



Construction Completion Report Operable Unit 5 (OU-5)

Sunnyside Yard
Queens, New York
(241006)

February 12, 2025

Prepared for:

National Railroad Passenger Corporation
Washington, D.C. 20002

Prepared by:

**Roux Environmental Engineering
and Geology, D.P.C.**
209 Shafter Street
Islandia, New York 11749

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- 1. Site Plan Sewer System Base Map

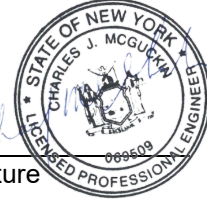
Certification

I, Charles J. McGuckin, certify that I am currently a New York State registered professional engineer and that this Construction Completion Report for Weir Replacement work performed within Operable Unit #5 (Site No. 241006) was prepared in accordance with all applicable statutes and regulations and in substantial conformance with the New York State Department of Environmental Conservation Division of Environmental Remediation Technical Guidance for Site Investigation and Remediation (DER-10), the NYSDEC-approved alternate weir design dated November 27, 2023, by Metropolitan Transport Authority – East Side Access, and the NYSDEC-approved Operation, Maintenance and Monitoring (OM&M) Plan which is attached as Appendix I in the approved OU-5 CCR dated March 23, 2023.

Charles J. McGuckin, P.E.
NYS Professional Engineer #069509

February 12, 2025
Date

Signature



1. Background and Site Description

National Railroad Passenger Corporation (Amtrak) and the New Jersey Transit Corporation (NJTC) entered into an Order on Consent (OOC) Index #W2-0081-87-06 with the New York State Department of Environmental Conservation (NYSDEC) in October 1989 for the Remedial Investigation (RI)/Feasibility Study (FS) portions of the remedial program at a 133-acre property located at Sunnyside Yard (Yard), 39-29 Honeywell Street in Queens, New York. Further, Amtrak and NJTC entered into the subsequent OOC Index #W2-0081-08-10 with NYSDEC in May 2010 for the implementation of NYSDEC-approved remedies at the Yard. Sunnyside Yard is listed as a Class II Site in the NYSDEC's Registry of Inactive Hazardous Waste Disposal Sites. A United States Geological Survey topographical quadrangle map (Figure 1) shows the Yard location.

The Yard is bounded by the Metropolitan Transportation Authority (MTA)/Long Island Railroad (LIRR) property to the north, Skillman Avenue to the south, light industrial and commercial properties and 42nd Place to the east, and Thomson Avenue to the west. The Yard functions as a maintenance facility for electric locomotives and railroad cars for Amtrak and a train layover storage yard for NJTC.

The Yard was subdivided into six Operable Units (OU) (Figure 2). The operable units are described as follows:

- Operable Unit 1 (OU-1) soil above the water table within the footprint of the proposed HSTF S&I Building. A Record of Decision (ROD) was issued for OU-1 in August 1997, and the remedial work was completed in April 1998;
- Operable Unit 2 (OU-2) soil above the water table within the footprint of the HSTF S&I Building ancillary structures. A No Further Action ROD was issued for OU-2 in November 1997;
- Operable Unit 3 (OU-3) soil and separate phase petroleum hydrocarbon (SPH) accumulation above the water table and soil below the water table within 8 acres in the north central portion of the Yard. The northern boundary of OU-3 extends onto MTA/LIRR property. A ROD was issued for OU-3 in March 2007, and the remedial work has been completed, and only monitoring is required.
- Operable Unit 4 (OU-4) soil above the water table (unsaturated zone) at the Yard, excluding the areas defined as OU-1, OU-2, and OU-3. A ROD was issued for OU-4 in March 2009;
- Operable Unit 5 (OU-5) sewer system (water and sediment) beneath the Yard. A ROD was issued for OU-5 in March 2012, and the majority of remedial work has been completed; and
- Operable Unit 6 (OU-6) saturated soil and the ground water beneath the Yard. OU-6 was later modified to also include soil vapor. A ROD was issued for OU-6 in March 2010. The remedy for OU-6 includes only routine monitoring in accordance with a Shallow Groundwater Monitoring Plan.

Roux Environmental Engineering and Geology, D.P.C. (Roux) has prepared this Construction Completion Report (CCR) to summarize Operations Maintenance and Monitoring (OM&M) activities performed by others under the oversight of MTA and Amtrak between September 2024 and October 2024 in Operable Unit 5 (OU-5) of the Yard.

A Site Plan presenting the sewer system layout is presented in Plate 1. The Yard-wide sewer system consists of two (2) separate subsystems: the primary combined sewer system in the main section of the Yard servicing among other facilities, the commissary area, engine house, and the body tracks, which ultimately discharges to NYCDEP's Bowery Bay Wastewater Treatment Plant. The secondary sewer system is significantly smaller than the primary system and is a storm sewer system that serves the western section of the Yard (this portion

of the Yard does not contain industrial activities). The secondary storm sewer system, which discharges to a sewer beneath 28th Street, is combined with other storm water discharge (unrelated to Amtrak or Yard operations) and ultimately discharges into Dutch Kills.

Manhole MH-40, located offsite and just downstream of the MTA/LIRR property, represents the collection point of three (3) sewer legs comprising the primary sewer system, and it is the furthest downstream manhole located in OU-5. As part of the OU-5 remedy, a weir was constructed of sandbags within MH-40 to mitigate suspended sediments in the combined outflow. The OM&M Plan for OU-5 requires periodic inspections of MH-40 and the weir. In 2023, an inspection of MH-40 weir, conducted by MTA, indicated that maintenance of the polyethylene sandbag weir was required. Instead of maintaining the existing weir, MTA proposed replacing the sandbag weir with a more robust concrete weir. The concrete weir design was submitted and approved by NYSDEC in their November 29, 2023 approval letter. This CCR summarizes work performed to install the concrete weir.

Of note, MH-40, which is referred to as “MH-M” by MTA, is *not* an Amtrak property, and is *not* controlled by Amtrak; however, MH-40 is associated with OU-5 of the Yard. After MH-40, wastewater flows through multiple structures, including an inverted siphon, on MTA property as shown on Figures in Appendix A. The siphon was constructed in 1998 to accommodate the MTA’s East Side Access. The siphon functions as a component of the New York City Department of Environmental Protection (NYCDEP) combined sewer system wherein sewage and stormwater are passed within. The siphon is comprised of three chambers (i.e., Chambers A, B and C). The siphon is located north of the Long Island Railroad (LIRR) Mid-Day Yard, and the Amtrak and New Jersey Transit Corporation (NJTC) Sunnyside Yard at the intersection of Northern Boulevard and 40th Avenue, Queens, New York and is not part of OU-5.

In September 2021, Hurricane Ida impacted New York City. According to the NYCDEP, large volumes of stormwater flowed into the siphon during the Hurricane Ida event carried an excessive quantity of material within tunnels and associated sumps connecting Chambers B and C (note the siphon, including Chambers B and C are not part of OU-5, nor are they on Amtrak Yard property). To improve siphon functionality, NYCDEP and MTA/LIRR agreed to collectively undertake a combined sewer cleanout effort from the siphon back upstream to MH40 concluding at MH2 (the furthest downstream location on Amtrak Yard property). As part of this effort, NYCDEP’s contractor collected waste characterization samples from these downstream structures (as described in the following section).

2. Scope of Work

Previous remediation of OU-5 was performed in accordance with the OU-5 RAWP dated September 26, 2012, and approved by NYSDEC in a letter dated January 30, 2013. The results of the OU-5 remediation were summarized in the approved OU-5 CCR dated March 23, 2023, which included an OM&M Plan as Appendix I.

Part of the OU-5 remedy included the installation of a weir within the terminal manhole, MH-40, of the sewer system. The original MH-40 weir was constructed of polyethylene sandbags. Each bag was constructed of durable polyethylene manufactured to be resistant to chemicals, oil, and ultraviolet damage. The sandbag weir was configured to be three rows deep (approximately 3.5 feet long), and three bags in height (approximately 18- inches tall), across the entire east-west span of the Manhole MH-40 vault area.

As discussed in the March 23, 2023 CCR, maintenance was performed in February 2022, which included the reconstruction of the MH-40 weir with new sandbags.

As a requirement of the approved OU-5 OM&M Plan, inspection of the MH-40 weir is required every two years. If the inspection indicates that maintenance of the weir is required, NYSDEC is required to be notified prior to performing maintenance of MH40 weir.

An inspection of MH-40 weir, conducted by MTA in 2023, indicated that maintenance of the polyethylene sandbag weir was required.

2.1 Proposed Maintenance and NYSDEC Approval

In response to the required maintenance, an alternate weir design, constructed of reinforced concrete, was prepared by MTA East Side Access and submitted to NYSDEC for their review and approval on November 27, 2023. On November 29, 2023, NYSDEC issued an approval letter for the alternative weir design. A copy of the alternative weir design and NYSDEC approval letter are included in Appendix B herein.

2.2 Sediment Waste Characterization

Prior to installation of the approved alternative weir design, waste characterization sampling of sediment was performed within downstream structures of MH-40. The sediment waste characterization sampling was performed by H2M Architects and Engineers (H2M) on behalf of NYCDEP on March 16, 2023. A total of four sediment samples were collected for laboratory analysis. The samples were analyzed for parameters based on the proposed disposal facility. The analytical results indicated Aroclor 1260 was detected in all four samples in concentrations ranging from 0.0348 milligrams per kilogram (mg/kg) to 2.2 mg/kg. The results of the sediment sampling are included in the In-Situ Waste Characterization letter report prepared by H2M dated April 14, 2023 found in Appendix C herein.

2.3 Sediment Removal and Disposal

Per conditions of the ROD for OU-5, Amtrak has responsibility to clean out sediment of a 45-foot segment within vicinity of the weir. Between September 3 and 6, 2024, National Water Main Cleaning Company (NWMCC), under the oversight of NYCDEP/MTA/Amtrak, removed and disposed of sediments from sewer system in the vicinity of MH-40. A total of 54.88 tons of sediment was removed by vacuum truck and subsequently transported and disposed of at Lemcor, Inc., 170 Frelinghuysen Avenue, Newark, NJ, 074114.

Roux conducted an inspection of the removal of the sediments from MH-40 on September 5, 2024. Roux observed NWMCC enter the confined space at MH-40 and proceed to remove former structures within the manhole including wood debris and piping. NWMCC then proceeded to use a vacuum truck to remove sediment from within the manhole structure.

A copy of the NYCDEP daily work reports associated with the sediment removal and the waste facility disposal scale tickets are included in Appendix D herein.

2.4 Weir Construction and As-Built Drawing

Between September 30 and October 4, 2024, JLJ IV Enterprises Inc., under the oversight NYCDEP performed the installation of the NYSDEC-approved alternative weir within MH-40.

In accordance with the NYSDEC-approved design drawing, the alternative weir was installed in the same location as the original sandbag weir. The top of the new weir was installed at the same invert elevation as the previous weir to ensure the alternative weir functions in accordance with the original design. The alternative weir was constructed of reinforced concrete and measures 8-inches wide, 18-inches high, and spans the entire 9.5-foot length of the manhole structure.

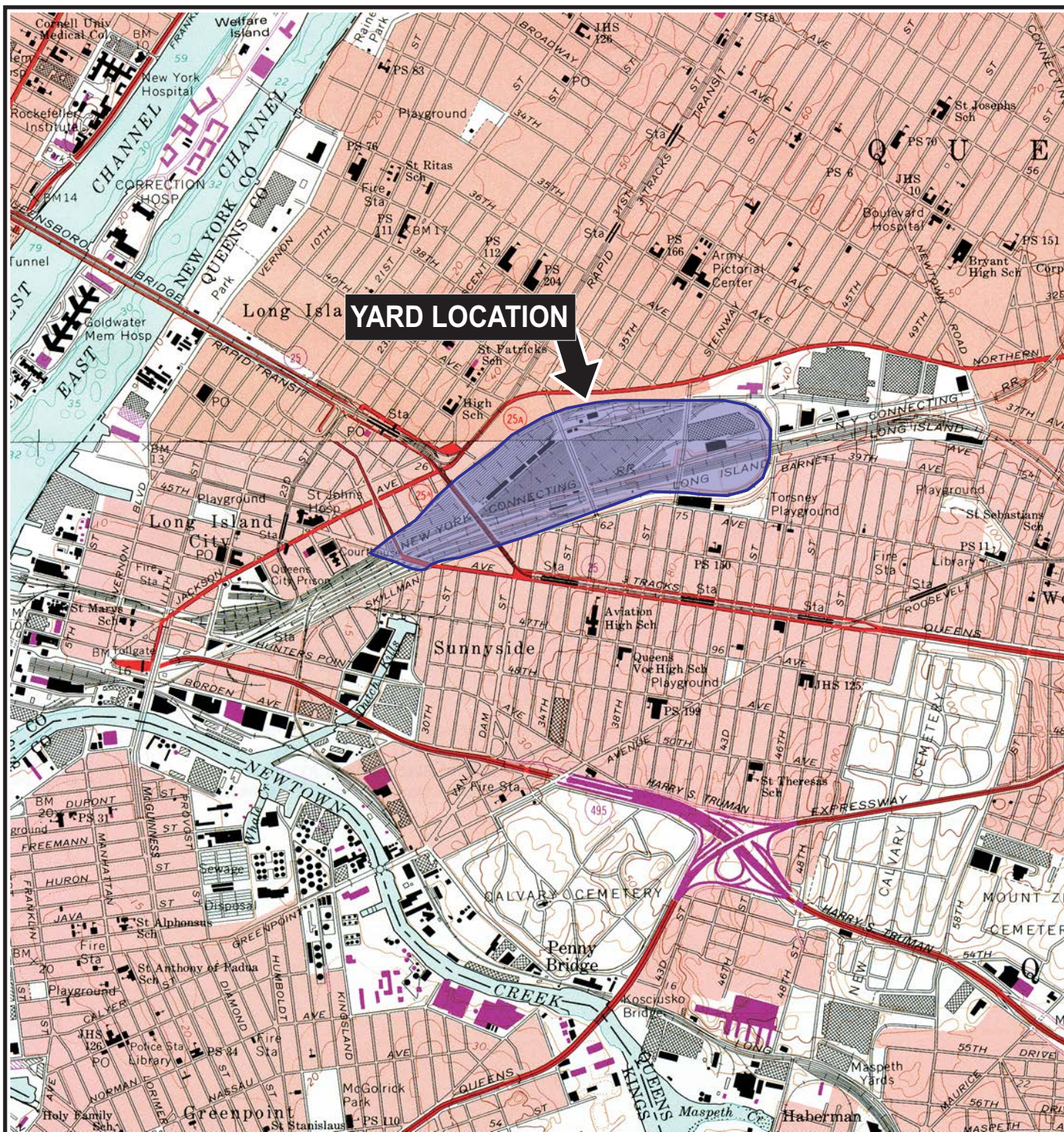
Following the installation of the alternative weir within MH-40, an as-built drawing of weir was prepared and certified by Donald Van Gerve, P.E.

A copy of the NYCDEP daily work reports during installation and the as-built drawing of the alternative weir are included Appendix E herein.

OU-5 Construction Completion Report *Sunnyside Yard, Queens, New York*

FIGURES

1. Location of Site
2. Amtrak Sunnyside Yard Layout



SOURCE:
CENTRAL PARK AND BROOKLYN, NEW YORK
QUADRANGLE 7.5 MINUTE SERIES (TOPOGRAPHIC)



QUADRANGLE
LOCATION

0 2000'



Title:

LOCATION OF SITE

OPERABLE UNIT 5 CONSTRUCTION COMPLETION REPORT
SUNNYSIDE YARD, QUEENS, NEW YORK

Prepared for:

AMTRAK

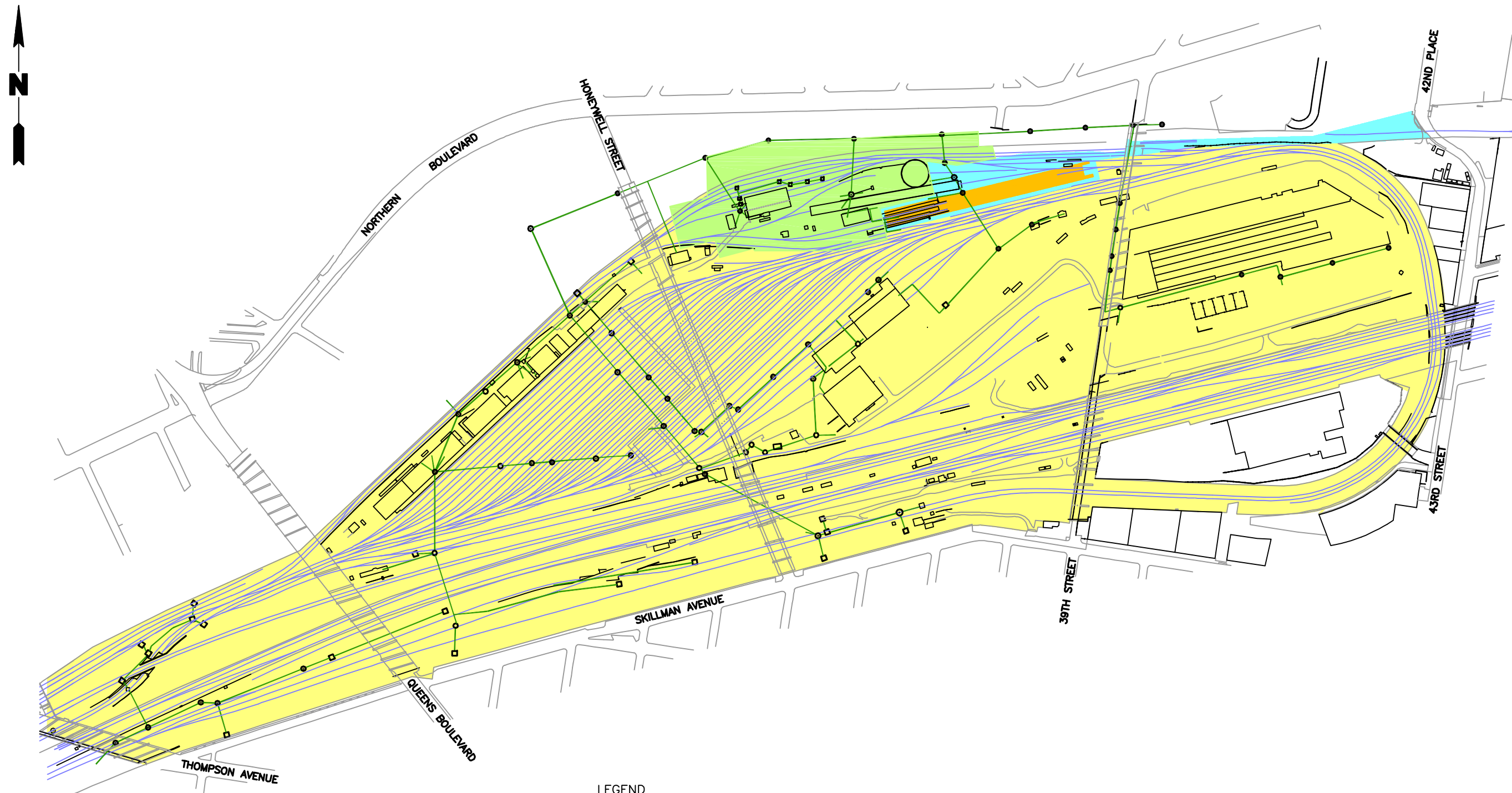
ROUX
ROUX ASSOCIATES, INC.
Environmental Consulting
& Management

Compiled by: H.G.	Date: 19MAR14
Prepared by: J.A.D.	Scale: AS SHOWN
Project Mgr.: H.G.	Project No.: 0055.0050Y008
File: 0055.0050Y135.01.CDR	

FIGURE

1

V:\CAD\PROJECTS\0055Y\0050Y\135\0055.0050Y135.05.DWG

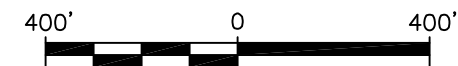


NOTES

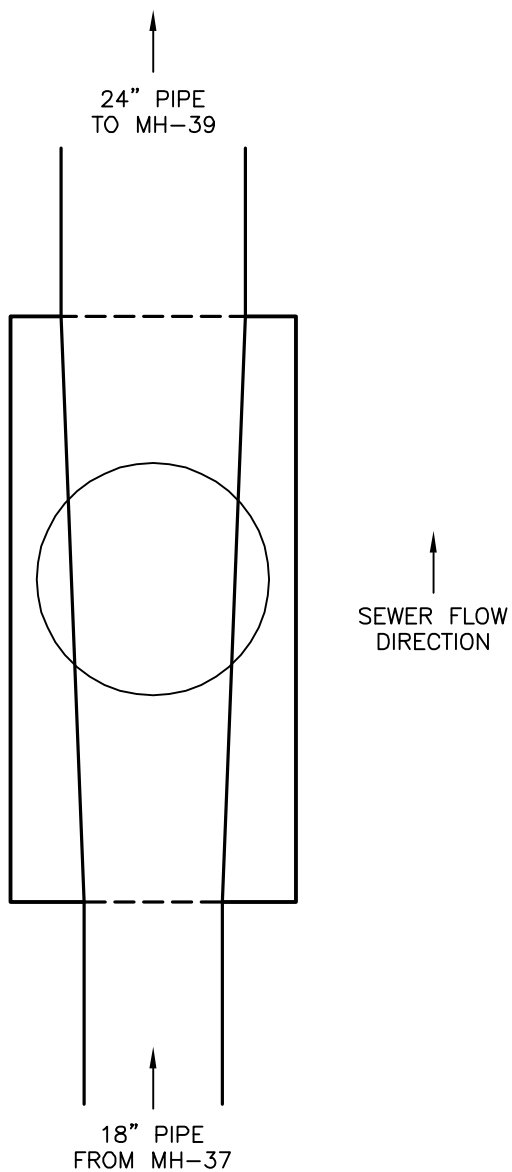
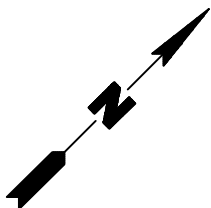
1. LOCATIONS OF SEWER COMPONENTS BASED UPON A REVIEW OF AMTRAK-SUPPLIED ENGINEERING DIAGRAMMS AND LIMITED FIELD SURVEY.
2. OU-6, GROUNDWATER BENEATH THE YARD (UNDERLIES ALL OTHER OU's)
3. LIRR - LONG ISLAND RAIL ROAD

LEGEND

- LOCATION OF RAILROAD TRACK
- APPROXIMATE LOCATION OF SEWER
- GRATE COVER CATCH BASIN LOCATION
- SOLID COVER MANHOLE LOCATION
- GRATE COVER MANHOLE LOCATION
- APPROXIMATE PROPERTY BOUNDARY
- OU-1
- OU-2
- OU-3
- OU-4
- OU-5 (YARD SEWER SYSTEM)
- OU-6, GROUNDWATER BENEATH THE YARD (UNDERLIES ALL OTHER OU's)



Title:			
AMTRAK YARD LAYOUT			
OPERABLE UNIT 5 CONSTRUCTION COMPLETION REPORT SUNNYSIDE, QUEENS, NEW YORK			
Prepared For:			
AMTRAK			
Remedial REMEDIAL ENGINEERING, P.C. ENVIRONMENTAL ENGINEERS	Compiled by: H.G.	Date: 27MAY14	FIGURE 2
	Prepared by: J.A.D.	Scale: AS SHOWN	
	Project Mgr: R.S.K.	Project: 0055.0050Y008	
File: 0055.0050Y135.05.DWG			



Title:

MH-38 PLAN VIEW

OPERABLE UNIT 5 CONSTRUCTION COMPLETION REPORT
SUNNYSIDE YARD, QUEENS, NEW YORK

Prepared For:

AMTRAK

Remedial

REMEDIAL ENGINEERING, P.C.
ENVIRONMENTAL ENGINEERS

Compiled by: R.M.

Prepared by: J.A.D.

Project Mgr: R.S.K.

File: 0055.0050Y135.02.DWG

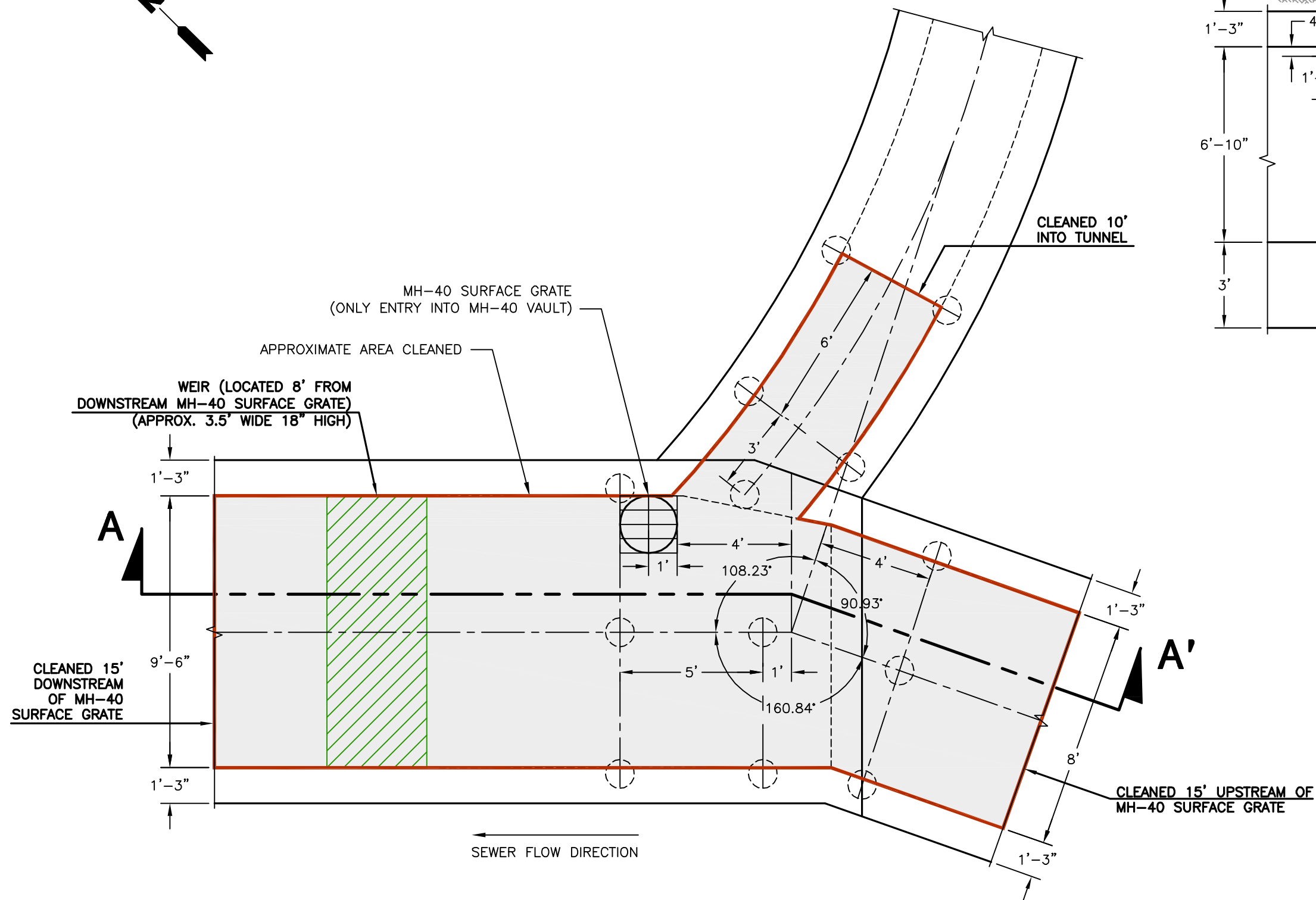
Date: 27MAY14

Scale: NOT TO SCALE

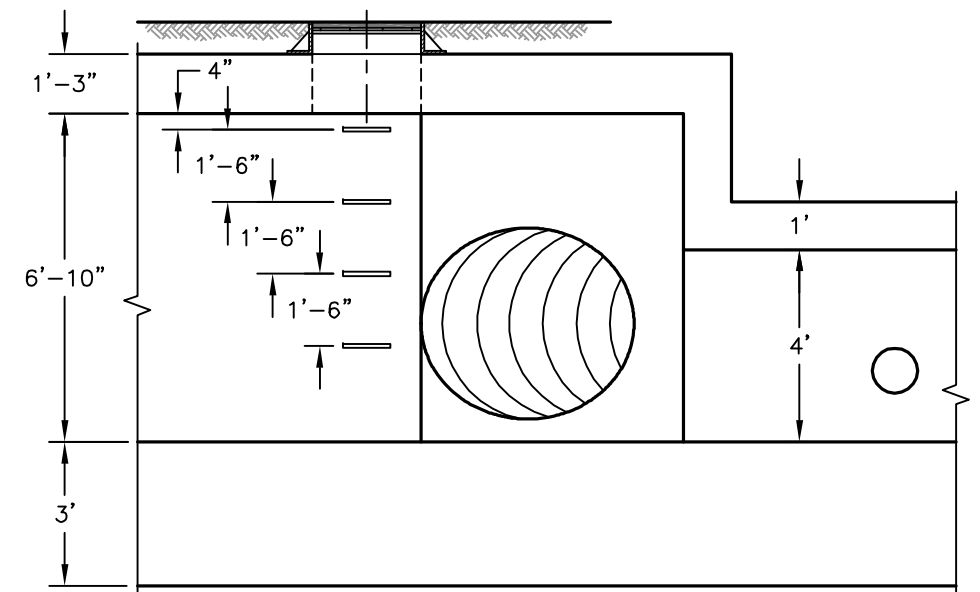
Project: 0055.0050Y008

FIGURE

3



PLAN VIEW
APPROXIMATE SCALE: 1/4" = 1'-0"



SECTION A-A'
APPROXIMATE SCALE: 1/4" = 1'-0"

LEGEND



MANHOLE-40(MH-40) SURFACE GRATE



AREA CLEANED



SAND-BAG WEIR CONSTRUCTED
AS PART OF OU-5 REMEDY

Title:

MH-40 DETAIL

OPERABLE UNIT 5 CONSTRUCTION COMPLETION REPORT
SUNNYSIDE YARD, QUEENS, NEW YORK

Prepared For:

AMTRAK



REMEDIAL ENGINEERING, P.C.
ENVIRONMENTAL ENGINEERS

Compiled by: J.G.

