/l	
87-86-5	Pentachlorophenol	ND	D037	100	0.10	0.014	mg/l	
95-95-4	2,4,5-Trichlorophenol	ND	D041	400	0.050	0.013	mg/l	
88-06-2	2,4,6-Trichlorophenol	ND	D042	2.0	0.050	0.0092	mg/l	
106-46-7	1,4-Dichlorobenzene	ND	D027	7.5	0.020	0.0017	mg/l	
121-14-2	2,4-Dinitrotoluene	ND	D030	0.13	0.020	0.0055	mg/l	
118-74-1	Hexachlorobenzene	ND J	D032	0.13	0.020	0.0033	mg/l	
87-68-3	Hexachlorobutadiene	ND	D033	0.50	0.010	0.0049	mg/l	
67-72-1	Hexachloroethane	ND	D034	3.0	0.050	0.0039	mg/l	
98-95-3	Nitrobenzene	ND	D036	2.0	0.020	0.0064	mg/l	
110-86-1	Pyridine	ND	D038	5.0	0.020	0.0039	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	33%		10-73%
4165-62-2	Phenol-d5	22%		10-64%
118-79-6	2,4,6-Tribromophenol	60%		31-130%
4165-60-0	Nitrobenzene-d5	53%		28-126%
321-60-8	2-Fluorobiphenyl	56%		26-114%
1718-51-0	Terphenyl-d14	46%		16-122%

(a) Associated Blank Spike outside control limits biased low for some compounds.

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
MCL = Maximum Contamination Level (40 CFR 261 7/1/11) B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	WC-10						
Lab Sample ID:	JD49152-21					Date Sampled:	07/28/22
Matrix:	SO - Soil					Date Received:	07/28/22
Method:	SW846 8151A SW846 3510C					Percent Solids:	n/a
Project:	NEPERA, Arden House Road, Harriman, NY						

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 ^a	3G137539.D	1	08/15/22 16:15	CP	08/09/22 10:25	OP41135	G3G5034
Run #2 ^b	OA161398.D	1	08/23/22 00:00	TL	08/18/22 13:50	OP41326	GOA5694

	Initial Volume	Final Volume
Run #1	30.0 ml	2.0 ml
Run #2	30.0 ml	2.0 ml

Herbicide TCLP Leachate

TCLP Leachate method SW846 1311

CAS No.	Compound	Result	HW#	MCL	RL	MDL	Units	Q
94-75-7	2,4-D	ND J	D016	10	0.0033	0.00098	mg/l	
93-72-1	2,4,5-TP (Silvex) ^c	ND	D017	1.0	0.0010	0.00020	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
19719-28-9	2,4-DCAA	59%	27%	13-169%
19719-28-9	2,4-DCAA	50%	30%	13-169%

(a) The leaching temperature was temporarily out of range for 16 hours.

(b) The leaching temperature was temporarily out of range for 16 hours. Confirmation run.

(c) Associated CCV outside of control limits high, sample was ND.

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
MCL = Maximum Contamination Level (40 CFR 261 7/1/11) B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	WC-11		
Lab Sample ID:	JD49152-51	Date Sampled:	07/28/22
Matrix:	SO - Soil	Date Received:	07/28/22
Method:	SW846 8270E SW846 3510C	Percent Solids:	n/a
Project:	NEPERA, Arden House Road, Harriman, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 ^a	P151108.D	1	08/10/22 03:17	CS	08/09/22 10:10	OP41133	EP6993
Run #2							

	Initial Volume	Final Volume
Run #1	100 ml	1.0 ml
Run #2		

ABN TCLP Leachate

TCLP Leachate method SW846 1311

CAS No.	Compound	Result	HW#	MCL	RL	MDL	Units	Q
95-48-7	2-Methylphenol	ND	D023	200	0.020	0.0089	mg/l	
	3&4-Methylphenol	ND	D024	200	0.020	0.0088	mg/l	
87-86-5	Pentachlorophenol	ND	D037	100	0.10	0.014	mg/l	
95-95-4	2,4,5-Trichlorophenol	ND	D041	400	0.050	0.013	mg/l	
88-06-2	2,4,6-Trichlorophenol	ND	D042	2.0	0.050	0.0092	mg/l	
106-46-7	1,4-Dichlorobenzene	ND	D027	7.5	0.020	0.0017	mg/l	
121-14-2	2,4-Dinitrotoluene	ND	D030	0.13	0.020	0.0055	mg/l	
118-74-1	Hexachlorobenzene	ND J	D032	0.13	0.020	0.0033	mg/l	
87-68-3	Hexachlorobutadiene	ND	D033	0.50	0.010	0.0049	mg/l	
67-72-1	Hexachloroethane	ND	D034	3.0	0.050	0.0039	mg/l	
98-95-3	Nitrobenzene	ND	D036	2.0	0.020	0.0064	mg/l	
110-86-1	Pyridine	ND	D038	5.0	0.020	0.0039	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	41%		10-73%
4165-62-2	Phenol-d5	27%		10-64%
118-79-6	2,4,6-Tribromophenol	63%		31-130%
4165-60-0	Nitrobenzene-d5	62%		28-126%
321-60-8	2-Fluorobiphenyl	62%		26-114%
1718-51-0	Terphenyl-d14	65%		16-122%