Prepared by: J.A.D.	Scale: AS SHOWN
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C.	Project Mgr: R.S.K.	Project: 0055.0050Y008
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File: 0055.0050Y135.03.DWG

FIGURE

OU-5 Construction Completion Report
Sunnyside Yard, Queens, New York

APPENDICES

- A. As-Built Figures of MTA Siphon
- B. NYSDEC Approval Letter
- C. Waste Characterization Letter Report
- D. Sediment Disposal Daily Work Reports and Disposal Tickets
- E. Weir Replacement Daily Work Reports and As-Built Drawing

OU-5 Construction Completion Report
Sunnyside Yard, Queens, New York

APPENDIX A

As-Built Figures of MTA Siphon

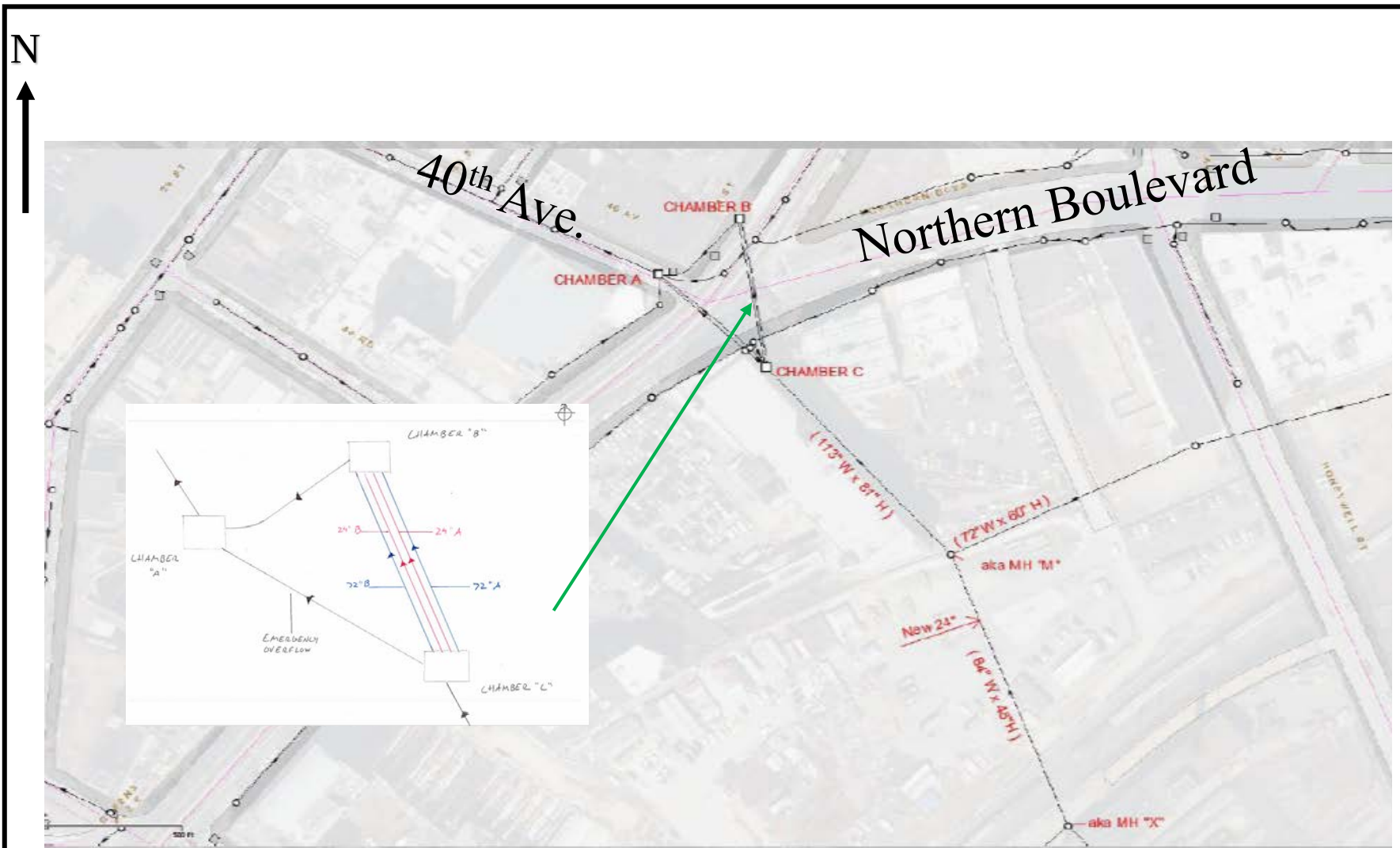


Figure 1 Site Location and Sewer Layout Map
In-Situ Waste Characterization Sampling Work Plan
Northern Boulevard Siphon Cleaning at MTA East Side Access
Queens, New York



architects + engineers
230 West 36th Street, 14th Floor
New York, NY 10018

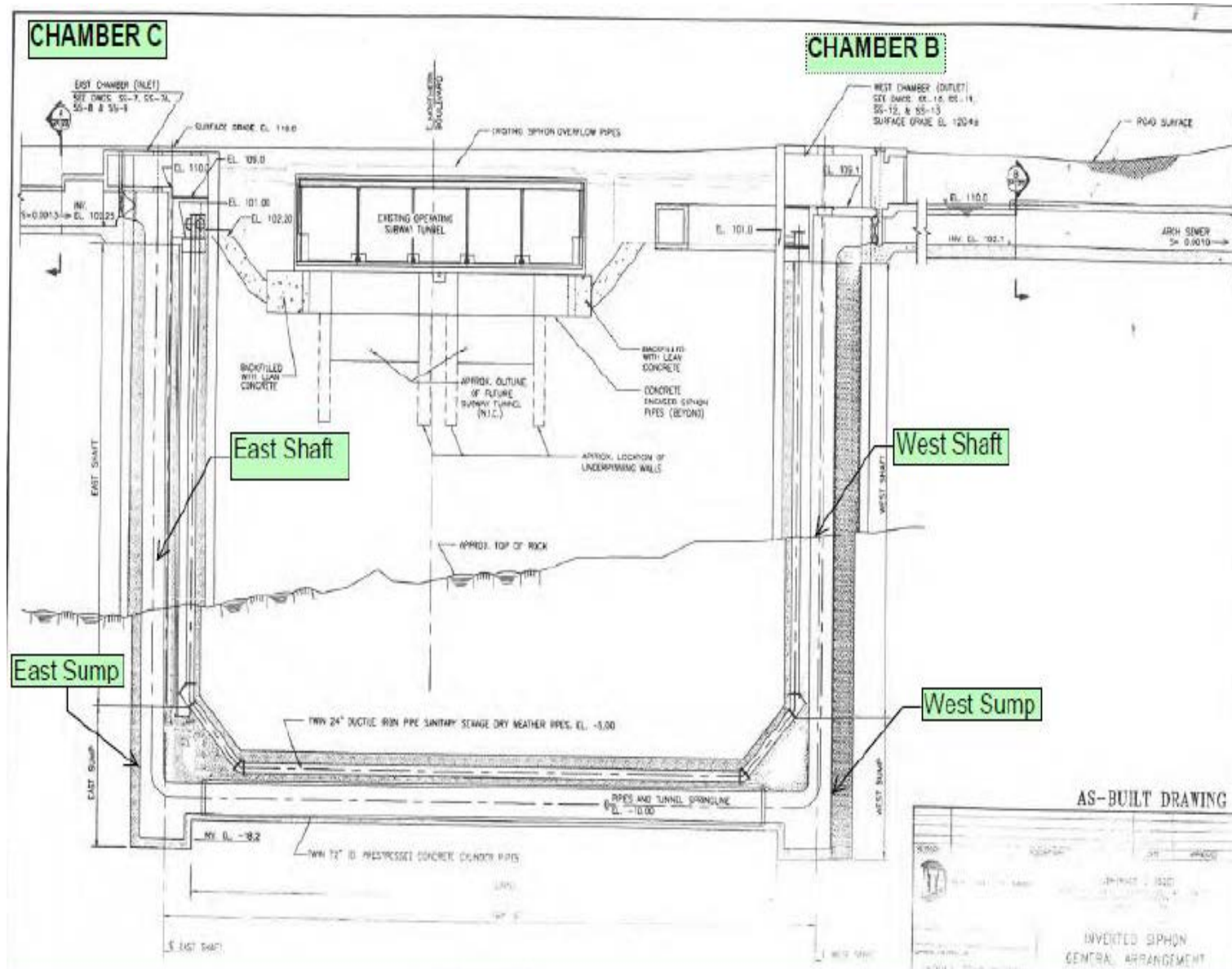


Figure 2 Siphon As-Built Drawing
In-Situ Waste Characterization Sampling Work Plan
Northern Boulevard Siphon Cleaning at MTA East Side Access
Queens, New York

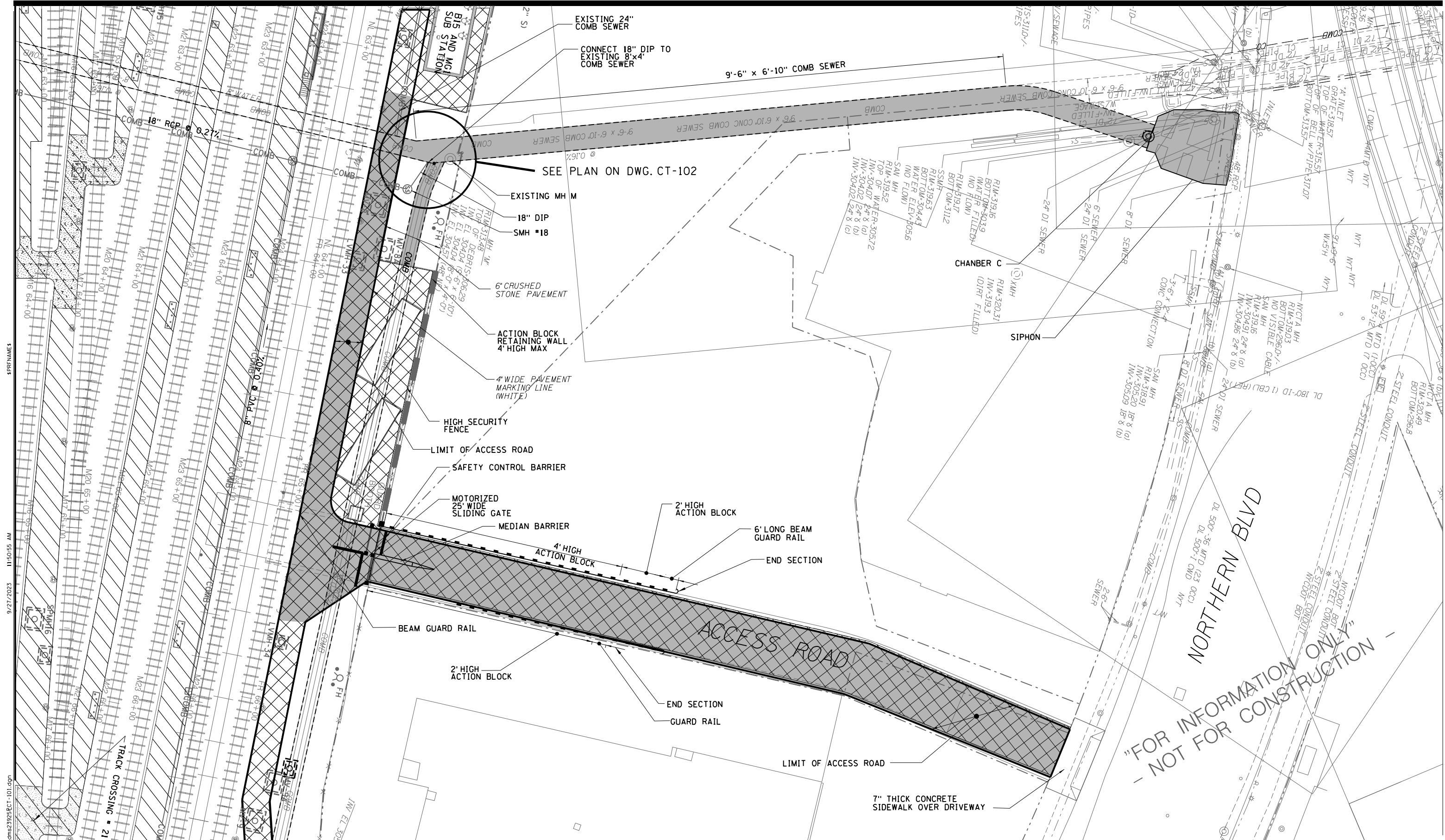


architects + engineers
230 West 36th Street, 14th Floor
New York, NY 10018

OU-5 Construction Completion Report
Sunnyside Yard, Queens, New York

APPENDIX B

NYSDEC Approval Letter



9/27/2023 11:50:55 AM \$PRNAME\$ c:\projects\self-foundation\p\ms2395\CT-101.dgn

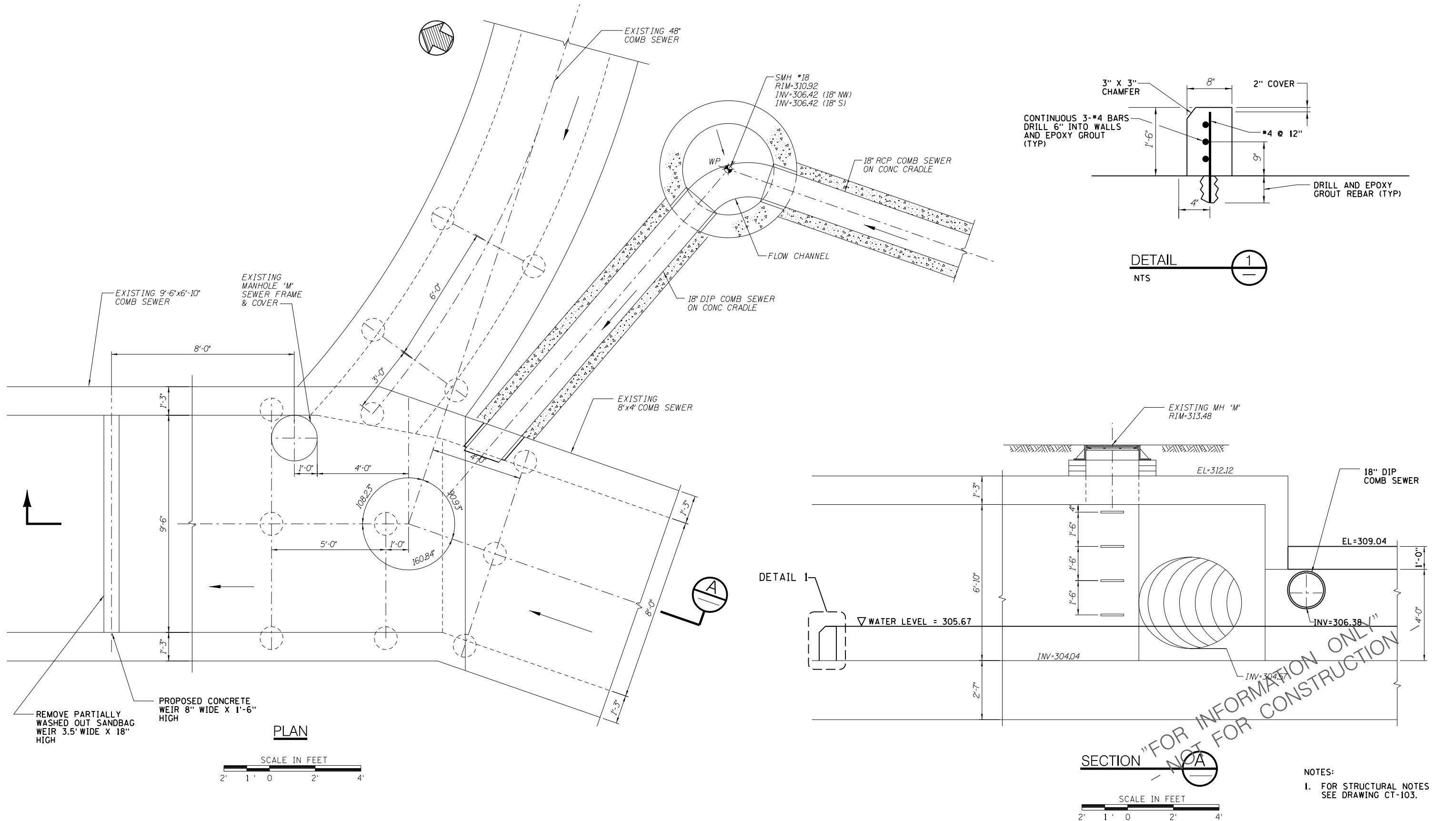
**Construction & Development**

**East Side Access**

DESIGN OF PERMANENT WEIR AT MANHOLE M
GENERAL CIVIL – LOCATION PLAN
DWG. CT-101

**GEC**
General Engineering Consultant

**WSP
STV
PARSONS**
WSP USA
STV INCORPORATED
PARSONS TRANSPORTATION
GROUP OF NEW YORK INC.
469 Seventh Avenue • New York, NY • 10018



STRUCTURAL NOTES:

1. CAST-IN-PLACE CONCRETE

F'C = 4,000 PSI
2. EPOXY COATED REINFORCING STEEL (ASTM A775 GRADE 60)

FY = 60,000 PSI
3. MINIMUM COVER FOR REINFORCEMENT

3"
4. ALL EXPOSED CAST-IN-PLACE CONCRETE EDGES SHALL BE CHAMFERED 3/4" X 3/4" UNLESS NOTED OTHERWISE

CONCRETE

- A. USE PREMIX HIGH STRENGTH CONCRETE MIX BY SAKRETE OR APPROVED EQUAL
- B. THE WATER USED FOR MIXING CONCRETE SHALL BE POTABLE FRESH WATER.
- C. ALLOWED SLUMP SHALL BE 4 INCHES +/- 1 IN.
- D. SUBMIT PRODUCT FOR ENGINEER'S APPROVAL

EPOXY GROUTING OF REINFORCING

- A. NONSHRINK EPOXY GROUT SHALL BE A 100% SOLIDS, VERY HIGH STRENGTH, HIGH PERFORMANCE, PRE-PACKAGED SYSTEM CONTAINING THERMOSETTING EPOXY RESINS, EXPANSIVE ADDITIVES AND INERT FILLERS. THE MANUFACTURER SHALL BE ISO 9001 CERTIFIED AND HAVE AT LEAST 10 YEARS EXPERIENCE IN THE MANUFACTURE OF NONSHRINK EPOXY GROUTS. THE MANUFACTURER SHALL OFFER TECHNICAL SERVICES AND PROVIDE A REPRESENTATIVE AT THE JOBSITE FOR PRODUCT TRAINING PRIOR TO PRODUCT INSTALLATION UPON FIVE DAYS ADVANCE NOTICE.
- B. THE MATERIAL SHALL MEET ALL THE FOLLOWING TYPICAL PERFORMANCE CRITERIA WHEN POST CURED AT 70°F
 1. COMPRESSIVE STRENGTH, ASTM C 579 B* UNIT TYPE STANDARD GRADE STRENGTH COMP. STRENGTH 1 DAY 16,500 PSI, 7 DAY 17,500 PSI, 28 DAYS 20,000 PSI
 2. HEIGHT CHANGE, ASTM C 827 70 F POSITIVE EXPANSION POSITIVE EXPANSION
 3. EFFECTIVE BEARING AREA 95%
 4. TENSILE STRENGTH, ASTM C 307 70 F (2,000 PSI)
 5. CREEP, ASTM C 1181 1 YEAR, 400 PSI, 140F 0.5 X 10-3 IN/IN 1.0 X 10-3 IN/IN
 6. FLEXURAL STRENGTH, ASTM C 580 5,000 PSI
 7. BOND TO CONCRETE, ASTM C 882 CONCRETE FAILURE CONCRETE FAILURE
 8. COEFFICIENT OF EXPANSION, ASTM C 531 16 X 10-6 IN/IN/OF 17 X 10-6 IN/IN/OF
- C. CONCRETE SURFACES
SHALL BE DIMENSIONALLY STABLE, FREE OF OIL, GREASE, LAITANCE AND OTHER CONTAMINANTS. MECHANICALLY ROUGHEN SURFACES TO OBTAIN CLEAN, SOUND CONCRETE BY ACCEPTABLE MECHANICAL MEANS, EXPOSING COARSE AGGREGATE. USE TOOLS SUCH AS PNEUMATIC CHIPPING GUNS FOR MECHANICAL SURFACE PREPARATION. DO NOT USE JACK HAMMERS TO PREPARE CONCRETE SURFACES.
- D. PRIOR TO PLACEMENT, CONCRETE SURFACES SHALL BE VISIBLY DRY AND BLOWN FREE OF DUST AND DEBRIS USING OIL-FREE COMPRESSED AIR
- E. SUBMIT EPOXY PRODUCT FOR ENGINEER'S APPROVAL.

EXECUTION

- DEWATER THE WORK AREA BY BLOCKING THE FLOW IN THE CULVERT UP STREAM PUMPING THE FLOW AROUND THE WORK AREA.
- REMOVE ALL ACCUMULATED DEBRIS INCLUDING ANY REMAINING SANDBAGS FROM THE WORK AREA. THOROUGHLY CLEAN ALL SURFACES OF THE EXISTING CONCRETE THAT WILL ABOUT THE NEW CONCRETE.
- DRILL AND EPOXY GROUT REBAR AS SHOWN ON THE PLANS.
- FORM THE WEIR AS SHOWN ON THE PLANS.
- CAST IN PLACE CONCRETE.
- FORMS CAN BE STRIPPED AFTER 48 HOURS AND INSPECTION BY THE ENGINEER. ANY VOIDS OR HONEYCOMBING SHALL BE REPAIRED.
- DEWATERING CAN BE REMOVED WITH THE ENGINEERS ACCEPTANCE OF THE CONCRETE WORKMANSHIP.

"FOR INFORMATION ONLY"
- NOT FOR CONSTRUCTION -

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

Division of Environmental Remediation, Region 2

47-40 21st Street, Long Island City, NY 11101

P: (718) 482-4995

www.dec.ny.gov

November 29, 2023

VIA EMAIL

Claudia Taccetta
National Railroad Passenger Corporation
400 West 31st Street
New York, NY 10001
claudia.taccetta@amtrak.com

Re: Amtrak Sunnyside Yard - Operable Unit (OU) 5
Site Code 241006
Weir Replacement

Dear Ms. Taccetta:

The New York State Department of Environmental Conservation (the Department) has reviewed the proposal to replace the existing 18-inch weir made of sandbags located downstream from MH-40 with 18-inch concrete weir at the same location. The proposal was submitted on November 27, 2023, by Metropolitan Transport Authority – East Side Access. The Department has no objection to the proposed change.

After the completion of weir replacement, a Construction Completion Report (CCR) must be submitted within one month by Roux Environmental Engineering and Geology, D.P.C. (ROUX) with certified as-build drawings. The CCR will document all activities performed, including contaminated media removal from MH-40, waste disposal etc. All work must be done in accordance with the approved Operation, Maintenance and Monitoring (OM&M) Plan which is attached as Appendix I in the approved OU-5 CCR dated March 23, 2023.

If you have any questions regarding this letter, please call me at (718) 482-6405.

Sincerely,



Hasan Ahmed
Project Manager

cc: J. O'Connell, C. Maycock – NYSDEC
S. McLaughlin, A. Ghosh – NYSDOH
C. McGuckin, R. Kovacs, J. Wills – Roux
M. Panhuise – Amtrak
L. Blugh-Willis, T. Lhundup – MTACC-ESA



Department of
Environmental
Conservation

OU-5 Construction Completion Report
Sunnyside Yard, Queens, New York

APPENDIX C

Waste Characterization Letter Report

April 14, 2023

Ms. Shay McAtmney
New York City Department of Environmental Protection
Chief Environmental Compliance Bureau of Water and Sewer Operations
59-17 Junction Boulevard, 3rd Floor Low-rise
Flushing, New York 11373

**Re: In-Situ Waste Characterization
Northern Boulevard Siphon Cleaning at MTA East Side Access**

Dear Ms. McAtmney:

At the request of the New York City Department of Environmental Protection (DEP), H2M architects + engineers (H2M) conducted in-situ waste characterization sampling for pre-characterization sampling associated with DEP's proposed Northern Boulevard Siphon Cleaning at the Mass Transit Authority (MTA) East Side Access (hereinafter the "Siphon"). The project will involve the removal of approximately 790 tons of combined sewer sediments and sludges (hereinafter "material"). A site location and sewer layout map, and a Siphon as-built drawing are provided as **Figures 1 and 2**, respectively and are provided in **Attachment A**.

The Siphon was constructed in 1998 to accommodate the MTA's East Side Access. The Siphon functions as a component of the DEP's combined sewer system wherein sewage and stormwater are passed within. The Siphon is comprised of three chambers (i.e., Chambers A, B and C). The Siphon is located north of the Long Island Railroad (LIRR) Mid-Day Yard, and the Amtrak and New Jersey Transit Corporation (NJTC) Sunnyside Yard at the intersection of Northern Boulevard and 40th Avenue, Queens, New York. The Sunnyside Yard is listed as a Class II Site in the New York State Department of Environmental Conservation's (NYSDEC's) Registry of Inactive Hazardous Waste Disposal Sites. The major contaminants of concern associated with the Sunnyside Yard are polychlorinated biphenyls (PCBs).

In September 2021, Hurricane Ida impacted New York City. According to the DEP, stormwater flowed into the Siphon during the Hurricane Ida event carrying an excessive quantity of material that currently remain within tunnels and associated sumps connecting Chambers B and C. Due to the proximity to the nearby Sunnyside Yard, an in-situ waste characterization plan was considered necessary to determine if contamination was present within the material prior to the removal of same.

Chamber B is commonly referred to as the "West Shaft" and the "West Sump". Chamber C is commonly referred to as the "East Shaft" and the "East Sump". The bases (i.e., sumps) of Chambers B and C are approximately 6 feet wide and located approximately 125 feet below grade (ftbg). Two pairs of 72-inch and 24-inch tunnels connect Chambers B and C and are approximately 162.5 feet in length. The western 72-inch tunnel is commonly referred to as the "West Siphon", and the eastern 72-inch tunnel is commonly referred to as the "East Siphon". Based upon information provided by the DEP, the West Siphon and East Siphon are estimated to contain 278 tons and 412 tons of material, respectively.

General flow direction between the two chambers is northward from Chamber C to Chamber B. Removal of material within and between Chambers B and C is critical to restore flow within the Siphon. Presently, the East Siphon is completely blocked and the flow within the West Siphon is significantly decreased.

It is important to note that the DEP and the Siphon are not subject to any United States Environmental Protection Agency (USEPA) or NYSDEC-mandated agreements. In-situ waste characterization sampling was conducted proactively due to the potential migration of impacted material from a nearby off-site source (i.e., Sunnyside Yard).

The overall project involves a cleanout of an existing combined sewer; therefore, no material is to be re-used and all removed material is to be disposed offsite. Prior to conducting in-situ sampling, H2M identified two disposal facilities capable of accepting the DEP's combined sewer materials if impacted with elevated concentrations of PCBs. The two facilities permitted to accept this type of waste material are: J.P. Mascaro & Sons Pioneer Crossing Landfill in Birdsboro, Pennsylvania and J.P. Mascaro & Sons White Pines Landfill in Millville, Pennsylvania. Thus, the soil sampling methodology and analytical requirements satisfied both the Pioneer Crossing Landfill and White Pines Landfill sampling protocols.

National Water Main Cleaning Co. ("National") is the DEP's contractor for the Siphon cleaning project. Prior to in-situ material sample collections, each 72-inch Siphon required dewatering and then the DEP's contractor was able to enter the confined space to assist H2M with sample collections.

Materials were collected from the northern and southern terminuses (i.e., Chamber B and Chamber C, respectively) by others from both 72-inch Siphons under confined space entry procedures. H2M provided the DEP's contractor with individual factory-new and cleaned five-gallon buckets and lids prior to entering Chambers B & C. Material from within each 72-inch Siphon were deposited into individual buckets pre-marked as "Chamber B West 72-inch", "Chamber B East 72-inch", "Chamber C West 72-inch" and "Chamber C East 72-inch". The DEP's contractor was instructed to only fill buckets approximately one-half full before securing with lids. Each bucket was returned to the surface for H2M personnel to screen with a photoionization detector (PID), record physical characteristics and transfer into laboratory-supplied glassware and ice-packed coolers. Residual material within each bucket after sampling was completed, was returned to the respective 72-inch Siphon.

Each of the four in-situ material samples were submitted for analysis to Chemtech laboratory headquartered in Mountainside, New Jersey, a New York State Department of Environmental Health (NYSDOH) Environmental Laboratory Approval Program (ELAP)-certified laboratory with a standard 10 business day turnaround time. The following analyses were performed by Chemtech to satisfy both J.P. Mascaro & Sons facilities' waste acceptance criteria:

Totals Analyses: - pH - Free Liquids - Ignitability - Oil & Grease - TPH - PCBs - Reactive Cyanide - Reactive Sulfide - Total Organic Halogens (TOX) - Total Solids (TS) - Total Volatile Solids (TVS)	TCLP Metals: - Arsenic - Barium - Cadmium - Chromium - Copper - Lead - Mercury - Nickel - Selenium - Silver - Zinc - Aluminum - Iron	TCLP SVOCs: - O-Cresol - M-Cresol - P-Cresol 1,4 Dichlorobenzene 2,4 Dinitrotoluene - Hexachlorobenzene - Hexachloro 1,3 butadiene - Hexachloroethane - Nitrobenzene - Pentachlorophenol 2,4,5 Trichlorophenol 2,4,6 Trichlorophenol
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ASTM Leachate: • Ammonia-Nitrogen • Chemical Oxygen Demand (COD) • Oil & Grease • TPH	TCLP Pesticides/Herbicides: • Chlordane • Endrin • Heptachlor • Heptachlor Epoxide • Lindane • Methoxychlor • Toxaphene • 2,4 D • 2,4,5 TP Silvex	TCLP VOCs: • Benzene • Carbon Tetrachloride • Chlorobenzene • Chloroform • 1,2 Dichloroethane • 1,1 Dichloroethene • 2-Butanone (MEK) • Pyridine • Tetrachloroethene • Trichloroethene • Vinyl Chloride • Toluene • Ethylbenzene • Xylene
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The sampling dates and H2M's identifications for each individual sample are as follows:

1. Chamber B 72" West: 03/16/2023
2. Chamber C 72" West: 03/16/2023
3. Chamber B 72" East: 03/22/2023
4. Chamber C 72" East: 03/24/2023

A summary table of data has been prepared by H2M and is provided as **Table 1** in **Attachment B**. The individual lab data reports are also attached (see **Attachment C**).

H2M has evaluated the data and compared same to relevant USEPA 40 CFR Part 261 Subpart C – Characteristics of Hazardous Waste criteria to determine if the material qualifies as hazardous waste. In addition, H2M also compared the data to the J.P. Mascaro & Sons White Pines Landfill facility waste acceptance criteria. It is important to note that the in-situ waste characterization sampling data was generated to satisfy the landfill facility-specific criteria and data results do not have USEPA Characteristics of Hazardous Waste criteria comparisons.

The primary contaminants of concern that prompted the in-situ waste characterization were PCBs. PCB totals analyses include nine individual analyses for the following:

1. Aroclor-1016
2. Aroclor-1221
3. Aroclor-1232
4. Aroclor-1242
5. Aroclor-1248
6. Aroclor-1254
7. Aroclor-1262
8. Aroclor-1268
9. Aroclor-1260

PCBs and the nine individual Aroclor compounds listed above are not included by the USEPA in 40 CFR Part 261 Subpart C – Characteristics of Hazardous Waste. However, the Toxic Substances Control Act (TSCA) has established disposal requirements for solid wastes with a PCB concentration exceeding 50 parts per million (ppm). Individual states and disposal facilities have established maximum concentration thresholds for PCBs. In New York State, the NYSDEC has established a hazardous waste classification threshold of 50 parts per million (ppm) for individual Aroclor compounds and/or total PCBs. However, most disposal facilities within New York State have established a significantly lower threshold than 50 ppm for waste acceptance.

Aroclor-1260 was the sole PCB compound detected at concentrations above laboratory method detection limits in each of the four material samples from the Siphon. Aroclor-1260 was detected at the following concentrations in the four samples:

1. 2.2 ppm – Chamber B 72" West
2. 1.6 ppm – Chamber C 72" West
3. 0.0506 ppm – Chamber B 72" East
4. 0.0348 ppm – Chamber C 72" East

Each of the remaining compounds and analytes reported by Chemtech were compared to the USEPA hazardous waste criteria and J.P. Mascaro & Sons White Pines Landfill facility waste acceptance criteria. Based upon this review, H2M has determined that there were no concentrations that classified the material as hazardous waste and that the material should be considered acceptable waste at the J.P. Mascaro & Sons White Pines Landfill facility. H2M recognizes that the DEP routinely disposes of combined sewer sediments and sludges at DEP-approved facilities. Thus, the data generated from this in-situ waste characterization may also be useful to the DEP and its contractor to facilitate material disposal at an alternate facility.

Please feel free to contact me directly if you have any questions regarding the in-situ waste characterization activities summarized in this letter.

Very truly yours,

H2M architects + engineers



Stephen I. Kaplan, P.G.
Practice Leader | Environmental

Att.

ATTACHMENT A

FIGURES

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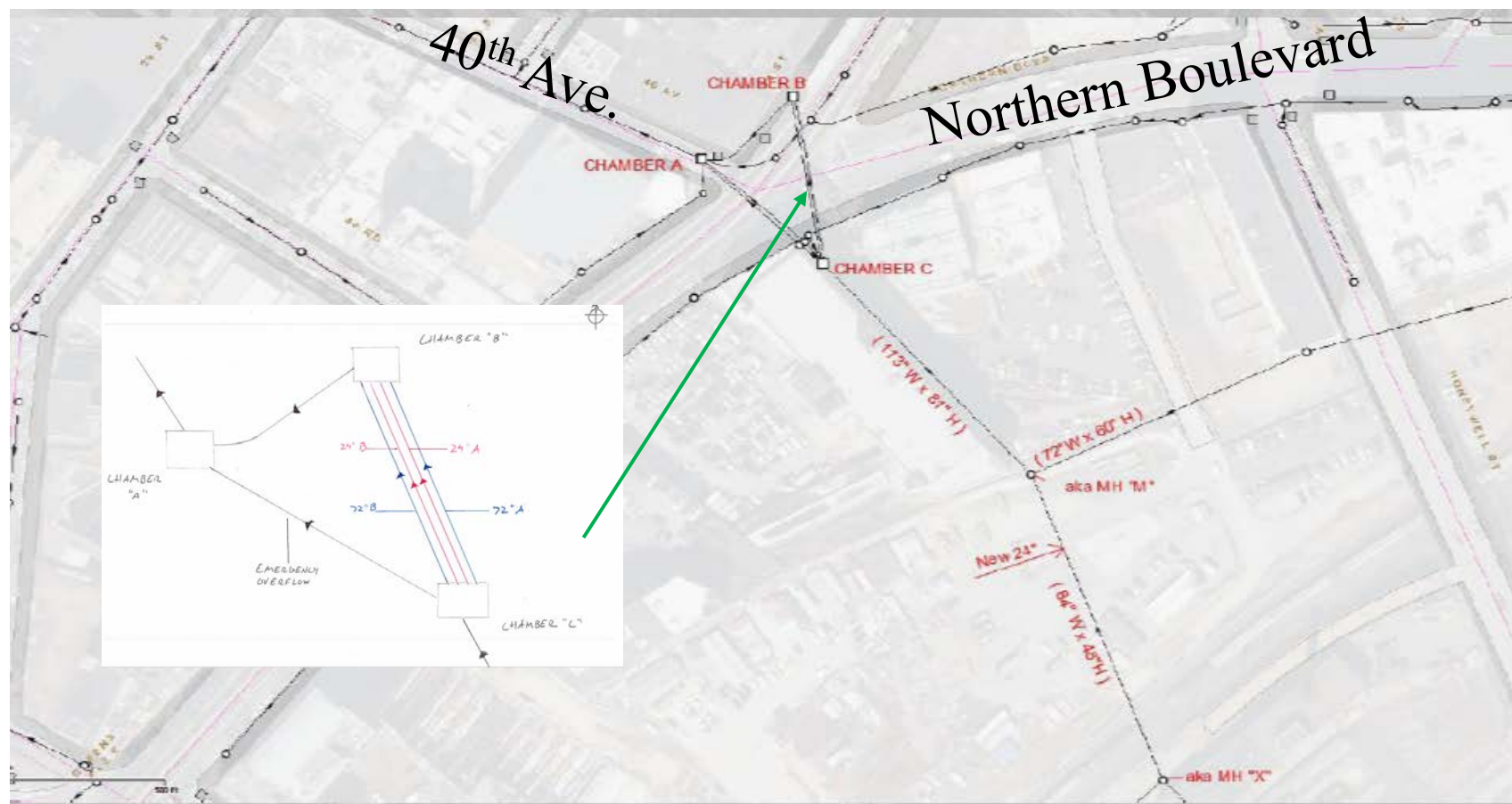


Figure 1 Site Location and Sewer Layout Map
In-Situ Waste Characterization Sampling Work Plan
Northern Boulevard Siphon Cleaning at MTA East Side Access
Queens, New York



architects + engineers
230 West 36th Street, 14th Floor
New York, NY 10018

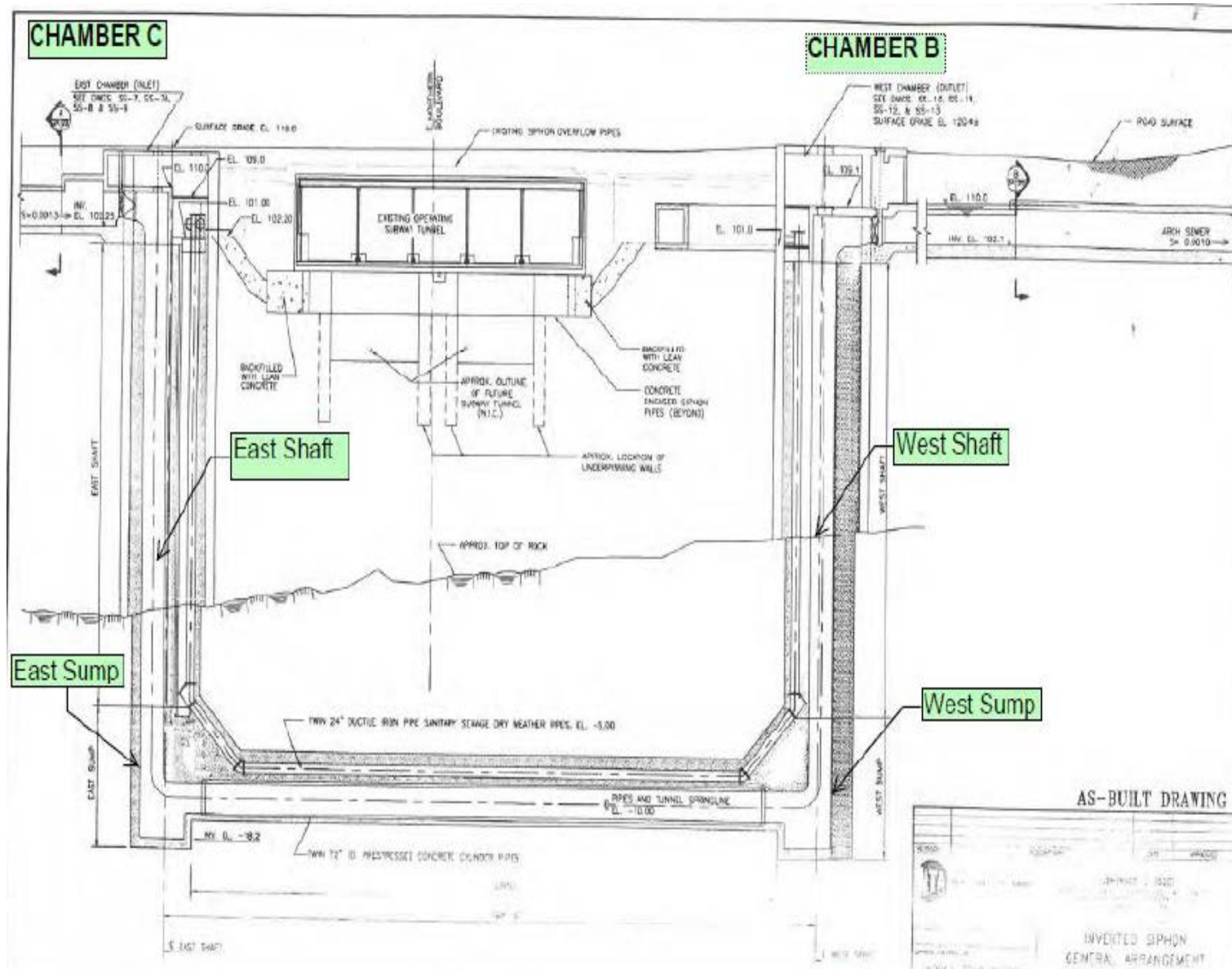


Figure 2 Siphon As-Built Drawing
In-Situ Waste Characterization Sampling Work Plan
Northern Boulevard Siphon Cleaning at MTA East Side Access
Queens, New York



architects + engineers
230 West 36th Street, 14th Floor
New York, NY 10018

ATTACHMENT B

TABLE 1

H2M

Table 1
In-Situ Waste Characterization
Northern Boulevard Siphon Cleaning at
MTA East Side Access

Sample ID	CHAMBER-B-72-WEST	CHAMBER-C-72-WEST	CHAMBER-B-72-EAST	CHAMBER-C-72-EAST	Federal (RCRA-TCLP) Hazardous Waste Criteria	White Pines Facility Limits	White Pines Facility Note
Lab Sample Number	O1975-03	O1975-06	O2058-03	O2102-03			
Sampling Date	3/16/2023	3/16/2023	3/22/2023	3/24/2023			
Matrix	WATER	WATER	WATER	WATER	WATER	WATER	
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	
COMPOUND	CAS #						
ASTM TPH	1.65 U	1.65 U	1.65 U	1.65 U	NA	5,000*	*Based upon 20x rule
Sample ID	CHAMBER-B-72-WEST	CHAMBER-C-72-WEST	CHAMBER-B-72-EAST	CHAMBER-C-72-EAST	Federal (RCRA-TCLP) Hazardous Waste Criteria	White Pines Facility Limits	White Pines Facility Note
Lab Sample Number	O1975-03	O1975-06	O2058-03	O2102-03			
Sampling Date	3/16/2023	3/16/2023	3/22/2023	3/24/2023			
Matrix	WATER	WATER	WATER	WATER	WATER	WATER	
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	
COMPOUND	CAS #						
ASTM Oil and Grease	0.53 U	0.53 U	0.53 U	0.53 U	NA	5,000*	*Based upon 20x rule
Sample ID	CHAMBER-B-72-WEST	CHAMBER-C-72-WEST	CHAMBER-B-72-EAST	CHAMBER-C-72-EAST	Federal (RCRA-TCLP) Hazardous Waste Criteria	White Pines Facility Limits	White Pines Facility Note
Lab Sample Number	O1975-03	O1975-06	O2058-03	O2102-03			
Sampling Date	3/16/2023	3/16/2023	3/22/2023	3/24/2023			
Matrix	Water	Water	Water	Water	WATER	WATER	
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	
COMPOUND	CAS #						
ASTM COD	11	24	24	7.97 J	NA	220,000	
Sample ID	CHAMBER-B-72-WEST	CHAMBER-C-72-WEST	CHAMBER-B-72-EAST	CHAMBER-C-72-EAST	Federal (RCRA-TCLP) Hazardous Waste Criteria	White Pines Facility Limits	White Pines Facility Note
Lab Sample Number	O1975-03	O1975-06	O2058-03	O2102-03			
Sampling Date	3/16/2023	3/16/2023	3/22/2023	3/24/2023			
Matrix	WATER	WATER	WATER	WATER	WATER	WATER	
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	
COMPOUND	CAS #						
ASTM Ammonia	0.054 J	10.2 D	15.1 D	20.2 D	NA	50,000*	*Ammonia-Nitrates
Sample ID	CHAMBER-B-72-WEST	CHAMBER-C-72-WEST	CHAMBER-B-72-EAST	CHAMBER-C-72-EAST	Federal (RCRA-TCLP) Hazardous Waste Criteria	White Pines Facility Limits	White Pines Facility Note
Lab Sample Number	O1975-01	O1975-04	O2058-01	O2102-01			
Sampling Date	3/16/2023	3/16/2023	3/22/2023	3/24/2023			
Matrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	
Units	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	
COMPOUND	CAS # Petroleum Hydrocarbons						
Petroleum Hydrocarbons	109,000	456,000	34,900	56,600	NA	100,000,000	
Sample ID	CHAMBER-B-72-WEST	CHAMBER-C-72-WEST	CHAMBER-B-72-EAST	CHAMBER-C-72-EAST	Toxic Substances Control Act (TSCA)	White Pines Facility Limits	White Pines Facility Note
Lab Sample Number	O1975-01	O1975-04	O2058-01	O2102-01			
Sampling Date	3/16/2023	3/16/2023	3/22/2023	3/24/2023			
Matrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	
Units	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	
COMPOUND	CAS #						
Aroclor-1016	12674-11-2	0.0072 U	0.0062 U	0.0075 U	0.0081 U	50	50
Aroclor-1221	11104-28-2	0.0119 U	0.0101 U	0.0123 U	0.0133 U	50	50
Aroclor-1232	11141-16-5	0.0091 U	0.0078 U	0.0095 U	0.0102 U	50	50
Aroclor-1242	53469-21-9	0.0063 U	0.0054 U	0.0066 U	0.0071 U	50	50
Aroclor-1248	12672-29-6	0.0057 U	0.0049 U	0.0059 U	0.0064 U	50	50
Aroclor-1254	11097-69-1	0.0076 U	0.0065 U	0.0079 U	0.0085 U	50	50
Aroclor-1262	37324-23-5	0.0055 U	0.0047 U	0.0057 U	0.0061 U	50	50
Aroclor-1268	11100-14-4	0.0067 U	0.0057 U	0.0069 U	0.0075 U	50	50
Aroclor-1260	11096-82-5	2.2 D	1.6 DF	0.0506	0.0348 J	50	50
Sample ID	CHAMBER-B-72-WEST	CHAMBER-C-72-WEST	CHAMBER-B-72-EAST	CHAMBER-C-72-EAST	Federal (RCRA-TCLP) Hazardous Waste Criteria	White Pines Facility Limits	White Pines Facility Note
Lab Sample Number	O1975-01	O1975-04	O2058-01	O2102-01			
Sampling Date	3/16/2023	3/16/2023	3/22/2023	3/24/2023			
Matrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	
Units	%	%	%	%	%	%	
COMPOUND	CAS #						
TVS	15.6	12	11.7	6.9 J	NA	See Note	Total Volatile Solids [Residue, Volatile (Gravimetric, Ignition at 550 Deg C)], Modified for Matrix

Table 1
In-Situ Waste Characterization
Northern Boulevard Siphon Cleaning at
MTA East Side Access



Sample ID	CHAMBER-B-72-WEST	CHAMBER-C-72-WEST	CHAMBER-B-72-EAST	CHAMBER-C-72-EAST	Federal (RCRA-TCLP) Hazardous Waste Criteria	White Pines Facility Limits	White Pines Facility Note
Lab Sample Number	O1975-01	O1975-04	O2058-01	O2102-01			
Sampling Date	3/16/2023	3/16/2023	3/22/2023	3/24/2023			
Matrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	
Units	%	%	%	%	%	%	
COMPOUND	CAS #						
TS	TS	46.1	52.5	48.1	41.4	NA	See Note: Volatile Solids in Solid and Semisolid Samples
Sample ID	CHAMBER-B-72-WEST	CHAMBER-C-72-WEST	CHAMBER-B-72-EAST	CHAMBER-C-72-EAST	Federal (RCRA-TCLP) Hazardous Waste Criteria	White Pines Facility Limits	White Pines Facility Note
Lab Sample Number	O1975-02	O1975-05	O2058-02	O2102-02			
Sampling Date	3/16/2023	3/16/2023	3/22/2023	3/24/2023			
Matrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	
Units	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/kg	mg/kg	
COMPOUND	CAS #						
Reactive Sulfide	RESU	6.31 J	7.91 J	7.92 J	6.37 J	500	500
Sample ID	CHAMBER-B-72-WEST	CHAMBER-C-72-WEST	CHAMBER-B-72-EAST	CHAMBER-C-72-EAST	Federal (RCRA-TCLP) Hazardous Waste Criteria	White Pines Facility Limits	White Pines Facility Note
Lab Sample Number	O1975-02	O1975-05	O2058-02	O2102-02			
Sampling Date	3/16/2023	3/16/2023	3/22/2023	3/24/2023			
Matrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	
Units	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/kg	mg/kg	
COMPOUND	CAS #						
Reactive Cyanide	RECY	0.011 U	0.011 U	0.018 J	0.019 J	250	NA
Sample ID	CHAMBER-B-72-WEST	CHAMBER-C-72-WEST	CHAMBER-B-72-EAST	CHAMBER-C-72-EAST	Federal (RCRA-TCLP) Hazardous Waste Criteria	White Pines Facility Limits	White Pines Facility Note
Lab Sample Number	O1975-01	O1975-04	O2058-01	O2102-01			
Sampling Date	3/16/2023	3/16/2023	3/22/2023	3/24/2023			
Matrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	
Units	pH	pH	pH	pH	pH	pH	
COMPOUND	CAS #						
pH	pH	6.38	6.82	6.82	6.73	≤ 2 or ≥12.5	<3
Sample ID	CHAMBER-B-72-WEST	CHAMBER-C-72-WEST	CHAMBER-B-72-EAST	CHAMBER-C-72-EAST	Federal (RCRA-TCLP) Hazardous Waste Criteria	White Pines Facility Limits	White Pines Facility Note
Lab Sample Number	O1975-01	O1975-04	O2058-01	O2102-01			
Sampling Date	3/16/2023	3/16/2023	3/22/2023	3/24/2023			
Matrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	
Units	ml/100gm	ml/100gm	ml/100gm	ml/100gm	ml/100gm	ml/100gm	
COMPOUND	CAS #						
Paint Filter		1 U	1 U	1 U	1 U	NA	NA
Sample ID	CHAMBER-B-72-WEST	CHAMBER-C-72-WEST	CHAMBER-B-72-EAST	CHAMBER-C-72-EAST	Federal (RCRA-TCLP) Hazardous Waste Criteria	White Pines Facility Limits	White Pines Facility Note
Lab Sample Number	O1975-01	O1975-04	O2058-01	O2102-01			
Sampling Date	3/16/2023	3/16/2023	3/22/2023	3/24/2023			
Matrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	
Units	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/kg	mg/kg	
COMPOUND	CAS #						
Oil and Grease	OAG	273	1,120	105 J	158 J	NA	100,000
Sample ID	CHAMBER-B-72-WEST	CHAMBER-C-72-WEST	CHAMBER-B-72-EAST	CHAMBER-C-72-EAST	Federal (RCRA-TCLP) Hazardous Waste Criteria	White Pines Facility Limits	White Pines Facility Note
Lab Sample Number	O1975-02	O1975-05	O2058-02	O2102-02			
Sampling Date	3/16/2023	3/16/2023	3/22/2023	3/24/2023			
Matrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	
Units	oC	oC	oC	oC	oC	oC	
COMPOUND	CAS #						
Ignitability	IGNIT	No	No	No	No	NA	Non-Ignitable
Sample ID	CHAMBER-B-72-WEST	CHAMBER-C-72-WEST	CHAMBER-B-72-EAST	CHAMBER-C-72-EAST	Federal (RCRA-TCLP) Hazardous Waste Criteria	White Pines Facility Limits	White Pines Facility Note
Lab Sample Number	O1975-02	O1975-05	O2058-02	O2102-02			
Sampling Date	3/16/2023	3/16/2023	3/22/2023	3/24/2023			
Matrix	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	
Units	pH	pH	pH	pH	pH	pH	
COMPOUND	CAS #						
Corrosivity		6.38	6.82	6.82	6.73	≤ 2 or ≥12.5	<3

Table 1
In-Situ Waste Characterization
Northern Boulevard Siphon Cleaning at
MTA East Side Access



Sample ID		CHAMBER-B-72-WEST	CHAMBER-C-72-WEST	CHAMBER-B-72-EAST	CHAMBER-C-72-EAST	Federal (RCRA-TCLP) Hazardous Waste Criteria	White Pines Facility Limits	White Pines Facility Note
Lab Sample Number		O1975-02	O1975-05	O2058-02	O2102-02			
Sampling Date		3/16/2023	3/16/2023	3/22/2023	3/24/2023			
Matrix		TCLP	TCLP	TCLP	TCLP			
Units		mg/l	mg/l	mg/l	mg/l	TCLP mg/l	TCLP mg/l	
COMPOUND	CAS #							
Vinyl Chloride	75-01-4	0.00025 U	0.00025 U	0.00025 U	0.00025 U	0.2	0.2	
1,1-Dichloroethene	75-35-4	0.00021 U	0.00021 U	0.00021 U	0.00021 U	0.7	0.7	
2-Butanone	78-93-3	0.011 J	0.0012 U	0.0012 U	0.0012 U	200	52	
Carbon Tetrachloride	56-23-5	0.00013 U	0.00013 U	0.00013 U	0.00013 U	0.5	0.5	
Chloroform	67-66-3	0.00014 U	0.00014 U	0.00014 U	0.00014 U	6	6	
Benzene	71-43-2	0.00012 U	0.00012 U	0.00012 U	0.00012 U	0.5	0.5	
1,2-Dichloroethane	107-06-2	0.00016 U	0.00016 U	0.00016 U	0.00016 U	0.5	0.5	
Trichloroethene	79-01-6	0.00026 U	0.00026 U	0.00026 U	0.00026 U	0.5	0.5	
Toluene	108-88-3	0.16 D	0.0012 J	0.00014 U	0.00014 U	NA	600	
Tetrachloroethene	127-18-4	0.00017 U	0.00017 U	0.00017 U	0.00017 U	0.7	0.7	
Chlorobenzene	108-90-7	0.0016 J	0.0011 J	0.00012 U	0.00012 U	100	20	
Ethyl Benzene	100-41-4	0.00013 U	0.0045 J	0.00013 U	0.00013 U	NA	200	
Total Xylenes	1330-20-7	0.00046 U	0.022	0.00046 U	0.00046 U	NA	20.8	
Sample ID		CHAMBER-B-72-WEST	CHAMBER-C-72-WEST	CHAMBER-B-72-EAST	CHAMBER-C-72-EAST	Federal (RCRA-TCLP) Hazardous Waste Criteria	White Pines Facility Limits	White Pines Facility Note
Lab Sample Number		O1975-02	O1975-05	O2058-02	O2102-02			
Sampling Date		3/16/2023	3/16/2023	3/22/2023	3/24/2023			
Matrix		TCLP	TCLP	TCLP	TCLP			
Units		mg/l	mg/l	mg/l	mg/l	TCLP mg/l	TCLP mg/l	
COMPOUND	CAS #							
Pyridine	110-86-1	0.018 U	0.018 U	0.018 U	0.018 U	5	5	
1,4-Dichlorobenzene	106-46-7	0.014 U	0.014 U	0.014 U	0.014 U	7.5	7.5	
2-Methylphenol	95-48-7	0.021 U	0.021 U	0.021 U	0.021 U	200	54.4	
3+4-Methylphenols	65794-96-9	0.13	0.022 U	0.022 U	0.022 U	200	54.4	
Hexachloroethane	67-72-1	0.016 U	0.016 U	0.016 U	0.016 U	3	3	
Nitrobenzene	98-95-3	0.017 U	0.017 U	0.017 U	0.017 U	2	2	
Hexachlorobutadiene	87-68-3	0.019 U	0.019 U	0.019 U	0.019 U	0.5	0.5	
2,4,6-Trichlorophenol	88-06-2	0.015 U	0.015 U	0.015 U	0.015 U	2	2	
2,4,5-Trichlorophenol	95-95-4	0.016 U	0.016 U	0.016 U	0.016 U	400	24	
2,4-Dinitrotoluene	121-14-2	0.025 U	0.025 U	0.025 U	0.025 U	0.13	0.13	
Hexachlorobenzene	118-74-1	0.019 U	0.019 U	0.019 U	0.019 U	0.13	0.13	
Pentachlorophenol	87-86-5	0.026 U	0.026 U	0.026 U	0.026 U	100	32	
Sample ID		CHAMBER-B-72-WEST	CHAMBER-C-72-WEST	CHAMBER-B-72-EAST	CHAMBER-C-72-EAST	Federal (RCRA-TCLP) Hazardous Waste Criteria	White Pines Facility Limits	White Pines Facility Note
Lab Sample Number		O1975-02	O1975-05	O2058-02	O2102-02			
Sampling Date		3/16/2023	3/16/2023	3/22/2023	3/24/2023			
Matrix		TCLP	TCLP	TCLP	TCLP			
Units		mg/l	mg/l	mg/l	mg/l	TCLP mg/l	TCLP mg/l	
COMPOUND	CAS #							
gamma-BHC (Lindane)	58-89-9	0.000064 U	0.000064 U	0.000064 U	0.000064 U	0.4	0.4	
Heptachlor	76-44-8	0.000073 U	0.000073 U	0.000073 U	0.000073 U	0.008	0.008	
Heptachlor epoxide	1024-57-3	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.008	0.008	
Endrin	72-20-8	0.000043 U	0.000043 U	0.000043 U	0.000043 U	0.02	0.02	
Methoxychlor	72-43-5	0.000066 U	0.000066 U	0.000066 U	0.000066 U	10	10	
Toxaphene	8001-35-2	0.0018 U	0.0018 U	0.0018 U	0.0018 U	0.5	0.5	
Chlordane	57-74-9	0.00097 U	0.00097 U	0.00097 U	0.00097 U	0.03	0.03	
Sample ID		CHAMBER-B-72-WEST	CHAMBER-C-72-WEST	CHAMBER-B-72-EAST	CHAMBER-C-72-EAST	Federal (RCRA-TCLP) Hazardous Waste Criteria	White Pines Facility Limits	White Pines Facility Note
Lab Sample Number		O1975-02	O1975-05	O2058-02	O2102-02			
Sampling Date		3/16/2023	3/16/2023	3/22/2023	3/24/2023			
Matrix		TCLP	TCLP	TCLP	TCLP			
Units		mg/l	mg/l	mg/l	mg/l	TCLP mg/l	TCLP mg/l	
COMPOUND	CAS #							
2,4-D	94-75-7	0.0057 U	0.0057 U	0.0057 U	0.0057 U	10	10	
2,4,5-TP (Silvex)	93-72-1	0.0054 U	0.0054 U	0.0054 U	0.0054 U	1	1	

Table 1
In-Situ Waste Characterization
Northern Boulevard Siphon Cleaning at
MTA East Side Access



Sample ID		CHAMBER-B-72-WEST	CHAMBER-C-72-WEST	CHAMBER-B-72-EAST	CHAMBER-C-72-EAST	Federal (RCRA-TCLP) Hazardous Waste Criteria	White Pines Facility Limits	White Pines Facility Note
Lab Sample Number		O1975-02	O1975-05	O2058-02	O2102-02			
Sampling Date		3/16/2023	3/16/2023	3/22/2023	3/24/2023			
Matrix		TCLP	TCLP	TCLP	TCLP	TCLP	TCLP	
Units		mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	
COMPOUND	CAS #							
Aluminum	7429-90-5	0.28 U	0.28 U	0.28 U	0.28 U	NA	300	
Arsenic	7440-38-2	0.035 U	0.035 U	0.035 U	0.035 U	5	NA	
Barium	7440-39-3	0.82	0.45 J	0.8	1.41	100	NA	
Cadmium	7440-43-9	0.001 U	0.001 U	0.001 U	0.001 U	1	NA	
Chromium	7440-47-3	0.008 U	0.0098 J	0.008 U	0.008 U	5	NA	
Copper	7440-50-8	0.071 U	0.071 U	0.071 U	0.071 U	NA	32	
Iron	7439-89-6	57.7	66.1	57.7	41.6	NA	4,000	
Lead	7439-92-1	0.035 U	0.035 U	0.035 U	0.035 U	5	NA	
Mercury	7439-97-6	0.00078 U	0.00078 U	0.00078 U	0.00078 U	0.2	NA	
Nickel	7440-02-0	0.045 J	0.088 J	0.019 J	0.063 J	NA	120	
Selenium	7782-49-2	0.059 U	0.059 U	0.059 U	0.059 U	1	NA	
Silver	7440-22-4	0.0066 U	0.0066 U	0.0066 U	0.0066 U	5	NA	
Zinc	7440-66-6	0.4	0.88	1.1	0.76	NA	200	
Sample ID		CHAMBER-B-72-WEST	CHAMBER-C-72-WEST	CHAMBER-B-72-EAST	CHAMBER-C-72-EAST	Federal (RCRA-TCLP) Hazardous Waste Criteria	White Pines Facility Limits	White Pines Facility Note
Lab Sample Number		23031468-001A	23031468-002A	23031824-001A	23032073-001A			
Sampling Date		3/16/2023	3/16/2023	3/22/2023	3/24/2023			
Matrix		Solid	Solid	Solid	Solid	Solid	Solid	
Units		mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	
COMPOUND	CAS #							
Extractable Organic Halides (EOX)		19.5 J	13 J	11.7 U	25.8 J	NA	>100	Total Organic Halogen (TOX)

ATTACHMENT C

LABORATORY DATA REPORTS

DATA PACKAGE

GENERAL CHEMISTRY
METALS
GC SEMI-VOLATILES
SEMI-VOLATILE ORGANICS
VOLATILE ORGANICS

PROJECT NAME : SIPHON

H2M ARCHITECTS + ENGINEERS

290 Broad Hollow Road

Suite 400E

Melville, NY - 11747

Phone No: 631-756-8000

ORDER ID : 02102

ATTENTION : Stephen I. Kaplan



Laboratory Certification ID # 20012



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Cover Page

Order ID : O2102

Project ID : Siphon

Client : H2M Architects + Engineers

Lab Sample Number

O2102-01
O2102-02
O2102-03

Client Sample Number

CHAMBER-C-72-EAST
CHAMBER-C-72-EAST
CHAMBER-C-72-EAST

I certify that the data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hard copy data package has been authorized by the laboratory manager or his designee, as verified by the following signature.

Signature :

S. M. Jodhani

APPROVED

By *Sohil Jodhani*, QA/QC Director at 8:38 am, Apr 07, 2023

NYDOH CERTIFICATION NO - 11376

NJDEP CERTIFICATION NO - 20012

CASE NARRATIVE**H2M Architects + Engineers****Project Name: Siphon****Project # N/A****Chemtech Project # O2102****Test Name: TCLP VOA Group1****A. Number of Samples and Date of Receipt:**

3 Solid samples were received on 03/24/2023.

B. Parameters

According to the Chain of Custody document, the following analyses were requested: ASTM Ammonia, ASTM COD, ASTM Leach Extraction, ASTM Oil and Grease, ASTM TPH, Corrosivity, Ignitability, Oil and Grease, Paint Filter, PCB, pH, RCRA CHARACTERISTICS, Reactive Cyanide, Reactive Sulfide, TCLP BNA, TCLP Extraction, TCLP Herbicide, TCLP Mercury, TCLP Pesticide, TCLP VOA Group1, TCLP ZHE Extraction, TCLP Metals Group1, TPH GC, TS, TVS and VOC-TCLVOA-10. This data package contains results for TCLP VOA Group1.

C. Analytical Techniques:

The analysis performed on instrument MSVOA_N were done using GC column RXI-624SIL MS 30m 0.25mm 1.4 um. Cat#13868. The analysis of TCLP VOA Group1 was based on method 8260D and TCLP extraction method was 1311.

D. QA/ QC Samples:

The Holding Times were met for all analysis.

The Surrogate recoveries met the acceptable criteria.

The Internal Standards Areas met the acceptable requirements.

The Retention Times were acceptable for all samples.

The RPD for {VN0328WBSD01} with File ID: VN077234.D met criteria except for 1,1-Dichloroethene [87%] due to difference in results of BS and BSD.

The Blank Spike for {VN0328WBS01} with File ID: VN077233.D met requirements for all samples except for Vinyl chloride [144%] , 1,1-Dichloroethene [248%] are failing high but no positive hit in associate sample therefore no corrective action taken.

The Blank Spike Duplicate for {VN0328WBSD01} with File ID: VN077234.D met requirements for all samples except for Vinyl chloride [144%] is failing high but no positive hit in associate sample therefore no corrective action taken.

The Blank analysis did not indicate the presence of lab contamination.

The Initial Calibration met the requirements .

The Continuous Calibration File ID VY013055.D met the requirements except for Vinyl Chloride is failing high but no positive hit in associate sample therefore no corrective action taken.

The Tuning criteria met requirements.

E. Additional Comments:

Samples for MS/MSD for VOC analysis were not provided with this set of samples. The Blank Spike Duplicate is reported with the data.

Please use %D calculated based on Avg RF and CCRF for all compounds using Average Response Factor when the %RSD value for a compound is <15% for the Initial Calibration curve and use %D calculated based on Amount added and Calculated amount for all compounds using Linear Regression when the %RSD value for a compound is > 15% for the Initial Calibration curve for SW-846 analysis.

F. Manual Integration Comments:

Please refer to the Manual integration Report included with the Run Logs for information on the manual integrations performed.

I certify that the data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. The laboratory manager or his designee, as verified by the following signature has authorized release of the data contained in this hard copy data package.