(a) Associated Blank Spike outside control limits biased low for some compounds.

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
MCL = Maximum Contamination Level (40 CFR 261 7/1/11) B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	WC-11		
Lab Sample ID:	JD49152-51	Date Sampled:	07/28/22
Matrix:	SO - Soil	Date Received:	07/28/22
Method:	SW846 8151A SW846 3510C	Percent Solids:	n/a
Project:	NEPERA, Arden House Road, Harriman, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 ^a	3G137542.D	1	08/15/22 17:22	CP	08/09/22 10:25	OP41135	G3G5034
Run #2 ^b	OA161399.D	1	08/23/22 00:25	TL	08/18/22 13:50	OP41326	GOA5694

	Initial Volume	Final Volume
Run #1	30.0 ml	2.0 ml
Run #2	30.0 ml	2.0 ml

Herbicide TCLP Leachate

TCLP Leachate method SW846 1311

CAS No.	Compound	Result	HW#	MCL	RL	MDL	Units	Q
94-75-7	2,4-D	ND J	D016	10	0.0033	0.00098	mg/l	
93-72-1	2,4,5-TP (Silvex) ^c	ND	D017	1.0	0.0010	0.00020	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
19719-28-9	2,4-DCAA	66%	32%	13-169%
19719-28-9	2,4-DCAA	71%	33%	13-169%

(a) The leaching temperature was temporarily out of range for 16 hours.

(b) The leaching temperature was temporarily out of range for 16 hours. Confirmation run.

(c) Associated CCV outside of control limits high, sample was ND.

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
MCL = Maximum Contamination Level (40 CFR 261 7/1/11) B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MH-FP-045-6-7	Date Sampled:	07/28/22
Lab Sample ID:	JD49152-19	Date Received:	07/28/22
Matrix:	SO - Soil	Percent Solids:	76.0
Project:	NEPERA, Arden House Road, Harriman, NY		

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Mercury	0.63 J	0.039	mg/kg	1	08/17/22	08/18/22 LM	SW846 7471B ¹	SW846 7471B ²

(1) Instrument QC Batch: MA52875
(2) Prep QC Batch: MP34645

RL = Reporting Limit

Report of Analysis

Client Sample ID:	MH-FP-045-7-8	Date Sampled:	07/28/22
Lab Sample ID:	JD49152-20	Date Received:	07/28/22
Matrix:	SO - Soil	Percent Solids:	75.4
Project:	NEPERA, Arden House Road, Harriman, NY		

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Mercury	0.36 J	0.040	mg/kg	1	08/17/22	08/18/22 LM	SW846 7471B ¹	SW846 7471B ²

(1) Instrument QC Batch: MA52875
(2) Prep QC Batch: MP34645

RL = Reporting Limit

Report of Analysis

Client Sample ID:	MH-FP-046-0-6	Date Sampled:	07/28/22
Lab Sample ID:	JD49152-22	Date Received:	07/28/22
Matrix:	SO - Soil	Percent Solids:	86.6
Project:	NEPERA, Arden House Road, Harriman, NY		

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Mercury	55.7 J	3.7	mg/kg	100	08/17/22	08/18/22 LM	SW846 7471B ¹	SW846 7471B ²

(1) Instrument QC Batch: MA52875
(2) Prep QC Batch: MP34645

RL = Reporting Limit

Report of Analysis

Client Sample ID:	MH-FP-046-6-12	Date Sampled:	07/28/22
Lab Sample ID:	JD49152-23	Date Received:	07/28/22
Matrix:	SO - Soil	Percent Solids:	89.6
Project:	NEPERA, Arden House Road, Harriman, NY		

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Mercury	93.6 J	5.8	mg/kg	200	08/17/22	08/18/22 LM	SW846 7471B ¹	SW846 7471B ²

(1) Instrument QC Batch: MA52875
(2) Prep QC Batch: MP34645

RL = Reporting Limit

Report of Analysis

Client Sample ID:	MH-FP-046-1-2		
Lab Sample ID:	JD49152-24	Date Sampled:	07/28/22
Matrix:	SO - Soil	Date Received:	07/28/22
		Percent Solids:	92.1
Project:	NEPERA, Arden House Road, Harriman, NY		

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Mercury	58.7 J	5.8	mg/kg	200	08/17/22	08/18/22 LM	SW846 7471B ¹	SW846 7471B ²

(1) Instrument QC Batch: MA52875
(2) Prep QC Batch: MP34645

RL = Reporting Limit

Report of Analysis

Client Sample ID:	MH-FP-046-2-3	Date Sampled:	07/28/22
Lab Sample ID:	JD49152-25	Date Received:	07/28/22
Matrix:	SO - Soil	Percent Solids:	90.8
Project:	NEPERA, Arden House Road, Harriman, NY		

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Mercury	9.2 J	0.69	mg/kg	20	08/17/22	08/18/22 LM	SW846 7471B ¹	SW846 7471B ²

(1) Instrument QC Batch: MA52875
(2) Prep QC Batch: MP34645

RL = Reporting Limit

Report of Analysis

Client Sample ID:	MH-FP-046-3-4	Date Sampled:	07/28/22
Lab Sample ID:	JD49152-26	Date Received:	07/28/22
Matrix:	SO - Soil	Percent Solids:	86.6
Project:	NEPERA, Arden House Road, Harriman, NY		

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Mercury	1.4 J	0.073	mg/kg	2	08/17/22	08/18/22 LM	SW846 7471B ¹	SW846 7471B ²

(1) Instrument QC Batch: MA52875
(2) Prep QC Batch: MP34645

RL = Reporting Limit

Report of Analysis

Client Sample ID:	MH-FP-046-4-5	Date Sampled:	07/28/22
Lab Sample ID:	JD49152-27	Date Received:	07/28/22
Matrix:	SO - Soil	Percent Solids:	87.0
Project:	NEPERA, Arden House Road, Harriman, NY		

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Mercury	1.7 J	0.18	mg/kg	5	08/17/22	08/18/22 LM	SW846 7471B ¹	SW846 7471B ²

(1) Instrument QC Batch: MA52875
(2) Prep QC Batch: MP34645

RL = Reporting Limit

Report of Analysis

Client Sample ID:	MH-FP-046-5-6	Date Sampled:	07/28/22
Lab Sample ID:	JD49152-28	Date Received:	07/28/22
Matrix:	SO - Soil	Percent Solids:	89.1
Project:	NEPERA, Arden House Road, Harriman, NY		

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Mercury	0.74 J	0.033	mg/kg	1	08/17/22	08/18/22 LM	SW846 7471B ¹	SW846 7471B ²

(1) Instrument QC Batch: MA52875
(2) Prep QC Batch: MP34645

RL = Reporting Limit

Report of Analysis

Client Sample ID:	MH-FP-046-6-7	Date Sampled:	07/28/22
Lab Sample ID:	JD49152-29	Date Received:	07/28/22
Matrix:	SO - Soil	Percent Solids:	88.1
Project:	NEPERA, Arden House Road, Harriman, NY		

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Mercury	0.85 J	0.061	mg/kg	2	08/17/22	08/18/22 LM	SW846 7471B ¹	SW846 7471B ²

(1) Instrument QC Batch: MA52875
(2) Prep QC Batch: MP34645

RL = Reporting Limit

Report of Analysis

Client Sample ID:	MH-FP-046-7-8	Date Sampled:	07/28/22
Lab Sample ID:	JD49152-30	Date Received:	07/28/22
Matrix:	SO - Soil	Percent Solids:	86.7
Project:	NEPERA, Arden House Road, Harriman, NY		

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Mercury	0.82 J	0.037	mg/kg	1	08/17/22	08/18/22 LM	SW846 7471B ¹	SW846 7471B ²

(1) Instrument QC Batch: MA52875
(2) Prep QC Batch: MP34645

RL = Reporting Limit

Report of Analysis

Client Sample ID:	DUP-20	Date Sampled:	07/28/22
Lab Sample ID:	JD49152-31	Date Received:	07/28/22
Matrix:	SO - Soil	Percent Solids:	90.4
Project:	NEPERA, Arden House Road, Harriman, NY		

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Mercury	10.9 J	1.7	mg/kg	50	08/17/22	08/18/22 LM	SW846 7471B ¹	SW846 7471B ²