Signature S. M. Jodhani

APPROVED

By Sohil Jodhani, QA/QC Director at 8:38 am, Apr 07, 2023

CASE NARRATIVE**H2M Architects + Engineers****Project Name: Siphon****Project # N/A****Chemtech Project # O2102****Test Name: TCLP BNA****A. Number of Samples and Date of Receipt:**

3 Solid samples were received on 03/24/2023.

B. Parameters

According to the Chain of Custody document, the following analyses were requested: ASTM Ammonia, ASTM COD, ASTM Leach Extraction, ASTM Oil and Grease, ASTM TPH, Corrosivity, Ignitability, Oil and Grease, Paint Filter, PCB, pH, RCRA CHARACTERISTICS, Reactive Cyanide, Reactive Sulfide, TCLP BNA, TCLP Extraction, TCLP Herbicide, TCLP Mercury, TCLP Pesticide, TCLP VOA Group1, TCLP ZHE Extraction, TCLP Metals Group1, TPH GC, TS, TVS and VOC-TCLVOA-10. This data package contains results for TCLP BNA.

C. Analytical Techniques:

The samples were analyzed on instrument BNA_M using GC Column ZB-SemiVolatiles Guardian which is 30 meters, 0.25 mm ID, 0.5 um df, Catalog # 7HG-G027-17-GGAThe analysis of TCLP BNA was based on method 8270E and extraction was done based on method 3510 and TCLP extraction method was 1311.

D. QA/ QC Samples:

The Holding Times were met for all analysis.

The Surrogate recoveries met the acceptable criteria.

The Internal Standards Areas met the acceptable requirements.

The Retention Times were acceptable for all samples.

The MS recoveries met the requirements for all compounds.

The MSD recoveries met the acceptable requirements.

The RPD met criteria .

The Blank Spike met requirements for all samples.

The Blank analysis did not indicate the presence of lab contamination.

The Initial Calibration met the requirements.

The Continuous Calibration met the requirements.

The Tuning criteria met requirements.

E. Additional Comments:

The Form 6 is not included in the data package because the Initial Calibration was performed using 8 points.

Please use %D calculated based on Avg RF and CCRF for all compounds using Average Response Factor when the %RSD value for a compound is <15% for the Initial Calibration curve and use %D calculated based on Amount added and Calculated amount for all compounds using Linear Regression when the %RSD value for a compound is > 15% for the Initial Calibration curve for SW-846 analysis.

F. Manual Integration Comments:

Please refer to the Manual integration Report included with the Run Logs for information on the manual integrations performed.

I certify that the data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. The laboratory manager or his designee, as verified by the following signature has authorized release of the data contained in this hard copy data package.

Signature S. M. Jodhani

APPROVED

By Sohil Jodhani, QA/QC Director at 8:38 am, Apr 07, 2023

CASE NARRATIVE

H2M Architects + Engineers

Project Name: Siphon

Project # N/A

Chemtech Project # O2102

Test Name: TCLP Pesticide

A. Number of Samples and Date of Receipt:

3 Solid samples were received on 03/24/2023.

B. Parameters

According to the Chain of Custody document, the following analyses were requested: ASTM Ammonia, ASTM COD, ASTM Leach Extraction, ASTM Oil and Grease, ASTM TPH, Corrosivity, Ignitability, Oil and Grease, Paint Filter, PCB, pH, RCRA CHARACTERISTICS, Reactive Cyanide, Reactive Sulfide, TCLP BNA, TCLP Extraction, TCLP Herbicide, TCLP Mercury, TCLP Pesticide, TCLP VOA Group1, TCLP ZHE Extraction, TCLP Metals Group1, TPH GC, TS, TVS and VOC-TCLVOA-10. This data package contains results for TCLP Pesticide.

C. Analytical Techniques:

The analysis was performed on instrument ECD_L. The front column is ZB-MR2 which is 30 meters, 0.32 mm ID, 0.25 um df, Catalog #: 7HMG017- 11 The rear column is ZB-MR1 which is 30 meters, 0.32 mm ID, 0.5 um df, Catalog # 7HM-G016-17. The analysis of TCLP Pesticides was based on method 8081B and extraction was done based on method 3510 and TCLP extraction method was 1311.

D. QA/ QC Samples:

The Holding Times were met for all analysis.

The Surrogate recoveries met the acceptable criteria.

The Retention Times were acceptable for all samples.

The MS recoveries met the requirements for all compounds .

The MSD recoveries met the acceptable requirements .

The RPD met criteria .

The Blank Spike met requirements for all samples .

The Blank analysis did not indicate the presence of lab contamination.

The Initial Calibration met the requirements .

The Continuous Calibration met the requirements .

E. Additional Comments:

F. Manual Integration Comments:

Please refer to the Manual integration Report included with the Run Logs for information on the manual integrations performed.

I certify that the data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. The laboratory manager or his designee, as verified by the following signature has authorized release of the data contained in this hard copy data package.

Signature S. M. Jodhani

APPROVED

By Sohil Jodhani, QA/QC Director at 8:39 am, Apr 07, 2023

CASE NARRATIVE**H2M Architects + Engineers****Project Name: Siphon****Project # N/A****Chemtech Project # O2102****Test Name: PCB****A. Number of Samples and Date of Receipt:**

3 Solid samples were received on 03/24/2023.

B. Parameters

According to the Chain of Custody document, the following analyses were requested: ASTM Ammonia, ASTM COD, ASTM Leach Extraction, ASTM Oil and Grease, ASTM TPH, Corrosivity, Ignitability, Oil and Grease, Paint Filter, PCB, pH, RCRA CHARACTERISTICS, Reactive Cyanide, Reactive Sulfide, TCLP BNA, TCLP Extraction, TCLP Herbicide, TCLP Mercury, TCLP Pesticide, TCLP VOA Group1, TCLP ZHE Extraction, TCLP Metals Group1, TPH GC, TS, TVS and VOC-TCLVOA-10. This data package contains results for PCB.

C. Analytical Techniques:

The analyses were performed on instrument GCECD_O. The front column is ZB-MR1 which is 30 meters, 0.32 mm ID, 0.5 μ m df, Catalogue # 7HM-G016-17. The rear column is ZB-MR2 which is 30 meters, 0.32 mm ID, 0.25 μ m; Catalogue # 7HM-G017-11. The analysis of PCBs was based on method 8082A and extraction was done based on method 3541.

D. QA/ QC Samples:

The Holding Times were met for all analysis.

The Surrogate recoveries met the acceptable criteria.

The Retention Times were acceptable for all samples.

The MS {O2082-02MS} with File ID: PO093581.D recoveries met the requirements for all compounds except for AR1016[447%], AR1260[202%], due to sample matrix interference.

The MSD {O2082-02MSD} with File ID: PO093582.D recoveries met the acceptable requirements except for AR1016[436%], AR1260[193%], due to sample matrix interference.

The RPD met criteria .

The Blank Spike met requirements for all samples .

The Blank analysis did not indicate the presence of lab contamination.

The Initial Calibration met the requirements .

The Continuous Calibration met the requirements .

E. Additional Comments:

The soil samples results are based on a dry weight basis.

F. Manual Integration Comments:

Please refer to the Manual integration Report included with the Run Logs for information on the manual integrations performed.

I certify that the data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. The laboratory manager or his designee, as verified by the following signature has authorized release of the data contained in this hard copy data package.

Signature S. M. Jodhani

APPROVED

By Sohil Jodhani, QA/QC Director at 8:39 am, Apr 07, 2023

CASE NARRATIVE

H2M Architects + Engineers

Project Name: Siphon

Project # N/A

Chemtech Project # O2102

Test Name: TCLP Herbicide

A. Number of Samples and Date of Receipt:

3 Solid samples were received on 03/24/2023.

B. Parameters

According to the Chain of Custody document, the following analyses were requested: ASTM Ammonia, ASTM COD, ASTM Leach Extraction, ASTM Oil and Grease, ASTM TPH, Corrosivity, Ignitability, Oil and Grease, Paint Filter, PCB, pH, RCRA CHARACTERISTICS, Reactive Cyanide, Reactive Sulfide, TCLP BNA, TCLP Extraction, TCLP Herbicide, TCLP Mercury, TCLP Pesticide, TCLP VOA Group1, TCLP ZHE Extraction, TCLP Metals Group1, TPH GC, TS, TVS and VOC-TCLVOA-10. This data package contains results for TCLP Herbicide.

C. Analytical Techniques:

The analysis was performed on instrument ECD_S. The front column is RTX-CLPesticides which is 30 meters, 0.32 mm ID, 0.5 µm df, Catalog # 11139. The rear column is RTX-CLPesticides2 which is 30 meters, 0.32 mm ID, 0.25 µm df, Catalog #: 11324. The analysis of TCLP Herbicides was based on method 8151A and extraction was done based on method 3510 and TCLP extraction method was 1311.

D. QA/ QC Samples:

The Holding Times were met for all analysis.

The Surrogate recoveries met the acceptable criteria.

The Retention Times were acceptable for all samples.

The MS recoveries met the requirements for all compounds.

The MSD recoveries met the acceptable requirements.

The RPD met criteria.

The Blank Spike met requirements for all samples.

The Blank analysis did not indicate the presence of lab contamination.

The Initial Calibration met the requirements.

The Continuous Calibration met the requirements.

E. Additional Comments:

F. Manual Integration Comments:

Please refer to the Manual integration Report included with the Run Logs for information on the manual integrations performed.

I certify that the data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. The laboratory manager or his designee, as verified by the following signature has authorized release of the data contained in this hard copy data package.

Signature

*S. M. Jodhani***APPROVED***By Sohil Jodhani, QA/QC Director at 8:39 am, Apr 07, 2023*

CASE NARRATIVE

H2M Architects + Engineers

Project Name: Siphon

Project # N/A

Chemtech Project # O2102

Test Name: TPH GC

A. Number of Samples and Date of Receipt:

3 Solid samples were received on 03/24/2023.

B. Parameters

According to the Chain of Custody document, the following analyses were requested: ASTM Ammonia, ASTM COD, ASTM Leach Extraction, ASTM Oil and Grease, ASTM TPH, Corrosivity, Ignitability, Oil and Grease, Paint Filter, PCB, pH, RCRA CHARACTERISTICS, Reactive Cyanide, Reactive Sulfide, TCLP BNA, TCLP Extraction, TCLP Herbicide, TCLP Mercury, TCLP Pesticide, TCLP VOA Group1, TCLP ZHE Extraction, TCLP Metals Group1, TPH GC, TS, TVS and VOC-TCLVOA-10. This data package contains results for TPH GC.

C. Analytical Techniques:

The analysis were performed on instrument FID_G. The column is RXI-1MS which is 20 meters, 0.18mm ID, 0.18 um df, catalog 13302. The analysis of TPH GC was based on method 8015D and extraction was done based on method 3541.

D. QA/ QC Samples:

The Holding Times were met for all analysis.

The Surrogate recoveries met the acceptable criteria.

The Retention Times were acceptable for all samples.

The MS recoveries met the requirements for all compounds.

The MSD {O2102-01MSD} with File ID: FG011689.D recoveries met the acceptable requirements except for Petroleum Hydrocarbons[62%], due to matrix interference.

The RPD met criteria .

The Blank Spike met requirements for all samples .

The Blank analysis did not indicate the presence of lab contamination.

The Initial Calibration met the requirements .

The Continuous Calibration met the requirements .

E. Additional Comments:

The soil samples results are based on a dry weight basis.

F. Manual Integration Comments:

Please refer to the Manual integration Report included with the Run Logs for information on the manual integrations performed.

I certify that the data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. The laboratory manager or his designee, as verified by the following signature has authorized release of the data contained in this hard copy data package.

Signature S. M. Jodhani

APPROVED

By Sohil Jodhani, QA/QC Director at 8:39 am, Apr 07, 2023

CASE NARRATIVE**H2M Architects + Engineers****Project Name: Siphon****Project # N/A****Chemtech Project # O2102****Test Name: TCLP Metals Group1, TCLP Mercury****A. Number of Samples and Date of Receipt:**

3 Solid samples were received on 03/24/2023.

B. Parameters:

According to the Chain of Custody document, the following analyses were requested: ASTM Ammonia, ASTM COD, ASTM Leach Extraction, ASTM Oil and Grease, ASTM TPH, Corrosivity, Ignitability, Oil and Grease, Paint Filter, PCB, pH, RCRA CHARACTERISTICS, Reactive Cyanide, Reactive Sulfide, TCLP BNA, TCLP Extraction, TCLP Herbicide, TCLP Mercury, TCLP Pesticide, TCLP VOA Group1, TCLP ZHE Extraction, TCLP Metals Group1, TPH GC, TS, TVS and VOC-TCLVOA-10. This data package contains results for TCLP Metals Group1, TCLP Mercury.

C. Analytical Techniques:

The analysis of TCLP Metals Group1 was based on method 6010D, digestion based on method 3010 (waters). The analysis and digestion of TCLP Mercury was based on method 7470A and TCLP extraction method was 1311.

D. QA/ QC Samples:

The Holding Times were met for all analysis.

The Blank Spike met requirements for all samples.

The Duplicate analysis met criteria for all samples.

The Matrix Spike analysis met criteria for all samples.

The Matrix Spike Duplicate analysis met criteria for all samples.

The Blank analysis did not indicate the presence of lab contamination.

The Calibration met the requirements.

The Serial Dilution met the acceptable requirements.

E. Additional Comments:

In analytical sequence LB124723, The % recovery was outside of acceptance limit for Iron of CCV03, CCV04, CCV010 But No any affected sample Reported under this CCVs.

I certify that the data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. The laboratory manager or his designee, as verified by the following signature has authorized release of the data contained in this hard copy data package.

Signature S. M. Jodhani**APPROVED**

By Sohil Jodhani, QA/QC Director at 8:39 am, Apr 07, 2023

CASE NARRATIVE**H2M Architects + Engineers****Project Name: Siphon****Project # N/A****Chemtech Project # O2102****Test Name: ASTM Ammonia,ASTM COD,ASTM Oil and Grease,ASTM TPH,Corrosivity,Ignitability,Oil and Grease,Paint Filter,pH,Reactive Cyanide,Reactive Sulfide,TS,TVS****A. Number of Samples and Date of Receipt:**

3 Solid samples were received on 03/24/2023.

B. Parameters:

According to the Chain of Custody document, the following analyses were requested: ASTM Ammonia, ASTM COD, ASTM Leach Extraction, ASTM Oil and Grease, ASTM TPH, Corrosivity, Ignitability, Oil and Grease, Paint Filter, PCB, pH, RCRA CHARACTERISTICS, Reactive Cyanide, Reactive Sulfide, TCLP BNA, TCLP Extraction, TCLP Herbicide, TCLP Mercury, TCLP Pesticide, TCLP VOA Group1, TCLP ZHE Extraction, TCLP Metals Group1, TPH GC, TS, TVS and VOC-TCLVOA-10. This data package contains results for ASTM Ammonia,ASTM COD,ASTM Oil and Grease,ASTM TPH,Corrosivity,Ignitability,Oil and Grease,Paint Filter,pH,Reactive Cyanide,Reactive Sulfide,TS,TVS.

C. Analytical Techniques:

The analysis of Ignitability was based on method 1030, The analysis of TVS was based on method 160.4, The analysis of ASTM TPH was based on method 1664, The analysis of ASTM Oil and Grease,Oil and Grease was based on method 1664A, The analysis of Reactive Cyanide was based on method 9012B, The analysis of Reactive Sulfide was based on method 9034, The analysis of Corrosivity,pH was based on method 9045D, The analysis of Paint Filter was based on method 9095B, The analysis of TS was based on method SM2540 B, The analysis of ASTM Ammonia was based on method SM4500-NH3 and The analysis of ASTM COD was based on method SM5220 D.

D. QA/ QC Samples:

The Holding Times were met for all samples except for CHAMBER-C-72-EAST of pH, for CHAMBER-C-72-EAST of Corrosivity as this sample received out of hold.

The Blank Spike met requirements for all samples.

The Duplicate analysis met criteria for all samples.

The Matrix Spike (CHAMBER-B-72-WESTMS) analysis met criteria for all samples except for ASTM COD due to matrix interference.

The Matrix Spike (CHAMBER-C-72-EASTMS) analysis met criteria for all samples except for Oil and Grease due to matrix interference.

The Matrix Spike Duplicate(CHAMBER-B-72-WESTMSD) analysis met criteria for all samples except for ASTM COD due to matrix interference.

The Matrix Spike Duplicate(CHAMBER-C-72-EASTMSD) analysis met criteria for all samples except for Oil and Grease due to matrix interference.

The Blank analysis did not indicate the presence of lab contamination.
The Calibration met the requirements.

E. Additional Comments:

As per method 1664A, MS/MSD is required to be performed with the sample analysis. However, Lab did not receive sufficient volume to perform the MS/MSD therefore MS/MSD were not performed for this project.

I certify that the data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. The laboratory manager or his designee, as verified by the following signature has authorized release of the data contained in this hard copy data package.

Signature S. M. Jodhani

APPROVED

By Sohil Jodhani, QA/QC Director at 8:39 am, Apr 07, 2023

DATA REPORTING QUALIFIERS- INORGANIC

For reporting results, the following “ Results Qualifiers” are used:

J	Indicates the reported value was obtained from a reading that was less than the Contract Required Detection Limit (CRDL), but greater than or equal to the Instrument Detection Limit (IDL).
U	Indicates the analyte was analyzed for, but not detected.
ND	Indicates the analyte was analyzed for, but not detected
E	Indicates the reported value is estimated because of the presence of interference
M	Indicates Duplicate injection precision not met.
N	Indicates the spiked sample recovery is not within control limits.
S	Indicates the reported value was determined by the Method of Standard Addition (MSA).
*	Indicates that the duplicate analysis is not within control limits.
+	Indicates the correlation coefficient for the MSA is less than 0.995.
D	Indicates the reported value is from a secondary analysis with a dilution factor. The original analysis exceeded the calibration range.
M	Method qualifiers “P” for ICP instrument “PM” for ICP when Microwave Digestion is used “CV” for Manual Cold Vapor AA “AV” for automated Cold Vapor AA “CA” for MIDI-Distillation Spectrophotometric “AS” for Semi -Automated Spectrophotometric “C” for Manual Spectrophotometric “T” for Titrimetric “NR” for analyte not required to be analyzed
OR	Indicates the analyte’s concentration exceeds the calibrated range of the instrument for that specific analysis.
Q	Indicates the LCS did not meet the control limits requirements
H	Sample Analysis Out Of Hold Time

DATA REPORTING QUALIFIERS- ORGANIC

For reporting results, the following "Results Qualifiers" are used:

Value	If the result is a value greater than or equal to the detection limit, report the value
U	Indicates the compound was analyzed for but was not detected. Report the minimum detection limit for the sample with the U, i.e. "10 U". This is not necessarily the instrument detection limit attainable for this particular sample based on any concentration or dilution that may have been required.
ND	Indicates the analyte was analyzed for, but not detected
J	Indicates an estimated value. This flag is used: (1) When estimating a concentration for a tentatively identified compound (library search hits, where a 1:1 response is assumed.) (2) When the mass spectral data indicated the identification, however the result was less than the specified detection limit greater than zero. If the detection limit was 10ug/L and a concentration of 3 ug/L was calculated report as 3 J. This flag is used when similar situation arise on any organic parameter i.e. Pest, PCB and others.
B	Indicates the analyte was found in the blank as well as the sample report as "12 B".
E	Indicates the analyte 's concentration exceeds the calibrated range of the instrument for that specific analysis.
D	This flag identifies all compounds identified in an analysis at a secondary dilution factor.
P	This flag is used for Pesticide/PCB target analyte when there is >25% difference for detected concentrations between the two GC columns. The lower of the two values is reported on Form 1 and flagged with a "P".
N	This flag indicates presumptive evidence of a compound. This is only used for tentatively identified compounds (TICs), where the identification is based on a mass spectral library search. It applies to all TIC results. For generic characterization of a TIC, such as chlorinated hydrocarbon, the flag is not used.
A	This flag indicates that a Tentatively Identified Compound is a suspected aldol-condensation product.
Q	Indicates the LCS did not meet the control limits requirements

APPENDIX A

QA REVIEW GENERAL DOCUMENTATION

Project #: O2102

Completed

For thorough review, the report must have the following:

GENERAL:

Are all original paperwork present (chain of custody, record of communication,airbill, sample management lab chronicle, login page)

✓

Check chain-of-custody for proper relinquish/return of samples

✓

Is the chain of custody signed and complete

✓

Check internal chain-of-custody for proper relinquish/return of samples /sample extracts

✓

Collect information for each project id from server. Were all requirements followed

✓

COVER PAGE:

Do numbers of samples correspond to the number of samples in the Chain of Custody on login page

✓

Do lab numbers and client Ids on cover page agree with the Chain of Custody

✓

CHAIN OF CUSTODY:

Do requested analyses on Chain of Custody agree with form I results

✓

Do requested analyses on Chain of Custody agree with the log-in page

✓

Were the correct method log-in for analysis according to the Analytical Request and Chain of Custody

✓

Were the samples received within hold time

✓

Were any problems found with the samples at arrival recorded in the Sample Management Laboratory Chronicle

✓

ANALYTICAL:

Was method requirement followed?

✓

Was client requirement followed?

✓

Does the case narrative summarize all QC failure?

✓

All runlogs and manual integration are reviewed for requirements

✓

All manual calculations and /or hand notations verified

✓

1st Level QA Review Signature: MOHAMMAD AHMED

Date: 04/07/2023

2nd Level QA Review Signature:

S. M. Jodhani

APPROVED

By Sohil Jodhani, QA/QC Director at 8:40 am, Apr 07, 2023

Hit Summary Sheet
SW-846

SDG No.: O2102
Client: H2M Architects + Engineers

A

B

C

D

Sample ID	Client ID	Matrix	Parameter	Concentration	C	MDL	RDL	Units
-----------	-----------	--------	-----------	---------------	---	-----	-----	-------

Client ID: 0

Total Voc :
Total Concentration:

SAMPLE DATA

Report of Analysis

Client:	H2M Architects + Engineers	Date Collected:	03/24/23
Project:	Siphon	Date Received:	03/24/23
Client Sample ID:	CHAMBER-C-72-EAST	SDG No.:	O2102
Lab Sample ID:	O2102-02	Matrix:	TCLP
Analytical Method:	SW8260	% Solid:	0
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	TCLP VOA Group1
GC Column:	RXI-624 ID : 0.25	Level :	LOW
Prep Method :	SW5035		

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VN077237.D	1		03/28/23 15:17	VN032823

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
TARGETS						
75-01-4	Vinyl Chloride	0.25	UQ	0.25	5.00	ug/L
75-35-4	1,1-Dichloroethene	0.21	UQ	0.21	5.00	ug/L
78-93-3	2-Butanone	1.20	U	1.20	25.0	ug/L
56-23-5	Carbon Tetrachloride	0.13	U	0.13	5.00	ug/L
67-66-3	Chloroform	0.14	U	0.14	5.00	ug/L
71-43-2	Benzene	0.12	U	0.12	5.00	ug/L
107-06-2	1,2-Dichloroethane	0.16	U	0.16	5.00	ug/L
79-01-6	Trichloroethene	0.26	U	0.26	5.00	ug/L
108-88-3	Toluene	0.14	U	0.14	5.00	ug/L
127-18-4	Tetrachloroethene	0.17	U	0.17	5.00	ug/L
108-90-7	Chlorobenzene	0.12	U	0.12	5.00	ug/L
100-41-4	Ethyl Benzene	0.13	U	0.13	5.00	ug/L
1330-20-7	Total Xylenes	0.46	U	0.46	15.0	ug/L
SURROGATES						
17060-07-0	1,2-Dichloroethane-d4	48.5		74 - 125	97%	SPK: 50
1868-53-7	Dibromofluoromethane	46.8		75 - 124	94%	SPK: 50
2037-26-5	Toluene-d8	54.9		86 - 113	110%	SPK: 50
460-00-4	4-Bromofluorobenzene	49.0		64 - 133	98%	SPK: 50
INTERNAL STANDARDS						
363-72-4	Pentafluorobenzene	283000	8.23			
540-36-3	1,4-Difluorobenzene	493000	9.107			
3114-55-4	Chlorobenzene-d5	450000	11.865			
3855-82-1	1,4-Dichlorobenzene-d4	167000	13.795			

U = Not Detected

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MDL = Method Detection Limit

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M = MS/MSD acceptance criteria did not meet requirements

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B = Analyte Found in Associated Method Blank

N = Presumptive Evidence of a Compound

* = Values outside of QC limits

D = Dilution

() = Laboratory InHouse Limit

A = Aldol-Condensation Reaction Products



284 Sheffield Street, Mountainside, New Jersey - 07092

Phone: (908) 789 8900 Fax: (908) 789 8922

LAB CHRONICLE

OrderID:	O2102	OrderDate:	3/27/2023 9:02:00 AM
Client:	H2M Architects + Engineers	Project:	Siphon
Contact:	Stephen I. Kaplan	Location:	M11,VOA Ref. #3 Water

LabID	ClientID	Matrix	Test	Method	Sample Date	Prep Date	Anal Date	Received
O2102-02	CHAMBER-C-72-EAST	TCLP	TCLP VOA Group1	8260D	03/24/23		03/28/23	03/24/23

Hit Summary Sheet
SW-846

SDG No.: O2102
Client: H2M Architects + Engineers

Sample ID	Client ID	Matrix	Parameter	Concentration	C	MDL	RDL	Units
Client ID :					0.000			
			Total Svoc :		0.00			
			Total Concentration:		0.00			

SAMPLE DATA

Report of Analysis

Client:	H2M Architects + Engineers	Date Collected:	03/24/23
Project:	Siphon	Date Received:	03/24/23
Client Sample ID:	CHAMBER-C-72-EAST	SDG No.:	O2102
Lab Sample ID:	O2102-02	Matrix:	TCLP
Analytical Method:	SW8270	% Solid:	0
Sample Wt/Vol:	100 Units: mL	Final Vol:	1000 uL
Soil Aliquot Vol:	uL	Test:	TCLP BNA
Extraction Type :	Decanted : N	Level :	LOW
Injection Volume :	GPC Factor : 1.0	GPC Cleanup :	N PH :
Prep Method :	SW3541		

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
BM039256.D	1	03/28/23 10:50	03/31/23 16:56	PB151761

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
TARGETS						
110-86-1	Pyridine	17.8	U	17.8	50.0	ug/L
106-46-7	1,4-Dichlorobenzene	14.3	U	14.3	50.0	ug/L
95-48-7	2-Methylphenol	20.6	U	20.6	50.0	ug/L
65794-96-9	3+4-Methylphenols	21.6	U	21.6	100	ug/L
67-72-1	Hexachloroethane	16.4	U	16.4	50.0	ug/L
98-95-3	Nitrobenzene	17.2	U	17.2	50.0	ug/L
87-68-3	Hexachlorobutadiene	19.3	U	19.3	50.0	ug/L
88-06-2	2,4,6-Trichlorophenol	15.2	U	15.2	50.0	ug/L
95-95-4	2,4,5-Trichlorophenol	15.7	U	15.7	50.0	ug/L
121-14-2	2,4-Dinitrotoluene	25.4	U	25.4	50.0	ug/L
118-74-1	Hexachlorobenzene	19.1	U	19.1	50.0	ug/L
87-86-5	Pentachlorophenol	25.5	U	25.5	100	ug/L
SURROGATES						
367-12-4	2-Fluorophenol	145		10 - 139	97%	SPK: 150
13127-88-3	Phenol-d6	130		10 - 134	87%	SPK: 150
4165-60-0	Nitrobenzene-d5	99.0		49 - 133	99%	SPK: 100
321-60-8	2-Fluorobiphenyl	100		52 - 132	100%	SPK: 100
118-79-6	2,4,6-Tribromophenol	153		45 - 141	102%	SPK: 150
1718-51-0	Terphenyl-d14	113		45 - 142	113%	SPK: 100
INTERNAL STANDARDS						
3855-82-1	1,4-Dichlorobenzene-d4	204000	7.916			
1146-65-2	Naphthalene-d8	794000	10.727			
15067-26-2	Acenaphthene-d10	442000	14.563			
1517-22-2	Phenanthrene-d10	895000	17.309			
1719-03-5	Chrysene-d12	761000	21.492			
1520-96-3	Perylene-d12	844000	23.903			

Report of Analysis

Client:	H2M Architects + Engineers	Date Collected:	03/24/23
Project:	Siphon	Date Received:	03/24/23
Client Sample ID:	CHAMBER-C-72-EAST	SDG No.:	O2102
Lab Sample ID:	O2102-02	Matrix:	TCLP
Analytical Method:	SW8270	% Solid:	0
Sample Wt/Vol:	100 Units: mL	Final Vol:	1000 uL
Soil Aliquot Vol:	uL	Test:	TCLP BNA
Extraction Type :	Decanted : N	Level :	LOW
Injection Volume :	GPC Factor : 1.0	GPC Cleanup :	N PH :
Prep Method :	SW3541		

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
BM039256.D	1	03/28/23 10:50	03/31/23 16:56	PB151761

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
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() = Laboratory InHouse Limit

A = Aldol-Condensation Reaction Products

Report of Analysis

Client:	H2M Architects + Engineers	Date Collected:	03/28/23
Project:	Siphon	Date Received:	03/28/23
Client Sample ID:	PB151735TB	SDG No.:	O2102
Lab Sample ID:	PB151735TB	Matrix:	TCLP
Analytical Method:	SW8270	% Solid:	0
Sample Wt/Vol:	100 Units: mL	Final Vol:	1000 uL
Soil Aliquot Vol:	uL	Test:	TCLP BNA
Extraction Type :	Decanted : N	Level :	LOW
Injection Volume :	GPC Factor : 1.0	GPC Cleanup :	N PH :
Prep Method :	SW3541		

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
BM039228.D	1	03/28/23 10:50	03/30/23 15:59	PB151761

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
TARGETS						
110-86-1	Pyridine	17.8	U	17.8	50.0	ug/L
106-46-7	1,4-Dichlorobenzene	14.3	U	14.3	50.0	ug/L
95-48-7	2-Methylphenol	20.6	U	20.6	50.0	ug/L
65794-96-9	3+4-Methylphenols	21.6	U	21.6	100	ug/L
67-72-1	Hexachloroethane	16.4	U	16.4	50.0	ug/L
98-95-3	Nitrobenzene	17.2	U	17.2	50.0	ug/L
87-68-3	Hexachlorobutadiene	19.3	U	19.3	50.0	ug/L
88-06-2	2,4,6-Trichlorophenol	15.2	U	15.2	50.0	ug/L
95-95-4	2,4,5-Trichlorophenol	15.7	U	15.7	50.0	ug/L
121-14-2	2,4-Dinitrotoluene	25.4	U	25.4	50.0	ug/L
118-74-1	Hexachlorobenzene	19.1	U	19.1	50.0	ug/L
87-86-5	Pentachlorophenol	25.5	U	25.5	100	ug/L
SURROGATES						
367-12-4	2-Fluorophenol	146		10 - 139	97%	SPK: 150
13127-88-3	Phenol-d6	138		10 - 134	92%	SPK: 150
4165-60-0	Nitrobenzene-d5	88.6		49 - 133	89%	SPK: 100
321-60-8	2-Fluorobiphenyl	88.0		52 - 132	88%	SPK: 100
118-79-6	2,4,6-Tribromophenol	130		45 - 141	87%	SPK: 150
1718-51-0	Terphenyl-d14	94.9		45 - 142	95%	SPK: 100
INTERNAL STANDARDS						
3855-82-1	1,4-Dichlorobenzene-d4	234000	7.922			
1146-65-2	Naphthalene-d8	905000	10.734			
15067-26-2	Acenaphthene-d10	510000	14.569			
1517-22-2	Phenanthrene-d10	1100000	17.315			
1719-03-5	Chrysene-d12	1020000	21.498			
1520-96-3	Perylene-d12	1200000	23.909			

Report of Analysis

Client:	H2M Architects + Engineers	Date Collected:	03/28/23
Project:	Siphon	Date Received:	03/28/23
Client Sample ID:	PB151735TB	SDG No.:	O2102
Lab Sample ID:	PB151735TB	Matrix:	TCLP
Analytical Method:	SW8270	% Solid:	0
Sample Wt/Vol:	100 Units: mL	Final Vol:	1000 uL
Soil Aliquot Vol:	uL	Test:	TCLP BNA
Extraction Type :	Decanted : N	Level :	LOW
Injection Volume :	GPC Factor : 1.0	GPC Cleanup :	N PH :
Prep Method :	SW3541		

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
BM039228.D	1	03/28/23 10:50	03/30/23 15:59	PB151761

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
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U = Not Detected

LOQ = Limit of Quantitation

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J = Estimated Value

B = Analyte Found in Associated Method Blank

N = Presumptive Evidence of a Compound

* = Values outside of QC limits

D = Dilution

() = Laboratory InHouse Limit

A = Aldol-Condensation Reaction Products



284 Sheffield Street, Mountainside, New Jersey - 07092

Phone: (908) 789 8900 Fax: (908) 789 8922

LAB CHRONICLE

OrderID:	O2102	OrderDate:	3/27/2023 9:02:00 AM
Client:	H2M Architects + Engineers	Project:	Siphon
Contact:	Stephen I. Kaplan	Location:	--Select--,M11,VOA Ref. #3 Water

LabID	ClientID	Matrix	Test	Method	Sample Date	Prep Date	Anal Date	Received
O2102-02	CHAMBER-C-72-EAST	TCLP	TCLP BNA	8270E	03/24/23	03/28/23	03/31/23	03/24/23

Hit Summary Sheet
SW-846

SDG No.: O2102

Order ID: O2102

Client: H2M Architects + Engineers

Project ID: Siphon

A

B

Sample ID	Client ID	Matrix	Parameter	Concentration	C	MDL	RDL	Units
Client ID :								

C

D

Total Concentration: 0.000

SAMPLE DATA

Report of Analysis

Client:	H2M Architects + Engineers		Date Collected:	03/24/23	
Project:	Siphon		Date Received:	03/24/23	
Client Sample ID:	CHAMBER-C-72-EAST		SDG No.:	O2102	
Lab Sample ID:	O2102-02		Matrix:	TCLP	
Analytical Method:	SW8081		% Solid:	0	Decanted:
Sample Wt/Vol:	100	Units: mL	Final Vol:	10000	uL
Soil Aliquot Vol:		uL	Test:	TCLP Pesticide	
Extraction Type:			Injection Volume :		
GPC Factor :	1.0	PH :			
Prep Method :	SW3541B				

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
PL081805.D	1	03/29/23 12:15	03/31/23 11:06	PB151790

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
TARGETS						
58-89-9	gamma-BHC (Lindane)	0.064	U	0.064	0.50	ug/L
76-44-8	Heptachlor	0.073	U	0.073	0.50	ug/L
1024-57-3	Heptachlor epoxide	0.10	U	0.10	0.50	ug/L
72-20-8	Endrin	0.043	U	0.043	0.50	ug/L
72-43-5	Methoxychlor	0.066	U	0.066	0.50	ug/L
8001-35-2	Toxaphene	1.80	U	1.80	10.0	ug/L
57-74-9	Chlordane	0.97	U	0.97	5.00	ug/L
SURROGATES						
2051-24-3	Decachlorobiphenyl	19.1		27 - 142	96%	SPK: 20
877-09-8	Tetrachloro-m-xylene	17.3		60 - 145	86%	SPK: 20

Comments:

U = Not Detected

LOQ = Limit of Quantitation

MDL = Method Detection Limit

LOD = Limit of Detection

E = Value Exceeds Calibration Range

P = Indicates >25% difference for detected concentrations between the two GC columns

Q = indicates LCS control criteria did not meet requirements

M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value

B = Analyte Found in Associated Method Blank

N = Presumptive Evidence of a Compound

* = Values outside of QC limits

D = Dilution

S = Indicates estimated value where valid five-point calibration was not performed prior to analyte detection in sample.