(1) Instrument QC Batch: MA52875
(2) Prep QC Batch: MP34645

RL = Reporting Limit

Report of Analysis

Client Sample ID:	DUP-21		
Lab Sample ID:	JD49152-41	Date Sampled:	07/28/22
Matrix:	SO - Soil	Date Received:	07/28/22
		Percent Solids:	55.7
Project:	NEPERA, Arden House Road, Harriman, NY		

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Mercury	54.7 J	2.5	mg/kg	50	08/17/22	08/18/22 LM	SW846 7471B ¹	SW846 7471B ²

(1) Instrument QC Batch: MA52875
(2) Prep QC Batch: MP34645

RL = Reporting Limit

Report of Analysis

Client Sample ID:	MH-FP-048-0-6	Date Sampled:	07/28/22
Lab Sample ID:	JD49152-42	Date Received:	07/28/22
Matrix:	SO - Soil	Percent Solids:	83.7
Project:	NEPERA, Arden House Road, Harriman, NY		

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Mercury	32.2 J	1.9	mg/kg	50	08/17/22	08/18/22 LM	SW846 7471B ¹	SW846 7471B ²

(1) Instrument QC Batch: MA52875
(2) Prep QC Batch: MP34645

RL = Reporting Limit

Report of Analysis

Client Sample ID:	MH-FP-048-6-12	
Lab Sample ID:	JD49152-43	Date Sampled: 07/28/22
Matrix:	SO - Soil	Date Received: 07/28/22
		Percent Solids: 89.6
Project:	NEPERA, Arden House Road, Harriman, NY	

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Mercury	29.1 J	1.6	mg/kg	50	08/17/22	08/18/22 LM	SW846 7471B ¹	SW846 7471B ²

(1) Instrument QC Batch: MA52875
(2) Prep QC Batch: MP34645

RL = Reporting Limit

Report of Analysis

Client Sample ID:	MH-FP-048-1-2	Date Sampled:	07/28/22
Lab Sample ID:	JD49152-44	Date Received:	07/28/22
Matrix:	SO - Soil	Percent Solids:	89.9
Project:	NEPERA, Arden House Road, Harriman, NY		

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Mercury	5.9 J	0.35	mg/kg	10	08/17/22	08/18/22 LM	SW846 7471B ¹	SW846 7471B ²

(1) Instrument QC Batch: MA52875
(2) Prep QC Batch: MP34645

RL = Reporting Limit

Report of Analysis

Client Sample ID:	MH-FP-048-2-3	
Lab Sample ID:	JD49152-45	Date Sampled: 07/28/22
Matrix:	SO - Soil	Date Received: 07/28/22
		Percent Solids: 90.7
Project:	NEPERA, Arden House Road, Harriman, NY	

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Mercury	2.2 J	0.18	mg/kg	5	08/17/22	08/18/22 LM	SW846 7471B ¹	SW846 7471B ²

(1) Instrument QC Batch: MA52875
(2) Prep QC Batch: MP34645

RL = Reporting Limit

Report of Analysis

Client Sample ID:	MH-FP-048-3-4	Date Sampled:	07/28/22
Lab Sample ID:	JD49152-46	Date Received:	07/28/22
Matrix:	SO - Soil	Percent Solids:	82.7
Project:	NEPERA, Arden House Road, Harriman, NY		

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Mercury	18.5 J	1.9	mg/kg	50	08/17/22	08/18/22 LM	SW846 7471B ¹	SW846 7471B ²

(1) Instrument QC Batch: MA52875
(2) Prep QC Batch: MP34645

RL = Reporting Limit

Report of Analysis

Client Sample ID:	MH-FP-048-4-5	Date Sampled:	07/28/22
Lab Sample ID:	JD49152-47	Date Received:	07/28/22
Matrix:	SO - Soil	Percent Solids:	84.3
Project:	NEPERA, Arden House Road, Harriman, NY		

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Mercury	6.7 J	0.66	mg/kg	20	08/17/22	08/18/22 LM	SW846 7471B ¹	SW846 7471B ²

(1) Instrument QC Batch: MA52875
(2) Prep QC Batch: MP34645

RL = Reporting Limit

Report of Analysis

Client Sample ID:	MH-FP-048-5-6	Date Sampled:	07/28/22
Lab Sample ID:	JD49152-48	Date Received:	07/28/22
Matrix:	SO - Soil	Percent Solids:	83.9
Project:	NEPERA, Arden House Road, Harriman, NY		