() = Laboratory InHouse Limit

Report of Analysis

Client:	H2M Architects + Engineers		Date Collected:		
Project:	Siphon		Date Received:	03/29/23	
Client Sample ID:	PB151735TB		SDG No.:	O2102	
Lab Sample ID:	PB151735TB		Matrix:	TCLP	
Analytical Method:	SW8081		% Solid:	0	Decanted:
Sample Wt/Vol:	100	Units: mL	Final Vol:	10000	uL
Soil Aliquot Vol:		uL	Test:	TCLP Pesticide	
Extraction Type:			Injection Volume :		
GPC Factor :	1.0	PH :			
Prep Method :	SW3541B				

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
PL081808.D	1	03/29/23 12:15	03/31/23 11:48	PB151790

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
TARGETS						
58-89-9	gamma-BHC (Lindane)	0.064	U	0.064	0.50	ug/L
76-44-8	Heptachlor	0.073	U	0.073	0.50	ug/L
1024-57-3	Heptachlor epoxide	0.10	U	0.10	0.50	ug/L
72-20-8	Endrin	0.043	U	0.043	0.50	ug/L
72-43-5	Methoxychlor	0.066	U	0.066	0.50	ug/L
8001-35-2	Toxaphene	1.80	U	1.80	10.0	ug/L
57-74-9	Chlordane	0.97	U	0.97	5.00	ug/L
SURROGATES						
2051-24-3	Decachlorobiphenyl	18.2		27 - 142	91%	SPK: 20
877-09-8	Tetrachloro-m-xylene	16.3		60 - 145	81%	SPK: 20

Comments:

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LAB CHRONICLE

OrderID:	O2102	OrderDate:	3/27/2023 9:02:00 AM
Client:	H2M Architects + Engineers	Project:	Siphon
Contact:	Stephen I. Kaplan	Location:	--Select--,M11,VOA Ref. #3 Water

LabID	ClientID	Matrix	Test	Method	Sample Date	Prep Date	Anal Date	Received
O2102-01	CHAMBER-C-72-EAST	SOIL			03/24/23			03/24/23
			PCB	8082A		03/27/23	03/27/23	
			TPH GC	8015D		03/29/23	03/29/23	
O2102-02	CHAMBER-C-72-EAST	TCLP			03/24/23			03/24/23
			TCLP Herbicide	8151A		03/28/23	03/29/23	
			TCLP Pesticide	8081B		03/29/23	03/31/23	

Hit Summary Sheet
SW-846

SDG No.:	O2102				Order ID:	O2102			
Client:	H2M Architects + Engineers				Project ID:	Siphon			
Sample ID	Client ID	Matrix	Parameter	Concentration	C	MDL	RDL	Units	
Client ID :	CHAMBER-C-72-EAST								
O2102-01	CHAMBER-C-72-EA	SOIL	Aroclor-1260	34.8	J	7.50	38.4	ug/kg	
Total Concentration:				34.800					

A

B

C

D

SAMPLE DATA

Report of Analysis

Client:	H2M Architects + Engineers		Date Collected:	03/24/23	
Project:	Siphon		Date Received:	03/24/23	
Client Sample ID:	CHAMBER-C-72-EAST		SDG No.:	O2102	
Lab Sample ID:	O2102-01		Matrix:	SOIL	
Analytical Method:	SW8082A		% Solid:	44.2	Decanted:
Sample Wt/Vol:	30.03	Units: g	Final Vol:	10000	uL
Soil Aliquot Vol:		uL	Test:	PCB	
Extraction Type:			Injection Volume :		
GPC Factor :	1.0	PH :			
Prep Method :	SW3541B				

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
PO093584.D	1	03/27/23 08:34	03/27/23 16:51	PB151720

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
TARGETS						
12674-11-2	Aroclor-1016	8.10	U	8.10	38.4	ug/kg
11104-28-2	Aroclor-1221	13.3	U	13.3	38.4	ug/kg
11141-16-5	Aroclor-1232	10.2	U	10.2	38.4	ug/kg
53469-21-9	Aroclor-1242	7.10	U	7.10	38.4	ug/kg
12672-29-6	Aroclor-1248	6.40	U	6.40	38.4	ug/kg
11097-69-1	Aroclor-1254	8.50	U	8.50	38.4	ug/kg
37324-23-5	Aroclor-1262	6.10	U	6.10	38.4	ug/kg
11100-14-4	Aroclor-1268	7.50	U	7.50	38.4	ug/kg
11096-82-5	Aroclor-1260	34.8	J	7.50	38.4	ug/kg
SURROGATES						
877-09-8	Tetrachloro-m-xylene	12.9		40 - 162	64%	SPK: 20
2051-24-3	Decachlorobiphenyl	10.3		32 - 176	52%	SPK: 20

Comments:

U = Not Detected

LOQ = Limit of Quantitation

MDL = Method Detection Limit

LOD = Limit of Detection

E = Value Exceeds Calibration Range

P = Indicates >25% difference for detected concentrations between the two GC columns

Q = indicates LCS control criteria did not meet requirements

M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value

B = Analyte Found in Associated Method Blank

N = Presumptive Evidence of a Compound

* = Values outside of QC limits

D = Dilution

S = Indicates estimated value where valid five-point calibration was not performed prior to analyte detection in sample.

() = Laboratory InHouse Limit



284 Sheffield Street, Mountainside, New Jersey - 07092

Phone: (908) 789 8900 Fax: (908) 789 8922

LAB CHRONICLE

OrderID:	O2102	OrderDate:	3/27/2023 9:02:00 AM
Client:	H2M Architects + Engineers	Project:	Siphon
Contact:	Stephen I. Kaplan	Location:	M11,VOA Ref. #3 Water

LabID	ClientID	Matrix	Test	Method	Sample Date	Prep Date	Anal Date	Received
O2102-01	CHAMBER-C-72-EAST	SOIL	PCB	8082A	03/24/23	03/27/23	03/27/23	03/24/23

Hit Summary Sheet
SW-846

SDG No.: O2102

Order ID: O2102

Client: H2M Architects + Engineers

Project ID: Siphon

A

B

Sample ID	Client ID	Matrix	Parameter	Concentration	C	MDL	RDL	Units
Client ID :								

C

D

Total Concentration: 0.000

SAMPLE DATA

Report of Analysis

Client:	H2M Architects + Engineers		Date Collected:	03/24/23	
Project:	Siphon		Date Received:	03/24/23	
Client Sample ID:	CHAMBER-C-72-EAST		SDG No.:	O2102	
Lab Sample ID:	O2102-02		Matrix:	TCLP	
Analytical Method:	SW8151A		% Solid:	0	Decanted:
Sample Wt/Vol:	100	Units: mL	Final Vol:	10000	uL
Soil Aliquot Vol:		uL	Test:	TCLP Herbicide	
Extraction Type:			Injection Volume :		
GPC Factor :	1.0	PH :			
Prep Method :	8151A				

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
PS022545.D	1	03/28/23 12:30	03/29/23 15:48	PB151786

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
TARGETS						
94-75-7	2,4-D	5.70	U	5.70	20.0	ug/L
93-72-1	2,4,5-TP (Silvex)	5.40	U	5.40	20.0	ug/L
SURROGATES						
19719-28-9	2,4-DCAA	591		16 - 175	118%	SPK: 500

Comments:

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Report of Analysis

Client:	H2M Architects + Engineers		Date Collected:		
Project:	Siphon		Date Received:	03/28/23	
Client Sample ID:	PB151735TB		SDG No.:	O2102	
Lab Sample ID:	PB151735TB		Matrix:	TCLP	
Analytical Method:	SW8151A		% Solid:	0	Decanted:
Sample Wt/Vol:	100	Units: mL	Final Vol:	10000	uL
Soil Aliquot Vol:		uL	Test:	TCLP Herbicide	
Extraction Type:			Injection Volume :		
GPC Factor :	1.0	PH :			
Prep Method :	8151A				

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
PS022548.D	1	03/28/23 12:30	03/29/23 17:00	PB151786

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
TARGETS						
94-75-7	2,4-D	5.70	U	5.70	20.0	ug/L
93-72-1	2,4,5-TP (Silvex)	5.40	U	5.40	20.0	ug/L
SURROGATES						
19719-28-9	2,4-DCAA	502		16 - 175	100%	SPK: 500

Comments:

U = Not Detected

LOQ = Limit of Quantitation

MDL = Method Detection Limit

LOD = Limit of Detection

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B = Analyte Found in Associated Method Blank

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LAB CHRONICLE

OrderID:	O2102	OrderDate:	3/27/2023 9:02:00 AM
Client:	H2M Architects + Engineers	Project:	Siphon
Contact:	Stephen I. Kaplan	Location:	M11,VOA Ref. #3 Water

LabID	ClientID	Matrix	Test	Method	Sample Date	Prep Date	Anal Date	Received
O2102-01	CHAMBER-C-72-EAST	SOIL			03/24/23			03/24/23
			PCB	8082A		03/27/23	03/27/23	
			TPH GC	8015D		03/29/23	03/29/23	
O2102-02	CHAMBER-C-72-EAST	TCLP			03/24/23			03/24/23
			TCLP Herbicide	8151A		03/28/23	03/29/23	

SAMPLE DATA

Report of Analysis

Client:	H2M Architects + Engineers	Date Collected:	03/24/23
Project:	Siphon	Date Received:	03/24/23
Client Sample ID:	CHAMBER-C-72-EAST	SDG No.:	O2102
Lab Sample ID:	O2102-01	Matrix:	SOIL
Analytical Method:	8015D TPH	% Solid:	44.2
Sample Wt/Vol:	30.09	Units:	g
Soil Aliquot Vol:			uL
Extraction Type:		Test:	TPH GC
GPC Factor :		Injection Volume :	
Prep Method :	SW3541		

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
FG011686.D	1	03/29/23 08:39	03/29/23 13:41	PB151763

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
TARGETS						
PHC	Petroleum Hydrocarbons	56600		907	6390	ug/kg
SURROGATES						
16416-32-3	TETRACOSANE-d50	18.5		37 - 130	93%	SPK: 20

Comments:

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B = Analyte Found in Associated Method Blank

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LAB CHRONICLE

OrderID:	O2102	OrderDate:	3/27/2023 9:02:00 AM
Client:	H2M Architects + Engineers	Project:	Siphon
Contact:	Stephen I. Kaplan	Location:	M11,VOA Ref. #3 Water

LabID	ClientID	Matrix	Test	Method	Sample Date	Prep Date	Anal Date	Received
O2102-01	CHAMBER-C-72-EAST	SOIL			03/24/23			03/24/23
			PCB	8082A		03/27/23	03/27/23	
			TPH GC	8015D		03/29/23	03/29/23	



284 Sheffield Street, Mountainside, NJ 07092 Phone: 908 789 8900 Fax: 908 789 8922

Hit Summary Sheet
SW-846

SDG No.:

O2102

Order ID:

O2102

Client:

H2M Architects + Engineers

Project ID:

Siphon

Sample ID	Client ID	Matrix	Parameter	Concentration	C	MDL	RDL	Units
Client ID : CHAMBER-C-72-EAST								
O2102-02	CHAMBER-C-72-EAST	TCLP	Barium	1410		39.2	500	ug/L
O2102-02	CHAMBER-C-72-EAST	TCLP	Iron	41600		185	500	ug/L
O2102-02	CHAMBER-C-72-EAST	TCLP	Nickel	62.5	J	8.50	200	ug/L
O2102-02	CHAMBER-C-72-EAST	TCLP	Zinc	758		17.5	200	ug/L

SAMPLE DATA

Report of Analysis

Client:	H2M Architects + Engineers	Date Collected:	03/24/23
Project:	Siphon	Date Received:	03/24/23
Client Sample ID:	CHAMBER-C-72-EAST	SDG No.:	O2102
Lab Sample ID:	O2102-02	Matrix:	TCLP
Level (low/med):	low	% Solid:	0

Cas	Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.	Prep Met.
7429-90-5	Aluminum	283	U	1	283	500	ug/L	03/28/23 12:30	03/30/23 15:13	SW6010	SW3050
7440-38-2	Arsenic	34.8	U	1	34.8	100	ug/L	03/28/23 12:30	03/30/23 15:13	SW6010	SW3050
7440-39-3	Barium	1410		1	39.2	500	ug/L	03/28/23 12:30	03/30/23 15:13	SW6010	SW3050
7440-43-9	Cadmium	1.00	U	1	1.00	30.0	ug/L	03/28/23 12:30	03/30/23 15:13	SW6010	SW3050
7440-47-3	Chromium	8.00	U	1	8.00	50.0	ug/L	03/28/23 12:30	03/30/23 15:13	SW6010	SW3050
7440-50-8	Copper	70.7	U	1	70.7	100	ug/L	03/28/23 12:30	03/30/23 15:13	SW6010	SW3050
7439-89-6	Iron	41600		1	185	500	ug/L	03/28/23 12:30	03/30/23 15:13	SW6010	SW3050
7439-92-1	Lead	35.1	U	1	35.1	60.0	ug/L	03/28/23 12:30	03/30/23 15:13	SW6010	SW3050
7439-97-6	Mercury	0.78	U	1	0.78	2.00	ug/L	03/29/23 12:32	03/29/23 17:50	SW7470A	
7440-02-0	Nickel	62.5	J	1	8.50	200	ug/L	03/28/23 12:30	03/30/23 15:13	SW6010	SW3050
7782-49-2	Selenium	58.8	U	1	58.8	100	ug/L	03/28/23 12:30	03/30/23 15:13	SW6010	SW3050
7440-22-4	Silver	6.60	U	1	6.60	50.0	ug/L	03/28/23 12:30	03/30/23 15:13	SW6010	SW3050
7440-66-6	Zinc	758		1	17.5	200	ug/L	03/28/23 12:30	03/30/23 15:13	SW6010	SW3050

Color Before:	Colorless	Clarity Before:	Clear	Texture:
Color After:	Colorless	Clarity After:	Clear	Artifacts:
Comments:	TCLP Mercury			

U = Not Detected
 LOQ = Limit of Quantitation
 MDL = Method Detection Limit
 LOD = Limit of Detection
 D = Dilution
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J = Estimated Value
 B = Analyte Found in Associated Method Blank
 * = indicates the duplicate analysis is not within control limits.
 E = Indicates the reported value is estimated because of the presence of interference.
 OR = Over Range
 N = Spiked sample recovery not within control limits



284 Sheffield Street, Mountainside, New Jersey - 07092

Phone: (908) 789 8900 Fax: (908) 789 8922

LAB CHRONICLE

OrderID:	O2102	OrderDate:	3/27/2023 9:02:00 AM
Client:	H2M Architects + Engineers	Project:	Siphon
Contact:	Stephen I. Kaplan	Location:	M11,VOA Ref. #3 Water

LabID	ClientID	Matrix	Test	Method	Sample Date	Prep Date	Anal Date	Received
O2102-02	CHAMBER-C-72-EAST	TCLP			03/24/23			03/24/23
			TCLP Mercury	7470A		03/29/23	03/29/23	
			TCLPMetals Group1	6010D		03/28/23	03/30/23	

SAMPLE DATA

Report of Analysis

Client:	H2M Architects + Engineers	Date Collected:	03/24/23 09:15
Project:	Siphon	Date Received:	03/24/23
Client Sample ID:	CHAMBER-C-72-EAST	SDG No.:	O2102
Lab Sample ID:	O2102-01	Matrix:	SOIL
		% Solid:	44.2

Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units(Dry Weight)	Prep Date	Date Ana.	Ana Met.
Oil and Grease	158	J	1	90.5	282	mg/Kg		03/28/23 11:30	1664A
Paint Filter	1.00	U	1	1.00	1.00	ml/100gm		03/28/23 10:50	9095B
pH	6.73	H	1	0	0	pH		03/27/23 17:11	9045D
TS	41.4		1	1.00	5.00	%		03/27/23 10:00	SM 2540 B-15
TVS	6.90	J	1	1.00	10.0	%		03/27/23 16:00	160.4

Comments: pH result reported at temperature 21.6 °C

U = Not Detected

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LOD = Limit of Detection

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H = Sample Analysis Out Of Hold Time

J = Estimated Value

B = Analyte Found in Associated Method Blank

* = indicates the duplicate analysis is not within control limits.

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Report of Analysis

Client:	H2M Architects + Engineers	Date Collected:	03/24/23 09:15
Project:	Siphon	Date Received:	03/24/23
Client Sample ID:	CHAMBER-C-72-EAST	SDG No.:	O2102
Lab Sample ID:	O2102-02	Matrix:	SOIL
		% Solid:	100

Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
Corrosivity	6.73	H	1	0	0	pH		03/27/23 17:11	9045D
Ignitability	NO		1	0	0	oC		03/28/23 09:45	1030
Reactive Cyanide	0.019	J	1	0.011	0.049	mg/Kg	03/27/23 11:00	03/27/23 12:58	9012B
Reactive Sulfide	6.37	J	1	2.98	10.0	mg/Kg	03/28/23 09:00	03/28/23 11:30	9034

Comments: pH result reported at temperature 21.6 °C

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LOQ = Limit of Quantitation

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H = Sample Analysis Out Of Hold Time

J = Estimated Value

B = Analyte Found in Associated Method Blank

* = indicates the duplicate analysis is not within control limits.

E = Indicates the reported value is estimated because of the presence of interference.

OR = Over Range

N =Spiked sample recovery not within control limits

Report of Analysis

Client:	H2M Architects + Engineers	Date Collected:	03/24/23 09:15
Project:	Siphon	Date Received:	03/24/23
Client Sample ID:	CHAMBER-C-72-EAST	SDG No.:	O2102
Lab Sample ID:	O2102-03	Matrix:	WATER
		% Solid:	0

Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
ASTM Ammonia	10.4	OR	1	0.045	0.10	mg/L	03/30/23 09:15	03/30/23 12:30	SM 4500-NH3 B plus NH3 G-11
ASTM COD	7.97	J	1	2.52	10.0	mg/L		03/29/23 16:25	SM 5220 D-11
ASTM Oil and Grease	0.53	U	1	0.53	5.00	mg/L		03/29/23 09:30	SW1664A
ASTM TPH	1.65	U	1	1.65	5.00	mg/L		03/29/23 10:00	SW1664

Comments:

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B = Analyte Found in Associated Method Blank
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OR = Over Range
N = Spiked sample recovery not within control limits

Report of Analysis

Client:	H2M Architects + Engineers	Date Collected:	03/24/23 09:15
Project:	Siphon	Date Received:	03/24/23
Client Sample ID:	CHAMBER-C-72-EASTDL	SDG No.:	O2102
Lab Sample ID:	O2102-03DL	Matrix:	WATER
		% Solid:	0

Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
ASTM Ammonia	20.2	D	20	0.90	2.00	mg/L	03/30/23 09:15	03/30/23 12:58	SM 4500-NH3 B plus NH3 G-11

Comments:

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LAB CHRONICLE

OrderID:	O2102	OrderDate:	3/27/2023 9:02:00 AM
Client:	H2M Architects + Engineers	Project:	Siphon
Contact:	Stephen I. Kaplan	Location:	M11,VOA Ref. #3 Water

LabID	ClientID	Matrix	Test	Method	Sample Date	Prep Date	Anal Date	Received
O2102-01	CHAMBER-C-72-EAST	SOIL			03/24/23 09:15			03/24/23
			Oil and Grease	1664A			03/28/23 11:30	
			Paint Filter	9095B			03/28/23 10:50	
			pH	9045D			03/27/23 17:11	
			TS	SM2540 B			03/27/23 10:00	
			TVS	160.4			03/27/23 16:00	
O2102-02	CHAMBER-C-72-EAST	SOIL			03/24/23 09:15			03/24/23
			Corrosivity	9045D			03/27/23 17:11	
			Ignitability	1030			03/28/23 09:45	
			Reactive Cyanide	9012B		03/27/23	03/27/23 12:58	
			Reactive Sulfide	9034		03/28/23	03/28/23 11:30	
O2102-03	CHAMBER-C-72-EAST	WATER			03/24/23 09:15			03/24/23
			ASTM Ammonia	SM4500-NH3		03/30/23	03/30/23 12:30	
			ASTM COD	SM5220 D			03/29/23 16:25	
			ASTM Oil and Grease	1664A			03/29/23 09:30	



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LAB CHRONICLE

O2102-03DL	CHAMBER-C-72-EAST DL	WATER	ASTM TPH	1664			03/29/23 10:00	
			ASTM Ammonia	SM4500-NH3	03/24/23 09:15	03/30/23	03/30/23 12:58	03/24/23

SHIPPING DOCUMENTS

CHEMTECH

CHAIN OF CUSTODY RECORD

284 Sheffield Street, Mountainside, NJ 07092
(908) 789-8900 • Fax (908) 789-8922
www.chemtech.net

CHEMTECH PROJECT NO. 02102-02103
QUOTE NO. 02102-02103
COC Number 2038659

13
13.1

CLIENT INFORMATION

REPORT TO BE SENT TO:

COMPANY: Ham architects & engineers
ADDRESS: 290 Broad hollow Road, Suite 400E
CITY Melville STATE: NY ZIP: 11747
ATTENTION: Steve Kaplan
PHONE: 631-756-8000x1613 FAX:

CLIENT PROJECT INFORMATION

PROJECT NAME: Northern Blvd Siphon Cleaning
PROJECT NO.: NYDP 2001 LOCATION: Queens
PROJECT MANAGER: Steve Kaplan
e-mail: SKaplan@ham.com
PHONE: 631-756-8000 x1613 FAX:

CLIENT BILLING INFORMATION

BILL TO: Ham architects & engineers PO#:
ADDRESS: 290 Broad hollow Rd, Suite 400E
CITY Melville STATE: NY ZIP: 11747
ATTENTION: Steve Kaplan PHONE: 631-756-8000x1613

ANALYSIS

DATA TURNAROUND INFORMATION

FAX (RUSH) _____ DAYS*
HARDCOPY (DATA PACKAGE): _____ DAYS*
EDD: Standard _____ DAYS*
*TO BE APPROVED BY CHEMTECH
STANDARD HARDCOPY TURNAROUND TIME IS 10 BUSINESS DAYS

DATA DELIVERABLE INFORMATION

☐ Level 1 (Results Only) ☐ Level 4 (QC + Full Raw Data)
☐ Level 2 (Results + QC) ☐ NJ Reduced ☐ US EPA CLP
☐ Level 3 (Results + QC) ☐ NYS ASP A ☐ NYS ASP B
+ Raw Data ☐ Other _____
☐ EDD FORMAT _____

1 Full white fire analysis
VOAS 8260

CHEMTECH SAMPLE ID	PROJECT SAMPLE IDENTIFICATION	SAMPLE MATRIX	SAMPLE TYPE		SAMPLE COLLECTION		# OF BOTTLES	PRESERVATIVES									COMMENTS	
			COMP	GRAB	DATE	TIME		E	1	2	3	4	5	6	7	8	9	← Specify Preservatives A-HCl D-NaOH B-HNO3 E-ICE C-H2SO4 F-OTHER
1.	Chamber C 72" Erst	Sludge		X	3/24/23	0915	12	X										
2.	TriP Blank								X									Not Retrieved
3.																		
4.																		
5.																		
6.																		
7.																		
8.																		
9.																		
10.																		

SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE POSSESSION INCLUDING COURIER DELIVERY

RELINQUISHED BY SAMPLER: 1. Paul Ruster	DATE/TIME: 3/24/23	RECEIVED BY: 1. [Signature] 0844	Conditions of bottles or coolers at receipt: ☐ COMPLIANT ☐ NON COMPLIANT ☐ COOLER TEMP 5.5 °C
RELINQUISHED BY SAMPLER: 2.	DATE/TIME:	RECEIVED BY: 2. 11:00	Comments: See Attached whitePines Facility Parameters
RELINQUISHED BY SAMPLER: 3.	DATE/TIME:	RECEIVED BY: 3.	Page ____ of ____
		CLIENT: ☐ Hand Delivered ☐ Other _____	Shipment Complete ☐ YES ☐ NO
		CHEMTECH: ☐ Picked Up ☐ Field Sampling	

Laboratory Certification

Certified By	License No.
CAS EPA CLP Contract	68HERH20D0011
Connecticut	PH-0649
DOD ELAP (L-A-B)	L2219
Maine	2022022
Maryland	296
New Hampshire	255422
New Jersey	20012
New York	11376
Pennsylvania	68-00548
Soil Permit	P330-21-00137
Texas	T104704488-22-15

DATA PACKAGE

SUB Data

PROJECT NAME : SIPHON

PROJECT # : O2103

H2M ARCHITECTS + ENGINEERS

290 Broad Hollow Road

Suite 400E

Melville, NY - 11747

Phone No: 631-756-8000

ORDER ID : O2103

ATTENTION : Stephen I. Kaplan



Cover Page

Order ID : O2103

Project ID : Siphon

Client : H2M Architects + Engineers

Lab Sample Number

O2103-01

Client Sample Number

CHAMBER-C-72-EAST

I certify that the data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hard copy data package has been authorized by the laboratory manager or his designee, as verified by the following signature.

Signature :

S. M. Jodhani

APPROVED

By *Sohil Jodhani, QA/QC Director* at 9:30 am, Apr 06, 2023

NYDOH CERTIFICATION NO - 11376

NJDEP CERTIFICATION NO - 20012



Summit Environmental Technologies, Inc.
3310 Win St.
Cuyahoga Falls, Ohio 44223
TEL: (330) 253-8211 FAX: (330) 253-4489
Website: <http://www.settek.com>

April 03, 2023

PM
Chemtech
284 Sheffield Street
Mountainside, NJ 07092
TEL:
FAX:
RE: O2103

Order No.: 23032073

Dear PM:

Summit Environmental Technologies, Inc. received 1 sample(s) on 3/29/2023 for the analyses presented in the following report.

There were no problems with the analytical events associated with this report unless noted in the Case Narrative.

Quality control data is within laboratory defined or method specified acceptance limits except where noted.

If you have any questions regarding these tests results, please feel free to call the laboratory.

Sincerely,

Jennifer Woolf

Project Manager

3310 Win St.
Cuyahoga Falls, Ohio 44223

Arkansas 88-0735, California 2943, Colorado, Connecticut PH-0108, Florida NELAC E87688, Idaho OH00923, Illinois 200061, Indiana C-OH-13, ISO/IEC 17025:2017 119125 L22-544, Kansas E-10347, Kentucky (Underground Storage Tank) 3, Kentucky 90146, Maryland 339, Michigan 9988, Minnesota 1780279, Nevada OH009232020-1, New Hampshire 2996, New Jersey OH006, New York 11777, North Carolina 39705 and 631, North Dakota R-201, Ohio DW, Ohio VAP CL0052, Oklahoma 2019-155, Oregon OH200001, Pennsylvania 68-01335, Rhode Island LA000317, South Carolina 92016001, Texas T104704466-19-16, Utah OH009232020-12, Virginia VELAP 10381, West Virginia 9957C



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TEL: (330) 253-8211 FAX: (330) 253-4489
Website: <http://www.settek.com>

Case Narrative

WO#: 23032073
Date: 4/3/2023

CLIENT: Chemtech
Project: O2103

WorkOrder Narrative:

23032073: This report in its entirety consists of the following documents: Cover Letter, Case Narrative, Analytical Results, QC Summary Report, Applicable Accreditation Information, Chain-of-Custody, Cooler Receipt Form, and other applicable forms as necessary. All documents contain the Summit Environmental Technologies, Inc., Work Order Number assigned to this report.

Summit Environmental Technologies, Inc., holds the accreditations/certifications listed at the bottom of the cover letter that may or may not pertain to this report. Please refer to the "Accreditation Program Analytes Report" for accredited analytes list.

The information contained in this analytical report is the sole property of Summit Environmental Technologies, Inc. and that of the customer. It cannot be reproduced in any form without the consent of Summit Environmental Technologies, Inc. or the customer for which this report was issued. The results contained in this report are only representative of the samples received. Conditions can vary at different times and at different sampling conditions. Summit Environmental Technologies, Inc. is not responsible for use or interpretation of the data included herein.

All results for Solid Samples are reported on an "as received" or "wet weight" basis unless indicated as "dry weight" using the "-dry" designation on the reporting units.

This report is believed to meet all of the requirements of the accrediting agency, where applicable. Any comments or problems with the analytical events associated with this report are noted below.

WorkOrder Comments:

Sample analyzed by SW846: 9023 EOX due to matrix; Results reported on "as received" basis.

Original

These commonly used Qualifiers and Acronyms may or may not be present in this report.

Qualifiers

U	The compound was analyzed for but was not detected above the MDL.
J	The reported value is greater than the Method Detection Limit but less than the Reporting Limit.
H	The hold time for sample preparation and/or analysis was exceeded. Not Clean Water Act compliant.
D	The result is reported from a dilution.
E	The result exceeded the linear range of the calibration or is estimated due to interference.
MC	The result is below the Minimum Compound Limit.
*	The result exceeds the Regulatory Limit or Maximum Contamination Limit.
m	Manual integration was used to determine the area response.
d	Manual integration in which peak was deleted
N	The result is presumptive based on a Mass Spectral library search assuming a 1:1 response.
P	The second column confirmation exceeded 25% difference.
C	The result has been confirmed by GC/MS.
X	The result was not confirmed when GC/MS Analysis was performed.
B	The analyte was detected in the Method Blank at a concentration greater than the RL.
MB+	The analyte was detected in the Method Blank at a concentration greater than the MDL.
G	The ICB or CCB contained reportable amounts of analyte.
QC-/+	The CCV recovery failed low (-) or high (+).
R/QDR	The RPD was outside of accepted recovery limits.
QL-/+	The LCS or LCSD recovery failed low (-) or high (+).
QLR	The LCS/LCSD RPD was outside of accepted recovery limits.
QM-/+	The MS or MSD recovery failed low (-) or high (+).
QMR	The MS/MSD RPD was outside of accepted recovery limits.
QV-/+	The ICV recovery failed low (-) or high (+).
S	The spike result was outside of accepted recovery limits.
W	Samples were received outside temperature limits (0° – 6° C). Not Clean Water Act compliant.
Z	Deviation; A deviation from the method was performed; Please refer to the Case Narrative for additional information

Acronyms

ND	Not Detected	RL	Reporting Limit
QC	Quality Control	MDL	Method Detection Limit
MB	Method Blank	LOD	Level of Detection
LCS	Laboratory Control Sample	LOQ	Level of Quantitation
LCSD	Laboratory Control Sample Duplicate	PQL	Practical Quantitation Limit
QCS	Quality Control Sample	CRQL	Contract Required Quantitation Limit
DUP	Duplicate	PL	Permit Limit
MS	Matrix Spike	RegLvl	Regulatory Limit
MSD	Matrix Spike Duplicate	MCL	Maximum Contamination Limit
RPD	Relative Percent Different	MinCL	Minimum Compound Limit
ICV	Initial Calibration Verification	RA	Reanalysis
ICB	Initial Calibration Blank	RE	Reextraction
CCV	Continuing Calibration Verification	TIC	Tentatively Identified Compound
CCB	Continuing Calibration Blank	RT	Retention Time
RLC	Reporting Limit Check	CF	Calibration Factor

This list of Qualifiers and Acronyms reflects the most commonly utilized Qualifiers and Acronyms for reporting. Please refer to the Analytical Notes in the Case Narrative for any Qualifiers or Acronyms that do not appear in this list or for additional information regarding the use of these Qualifiers on reported data.

Original



Summit Environmental Technologies, Inc.
3310 Win St.
Cuyahoga Falls, Ohio 44223
TEL: (330) 253-8211 FAX: (330) 253-4489
Website: <http://www.settek.com>

Workorder
Sample Summary
WO#: 23032073
03-Apr-23

CLIENT: Chemtech
Project: O2103

Lab SampleID	Client Sample ID	Tag No	Date Collected	Date Received	Matrix
23032073-001	CHAMBER-C-72-EAST		3/24/2023 9:15:00 AM	3/29/2023 9:45:00 AM	Solid



Summit Environmental Technologies, Inc.
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Cuyahoga Falls, Ohio 44223
TEL: (330) 253-8211 FAX: (330) 253-4489
Website: <http://www.settek.com>

DATES REPORT

WO#: 23032073
03-Apr-23

Client: Chemtech
Project: O2103

Sample ID	Client Sample ID	Collection Date	Matrix	Test Name	Leachate Date	Prep Date	Analysis Date
23032073-001A	CHAMBER-C-72-EAST	3/24/2023 9:15:00 AM	Solid	Extractable Organic Halides (EOX) (9			3/31/2023 8:30:00 AM

Original



Summit Environmental Technologies, Inc.
3310 Win St.
Cuyahoga Falls, Ohio 44223
TEL: (330) 253-8211 FAX: (330) 253-4489
Website: <http://www.settek.com>

WO#: 23032073
Date Reported: 4/3/2023
Company: Chemtech
Address: 284 Sheffield Street
Mountainside NJ 07092
Received: 3/29/2023
Project#: O2103

Client ID#	Lab ID#	Collected	Analyte	Result Units	Qual	Matrix	Method	DF	MDL	PQL	Run	Analyst
CHAMBER-C-72-EAST	001	3/24/2023	Extractable Organic Halides	25.8 mg/Kg	J	Solid	EPA 9023	1	11.7	40.0	3/31/2023	KMW



Summit Environmental Technologies, Inc.
3310 Win St.
Cuyahoga Falls, Ohio 44223
TEL: (330) 253-8211 FAX: (330) 253-4489
Website: <http://www.settek.com>

Accreditation Program Analytes Report

WO#: 23032073
03-Apr-23

Client: Chemtech

State: NY

Project: O2103

Program Name: DW_WW_SCM_NI

Sample ID	Matrix	Test Name	Analyte	Status
23032073-001A	Solid	Extractable Organic Halides (EOX) (9023)	Extractable Organic Halides	A

Key

DW_WW_SCM_NE A Accredited

Original #1



Summit Environmental Technologies, Inc.
3310 Win St.
Cuyahoga Falls, Ohio 44223
TEL: (330) 253-8211 FAX: (330) 253-4489
Website: <http://www.settek.com>

QC SUMMARY REPORT

WO#: 23032073

03-Apr-23

Client: Chemtech

Project: O2103

BatchID: R160966

Sample ID: MB-R160966	SampType: MBLK	TestCode: EOX_S(9023) Units: mg/Kg			Prep Date:				RunNo: 160966		
Client ID: PBS	Batch ID: R160966	TestNo: SW9023			Analysis Date: 3/31/2023				SeqNo: 4277435		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Extractable Organic Halides	ND	40.0									U

Sample ID: LCS-R160966	SampType: LCS	TestCode: EOX_S(9023) Units: mg/Kg				Prep Date:			RunNo: 160966		
Client ID: LCSS	Batch ID: R160966	TestNo: SW9023				Analysis Date: 3/31/2023			SeqNo: 4277436		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Extractable Organic Halides	56.0	40.0	50.00	0	112	81	114				

Sample ID: 23032200-003AMS	SampType: MS	TestCode: EOX_S(9023)	Units: mg/Kg	Prep Date:	RunNo: 160966						
Client ID: BatchQC	Batch ID: R160966	TestNo: SW9023		Analysis Date: 3/31/2023	SeqNo: 4279728						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Extractable Organic Halides	420	40.0	500.0	16.75	80.6	78	116				

Sample ID: 23032200-003AMSD		SampType: MSD		TestCode: EOX_S(9023)		Units: mg/Kg		Prep Date:		RunNo: 160966	
Client ID: BatchQC		Batch ID: R160966		TestNo: SW9023				Analysis Date: 3/31/2023		SeqNo: 4279729	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Extractable Organic Halides	500	40.0	500.0	16.75	96.6	78	116	420.0	17.4	20	

Qualifiers:	B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analy
	J	Analyte detected below quantitation limits	M	Manual Integration used to determine area response	MC	Value is below Minimum Compound
	ND	Not Detected	OG1		P	Second column confirmation exceeds
	PL	Permit Limit	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit

Original



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QC SUMMARY REPORT

WO#: 23032073

03-Apr-23

Client: Chemtech

Project: O2103

BatchID: R160966

Sample ID: 23032200-003AMSD		SampType: MSD		TestCode: EOX_S(9023)		Units: mg/Kg		Prep Date:		RunNo: 160966			
Client ID: BatchQC		Batch ID: R160966		TestNo: SW9023				Analysis Date: 3/31/2023		SeqNo: 4279729			
Analyte		Result		PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Sample ID: MB-R160966	SampType: MBLK	TestCode: EOX_S(9023)	Units: mg/Kg	Prep Date:	RunNo: 160966						
Client ID: PBS	Batch ID: R160966	TestNo: SW9023		Analysis Date: 3/31/2023	SeqNo: 4279731						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Extractable Organic Halides	ND	40.0									U

Qualifiers: B Analyte detected in the associated Method Blank
J Analyte detected below quantitation limits
ND Not Detected
PL Permit Limit

E Value above quantitation range
M Manual Integration used to determine area response
OG1
R RPD outside accepted recovery limits

H Holding times for preparation or analy
MC Value is below Minimum Compound
P Second column confirmation exceeds
RL Reporting Detection Limit

Original

CHEMTECH

CHAIN OF CUSTODY RECORD

284 Sheffield Street, Mountainside, NJ 07092
(908) 789-8900 • Fax (908) 789-8922
www.chemtech.net

CHEMTECH PROJECT NO.
QUOTE NO. 02102-02103
COC Number 2038659

CLIENT INFORMATION

REPORT TO BE SENT TO:

COMPANY: Ham architects + engineers
ADDRESS: 290 Broad hollow Road, Suite 400E
CITY Melville STATE: NY ZIP: 11747
ATTENTION: Steve Kaplan
PHONE: 631-756-8000x1613 FAX:

CLIENT PROJECT INFORMATION

PROJECT NAME: Northern Blvd Siphon Cleaning
PROJECT NO.: NYDP 2001 LOCATION: Queens
PROJECT MANAGER: Steve Kaplan
e-mail: SKaplan@ham.com
PHONE: 631-756-8000x1613 FAX:

CLIENT BILLING INFORMATION

BILL TO: Ham architects + engineers PO#:
ADDRESS: 290 Broad hollow Rd, Suite 400E
CITY Melville STATE: NY ZIP: 11747
ATTENTION: Steve Kaplan PHONE: 631-756-8000x1613

ANALYSIS

DATA TURNAROUND INFORMATION

FAX (RUSH) _____ DAYS*
HARDCOPY (DATA PACKAGE): _____ DAYS*
EDD: Standard _____ DAYS*
*TO BE APPROVED BY CHEMTECH
STANDARD HARDCOPY TURNAROUND TIME IS 10 BUSINESS DAYS

DATA DELIVERABLE INFORMATION

☐ Level 1 (Results Only) ☐ Level 4 (QC + Full Raw Data)
☐ Level 2 (Results + QC) ☐ NJ Reduced ☐ US EPA CLP
☐ Level 3 (Results + QC) ☐ NYS ASP A ☐ NYS ASP B
+ Raw Data ☐ Other _____
☐ EDD FORMAT _____

1 Full white fire analysis
2 VOA 8260
3
4
5
6
7
8
9

CHEMTECH SAMPLE ID	PROJECT SAMPLE IDENTIFICATION	SAMPLE MATRIX	SAMPLE TYPE		SAMPLE COLLECTION		# OF BOTTLES	PRESERVATIVES									COMMENTS	
			COMP	GRAB	DATE	TIME		E	1	2	3	4	5	6	7	8	9	← Specify Preservatives A-HCl D-NaOH B-HNO3 E-ICE C-H2SO4 F-OTHER
1.	Chamber C 72" Erst	Sudge	X		3/24/23	0915	12	X										
2.	TriP Blank							X										Not Retrieved
3.																		
4.																		
5.																		
6.																		
7.																		
8.																		
9.																		
10.																		

SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE POSSESSION INCLUDING COURIER DELIVERY

RELINQUISHED BY SAMPLER: 1. Paul Ruster	DATE/TIME: 3/24/23	RECEIVED BY: 1. [Signature] 0844	Conditions of bottles or coolers at receipt: ☐ COMPLIANT ☐ NON COMPLIANT ☐ COOLER TEMP 5.5 °C
RELINQUISHED BY SAMPLER: 2.	DATE/TIME:	RECEIVED BY: 2. 11:00	Comments: See Attached whitePines Facility Parameters
RELINQUISHED BY SAMPLER: 3.	DATE/TIME:	RECEIVED BY: 3.	Page ____ of ____

CLIENT: ☐ Hand Delivered ☐ Other _____

CHEMTECH: ☐ Picked Up ☐ Field Sampling

Shipment Complete
☐ YES ☐ NO

CHEMTECH

CHAIN OF CUSTODY RECORD

284 Sheffield Street, Mountainside, NJ 07092
 (908) 789-8900 Fax (908) 789-8922
 WWW.CHEMTECH.NET

22032073

Sub Lab INFORMATION		CLIENT PROJECT INFORMATION		CLIENT BILLING INFORMATION	
COMPANY : Summit Enviromental Technologies I	ORDER ID : 02103	BILL TO: CHEMTECH		PO# : 02103	
ADDRESS : 3310 Wln St	PROJECT ID:Siphon	ADDRESS : 284, Sheffield Street /			
CITY:Cuyahoga State :Ohio ZIP :44223	PROJECT MANAGER Samantha	CITY: Mountainside State : NJ		ZIP : 07092	
E-mail :	E-mail : Samantha@chemtech.net	ATTENTION :Samant			
PHONE :330-253-8211	PHONE : (908) 789 8900	FAX: (908) 789 8922	PHONE : (908) 789 8900		FAX : (908) 789 8922

EDD : EXCEL NOCLEAN Report : Level 1 Comment :

ID	CLIENT SAMPLE IDENTIFICATION	SAMPLE MATRIX	ANALYSIS	Preservative	Method	SAMPLE COLLECTION		# OF BOTTLES	TAT DAYS
						DATE	TIME		
01	CHAMBER-C-72-EAST	Solid	TOX	Cool 4 deg C	9023	03/24/2023	09:15:00	1	10

SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGES POSSESSION INCLUDING COURIER DELIVERY

RELINQUISHED BY SAMPLER: 1. <i>L. C. Ju</i>	DATETIME: 3-27-2023	RECEIVED BY: <i>[Signature]</i>	Conditions of bottles or Coolers at receipt: 3/29/23 0945 Lo 3/29/23 0945 Fedex Cooler, with Ice	☐ Compliant ☐ Non Compliant	Cooler Temp Ice or Cooler?--
RELINQUISHED BY: 2.	DATETIME:	RECEIVED BY: 2.			
RELINQUISHED BY: 3.	DATETIME:	RECEIVED BY: 3.	Page 1 of 1	☐ OVERNIGHT ☐ OVERNIGHT	Shipment Complete: ☐ YES ☐ NO



Summit Environmental Technologies, Inc.
3310 Win St.
Cuyahoga Falls, Ohio 44223
TEL: (330) 253-8211 FAX: (330) 253-4489
Website: <http://www.settek.com>

Sample Log-In Check List

Client Name: **CHE-NJ-07972**

Work Order Number: **23032073**

RcptNo: **1**

Logged by: **3/29/2023 9:45:00 AM**

Completed By: **Christina N. Gemma** **3/29/2023 2:11:32 PM**

Reviewed By: **Jennifer Woolf** **3/29/2023 2:30:22 PM**

C. Gemma
Jennifer Woolf

Chain of Custody

1. Is Chain of Custody complete? Yes ☒ No ☐ Not Present ☐
2. How was the sample delivered? FedEx
Tracking No.: 771673020495

Log In

3. Coolers are present? Yes ☒ No ☐ NA ☐
4. Shipping container/cooler in good condition? Yes ☒ No ☐
Custody seals intact on shipping container/cooler? Yes ☐ No ☐ Not Present ☒
No. Seal Date: Signed By:
5. Was an attempt made to cool the samples? Yes ☒ No ☐ NA ☐
6. Were all samples received at a temperature of >0° C to 6.0°C Yes ☒ No ☐ NA ☐
7. Sample(s) in proper container(s)? Yes ☒ No ☐
8. Sufficient sample volume for indicated test(s)? Yes ☒ No ☐
9. Are samples (except VOA and ONG) properly preserved? Yes ☒ No ☐
10. Was preservative added to bottles? Yes ☐ No ☒ NA ☐
11. Is the headspace in the VOA vials less than 1/4 inch or 6 mm? Yes ☐ No ☐ No VOA Vials ☒
12. Were any sample containers received broken? Yes ☐ No ☒
13. Does paperwork match bottle labels? Yes ☒ No ☐
(Note discrepancies on chain of custody)
14. Are matrices correctly identified on Chain of Custody? Yes ☒ No ☐
15. Is it clear what analyses were requested? Yes ☒ No ☐
16. Were all holding times able to be met? Yes ☒ No ☐
(If no, notify customer for authorization.)

Special Handling (if applicable)

17. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☒

Person Notified: Date:
By Whom: Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person
Regarding:
Client Instructions:

18. Additional remarks:

Received by Linda O.

Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	3.5	Good	Not Present			

DATA PACKAGE

GENERAL CHEMISTRY
METALS
GC SEMI-VOLATILES
SEMI-VOLATILE ORGANICS
VOLATILE ORGANICS

PROJECT NAME : SIPHON

H2M ARCHITECTS + ENGINEERS

290 Broad Hollow Road

Suite 400E

Melville, NY - 11747

Phone No: 631-756-8000

ORDER ID : 02058

ATTENTION : Stephen I. Kaplan



Laboratory Certification ID # 20012



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Cover Page

Order ID : O2058

Project ID : Siphon

Client : H2M Architects + Engineers

Lab Sample Number

O2058-01
O2058-02
O2058-03

Client Sample Number

CHAMBER-B-72-EAST
CHAMBER-B-72-EAST
CHAMBER-B-72-EAST

I certify that the data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hard copy data package has been authorized by the laboratory manager or his designee, as verified by the following signature.

Signature : S. M. Jodhani

APPROVED

Date: 4/6/2023
By Sohil Jodhani, QA/QC Director at 8:58 am, Apr 06, 2023

NYDOH CERTIFICATION NO - 11376

NJDEP CERTIFICATION NO - 20012

CASE NARRATIVE

H2M Architects + Engineers

Project Name: Siphon

Project # N/A

Chemtech Project # O2058

Test Name: TCLP VOA Group1

A. Number of Samples and Date of Receipt:

3 Solid samples were received on 03/23/2023.

B. Parameters

According to the Chain of Custody document, the following analyses were requested: ASTM Ammonia, ASTM COD, ASTM Leach Extraction, ASTM Oil and Grease, ASTM TPH, Corrosivity, Ignitability, Oil and Grease, Paint Filter, PCB, pH, RCRA CHARACTERISTICS, Reactive Cyanide, Reactive Sulfide, TCLP BNA, TCLP Extraction, TCLP Herbicide, TCLP Mercury, TCLP Pesticide, TCLP VOA Group1, TCLP ZHE Extraction, TCLP Metals Group1, TPH GC, TS and TVS. This data package contains results for TCLP VOA Group1.

C. Analytical Techniques:

The analysis performed on instrument MSVOA_X were done using GC column DB-624UI 20m 0.18mm 1.0 um. Cat#121-1324UI The analysis of TCLP VOA Group1 was based on method 8260D and TCLP extraction method was 1311.

D. QA/ QC Samples:

The Holding Times were met for all analysis.

The Surrogate recoveries met the acceptable criteria.

The Internal Standards Areas met the acceptable requirements.

The Retention Times were acceptable for all samples.

The RPD met criteria .

The Blank Spike met requirements for all samples .

The Blank Spike Duplicate for {VX0324WBSD01} with File ID: VX034717.D met requirements for all samples except for 1,2-Dichloroethane[123%], Chloroform[115%] are failing high but no positive hit in associate sample therefore no corrective action taken.

The Blank analysis did not indicate the presence of lab contamination.

The Initial Calibration met the requirements .

The Continuous Calibration met the requirements .

The Tuning criteria met requirements.

E. Additional Comments:

Samples for MS/MSD for VOC analysis were not provided with this set of samples. The Blank Spike Duplicate is reported with the data.

Please use %D calculated based on Avg RF and CCRF for all compounds using Average Response Factor when the %RSD value for a compound is <15% for the Initial Calibration curve and use %D calculated based on Amount added and Calculated amount for all compounds using Linear Regression when the %RSD value for a compound is > 15% for the Initial Calibration curve for SW-846 analysis.

F. Manual Integration Comments:

Please refer to the Manual integration Report included with the Run Logs for information on the manual integrations performed.

I certify that the data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. The laboratory manager or his designee, as verified by the following signature has authorized release of the data contained in this hard copy data package.

Signature S. M. Jodhani

APPROVED

By Sohil Jodhani, QA/QC Director at 8:58 am, Apr 06, 2023

CASE NARRATIVE

H2M Architects + Engineers

Project Name: Siphon

Project # N/A

Chemtech Project # O2058

Test Name: TCLP BNA

A. Number of Samples and Date of Receipt:

3 Solid samples were received on 03/23/2023.

B. Parameters

According to the Chain of Custody document, the following analyses were requested: ASTM Ammonia, ASTM COD, ASTM Leach Extraction, ASTM Oil and Grease, ASTM TPH, Corrosivity, Ignitability, Oil and Grease, Paint Filter, PCB, pH, RCRA CHARACTERISTICS, Reactive Cyanide, Reactive Sulfide, TCLP BNA, TCLP Extraction, TCLP Herbicide, TCLP Mercury, TCLP Pesticide, TCLP VOA Group1, TCLP ZHE Extraction, TCLP Metals Group1, TPH GC, TS and TVS. This data package contains results for TCLP BNA.

C. Analytical Techniques:

The samples were analyzed on instrument BNA_M using GC Column ZB-SemiVolatiles Guardian which is 30 meters, 0.25 mm ID, 0.5 um df, Catalog # 7HG-G027-17-GGAThe samples were analyzed on instrument BNA_P using GC Column ZB-SemiVolatiles Guardian which is 30 meters, 0.25 mm ID, 0.5 um df, Catalog # 7HG-G027-17-GGAThe analysis of TCLP BNA was based on method 8270E and extraction was done based on method 3510 and TCLP extraction method was 1311.

D. QA/ QC Samples:

The Holding Times were met for all analysis.

The Surrogate recoveries met the acceptable criteria.

The Internal Standards Areas met the acceptable requirements except for WC1-20230322MS and WC1-20230322MSD due to matrix interference therefore no corrective action taken.

The Retention Times were acceptable for all samples.

The MS recoveries met the requirements for all compounds .

The MSD recoveries met the acceptable requirements .

The RPD met criteria .

The Blank Spike met requirements for all samples .

The Blank analysis did not indicate the presence of lab contamination.

The % RSD is greater than 15% in the Initial Calibration method (Method 8270-BM030823.M) for 2,4-Dinitrotoluene, this compound is passing on Linear Regression

The Continuous Calibration File ID BM039137.D met the requirements except for 2,4-Dinitrotoluene but associated QC within limits therefore no corrective action taken.

The Tuning criteria met requirements.

E. Additional Comments:

The Form 6 is not included in the data package because the Initial Calibration was performed using 8 points.

Please use %D calculated based on Avg RF and CCRF for all compounds using Average Response Factor when the %RSD value for a compound is <15% for the Initial Calibration curve and use %D calculated based on Amount added and Calculated amount for all compounds using Linear Regression when the %RSD value for a compound is > 15% for the Initial Calibration curve for SW-846 analysis.

F. Manual Integration Comments:

Please refer to the Manual integration Report included with the Run Logs for information on the manual integrations performed.

I certify that the data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. The laboratory manager or his designee, as verified by the following signature has authorized release of the data contained in this hard copy data package.

Signature S. M. Jodhani

APPROVED

By Sohil Jodhani, QA/QC Director at 8:59 am, Apr 06, 2023

CASE NARRATIVE

H2M Architects + Engineers

Project Name: Siphon

Project # N/A

Chemtech Project # O2058

Test Name: TCLP Pesticide

A. Number of Samples and Date of Receipt:

3 Solid samples were received on 03/23/2023.

B. Parameters

According to the Chain of Custody document, the following analyses were requested: ASTM Ammonia, ASTM COD, ASTM Leach Extraction, ASTM Oil and Grease, ASTM TPH, Corrosivity, Ignitability, Oil and Grease, Paint Filter, PCB, pH, RCRA CHARACTERISTICS, Reactive Cyanide, Reactive Sulfide, TCLP BNA, TCLP Extraction, TCLP Herbicide, TCLP Mercury, TCLP Pesticide, TCLP VOA Group1, TCLP ZHE Extraction, TCLP Metals Group1, TPH GC, TS and TVS. This data package contains results for TCLP Pesticide.

C. Analytical Techniques:

The analysis was performed on instrument ECD_L. The front column is ZB-MR2 which is 30 meters, 0.32 mm ID, 0.25 um df, Catalog #: 7HMG017- 11 The rear column is ZB-MR1 which is 30 meters, 0.32 mm ID, 0. 5 um df,: Catalog # 7HM-G016-17. .The analysis of TCLP Pesticides was based on method 8081B and extraction was done based on method 3510 and TCLP extraction method was 1311.

D. QA/ QC Samples:

The Holding Times were met for all analysis.

The Surrogate recoveries met the acceptable criteria.

The Retention Times were acceptable for all samples.

The MS recoveries met the requirements for all compounds .

The MSD recoveries met the acceptable requirements .

The RPD met criteria .

The Blank Spike met requirements for all samples .

The Blank analysis did not indicate the presence of lab contamination.

The Initial Calibration met the requirements .

The Continuous Calibration met the requirements .

E. Additional Comments:

F. Manual Integration Comments:

Please refer to the Manual integration Report included with the Run Logs for information on the manual integrations performed.

I certify that the data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. The laboratory manager or his designee, as verified by the following signature has authorized release of the data contained in this hard copy data package.

Signature S. M. Jodhani

APPROVED

By Sohil Jodhani, QA/QC Director at 8:59 am, Apr 06, 2023

CASE NARRATIVE

H2M Architects + Engineers

Project Name: Siphon

Project # N/A

Chemtech Project # O2058

Test Name: PCB

A. Number of Samples and Date of Receipt:

3 Solid samples were received on 03/23/2023.

B. Parameters

According to the Chain of Custody document, the following analyses were requested: ASTM Ammonia, ASTM COD, ASTM Leach Extraction, ASTM Oil and Grease, ASTM TPH, Corrosivity, Ignitability, Oil and Grease, Paint Filter, PCB, pH, RCRA CHARACTERISTICS, Reactive Cyanide, Reactive Sulfide, TCLP BNA, TCLP Extraction, TCLP Herbicide, TCLP Mercury, TCLP Pesticide, TCLP VOA Group1, TCLP ZHE Extraction, TCLP Metals Group1, TPH GC, TS and TVS. This data package contains results for PCB.

C. Analytical Techniques:

The analyses were performed on instrument GCECD_O. The front column is ZB-MR1 which is 30 meters, 0.32 mm ID, 0.5 μ m df, Catalogue # 7HM-G016-17. The rear column is ZB-MR2 which is 30 meters, 0.32 mm ID, 0.25 μ m; Catalogue # 7HM-G017-11. The analysis of PCBs was based on method 8082A and extraction was done based on method 3541.

D. QA/ QC Samples:

The Holding Times were met for all analysis.

The Surrogate recoveries met the acceptable criteria.

The Retention Times were acceptable for all samples.

The MS recoveries met the requirements for all compounds .

The MSD recoveries met the acceptable requirements .

The RPD met criteria .

The Blank Spike met requirements for all samples .

The Blank analysis did not indicate the presence of lab contamination.

The Initial Calibration met the requirements .

The Continuous Calibration met the requirements .

E. Additional Comments:

The soil samples results are based on a dry weight basis.

F. Manual Integration Comments:

Please refer to the Manual integration Report included with the Run Logs for information on the manual integrations performed.

I certify that the data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. The laboratory manager or his designee, as verified by the following signature has authorized release of the data contained in this hard copy data package.

Signature S. M. Jodhani

APPROVED

By Sohil Jodhani, QA/QC Director at 8:59 am, Apr 06, 2023

CASE NARRATIVE

H2M Architects + Engineers

Project Name: Siphon

Project # N/A

Chemtech Project # O2058

Test Name: TCLP Herbicide

A. Number of Samples and Date of Receipt:

3 Solid samples were received on 03/23/2023.

B. Parameters

According to the Chain of Custody document, the following analyses were requested: ASTM Ammonia, ASTM COD, ASTM Leach Extraction, ASTM Oil and Grease, ASTM TPH, Corrosivity, Ignitability, Oil and Grease, Paint Filter, PCB, pH, RCRA CHARACTERISTICS, Reactive Cyanide, Reactive Sulfide, TCLP BNA, TCLP Extraction, TCLP Herbicide, TCLP Mercury, TCLP Pesticide, TCLP VOA Group1, TCLP ZHE Extraction, TCLP Metals Group1, TPH GC, TS and TVS. This data package contains results for TCLP Herbicide.

C. Analytical Techniques:

The analysis was performed on instrument ECD_S. The front column is RTX-CLPesticides which is 30 meters, 0.32 mm ID, 0.5 µm df, Catalog # 11139. The rear column is RTX-CLPesticides2 which is 30 meters, 0.32 mm ID, 0.25 µm df, Catalog #: 11324. The analysis of TCLP Herbicides was based on method 8151A and extraction was done based on method 3510 and TCLP extraction method was 1311.

D. QA/ QC Samples:

The Holding Times were met for all analysis.

The Surrogate recoveries met the acceptable criteria.

The Retention Times were acceptable for all samples.

The MS recoveries met the requirements for all compounds.

The MSD recoveries met the acceptable requirements.

The RPD met criteria.

The Blank Spike met requirements for all samples.

The Blank analysis did not indicate the presence of lab contamination.

The Initial Calibration met the requirements.

The Continuous Calibration met the requirements.

E. Additional Comments:

F. Manual Integration Comments:

Please refer to the Manual integration Report included with the Run Logs for information on the manual integrations performed.

I certify that the data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. The laboratory manager or his designee, as verified by the following signature has authorized release of the data contained in this hard copy data package.

Signature S. M. Jodhani

APPROVED

By Sohil Jodhani, QA/QC Director at 8:59 am, Apr 06, 2023

CASE NARRATIVE

H2M Architects + Engineers

Project Name: Siphon

Project # N/A

Chemtech Project # O2058

Test Name: TPH GC

A. Number of Samples and Date of Receipt:

3 Solid samples were received on 03/23/2023.

B. Parameters

According to the Chain of Custody document, the following analyses were requested: ASTM Ammonia, ASTM COD, ASTM Leach Extraction, ASTM Oil and Grease, ASTM TPH, Corrosivity, Ignitability, Oil and Grease, Paint Filter, PCB, pH, RCRA CHARACTERISTICS, Reactive Cyanide, Reactive Sulfide, TCLP BNA, TCLP Extraction, TCLP Herbicide, TCLP Mercury, TCLP Pesticide, TCLP VOA Group1, TCLP ZHE Extraction, TCLP Metals Group1, TPH GC, TS and TVS. This data package contains results for TPH GC.

C. Analytical Techniques:

The analysis were performed on instrument FID_F. The column is RXI-1MS which is 20 meters, 0.18mm ID, 0.18 um df, catalog 13302. The analysis were performed on instrument FID_G. The column is RXI-1MS which is 20 meters, 0.18mm ID, 0.18 um df, catalog 13302. The analysis of TPH GC was based on method 8015D and extraction was done based on method 3541.

D. QA/ QC Samples:

The Holding Times were met for all analysis.

The Surrogate recoveries met the acceptable criteria.

The Retention Times were acceptable for all samples.

The MS {O2022-01MS} with File ID: FG011662.D recoveries met the requirements for all compounds except for Petroleum Hydrocarbons[378%], due to sample matrix interference.

The MSD {O2022-01MSD} with File ID: FG011663.D recoveries met the acceptable requirements except for Petroleum Hydrocarbons[467%], due to sample matrix interference.

The RPD for {O2022-01MSD} with File ID: FG011663.D met criteria except for Petroleum Hydrocarbons[21%] due to difference in results of MS-MSD.

The Blank Spike met requirements for all samples .

The Blank analysis did not indicate the presence of lab contamination.
The Initial Calibration met the requirements .
The Continuous Calibration met the requirements .