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Mercury	0.15 J	0.035	mg/kg	1	08/17/22	08/18/22 LM	SW846 7471B ¹	SW846 7471B ²

(1) Instrument QC Batch: MA52875
(2) Prep QC Batch: MP34645

RL = Reporting Limit

Appendix B
Data Usability Summary Report

To: File

Cc:

From:

Date: February 2023

Subject: Data Usability Summary Report for Flood Plain Soil Sampling at the Nepera-Harriman Site

The Data Usability Review has been completed for the data packages generated by Test America Laboratories that pertain to groundwater samples collected at the Nepera-Harriman Site during July 2022. Thirteen data packages associated with soil samples collected from July 18, 2022 to July 28, 2022 containing results for required constituents, duplicates, field blanks, trip blanks, matrix spikes, laboratory control samples, and method blanks were reviewed.

Data usability was generally performed in conformance with the methods outline in the “*Emerging Contaminants Site Investigation Work Plan*” (Work Plan) prepared for this Facility in October 2019. Where appropriate, the following items were reviewed:

- Data completeness
- Review of QA/QC Samples
- Overall Evaluation of Data
- Sample Temperatures
- Holding Times
- Analytical Detection Limits and Sample Quantitation
- Surrogate Recovery
- Matrix Spike/Matrix Spike Duplicate (MS/MSD) Review
- Laboratory Control Sample (LCS)
- Initial/Continuing Calibration
- Gas chromatograph/mass spectrometer/GC/Electron Capture Detector (GC/MS/GC/ECD) Instrument Performance
- Internal Standards
- Target Compound Identification
- System Performance
- Serial Dilution

In addition, the Data Usability Review was performed in accordance with the guidance provided by the New York State Department of Environmental Conservation (NYSDEC) Division of Environmental Remediation (DER) document DER-10. The following items were reviewed where appropriate:

1. Is the data package complete as defined under the requirements for the most current DEC ASP Category B or USEPA CLP data deliverables?
Yes. The laboratory reports provided were complete Category B analytical data packages
2. Have all holding times been met?
Some samples were held, pending nearby sampling location results, and analyzed beyond hold time.
3. Do all the QC data; blanks, instrument tunings, calibration standards, calibration verifications, surrogate recoveries, spike recoveries, replicate analyses, laboratory controls and sample data fall within the protocol required limits and specifications?
Items not mentioned in the following discussion were found to be acceptable as outlined in the validation procedures and as applicable for the methodology.
4. Have all of the data been generated using established and agreed upon analytical protocols?
Yes. The data analyzed was generated using established analytical protocols.
5. Does an evaluation of the raw data confirm the results provided in the data summary sheets and quality control verification forms?
Unless noted specifically in the following text, reported results of the validated samples are substantiated by the raw data, and generated in compliance with the protocol requirements.
6. Have the correct data qualifiers been used and are they consistent with the most current DEC ASP?
The details below provide a description of data qualifiers.
7. Have any quality control (QC) exceedances been specifically noted in the DUSR and have the corresponding QC summary sheets from the data package been attached to the DUSR?
The details below provide a description of the quality control exceedances and the appropriate pages have been attached to this Memo.

Those items showing deficiencies are discussed in the following sections of the report. Items not mentioned in the following discussion were found to be acceptable as outlined in the above-mentioned validation procedures and as applicable for the methodology. Unless noted specifically in the following text, reported results of the validated samples are substantiated by the raw data, and generated in compliance with the protocol requirements. Note that the Case Narratives attached for each of the Laboratory Reports reviewed may apply to items outside the scope of this Memo.

The laboratory reports provided were complete Category B analytical data packages and the data analyzed was generated using established analytical protocols. Copies of the laboratory case narrative, list of data reporting qualifiers, annotated quality control (QC) results, and annotated sample results are attached to this text and should be reviewed in conjunction with this report.

SGS LABORATORY REPORT JD48570

The samples collected for this analysis were delivered to the laboratory in good condition, properly preserved with temperatures within the acceptable range. The samples were extracted and analyses were performed within the allowable holding times.

Matrix Spike/ Matrix Spike Duplicates

The matrix spike recovered high for mercury in the MS/MSD processes associated with sample locations MH-FP-005-10-11 and MH-FP-005-11-12. The detected sample results associated with the high recovery should be qualified with a "J". Where necessary, the appropriate changes have been made in the laboratory report.

SGS LABORATORY REPORT JD48642

The samples collected for this analysis were delivered to the laboratory in good condition, properly preserved. The samples were extracted and analyses were performed within the allowable holding times.