E. Additional Comments:

The soil samples results are based on a dry weight basis.

F. Manual Integration Comments:

Please refer to the Manual integration Report included with the Run Logs for information on the manual integrations performed.

I certify that the data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. The laboratory manager or his designee, as verified by the following signature has authorized release of the data contained in this hard copy data package.

Signature S. M. Jodhani

APPROVED

By Sohil Jodhani, QA/QC Director at 8:59 am, Apr 06, 2023

CASE NARRATIVE**H2M Architects + Engineers****Project Name: Siphon****Project # N/A****Chemtech Project # O2058****Test Name: TCLP Mercury, TCLP Metals Group1****A. Number of Samples and Date of Receipt:**

3 Solid samples were received on 03/23/2023.

B. Parameters:

According to the Chain of Custody document, the following analyses were requested: ASTM Ammonia, ASTM COD, ASTM Leach Extraction, ASTM Oil and Grease, ASTM TPH, Corrosivity, Ignitability, Oil and Grease, Paint Filter, PCB, pH, RCRA CHARACTERISTICS, Reactive Cyanide, Reactive Sulfide, TCLP BNA, TCLP Extraction, TCLP Herbicide, TCLP Mercury, TCLP Pesticide, TCLP VOA Group1, TCLP ZHE Extraction, TCLP Metals Group1, TPH GC, TS and TVS. This data package contains results for TCLP Mercury, TCLP Metals Group1.

C. Analytical Techniques:

The analysis of TCLP Metals Group1 was based on method 6010D, digestion based on method 3010 (waters). The analysis and digestion of TCLP Mercury was based on method 7470A and TCLP extraction method was 1311.

D. QA/ QC Samples:

The Holding Times were met for all analysis.

The Blank Spike met requirements for all samples.

The Duplicate analysis met criteria for all samples.

The Matrix Spike analysis met criteria for all samples.

The Matrix Spike Duplicate analysis met criteria for all samples.

The Blank analysis did not indicate the presence of lab contamination.

The Calibration met the requirements.

The Serial Dilution met the acceptable requirements.

E. Additional Comments:

I certify that the data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. The laboratory manager or his designee, as verified by the following signature has authorized release of the data contained in this hard copy data package.

Signature S. M. Jodhani**APPROVED**

By Sohil Jodhani, QA/QC Director at 8:59 am, Apr 06, 2023

CASE NARRATIVE**H2M Architects + Engineers****Project Name: Siphon****Project # N/A****Chemtech Project # O2058****Test Name: ASTM Ammonia,TS,Oil and Grease,Corrosivity,pH,Paint****Filter,TVS,ASTM COD,Ignitability,ASTM Oil and Grease,Reactive Cyanide,ASTM TPH,Reactive Sulfide****A. Number of Samples and Date of Receipt:**

3 Solid samples were received on 03/23/2023.

B. Parameters:

According to the Chain of Custody document, the following analyses were requested: ASTM Ammonia, ASTM COD, ASTM Leach Extraction, ASTM Oil and Grease, ASTM TPH, Corrosivity, Ignitability, Oil and Grease, Paint Filter, PCB, pH, RCRA CHARACTERISTICS, Reactive Cyanide, Reactive Sulfide, TCLP BNA, TCLP Extraction, TCLP Herbicide, TCLP Mercury, TCLP Pesticide, TCLP VOA Group1, TCLP ZHE Extraction, TCLP Metals Group1, TPH GC, TS and TVS. This data package contains results for ASTM Ammonia,TS,Oil and Grease,Corrosivity,pH,Paint Filter,TVS,ASTM COD,Ignitability,ASTM Oil and Grease,Reactive Cyanide,ASTM TPH,Reactive Sulfide.

C. Analytical Techniques:

The analysis of Ignitability was based on method 1030, The analysis of TVS was based on method 160.4, The analysis of ASTM TPH was based on method 1664, The analysis of ASTM Oil and Grease, Oil and Grease was based on method 1664A, The analysis of Reactive Cyanide was based on method 9012B, The analysis of Reactive Sulfide was based on method 9034, The analysis of Corrosivity,pH was based on method 9045D, The analysis of Paint Filter was based on method 9095B, The analysis of TS was based on method SM2540 B, The analysis of ASTM Ammonia was based on method SM4500-NH3 and The analysis of ASTM COD was based on method SM5220 D.

D. QA/ QC Samples:

The Holding Times were met for all samples except for CHAMBER-B-72-EAST of pH, for CHAMBER-B-72-EAST of Corrosivity as this sample received out of hold.

The Blank Spike met requirements for all samples.

The Duplicate analysis met criteria for all samples.

The Matrix Spike (CHAMBER-B-72-WESTMS) analysis met criteria for all samples except for ASTM COD due to matrix interference.

The Matrix Spike (CHAMBER-C-72-EASTMS) analysis met criteria for all samples except for Oil and Grease due to matrix interference.

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The Matrix Spike Duplicate (CHAMBER-B-72-WESTMSD) analysis met criteria for all samples except for ASTM COD due to matrix interference.

The Matrix Spike Duplicate (CHAMBER-C-72-EASTMSD) analysis met criteria for all samples except for Oil and Grease due to matrix interference.

The Blank analysis did not indicate the presence of lab contamination.
The Calibration met the requirements.

E. Additional Comments:

As per method 1664A, MS/MSD is required to be performed with the sample analysis. However, Lab did not receive sufficient volume to perform the MS/MSD therefore MS/MSD were not performed for this project.

I certify that the data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. The laboratory manager or his designee, as verified by the following signature has authorized release of the data contained in this hard copy data package.

Signature S. M. Jodhani

APPROVED

By Sohil Jodhani, QA/QC Director at 8:59 am, Apr 06, 2023

DATA REPORTING QUALIFIERS- INORGANIC

For reporting results, the following “ Results Qualifiers” are used:

J	Indicates the reported value was obtained from a reading that was less than the Contract Required Detection Limit (CRDL), but greater than or equal to the Instrument Detection Limit (IDL).
U	Indicates the analyte was analyzed for, but not detected.
ND	Indicates the analyte was analyzed for, but not detected
E	Indicates the reported value is estimated because of the presence of interference
M	Indicates Duplicate injection precision not met.
N	Indicates the spiked sample recovery is not within control limits.
S	Indicates the reported value was determined by the Method of Standard Addition (MSA).
*	Indicates that the duplicate analysis is not within control limits.
+	Indicates the correlation coefficient for the MSA is less than 0.995.
D	Indicates the reported value is from a secondary analysis with a dilution factor. The original analysis exceeded the calibration range.
M	Method qualifiers “P” for ICP instrument “PM” for ICP when Microwave Digestion is used “CV” for Manual Cold Vapor AA “AV” for automated Cold Vapor AA “CA” for MIDI-Distillation Spectrophotometric “AS” for Semi -Automated Spectrophotometric “C” for Manual Spectrophotometric “T” for Titrimetric “NR” for analyte not required to be analyzed
OR	Indicates the analyte’s concentration exceeds the calibrated range of the instrument for that specific analysis.
Q	Indicates the LCS did not meet the control limits requirements

DATA REPORTING QUALIFIERS- ORGANIC

For reporting results, the following “ Results Qualifiers” are used:

Value	If the result is a value greater than or equal to the detection limit, report the value
U	Indicates the compound was analyzed for but was not detected. Report the minimum detection limit for the sample with the U, i.e. “10 U”. This is not necessarily the instrument detection limit attainable for this particular sample based on any concentration or dilution that may have been required.
ND	Indicates the analyte was analyzed for, but not detected
J	Indicates an estimated value. This flag is used: (1) When estimating a concentration for a tentatively identified compound (library search hits, where a 1:1 response is assumed.) (2) When the mass spectral data indicated the identification, however the result was less than the specified detection limit greater than zero. If the detection limit was 10ug/L and a concentration of 3 ug/L was calculated report as 3 J. This flag is used when similar situation arise on any organic parameter i.e. Pest, PCB and others.
B	Indicates the analyte was found in the blank as well as the sample report as “12 B”.
E	Indicates the analyte ‘s concentration exceeds the calibrated range of the instrument for that specific analysis.
D	This flag identifies all compounds identified in an analysis at a secondary dilution factor.
P	This flag is used for Pesticide/PCB target analyte when there is >25% difference for detected concentrations between the two GC columns. The lower of the two values is reported on Form 1 and flagged with a “P”.
N	This flag indicates presumptive evidence of a compound. This is only used for tentatively identified compounds (TICs), where the identification is based on a mass spectral library search. It applies to all TIC results. For generic characterization of a TIC, such as chlorinated hydrocarbon, the flag is not used.
A	This flag indicates that a Tentatively Identified Compound is a suspected aldol-condensation product.
Q	Indicates the LCS did not meet the control limits requirements

APPENDIX A

QA REVIEW GENERAL DOCUMENTATION

Project #: O2058

Completed

For thorough review, the report must have the following:

GENERAL:

Are all original paperwork present (chain of custody, record of communication,airbill, sample management lab chronicle, login page)

✓

Check chain-of-custody for proper relinquish/return of samples

✓

Is the chain of custody signed and complete

✓

Check internal chain-of-custody for proper relinquish/return of samples /sample extracts

✓

Collect information for each project id from server. Were all requirements followed

✓

COVER PAGE:

Do numbers of samples correspond to the number of samples in the Chain of Custody on login page

✓

Do lab numbers and client Ids on cover page agree with the Chain of Custody

✓

CHAIN OF CUSTODY:

Do requested analyses on Chain of Custody agree with form I results

✓

Do requested analyses on Chain of Custody agree with the log-in page

✓

Were the correct method log-in for analysis according to the Analytical Request and Chain of Custody

✓

Were the samples received within hold time

✓

Were any problems found with the samples at arrival recorded in the Sample Management Laboratory Chronicle

✓

ANALYTICAL:

Was method requirement followed?

✓

Was client requirement followed?

✓

Does the case narrative summarize all QC failure?

✓

All runlogs and manual integration are reviewed for requirements

✓

All manual calculations and /or hand notations verified

✓

1st Level QA Review Signature: MOHAMMAD AHMED

Date: 04/06/2023

2nd Level QA Review Signature:

S. M. Jodhani

APPROVED

By Sohil Jodhani, QA/QC Director at 9:00 am, Apr 06, 2023

Hit Summary Sheet
SW-846

SDG No.: O2058
Client: H2M Architects + Engineers

A

B

C

D

Sample ID	Client ID	Matrix	Parameter	Concentration	C	MDL	RDL	Units
-----------	-----------	--------	-----------	---------------	---	-----	-----	-------

Client ID: 0

Total Voc :
Total Concentration:

SAMPLE DATA

Report of Analysis

Client:	H2M Architects + Engineers	Date Collected:	03/22/23
Project:	Siphon	Date Received:	03/23/23
Client Sample ID:	CHAMBER-B-72-EAST	SDG No.:	O2058
Lab Sample ID:	O2058-02	Matrix:	TCLP
Analytical Method:	SW8260	% Solid:	0
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	TCLP VOA Group1
GC Column:	DB-624UI ID : 0.18	Level :	LOW
Prep Method :	SW5035		

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VX034719.D	1		03/24/23 14:33	VX032423

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
TARGETS						
75-01-4	Vinyl Chloride	0.25	U	0.25	5.00	ug/L
75-35-4	1,1-Dichloroethene	0.21	U	0.21	5.00	ug/L
78-93-3	2-Butanone	1.20	U	1.20	25.0	ug/L
56-23-5	Carbon Tetrachloride	0.13	U	0.13	5.00	ug/L
67-66-3	Chloroform	0.14	UQ	0.14	5.00	ug/L
71-43-2	Benzene	0.12	U	0.12	5.00	ug/L
107-06-2	1,2-Dichloroethane	0.16	UQ	0.16	5.00	ug/L
79-01-6	Trichloroethene	0.26	U	0.26	5.00	ug/L
108-88-3	Toluene	0.14	U	0.14	5.00	ug/L
127-18-4	Tetrachloroethene	0.17	U	0.17	5.00	ug/L
108-90-7	Chlorobenzene	0.12	U	0.12	5.00	ug/L
100-41-4	Ethyl Benzene	0.13	U	0.13	5.00	ug/L
1330-20-7	Total Xylenes	0.46	U	0.46	15.0	ug/L
SURROGATES						
17060-07-0	1,2-Dichloroethane-d4	50.3		74 - 125	101%	SPK: 50
1868-53-7	Dibromofluoromethane	48.6		75 - 124	97%	SPK: 50
2037-26-5	Toluene-d8	49.2		86 - 113	98%	SPK: 50
460-00-4	4-Bromofluorobenzene	47.4		64 - 133	95%	SPK: 50
INTERNAL STANDARDS						
363-72-4	Pentafluorobenzene	317000	5.55			
540-36-3	1,4-Difluorobenzene	527000	6.757			
3114-55-4	Chlorobenzene-d5	480000	10.055			
3855-82-1	1,4-Dichlorobenzene-d4	222000	12.024			

U = Not Detected

LOQ = Limit of Quantitation

MDL = Method Detection Limit

LOD = Limit of Detection

E = Value Exceeds Calibration Range

Q = indicates LCS control criteria did not meet requirements

M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value

B = Analyte Found in Associated Method Blank

N = Presumptive Evidence of a Compound

* = Values outside of QC limits

D = Dilution

() = Laboratory InHouse Limit

A = Aldol-Condensation Reaction Products



284 Sheffield Street, Mountainside, New Jersey - 07092

Phone: (908) 789 8900 Fax: (908) 789 8922

LAB CHRONICLE

OrderID:	O2058	OrderDate:	3/23/2023 11:18:00 AM
Client:	H2M Architects + Engineers	Project:	Siphon
Contact:	Stephen I. Kaplan	Location:	M11

LabID	ClientID	Matrix	Test	Method	Sample Date	Prep Date	Anal Date	Received
O2058-02	CHAMBER-B-72-EAST	TCLP	TCLP VOA Group1	8260D	03/22/23		03/24/23	03/23/23

Hit Summary Sheet
SW-846

SDG No.: O2058
Client: H2M Architects + Engineers

Sample ID	Client ID	Matrix	Parameter	Concentration	C	MDL	RDL	Units
Client ID :					0.000			
			Total Svoc :			0.00		
			Total Concentration:			0.00		

SAMPLE DATA

Report of Analysis

Client:	H2M Architects + Engineers	Date Collected:	03/22/23
Project:	Siphon	Date Received:	03/23/23
Client Sample ID:	CHAMBER-B-72-EAST	SDG No.:	O2058
Lab Sample ID:	O2058-02	Matrix:	TCLP
Analytical Method:	SW8270	% Solid:	0
Sample Wt/Vol:	100 Units: mL	Final Vol:	1000 uL
Soil Aliquot Vol:	uL	Test:	TCLP BNA
Extraction Type :	Decanted : N	Level :	LOW
Injection Volume :	GPC Factor : 1.0	GPC Cleanup :	N PH :
Prep Method :	SW3541		

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
BP014321.D	1	03/24/23 10:20	03/27/23 20:06	PB151670

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
TARGETS						
110-86-1	Pyridine	17.8	U	17.8	50.0	ug/L
106-46-7	1,4-Dichlorobenzene	14.3	U	14.3	50.0	ug/L
95-48-7	2-Methylphenol	20.6	U	20.6	50.0	ug/L
65794-96-9	3+4-Methylphenols	21.6	U	21.6	100	ug/L
67-72-1	Hexachloroethane	16.4	U	16.4	50.0	ug/L
98-95-3	Nitrobenzene	17.2	U	17.2	50.0	ug/L
87-68-3	Hexachlorobutadiene	19.3	U	19.3	50.0	ug/L
88-06-2	2,4,6-Trichlorophenol	15.2	U	15.2	50.0	ug/L
95-95-4	2,4,5-Trichlorophenol	15.7	U	15.7	50.0	ug/L
121-14-2	2,4-Dinitrotoluene	25.4	U	25.4	50.0	ug/L
118-74-1	Hexachlorobenzene	19.1	U	19.1	50.0	ug/L
87-86-5	Pentachlorophenol	25.5	U	25.5	100	ug/L
SURROGATES						
367-12-4	2-Fluorophenol	142		10 - 139	94%	SPK: 150
13127-88-3	Phenol-d6	130		10 - 134	87%	SPK: 150
4165-60-0	Nitrobenzene-d5	98.1		49 - 133	98%	SPK: 100
321-60-8	2-Fluorobiphenyl	93.1		52 - 132	93%	SPK: 100
118-79-6	2,4,6-Tribromophenol	146		45 - 141	97%	SPK: 150
1718-51-0	Terphenyl-d14	93.8		45 - 142	94%	SPK: 100
INTERNAL STANDARDS						
3855-82-1	1,4-Dichlorobenzene-d4	116000	8.028			
1146-65-2	Naphthalene-d8	439000	10.846			
15067-26-2	Acenaphthene-d10	267000	14.675			
1517-22-2	Phenanthrene-d10	598000	17.428			
1719-03-5	Chrysene-d12	635000	21.51			
1520-96-3	Perylene-d12	733000	24.027			

Report of Analysis

Client:	H2M Architects + Engineers	Date Collected:	03/22/23
Project:	Siphon	Date Received:	03/23/23
Client Sample ID:	CHAMBER-B-72-EAST	SDG No.:	O2058
Lab Sample ID:	O2058-02	Matrix:	TCLP
Analytical Method:	SW8270	% Solid:	0
Sample Wt/Vol:	100 Units: mL	Final Vol:	1000 uL
Soil Aliquot Vol:	uL	Test:	TCLP BNA
Extraction Type :	Decanted : N	Level :	LOW
Injection Volume :	GPC Factor : 1.0	GPC Cleanup :	N PH :
Prep Method :	SW3541		

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
BP014321.D	1	03/24/23 10:20	03/27/23 20:06	PB151670

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
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U = Not Detected

LOQ = Limit of Quantitation

MDL = Method Detection Limit

LOD = Limit of Detection

E = Value Exceeds Calibration Range

Q = indicates LCS control criteria did not meet requirements

M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value

B = Analyte Found in Associated Method Blank

N = Presumptive Evidence of a Compound

* = Values outside of QC limits

D = Dilution

() = Laboratory InHouse Limit

A = Aldol-Condensation Reaction Products

Report of Analysis

Client:	H2M Architects + Engineers	Date Collected:	03/24/23
Project:	Siphon	Date Received:	03/24/23
Client Sample ID:	PB151641TB	SDG No.:	O2058
Lab Sample ID:	PB151641TB	Matrix:	TCLP
Analytical Method:	SW8270	% Solid:	0
Sample Wt/Vol:	100 Units: mL	Final Vol:	1000 uL
Soil Aliquot Vol:	uL	Test:	TCLP BNA
Extraction Type :	Decanted : N	Level :	LOW
Injection Volume :	GPC Factor : 1.0	GPC Cleanup :	N PH :
Prep Method :	SW3541		

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
BP014301.D	1	03/24/23 10:20	03/24/23 22:23	PB151670

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
TARGETS						
110-86-1	Pyridine	17.8	U	17.8	50.0	ug/L
106-46-7	1,4-Dichlorobenzene	14.3	U	14.3	50.0	ug/L
95-48-7	2-Methylphenol	20.6	U	20.6	50.0	ug/L
65794-96-9	3+4-Methylphenols	21.6	U	21.6	100	ug/L
67-72-1	Hexachloroethane	16.4	U	16.4	50.0	ug/L
98-95-3	Nitrobenzene	17.2	U	17.2	50.0	ug/L
87-68-3	Hexachlorobutadiene	19.3	U	19.3	50.0	ug/L
88-06-2	2,4,6-Trichlorophenol	15.2	U	15.2	50.0	ug/L
95-95-4	2,4,5-Trichlorophenol	15.7	U	15.7	50.0	ug/L
121-14-2	2,4-Dinitrotoluene	25.4	U	25.4	50.0	ug/L
118-74-1	Hexachlorobenzene	19.1	U	19.1	50.0	ug/L
87-86-5	Pentachlorophenol	25.5	U	25.5	100	ug/L
SURROGATES						
367-12-4	2-Fluorophenol	151		10 - 139	101%	SPK: 150
13127-88-3	Phenol-d6	148		10 - 134	99%	SPK: 150
4165-60-0	Nitrobenzene-d5	96.1		49 - 133	96%	SPK: 100
321-60-8	2-Fluorobiphenyl	90.7		52 - 132	91%	SPK: 100
118-79-6	2,4,6-Tribromophenol	121		45 - 141	81%	SPK: 150
1718-51-0	Terphenyl-d14	105		45 - 142	105%	SPK: 100
INTERNAL STANDARDS						
3855-82-1	1,4-Dichlorobenzene-d4	200000	8.028			
1146-65-2	Naphthalene-d8	771000	10.852			
15067-26-2	Acenaphthene-d10	470000	14.675			
1517-22-2	Phenanthrene-d10	931000	17.434			
1719-03-5	Chrysene-d12	586000	21.516			
1520-96-3	Perylene-d12	555000	24.033			

Report of Analysis

Client:	H2M Architects + Engineers	Date Collected:	03/24/23
Project:	Siphon	Date Received:	03/24/23
Client Sample ID:	PB151641TB	SDG No.:	O2058
Lab Sample ID:	PB151641TB	Matrix:	TCLP
Analytical Method:	SW8270	% Solid:	0
Sample Wt/Vol:	100 Units: mL	Final Vol:	1000 uL
Soil Aliquot Vol:	uL	Test:	TCLP BNA
Extraction Type :	Decanted : N	Level :	LOW
Injection Volume :	GPC Factor : 1.0	GPC Cleanup :	N PH :
Prep Method :	SW3541		

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
BP014301.D	1	03/24/23 10:20	03/24/23 22:23	PB151670

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
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() = Laboratory InHouse Limit

A = Aldol-Condensation Reaction Products



284 Sheffield Street, Mountainside, New Jersey - 07092

Phone: (908) 789 8900 Fax: (908) 789 8922

LAB CHRONICLE

OrderID:	O2058	OrderDate:	3/23/2023 11:18:00 AM
Client:	H2M Architects + Engineers	Project:	Siphon
Contact:	Stephen I. Kaplan	Location:	M11

LabID	ClientID	Matrix	Test	Method	Sample Date	Prep Date	Anal Date	Received
O2058-02	CHAMBER-B-72-EAST	TCLP	TCLP BNA	8270E	03/22/23	03/24/23	03/27/23	03/23/23

Hit Summary Sheet
SW-846

SDG No.:

O2058

Order ID:

O2058

Client:

H2M Architects + Engineers

Project ID:

Siphon

A

B

Sample ID	Client ID	Matrix	Parameter	Concentration	C	MDL	RDL	Units
Client ID :								

C

D

Total Concentration: 0.000

SAMPLE DATA

Report of Analysis

Client:	H2M Architects + Engineers		Date Collected:	03/22/23	
Project:	Siphon		Date Received:	03/23/23	
Client Sample ID:	CHAMBER-B-72-EAST		SDG No.:	O2058	
Lab Sample ID:	O2058-02		Matrix:	TCLP	
Analytical Method:	SW8081		% Solid:	0	Decanted:
Sample Wt/Vol:	100	Units: mL	Final Vol:	10000	uL
Soil Aliquot Vol:		uL	Test:	TCLP Pesticide	
Extraction Type:			Injection Volume :		
GPC Factor :	1.0	PH :			
Prep Method :	SW3541B				

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
PL081724.D	1	03/24/23 11:10	03/24/23 18:44	PB151671

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
TARGETS						
58-89-9	gamma-BHC (Lindane)	0.064	U	0.064	0.50	ug/L
76-44-8	Heptachlor	0.073	U	0.073	0.50	ug/L
1024-57-3	Heptachlor epoxide	0.10	U	0.10	0.50	ug/L
72-20-8	Endrin	0.043	U	0.043	0.50	ug/L
72-43-5	Methoxychlor	0.066	U	0.066	0.50	ug/L
8001-35-2	Toxaphene	1.80	U	1.80	10.0	ug/L
57-74-9	Chlordane	0.97	U	0.97	5.00	ug/L
SURROGATES						
2051-24-3	Decachlorobiphenyl	13.9		27 - 142	69%	SPK: 20
877-09-8	Tetrachloro-m-xylene	19.1		60 - 145	96%	SPK: 20

Comments:

U = Not Detected

LOQ = Limit of Quantitation

MDL = Method Detection Limit

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() = Laboratory InHouse Limit

Report of Analysis

Client:	H2M Architects + Engineers		Date Collected:		
Project:	Siphon		Date Received:	03/24/23	
Client Sample ID:	PB151641TB		SDG No.:	O2058	
Lab Sample ID:	PB151641TB		Matrix:	TCLP	
Analytical Method:	SW8081		% Solid:	0	Decanted:
Sample Wt/Vol:	100	Units: mL	Final Vol:	10000	uL
Soil Aliquot Vol:		uL	Test:	TCLP Pesticide	
Extraction Type:			Injection Volume :		
GPC Factor :	1.0	PH :			
Prep Method :	SW3541B				

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
PL081728.D	1	03/24/23 11:10	03/24/23 19:40	PB151671

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
TARGETS						
58-89-9	gamma-BHC (Lindane)	0.064	U	0.064	0.50	ug/L
76-44-8	Heptachlor	0.073	U	0.073	0.50	ug/L
1024-57-3	Heptachlor epoxide	0.10	U	0.10	0.50	ug/L
72-20-8	Endrin	0.043	U	0.043	0.50	ug/L
72-43-5	Methoxychlor	0.066	U	0.066	0.50	ug/L
8001-35-2	Toxaphene	1.80	U	1.80	10.0	ug/L
57-74-9	Chlordane	0.97	U	0.97	5.00	ug/L
SURROGATES						
2051-24-3	Decachlorobiphenyl	18.2		27 - 142	91%	SPK: 20
877-09-8	Tetrachloro-m-xylene	17.0		60 - 145	85%	SPK: 20

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Phone: (908) 789 8900 Fax: (908) 789 8922

LAB CHRONICLE

OrderID:	O2058	OrderDate:	3/23/2023 11:18:00 AM
Client:	H2M Architects + Engineers	Project:	Siphon
Contact:	Stephen I. Kaplan	Location:	M11

LabID	ClientID	Matrix	Test	Method	Sample Date	Prep Date	Anal Date	Received
O2058-01	CHAMBER-B-72-EAST	SOIL	TPH GC	8015D	03/22/23	03/24/23	03/24/23	03/23/23
O2058-02	CHAMBER-B-72-EAST	TCLP	TCLP Herbicide	8151A	03/22/23	03/25/23	03/27/23	03/23/23
			TCLP Pesticide	8081B		03/24/23	03/24/23	

Hit Summary Sheet
SW-846

SDG No.: O2058

Order ID: O2058

Client: H2M Architects + Engineers

Project ID: Siphon

Sample ID	Client ID	Matrix	Parameter	Concentration	C	MDL	RDL	Units
Client ID :	CHAMBER-B-72-EAST							
O2058-01	CHAMBER-B-72-EA	SOIL	Aroclor-1260	50.6	7.00		35.7	ug/kg
Total Concentration:				50.600				

SAMPLE DATA

Report of Analysis

Client:	H2M Architects + Engineers		Date Collected:	03/22/23	
Project:	Siphon		Date Received:	03/23/23	
Client Sample ID:	CHAMBER-B-72-EAST		SDG No.:	O2058	
Lab Sample ID:	O2058-01		Matrix:	SOIL	
Analytical Method:	SW8082A		% Solid:	47.5	Decanted:
Sample Wt/Vol:	30.05	Units: g	Final Vol:	10000	uL
Soil Aliquot Vol:		uL	Test:	PCB	
Extraction Type:			Injection Volume :		
GPC Factor :	1.0	PH :			
Prep Method :	SW3541B				

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
PO093513.D	1	03/24/23 09:10	03/24/23 14:52	PB151655

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
TARGETS						
12674-11-2	Aroclor-1016	7.50	U	7.50	35.7	ug/kg
11104-28-2	Aroclor-1221	12.3	U	12.3	35.7	ug/kg
11141-16-5	Aroclor-1232	9.50	U	9.50	35.7	ug/kg
53469-21-9	Aroclor-1242	6.60	U	6.60	35.7	ug/kg
12672-29-6	Aroclor-1248	5.90	U	5.90	35.7	ug/kg
11097-69-1	Aroclor-1254	7.90	U	7.90	35.7	ug/kg
37324-23-5	Aroclor-1262	5.70	U	5.70	35.7	ug/kg
11100-14-4	Aroclor-1268	6.90	U	6.90	35.7	ug/kg
11096-82-5	Aroclor-1260	50.6		7.00	35.7	ug/kg
SURROGATES						
877-09-8	Tetrachloro-m-xylene	15.1		40 - 162	76%	SPK: 20
2051-24-3	Decachlorobiphenyl	10.8		32 - 176	54%	SPK: 20

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LAB CHRONICLE

OrderID:	O2058	OrderDate:	3/23/2023 11:18:00 AM
Client:	H2M Architects + Engineers	Project:	Siphon
Contact:	Stephen I. Kaplan	Location:	M11

LabID	ClientID	Matrix	Test	Method	Sample Date	Prep Date	Anal Date	Received
O2058-01	CHAMBER-B-72-EAST	SOIL			03/22/23			03/23/23
			PCB	8082A		03/24/23	03/24/23	
			TPH GC	8015D		03/24/23	03/24/23	
O2058-02	CHAMBER-B-72-EAST	TCLP			03/22/23			03/23/23
			TCLP Herbicide	8151A		03/25/23	03/27/23	
			TCLP Pesticide	8081B		03/24/23	03/24/23	

Hit Summary Sheet
SW-846

SDG No.: O2058

Order ID: O2058

Client: H2M Architects + Engineers

Project ID: Siphon

Sample ID	Client ID	Matrix	Parameter	Concentration	C	MDL	RDL	Units
Client ID :								

Total Concentration: 0.000

SAMPLE DATA

Report of Analysis

Client:	H2M Architects + Engineers		Date Collected:	03/22/23	
Project:	Siphon		Date Received:	03/23/23	
Client Sample ID:	CHAMBER-B-72-EAST		SDG No.:	O2058	
Lab Sample ID:	O2058-02		Matrix:	TCLP	
Analytical Method:	SW8151A		% Solid:	0	Decanted:
Sample Wt/Vol:	100	Units: mL	Final Vol:	10000	uL
Soil Aliquot Vol:		uL	Test:	TCLP Herbicide	
Extraction Type:			Injection Volume :		
GPC Factor :	1.0	PH :			
Prep Method :	8151A				

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
PS022515.D	1	03/25/23 08:10	03/27/23 11:54	PB151716

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
TARGETS						
94-75-7	2,4-D	5.70	U	5.70	20.0	ug/L
93-72-1	2,4,5-TP (Silvex)	5.40	U	5.40	20.0	ug/L
SURROGATES						
19719-28-9	2,4-DCAA	573		16 - 175	115%	SPK: 500

Comments:

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() = Laboratory InHouse Limit

Report of Analysis

Client:	H2M Architects + Engineers		Date Collected:		
Project:	Siphon		Date Received:	03/25/23	
Client Sample ID:	PB151641TB		SDG No.:	O2058	
Lab Sample ID:	PB151641TB		Matrix:	TCLP	
Analytical Method:	SW8151A		% Solid:	0	Decanted:
Sample Wt/Vol:	100	Units: mL	Final Vol:	10000	uL
Soil Aliquot Vol:		uL	Test:	TCLP Herbicide	
Extraction Type:			Injection Volume :		
GPC Factor :	1.0	PH :			
Prep Method :	8151A				

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
PS022529.D	1	03/25/23 08:10	03/27/23 19:08	PB151716

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
TARGETS						
94-75-7	2,4-D	5.70	U	5.70	20.0	ug/L
93-72-1	2,4,5-TP (Silvex)	5.40	U	5.40	20.0	ug/L
SURROGATES						
19719-28-9	2,4-DCAA	673		16 - 175	135%	SPK: 500

Comments:

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LAB CHRONICLE

OrderID:	O2058	OrderDate:	3/23/2023 11:18:00 AM
Client:	H2M Architects + Engineers	Project:	Siphon
Contact:	Stephen I. Kaplan	Location:	M11