Surrogate Recovery

Surrogate recoveries for TCB1 and TCB2 and DCB1 and DCB2 all recovered high in Leachate Blank 19 associated with sample WC-01. The detected values were appropriately qualified with a "J", therefore no change was made to the lab report.

Matrix Spike/ Matrix Spike Duplicates

The matrix spike recovered high for mercury in the MS/MSD processes associated with sample locations

MH-FP-006-3-4,	MH-FP-008-0-6,	MH-FP-008-4-5,	MH-FP-009-0-6,
MH-FP-006-4-5,	MH-FP-008-6-12,	MH-FP-008-5-6,	MH-FP-009-6-12,
MH-FP-006-5-6,	MH-FP-008-1-2,	MH-FP-008-6-7,	MH-FP-009-1-2,
MH-FP-006-6-7,	MH-FP-008-2-3,	MH-FP-008-7-8	MH-FP-009-2-3
MH-FP-006-7-8,	MH-FP-008-3-4,	Dup-01 and 02,	

The detected sample results associated with the high recovery should be qualified with a "J". Where necessary, the appropriate changes have been made in the laboratory report.

The RPD for hexachlorobutadiene and hexachloroethane recovered high in the MS/MSD associated with sample WC-01. The detected sample results associated with the high recovery should be qualified with a "J". However, these parameters were not detected, therefore no changes were made to the lab report.

Methoxychlor recovered high in the MSD associated with sample WC-01. The detected sample results should be qualified with a "J". However, this parameter was not detected, therefore no change was made to the lab report.

Initial/Continuing Calibration

The CCV for 2-Butanone (MEK) associate with sample WC-01 was outside of control limits, biased low. The sample result was ND, however the results should be qualified with a "J" as a result of the low bias. Where necessary, the appropriate changes have been made in the laboratory report.

Internal Standards, Target Compound Identification, and System Performance

During the analysis, the internal standard areas and the retention times were within acceptable ranges, target compounds were appropriately identified, and the system performance was satisfactory.

Additional Summary

Chloroform was detected in the method blank associated with sample WC-01 and qualified with a "B" in the lab report.

Pyridine recovered low in Blank Spike 1 associated with sample WC-01. The sample result was ND, however the results should be qualified with a “J” as a result of the low bias. Where necessary, the appropriate changes have been made in the laboratory report.

Heptachlor, methoxychlor, and the associated surrogates recovered high in Blank Spike 1 associated with sample WC-01. The detected values were appropriately qualified with a “J”, therefore no changes were made to the lab report.

The TCLP temperature and the leaching temperature for the leachate blank was out of range for 17 hours for analyses associated with sample WC-01.

SGS LABORATORY REPORT JD48789

The samples collected for this analysis were delivered to the laboratory in good condition, properly preserved. The samples were extracted and analyses were performed within the allowable holding times.

Matrix Spike/Matrix Spike Duplicates

Trichloroethene recovered high in the matrix spike and matrix spike duplicate associated with sample WC-04. The detected sample results should be qualified with a “J”. However, this parameter was not detected, therefore no change was made to the lab report.

2,4-D had no recovery in the matrix spike and matrix spike duplicate associated with sample WC-04. The sample result was ND, however the results should be qualified with a “J” as a result of the low bias. Where necessary, the appropriate changes have been made in the laboratory report.

The RPD's for eight parameters recovered high in the MS/MSD associated with sample WC-04. The detected sample results associated with the high recovery should be qualified with a “J”. However, these parameters were not detected, therefore no changes were made to the lab report.

Method Blank, Leachate Blank, Blank Spike

2,4-DCAA recovered low in blanks associated with sample WC-04.

2,4-D had low or no recovery in the leachate and blank spikes associated with sample WC-04.

The sample results were ND, however the results should be qualified with a “J” as a result of the low bias. Where necessary, the appropriate changes have been made in the laboratory report.

Additional Summary

Chloroform was detected in the leachate blank summary associated with sample WC-04 and qualified with a “B” in the lab report.

The TCLP temperature and the leaching temperature for the leachate blank was out of range for 16 hours for analyses associated with sample WC-04.

SGS LABORATORY REPORT JD48789T

The samples collected for this analysis were delivered to the laboratory in good condition, properly preserved with temperatures within the acceptable range. Samples were held and analyzed past the hold time for mercury.

Matrix Spike/Matrix Spike Duplicates

Mercury recovered high in the matrix spike associated with nearly all sample locations.

The RPD for mercury in the matrix spike duplicate exceeded quality control limits for the MS/MSD processes associated with nearly all sample locations.

The detected sample results associated with the high recovery should be qualified with a "J". Where necessary, the appropriate changes have been made in the laboratory report.

SGS LABORATORY REPORT JD48790

The samples collected for this analysis were delivered to the laboratory in good condition, properly preserved with temperatures within the acceptable range. The samples were extracted and analyses were performed within the allowable holding times.

Matrix Spike/ Matrix Spike Duplicates

Trichloroethene recovered high in the matrix spike and matrix spike duplicated associated with samples WC-02 and WC-03. The detected sample results should be qualified with a "J". However, this parameter was not detected, therefore no changes were made to the lab report.

2,4-D had no recovery in the matrix spike and matrix spike duplicate associated with samples WC-02 and WC-03. The sample result was ND, however the results should be qualified with a "J" as a result of the low bias. Where necessary, the appropriate changes have been made in the laboratory report.

Mercury recovered low in the MS/MSD associated with sample DUP-05. The sample results should be qualified with a "J" as a result of the low bias. Where necessary, the appropriate changes have been made in the laboratory report.

The RPD's for eight parameters recovered high in the MS/MSD associated with samples WC-02 and WC-03. The detected sample results associated with the high recovery should be qualified with a "J". However, these parameters were not detected, therefore no changes were made to the lab report.

Method Blank, Leachate Blank, Blank Spike

2,4-DCAA recovered low in method blank associated with samples WC-02 and WC-03.

2,4-D had low or no recovery in the leachate and blank spike associated with samples WC-02 and WC-03.

The sample results were ND, however the results should be qualified with a "J" as a result of the low bias. Where necessary, the appropriate changes have been made in the laboratory report.

Additional Summary

Chloroform was detected in the leachate blank summary associated with samples WC-02 and WC-03 and qualified with "B" in the lab report.

The TCLP temperature and the leaching temperature for the leachate blank was out of range for 16 hours for analyses associated with samples WC-02 and WC-03.

SGS LABORATORY REPORT JD48790U

The samples collected for this analysis were delivered to the laboratory in good condition, properly preserved with temperatures within the acceptable range. Samples were held and analyzed past the hold time for mercury.

Matrix Spike/Matrix Spike Duplicates

Mercury recovered high in the MD/MSD and showed high RPD associated with sample locations

MH-FP-013-3-4,	MH-FP-016-0-6,	MH-FP-016-4-5,	MH-FP-019-6-12,
MH-FP-013-4-5,	MH-FP-016-6-12,	MH-FP-016-5-6,	MH-FP-019-1-2,
MH-FP-013-5-6,	MH-FP-016-1-2,	MH-FP-016-6-7,	MH-FP-019-2-3,
MH-FP-013-6-7,	MH-FP-016-2-3,	MH-FP-016-7-8,	MH-FP- 019-3-4,
MH-FP-013-7-8,	MH-FP-016-3-4,	MH-FP-019-0-6,	MH-FP-019-4-5.

Mercury also recovered high in the MD/MSD and showed high RPD associated with sample locations MH-FP-019-5-6, MH-FP-019-6-7, and MH-FP-019-7-8. The detected sample results associated with the high recovery should be qualified with a "J". Where necessary, the appropriate changes have been made in the laboratory report.

SGS LABORATORY REPORT JD48859

The samples collected for this analysis were delivered to the laboratory in good condition, properly preserved with temperatures within the acceptable range. The samples were extracted and analyses were performed within the allowable holding times.

Matrix Spike/ Matrix Spike Duplicates

2,4-D had no recovery in the matrix spike and matrix spike duplicate associated with samples WC-05 and WC-06. 2,4-DCAA recovered low in the matrix spike and matrix spike duplicate associated with samples WC-05 and WC-06. The sample result was ND, however the results should be qualified with a "J" as a result of the low bias. Where necessary, the appropriate changes have been made in the laboratory report.

Mercury recovered low in the MS/MSD associated with sample locations

MH-FP-026-0-6,	MH-FP-026-4-5,	DUP-08,	MH-FP-027-4-5,
MH-FP-026-6-12,	MH-FP-026-5-6,	MH-FP-027-0-6,	MH-FP-027-5-6,
MH-FP-026-1-2,	MH-FP-026-6-7,	MH-FP-027-1-2,	MH-FP-027-6-7,
MH-FP-026-2-3,	MH-FP-026-7-8,	MH-FP-027-2-3,	MH-FP-027-7-8
MH-FP-026-3-4,	MH-FP-027-6-12,	MH-FP-027-3-4,	

The RPDs for the sample locations listed above recovered high. The sample results should be qualified with a "J" as a result of the low bias and evidence of matrix interference. Where necessary, the appropriate changes have been made in the laboratory report.

The RPD's for eight parameters recovered high in the MS/MSD associated with samples WC-05 and WC-06. The detected sample results associated with the high recovery should be qualified with a "J". However, these parameters were not detected, therefore no changes were made to the lab report.

Method Blank, Leachate Blank, Blank Spike

2,4-DCAA recovered low in blank and leachate spike associated with samples WC-05 and WC-06.
2,4-D had low or no recovery in the leachate and blank spike associated with samples WC-05 and WC-06.

The sample results were ND, however the results should be qualified with a “J” as a result of the low bias. Where necessary, the appropriate changes have been made in the laboratory report.

Additional Summary

Chloroform was detected in the leachate blank summary associated with samples WC-05 and WC-06 and qualified with “B” in the lab report.

The TCLP temperature and the leaching temperature for the leachate blank was out of range for 16 hours for analyses associated with samples WC-05 and WC-06.

SGS LABORATORY REPORT JD48859T

The samples collected for this analysis were delivered to the laboratory in good condition, properly preserved with temperatures within the acceptable range. Samples were held and analyzed past the hold time for mercury.

SGS LABORATORY REPORT JD48935T

The samples collected for this analysis were delivered to the laboratory in good condition, properly preserved with temperatures within the acceptable range. Samples were held and analyzed past the hold time for mercury.

SGS LABORATORY REPORT JD49007

The samples collected for this analysis were delivered to the laboratory in good condition, properly preserved with temperatures within the acceptable range. Samples were held and analyzed past the hold time for mercury.

Additional Summary

Chlorobenzene was detected in the leachate blank summary associated with samples WC-08 and WC-09. Detections were qualified with “B” in the lab report.

SGS LABORATORY REPORT JD49152

The samples collected for this analysis were delivered to the laboratory in good condition, properly preserved with temperatures within the acceptable range. The samples were extracted and analyses were performed within the allowable holding times.

Matrix Spike/ Matrix Spike Duplicates

Hexachlorobenzene recovered low in the matrix spike duplicate associated with samples WC-10 and WC-11. The sample results were ND, however the results should be qualified with a “J” as a result of the low bias. Where necessary, the appropriate changes have been made in the laboratory report.

2,4-D had no recovery in the matrix spike and matrix spike duplicate associated with samples WC-10 and WC-11.
2,4-DCAA recovered low in the matrix spike and matrix spike duplicate associated with samples WC-10 and WC-11. The sample result was ND, however the results should be qualified with a “J” as a result of the low bias.
Where necessary, the appropriate changes have been made in the laboratory report.

Mercury recovered low in the MS/MSD associated with sample locations

MH-FP-045-6-7,	MH-FP-046-2-3,	MH-FP-046-7-8,	MH-FP-048-2-3,
MH-FP-045-7-8,	MH-FP-046-3-4,	DUP-20, DUP-21,	MH-FP-048-3-4,
MH-FP-046-0-6,	MH-FP-046-4-5,	MH-FP-048-0-6,	MH-FP-048-4-5,
MH-FP-046-6-12,	MH-FP-046-5-6,	MH-FP-048-6-12,	MH-FP-048-5-6
MH-FP-046-1-2,	MH-FP-046-6-7,	MH-FP-048-1-2,	

The sample results should be qualified with a “J” as a result of the low bias. Where necessary, the appropriate changes have been made in the laboratory report.

The RPD’s for ten parameters recovered high in the MS/MSD associated with samples WC-10 and WC-11. The detected sample results associated with the high recovery should be qualified with a “J”. However, these parameters were not detected, therefore no changes were made to the lab report.

Method Blank, Leachate Blank, Blank Spike

2,4-DCAA recovered low in blank and leachate spike associated with samples WC-10 and WC-11.

2,4-D had low or no recovery in the leachate and blank spike associated with samples WC-10 and WC-11.

The sample results were ND, however the results should be qualified with a “J” as a result of the low bias. Where necessary, the appropriate changes have been made in the laboratory report.

Blank Spike

Six parameters recovered high in the blank spike associated with samples WC-10 and WC-11. The detected sample results associated with the high recovery should be qualified with a “J”. However, these parameters were not detected, therefore no changes were made to the lab report.

CONCLUSIONS

The samples were analyzed, and results reported with compliance to protocol requirements and with adherence to quality criteria unless otherwise noted. The laboratory results are usable as reported, or usable as qualified, estimated values.