LabID	ClientID	Matrix	Test	Method	Sample Date	Prep Date	Anal Date	Received
O2058-01	CHAMBER-B-72-EAST	SOIL	TPH GC	8015D	03/22/23	03/24/23	03/24/23	03/23/23
O2058-02	CHAMBER-B-72-EAST	TCLP	TCLP Herbicide	8151A	03/22/23	03/25/23	03/27/23	03/23/23

SAMPLE DATA

Report of Analysis

Client:	H2M Architects + Engineers	Date Collected:	03/22/23
Project:	Siphon	Date Received:	03/23/23
Client Sample ID:	CHAMBER-B-72-EAST	SDG No.:	O2058
Lab Sample ID:	O2058-01	Matrix:	SOIL
Analytical Method:	8015D TPH	% Solid:	47.5
Sample Wt/Vol:	30.01	Units:	g
Soil Aliquot Vol:			uL
Extraction Type:		Test:	TPH GC
GPC Factor :		Injection Volume :	
Prep Method :	SW3541		

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
FF012352.D	1	03/24/23 09:30	03/24/23 15:08	PB151662

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
TARGETS						
PHC	Petroleum Hydrocarbons	34900		846	5960	ug/kg
SURROGATES						
16416-32-3	TETRACOSANE-d50	13.8		37 - 130	69%	SPK: 20

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LAB CHRONICLE

OrderID:	O2058	OrderDate:	3/23/2023 11:18:00 AM
Client:	H2M Architects + Engineers	Project:	Siphon
Contact:	Stephen I. Kaplan	Location:	M11

LabID	ClientID	Matrix	Test	Method	Sample Date	Prep Date	Anal Date	Received
O2058-01	CHAMBER-B-72-EAST	SOIL	TPH GC	8015D	03/22/23	03/24/23	03/24/23	03/23/23



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Hit Summary Sheet
SW-846

SDG No.:

O2058

Order ID:

O2058

Client:

H2M Architects + Engineers

Project ID:

Siphon

Sample ID	Client ID	Matrix	Parameter	Concentration	C	MDL	RDL	Units
Client ID : CHAMBER-B-72-EAST								
O2058-02	CHAMBER-B-72-EAST	TCLP	Barium	804		39.2	500	ug/L
O2058-02	CHAMBER-B-72-EAST	TCLP	Iron	57700		185	500	ug/L
O2058-02	CHAMBER-B-72-EAST	TCLP	Nickel	18.7	J	8.50	200	ug/L
O2058-02	CHAMBER-B-72-EAST	TCLP	Zinc	1100		17.5	200	ug/L

SAMPLE DATA

Report of Analysis

Client:	H2M Architects + Engineers	Date Collected:	03/22/23
Project:	Siphon	Date Received:	03/23/23
Client Sample ID:	CHAMBER-B-72-EAST	SDG No.:	O2058
Lab Sample ID:	O2058-02	Matrix:	TCLP
Level (low/med):	low	% Solid:	0

Cas	Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.	Prep Met.
7429-90-5	Aluminum	283	U	1	283	500	ug/L	03/24/23 11:00	03/24/23 19:01	SW6010	SW3050
7440-38-2	Arsenic	34.8	U	1	34.8	100	ug/L	03/24/23 11:00	03/24/23 19:01	SW6010	SW3050
7440-39-3	Barium	804		1	39.2	500	ug/L	03/24/23 11:00	03/24/23 19:01	SW6010	SW3050
7440-43-9	Cadmium	1.00	U	1	1.00	30.0	ug/L	03/24/23 11:00	03/24/23 19:01	SW6010	SW3050
7440-47-3	Chromium	8.00	U	1	8.00	50.0	ug/L	03/24/23 11:00	03/24/23 19:01	SW6010	SW3050
7440-50-8	Copper	70.7	U	1	70.7	100	ug/L	03/24/23 11:00	03/24/23 19:01	SW6010	SW3050
7439-89-6	Iron	57700		1	185	500	ug/L	03/24/23 11:00	03/24/23 19:01	SW6010	SW3050
7439-92-1	Lead	35.1	U	1	35.1	60.0	ug/L	03/24/23 11:00	03/24/23 19:01	SW6010	SW3050
7439-97-6	Mercury	0.78	U	1	0.78	2.00	ug/L	03/27/23 12:47	03/27/23 19:59	SW7470A	
7440-02-0	Nickel	18.7	J	1	8.50	200	ug/L	03/24/23 11:00	03/24/23 19:01	SW6010	SW3050
7782-49-2	Selenium	58.8	U	1	58.8	100	ug/L	03/24/23 11:00	03/24/23 19:01	SW6010	SW3050
7440-22-4	Silver	6.60	U	1	6.60	50.0	ug/L	03/24/23 11:00	03/24/23 19:01	SW6010	SW3050
7440-66-6	Zinc	1100		1	17.5	200	ug/L	03/24/23 11:00	03/24/23 19:01	SW6010	SW3050

Color Before:	Colorless	Clarity Before:	Clear	Texture:
Color After:	Colorless	Clarity After:	Clear	Artifacts:
Comments:	TCLP Mercury			

U = Not Detected
 LOQ = Limit of Quantitation
 MDL = Method Detection Limit
 LOD = Limit of Detection
 D = Dilution
 Q = indicates LCS control criteria did not meet requirements

J = Estimated Value
 B = Analyte Found in Associated Method Blank
 * = indicates the duplicate analysis is not within control limits.
 E = Indicates the reported value is estimated because of the presence of interference.
 OR = Over Range
 N = Spiked sample recovery not within control limits



284 Sheffield Street, Mountainside, New Jersey - 07092

Phone: (908) 789 8900 Fax: (908) 789 8922

LAB CHRONICLE

OrderID:	O2058	OrderDate:	3/23/2023 11:18:00 AM
Client:	H2M Architects + Engineers	Project:	Siphon
Contact:	Stephen I. Kaplan	Location:	--Select--,M11

LabID	ClientID	Matrix	Test	Method	Sample Date	Prep Date	Anal Date	Received
O2058-02	CHAMBER-B-72-EAST	TCLP			03/22/23			03/23/23
			TCLP Mercury	7470A		03/27/23	03/27/23	
			TCLPMetals Group1	6010D		03/24/23	03/24/23	

SAMPLE DATA

Report of Analysis

Client:	H2M Architects + Engineers	Date Collected:	03/22/23 13:30
Project:	Siphon	Date Received:	03/23/23
Client Sample ID:	CHAMBER-B-72-EAST	SDG No.:	O2058
Lab Sample ID:	O2058-01	Matrix:	SOIL
		% Solid:	47.5

Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units(Dry Weight)	Prep Date	Date Ana.	Ana Met.
Oil and Grease	105	J	1	84.1	263	mg/Kg		03/28/23 11:30	1664A
Paint Filter	1.00	U	1	1.00	1.00	ml/100gm		03/24/23 15:47	9095B
pH	6.82	H	1	0	0	pH		03/23/23 16:35	9045D
TS	48.1		1	1.00	5.00	%		03/23/23 10:00	SM 2540 B-15
TVS	11.7		1	1.00	10.0	%		03/23/23 16:10	160.4

Comments: pH result reported at temperature 22.1 °C

U = Not Detected

LOQ = Limit of Quantitation

MDL = Method Detection Limit

LOD = Limit of Detection

D = Dilution

Q = indicates LCS control criteria did not meet requirements

H = Sample Analysis Out Of Hold Time

J = Estimated Value

B = Analyte Found in Associated Method Blank

* = indicates the duplicate analysis is not within control limits.

E = Indicates the reported value is estimated because of the presence of interference.

OR = Over Range

N =Spiked sample recovery not within control limits

Report of Analysis

Client:	H2M Architects + Engineers	Date Collected:	03/22/23 13:30
Project:	Siphon	Date Received:	03/23/23
Client Sample ID:	CHAMBER-B-72-EAST	SDG No.:	O2058
Lab Sample ID:	O2058-02	Matrix:	SOIL
		% Solid:	100

Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
Corrosivity	6.82	H	1	0	0	pH		03/23/23 16:35	9045D
Ignitability	NO		1	0	0	oC		03/24/23 14:02	1030
Reactive Cyanide	0.018	J	1	0.011	0.049	mg/Kg	03/23/23 10:45	03/23/23 13:57	9012B
Reactive Sulfide	7.92	J	1	2.98	10.0	mg/Kg	03/28/23 09:00	03/28/23 11:19	9034

Comments: pH result reported at temperature 22.1 °C

U = Not Detected

LOQ = Limit of Quantitation

MDL = Method Detection Limit

LOD = Limit of Detection

D = Dilution

Q = indicates LCS control criteria did not meet requirements

H = Sample Analysis Out Of Hold Time

J = Estimated Value

B = Analyte Found in Associated Method Blank

* = indicates the duplicate analysis is not within control limits.

E = Indicates the reported value is estimated because of the presence of interference.

OR = Over Range

N =Spiked sample recovery not within control limits

Report of Analysis

Client:	H2M Architects + Engineers	Date Collected:	03/22/23 13:30
Project:	Siphon	Date Received:	03/23/23
Client Sample ID:	CHAMBER-B-72-EAST	SDG No.:	O2058
Lab Sample ID:	O2058-03	Matrix:	WATER
		% Solid:	0

Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
ASTM Ammonia	17.1	OR	1	0.045	0.10	mg/L	03/30/23 09:15	03/30/23 12:30	SM 4500-NH3 B plus NH3 G-11
ASTM COD	24.0		1	2.52	10.0	mg/L		03/29/23 16:24	SM 5220 D-11
ASTM Oil and Grease	0.53	U	1	0.53	5.00	mg/L		03/29/23 09:30	SW1664A
ASTM TPH	1.65	U	1	1.65	5.00	mg/L		03/29/23 10:00	SW1664

Comments:

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
D = Dilution
Q = indicates LCS control criteria did not meet requirements
H = Sample Analysis Out Of Hold Time

J = Estimated Value
B = Analyte Found in Associated Method Blank
* = indicates the duplicate analysis is not within control limits.
E = Indicates the reported value is estimated because of the presence of interference.
OR = Over Range
N =Spiked sample recovery not within control limits

Report of Analysis

Client:	H2M Architects + Engineers	Date Collected:	03/22/23 13:30
Project:	Siphon	Date Received:	03/23/23
Client Sample ID:	CHAMBER-B-72-EASTDL	SDG No.:	O2058
Lab Sample ID:	O2058-03DL	Matrix:	WATER
		% Solid:	0

Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
ASTM Ammonia	15.1	D	20	0.90	2.00	mg/L	03/30/23 09:15	03/30/23 13:24	SM 4500-NH3 B plus NH3 G-11

Comments:

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
D = Dilution
Q = indicates LCS control criteria did not meet requirements
H = Sample Analysis Out Of Hold Time

J = Estimated Value
B = Analyte Found in Associated Method Blank
* = indicates the duplicate analysis is not within control limits.
E = Indicates the reported value is estimated because of the presence of interference.
OR = Over Range
N =Spiked sample recovery not within control limits

LAB CHRONICLE

OrderID:	O2058	OrderDate:	3/23/2023 11:18:00 AM
Client:	H2M Architects + Engineers	Project:	Siphon
Contact:	Stephen I. Kaplan	Location:	M11

LabID	ClientID	Matrix	Test	Method	Sample Date	Prep Date	Anal Date	Received
O2058-01	CHAMBER-B-72-EAST	SOIL			03/22/23 13:30			03/23/23
			Oil and Grease	1664A			03/28/23 11:30	
			Paint Filter	9095B			03/24/23 15:47	
			pH	9045D			03/23/23 16:35	
			TS	SM2540 B			03/23/23 10:00	
			TVS	160.4			03/23/23 16:10	
O2058-02	CHAMBER-B-72-EAST	SOIL			03/22/23 13:30			03/23/23
			Corrosivity	9045D			03/23/23 16:35	
			Ignitability	1030			03/24/23 14:02	
			Reactive Cyanide	9012B		03/23/23	03/23/23 13:57	
			Reactive Sulfide	9034		03/28/23	03/28/23 11:19	
O2058-03	CHAMBER-B-72-EAST	WATER			03/22/23 13:30			03/23/23
			ASTM Ammonia	SM4500-NH3		03/30/23	03/30/23 12:30	
			ASTM COD	SM5220 D			03/29/23 16:24	
			ASTM Oil and Grease	1664A			03/29/23 09:30	



284 Sheffield Street, Mountainside, New Jersey - 07092

Phone: (908) 789 8900 Fax: (908) 789 8922

LAB CHRONICLE

ASTM TPH 1664 03/29/23 10:00

O2058-03DL CHAMBER-B-72-EAST WATER 03/22/23 13:30 03/23/23
DL

ASTM Ammonia SM4500-NH3 03/30/23 03/30/23 13:24

SHIPPING DOCUMENTS

CHEMTECH

CHAIN OF CUSTODY RECORD

284 Sheffield Street, Mountainside, NJ 07092
(908) 789-8900 • Fax (908) 789-8922
www.chemtech.net

CHEMTECH PROJECT NO.

QUOTE NO.

COC Number

2038930

13

13.1

CLIENT INFORMATION

REPORT TO BE SENT TO:

COMPANY: H2M architects + engineers

ADDRESS: 290 Broadhollow Road

CITY: Melville STATE: NY ZIP: 11747

ATTENTION: Stephen Kaplan

PHONE: 631 756 8000 x1613 FAX:

CLIENT PROJECT INFORMATION

PROJECT NAME: Northern Blvd Sphx Cleaning

PROJECT NO.: NYDP 2001 LOCATION: Queens NY

PROJECT MANAGER: Stephen Kaplan

e-mail: S.Kaplan@H2M.com

PHONE: 631 756 8000 x1613 FAX:

CLIENT BILLING INFORMATION

BILL TO: H2M architects + engineers BO#:

ADDRESS: 290 Broadhollow Road, Suite 400 E

CITY: Melville STATE: NY ZIP: 11747

ATTENTION: Stephen Kaplan PHONE: 631 756 8000 x1613

ANALYSIS

DATA TURNAROUND INFORMATION

FAX (RUSH) _____ DAYS*

HARDCOPY (DATA PACKAGE): _____ DAYS*

EDD: _____ DAYS*

TO BE APPROVED BY CHEMTECH

STANDARD HARDCOPY TURNAROUND TIME IS 10 BUSINESS DAYS

DATA DELIVERABLE INFORMATION

☐ Level 1 (Results Only) ☐ Level 4 (QC + Full Raw Data)

☐ Level 2 (Results + QC) ☐ NJ Reduced ☐ US EPA CLP

☐ Level 3 (Results + QC) ☐ NYS ASP A ☐ NYS ASP B

+ Raw Data) ☐ Other _____

☐ EDD FORMAT _____

Full pink lines facility parameters

PRESERVATIVES

COMMENTS

CHEMTECH SAMPLE ID	PROJECT SAMPLE IDENTIFICATION	SAMPLE MATRIX	SAMPLE TYPE		SAMPLE COLLECTION		# OF BOTTLES										← Specify Preservatives A-HCl B-HNO3 C-H2SO4 D-NaOH E-ICE F-OTHER
			COMP	GRAB	DATE	TIME		1	2	3	4	5	6	7	8	9	
1.	CHAMBER B 72" East	sludge		X	3/22/23	1330	12	X									
2.	CHAMBER B 72" East																
3.																	
4.																	
5.																	
6.																	
7.																	
8.																	
9.																	
10.																	

SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE POSSESSION INCLUDING COURIER DELIVERY

RELINQUISHED BY SAMPLER: 1. <i>[Signature]</i> H2M	DATE/TIME: 3/22/23 1730	RECEIVED BY: 1. <i>[Signature]</i>	Conditions of bottles or coolers at receipt: ☐ COMPLIANT ☐ NON COMPLIANT ☐ COOLER TEMP _____ °C
RELINQUISHED BY SAMPLER: 2. <i>[Signature]</i>	DATE/TIME: 3/23/23 9:50	RECEIVED BY: 2. <i>[Signature]</i>	Comments: See attached white lines facility parameters
RELINQUISHED BY SAMPLER: 3. <i>[Signature]</i>	DATE/TIME:	RECEIVED BY: 3. <i>[Signature]</i>	

Page 1 of 1

CLIENT: ☐ Hand Delivered ☒ Other
CHEMTECH: ☐ Picked Up ☐ Field Sampling

Shipment Complete
☒ YES ☐ NO

Form U Parameters (White Pines)

TCLP Metals

Arsenic
Barium
Cadmium
Chromium
Copper
Lead
Mercury
Nickel
Selenium
Silver
Zinc
Aluminum
Iron

TCLP Volatiles

Benzene
Carbon Tetrachloride
Chlorobenzene
Chloroform
1,2 Dichloroethane
1,1 Dichloroethene
2-Butanone (MEK)
Pyridine
Tetrachloroethene
Trichloroethene
Vinyl Chloride
Toluene
Ethylbenzene
Xylene

TCLP Semi-Volatiles

O-Cresol
M-Cresol
P-Cresol
1,4 Dichlorobenzene
2,4 Dinitrotoluene
Hexachlorobenzene
Hexachloro 1,3 butadiene
Hexachloroethane
Nitrobenzene
Pentachlorophenol
2,4,5 Trichlorophenol
2,4,6 Trichlorophenol

TCLP Pesticides/Herbicides

Chlordane
Endrin
Heptachlor
Heptachlor Epoxide
Lindane
Methoxychlor
Toxaphene
2,4 D
2,4,5 TP Silvex

ASTM Leachate

Ammonia-Nitrogen
Chemical Oxygen Demand
Oil & Grease
Total Petroleum Hydrocarbons

Total Analysis

pH
Free Liquids
Ignitability
Oil & Grease
Total Petroleum Hydrocarbons
PCBs
Reactive Cyanide
Reactive Sulfide
Total Organic Halogens
Total Solids
Total Volatile Solids

Laboratory Certification

Certified By	License No.
CAS EPA CLP Contract	68HERH20D0011
Connecticut	PH-0649
DOD ELAP (L-A-B)	L2219
Maine	2022022
Maryland	296
New Hampshire	255422
New Jersey	20012
New York	11376
Pennsylvania	68-00548
Soil Permit	P330-21-00137
Texas	T104704488-22-15

SUB DATA PACKAGE

PROJECT NAME : SIPHON

PROJECT # : O2057

H2M ARCHITECTS + ENGINEERS

290 Broad Hollow Road

Suite 400E

Melville, NY - 11747

Phone No: 631-756-8000

ORDER ID : O2057

ATTENTION : Stephen I. Kaplan



Cover Page

Order ID : O2057

Project ID : Siphon

Client : H2M Architects + Engineers

Lab Sample Number

O2057-01

Client Sample Number

CHAMBER-B-72-EAST

I certify that the data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hard copy data package has been authorized by the laboratory manager or his designee, as verified by the following signature.

Signature :

S. M. Jodhani

APPROVED

By *Sohil Jodhani, QA/QC Director* at 10:32 am, Apr 04, 2023

NYDOH CERTIFICATION NO - 11376

NJDEP CERTIFICATION NO - 20012



Summit Environmental Technologies, Inc.
3310 Win St.
Cuyahoga Falls, Ohio 44223
TEL: (330) 253-8211 FAX: (330) 253-4489
Website: <http://www.settek.com>

March 28, 2023

PM
Chemtech
284 Sheffield Street
Mountainside, NJ 07092
TEL:
FAX:
RE: O2057

Dear PM:

Order No.: 23031824

Summit Environmental Technologies, Inc. received 1 sample(s) on 3/23/2023 for the analyses presented in the following report.

There were no problems with the analytical events associated with this report unless noted in the Case Narrative.

Quality control data is within laboratory defined or method specified acceptance limits except where noted.

If you have any questions regarding these tests results, please feel free to call the laboratory.

Sincerely,

Jennifer Woolf

Project Manager

3310 Win St.
Cuyahoga Falls, Ohio 44223

Arkansas 88-0735, California 2943, Colorado, Connecticut PH-0108, Florida NELAC E87688, Idaho OH00923, Illinois 200061, Indiana C-OH-13, ISO/IEC 17025:2017 119125 L22-544, Kansas E-10347, Kentucky (Underground Storage Tank) 3, Kentucky 90146, Maryland 339, Michigan 9988, Minnesota 1780279, Nevada OH009232020-1, New Hampshire 2996, New Jersey OH006, New York 11777, North Carolina 39705 and 631, North Dakota R-201, Ohio DW, Ohio VAP CL0052, Oklahoma 2019-155, Oregon OH200001, Pennsylvania 68-01335, Rhode Island LA000317, South Carolina 92016001, Texas T104704466-19-16, Utah OH009232020-12, Virginia VELAP 10381, West Virginia 9957C



Summit Environmental Technologies, Inc.
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Cuyahoga Falls, Ohio 44223
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Website: <http://www.settek.com>

Case Narrative

WO#: 23031824
Date: 3/28/2023

CLIENT: Chemtech
Project: O2057

WorkOrder Narrative:

23031824: This report in its entirety consists of the following documents: Cover Letter, Case Narrative, Analytical Results, QC Summary Report, Applicable Accreditation Information, Chain-of-Custody, Cooler Receipt Form, and other applicable forms as necessary. All documents contain the Summit Environmental Technologies, Inc., Work Order Number assigned to this report.

Summit Environmental Technologies, Inc., holds the accreditations/certifications listed at the bottom of the cover letter that may or may not pertain to this report. Please refer to the "Accreditation Program Analytes Report" for accredited analytes list.

The information contained in this analytical report is the sole property of Summit Environmental Technologies, Inc. and that of the customer. It cannot be reproduced in any form without the consent of Summit Environmental Technologies, Inc. or the customer for which this report was issued. The results contained in this report are only representative of the samples received. Conditions can vary at different times and at different sampling conditions. Summit Environmental Technologies, Inc. is not responsible for use or interpretation of the data included herein.

All results for Solid Samples are reported on an "as received" or "wet weight" basis unless indicated as "dry weight" using the "-dry" designation on the reporting units.

This report is believed to meet all of the requirements of the accrediting agency, where applicable. Any comments or problems with the analytical events associated with this report are noted below.

WorkOrder Comments:

Sample analyzed by SW846: 9023 EOX due to matrix; Results reported on "as received" basis.

Original

These commonly used Qualifiers and Acronyms may or may not be present in this report.

Qualifiers

U	The compound was analyzed for but was not detected above the MDL.
J	The reported value is greater than the Method Detection Limit but less than the Reporting Limit.
H	The hold time for sample preparation and/or analysis was exceeded. Not Clean Water Act compliant.
D	The result is reported from a dilution.
E	The result exceeded the linear range of the calibration or is estimated due to interference.
MC	The result is below the Minimum Compound Limit.
*	The result exceeds the Regulatory Limit or Maximum Contamination Limit.
m	Manual integration was used to determine the area response.
d	Manual integration in which peak was deleted
N	The result is presumptive based on a Mass Spectral library search assuming a 1:1 response.
P	The second column confirmation exceeded 25% difference.
C	The result has been confirmed by GC/MS.
X	The result was not confirmed when GC/MS Analysis was performed.
B	The analyte was detected in the Method Blank at a concentration greater than the RL.
MB+	The analyte was detected in the Method Blank at a concentration greater than the MDL.
G	The ICB or CCB contained reportable amounts of analyte.
QC-/+	The CCV recovery failed low (-) or high (+).
R/QDR	The RPD was outside of accepted recovery limits.
QL-/+	The LCS or LCSD recovery failed low (-) or high (+).
QLR	The LCS/LCSD RPD was outside of accepted recovery limits.
QM-/+	The MS or MSD recovery failed low (-) or high (+).
QMR	The MS/MSD RPD was outside of accepted recovery limits.
QV-/+	The ICV recovery failed low (-) or high (+).
S	The spike result was outside of accepted recovery limits.
W	Samples were received outside temperature limits (0° – 6° C). Not Clean Water Act compliant.
Z	Deviation; A deviation from the method was performed; Please refer to the Case Narrative for additional information

Acronyms

ND	Not Detected	RL	Reporting Limit
QC	Quality Control	MDL	Method Detection Limit
MB	Method Blank	LOD	Level of Detection
LCS	Laboratory Control Sample	LOQ	Level of Quantitation
LCSD	Laboratory Control Sample Duplicate	PQL	Practical Quantitation Limit
QCS	Quality Control Sample	CRQL	Contract Required Quantitation Limit
DUP	Duplicate	PL	Permit Limit
MS	Matrix Spike	RegLvl	Regulatory Limit
MSD	Matrix Spike Duplicate	MCL	Maximum Contamination Limit
RPD	Relative Percent Different	MinCL	Minimum Compound Limit
ICV	Initial Calibration Verification	RA	Reanalysis
ICB	Initial Calibration Blank	RE	Reextraction
CCV	Continuing Calibration Verification	TIC	Tentatively Identified Compound
CCB	Continuing Calibration Blank	RT	Retention Time
RLC	Reporting Limit Check	CF	Calibration Factor

This list of Qualifiers and Acronyms reflects the most commonly utilized Qualifiers and Acronyms for reporting. Please refer to the Analytical Notes in the Case Narrative for any Qualifiers or Acronyms that do not appear in this list or for additional information regarding the use of these Qualifiers on reported data.

Original



Summit Environmental Technologies, Inc.
3310 Win St.
Cuyahoga Falls, Ohio 44223
TEL: (330) 253-8211 FAX: (330) 253-4489
Website: <http://www.settek.com>

Workorder Sample Summary

WO#: 23031824
28-Mar-23

CLIENT: Chemtech
Project: O2057

Lab SampleID	Client Sample ID	Tag No	Date Collected	Date Received	Matrix
23031824-001	Chamber-B-72-East		3/22/2023 1:30:00 PM	3/23/2023 10:15:00 AM	Solid



Summit Environmental Technologies, Inc.
3310 Win St.
Cuyahoga Falls, Ohio 44223
TEL: (330) 253-8211 FAX: (330) 253-4489
Website: <http://www.settek.com>

DATES REPORT

WO#: 23031824

28-Mar-23

Client: Chemtech

Project: O2057

Sample ID	Client Sample ID	Collection Date	Matrix	Test Name	Leachate Date	Prep Date	Analysis Date
23031824-001A	Chamber-B-72-East	3/22/2023 1:30:00 PM	Solid	Extractable Organic Halides (EOX) (9			3/27/2023 2:00:00 PM

Original



Summit Environmental Technologies, Inc.
3310 Win St.
Cuyahoga Falls, Ohio 44223
TEL: (330) 253-8211 FAX: (330) 253-4489
Website: <http://www.settek.com>

WO#: 23031824
Date Reported: 3/28/2023
Company: Chemtech
Address: 284 Sheffield Street
Mountainside NJ 07092
Received: 3/23/2023
Project#: O2057

Client ID#	Lab ID#	Collected	Analyte	Result	Units	Qual	Matrix	Method	DF	MDL	PQL	Run	Analyst
Chamber-B-72-East	001	3/22/2023	Extractable Organic Halides	ND	mg/Kg	U	Solid	EPA 9023	1	11.7	40.0	3/27/2023	KMW



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Cuyahoga Falls, Ohio 44223
TEL: (330) 253-8211 FAX: (330) 253-4489
Website: <http://www.settek.com>

Accreditation Program Analytes Report

WO#: 23031824
28-Mar-23

Client: Chemtech

State: NY

Project: O2057

Program Name: DW_WW_SCM_NI

Sample ID	Matrix	Test Name	Analyte	Status
23031824-001A	Solid	Extractable Organic Halides (EOX) (9023)	Extractable Organic Halides	A

Key

DW_WW_SCM_NE A Accredited

Original #1



Summit Environmental Technologies, Inc.
3310 Win St.
Cuyahoga Falls, Ohio 44223
TEL: (330) 253-8211 FAX: (330) 253-4489
Website: <http://www.settek.com>

QC SUMMARY REPORT

WO#: 23031824

28-Mar-23

Client: Chemtech

Project: O2057

BatchID: R160624

Sample ID: MB-R160624	SampType: MBLK	TestCode: EOX_S(9023)	Units: mg/Kg	Prep Date:	RunNo: 160624						
Client ID: PBS	Batch ID: R160624	TestNo: SW9023		Analysis Date: 3/27/2023	SeqNo: 4268947						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Extractable Organic Halides	ND	40.0									U

Sample ID: LCS-R160624	SampType: LCS	TestCode: EOX_S(9023) Units: mg/Kg				Prep Date:			RunNo: 160624		
Client ID: LCSS	Batch ID: R160624	TestNo: SW9023				Analysis Date: 3/27/2023			SeqNo: 4268948		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Extractable Organic Halides	50.8	40.0	50.00	0	102	81	114				

Sample ID: 23031824-001AMS	SampType: MS	TestCode: EOX_S(9023)	Units: mg/Kg	Prep Date:	RunNo: 160624						
Client ID: Chamber-B-72-East	Batch ID: R160624	TestNo: SW9023		Analysis Date: 3/27/2023	SeqNo: 4269860						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Extractable Organic Halides	400	40.0	500.0	0	80.0	78	116				

Sample ID: 23031824-001AMSD		SampType: MSD		TestCode: EOX_S(9023)		Units: mg/Kg		Prep Date:		RunNo: 160624		
Client ID: Chamber-B-72-East		Batch ID: R160624		TestNo: SW9023				Analysis Date: 3/27/2023		SeqNo: 4269861		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Extractable Organic Halides		440	40.0	500.0	0	88.0	78	116	400.0	9.52	20	

Qualifiers:	B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analy
	J	Analyte detected below quantitation limits	M	Manual Integration used to determine area response	MC	Value is below Minimum Compound
	ND	Not Detected	OG1		P	Second column confirmation exceeds
	PL	Permit Limit	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit

Original



Summit Environmental Technologies, Inc.
3310 Win St.
Cuyahoga Falls, Ohio 44223
TEL: (330) 253-8211 FAX: (330) 253-4489
Website: <http://www.settek.com>

QC SUMMARY REPORT

WO#: 23031824

28-Mar-23

Client: Chemtech

Project: O2057

BatchID: R160624

Sample ID: 23031824-001AMSD	SampType: MSD	TestCode: EOX_S(9023)	Units: mg/Kg	Prep Date:	RunNo: 160624						
Client ID: Chamber-B-72-East	Batch ID: R160624	TestNo: SW9023		Analysis Date: 3/27/2023	SeqNo: 4269861						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Sample ID: MB-R160624	SampType: MBLK	TestCode: EOX_S(9023)	Units: mg/Kg	Prep Date:	RunNo: 160624						
Client ID: PBS	Batch ID: R160624	TestNo: SW9023		Analysis Date: 3/27/2023	SeqNo: 4269864						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Extractable Organic Halides	ND	40.0									U

Qualifiers: B Analyte detected in the associated Method Blank
J Analyte detected below quantitation limits
ND Not Detected
PL Permit Limit

E Value above quantitation range
M Manual Integration used to determine area response
OG1
R RPD outside accepted recovery limits

H Holding times for preparation or analy
MC Value is below Minimum Compound
P Second column confirmation exceeds
RL Reporting Detection Limit

Original

CHEMTECH

CHAIN OF CUSTODY RECORD

284 Sheffield Street, Mountainside, NJ 07092
(908) 789-8900 • Fax (908) 789-8922
www.chemtech.net

CHEMTECH PROJECT NO.

QUOTE NO.

COC Number

02057 - 02058
2038930

CLIENT INFORMATION

REPORT TO BE SENT TO:

COMPANY: H2M architects + engineers

ADDRESS: 290 Broadhollow Road

CITY: Melville STATE: NY ZIP: 11747

ATTENTION: Stephen Kaplan

PHONE: 631 756 8000 x1613 FAX:

CLIENT PROJECT INFORMATION

PROJECT NAME: Northern Blvd Sphx Cleaning

PROJECT NO.: NYDP 2001 LOCATION: Queens NY

PROJECT MANAGER: Stephen Kaplan

e-mail: S.Kaplan@H2M.com

PHONE: 631 756 8000 x1613 FAX:

CLIENT BILLING INFORMATION

BILL TO: H2M architects + engineers

ADDRESS: 290 Broadhollow Road, Suite 400 E

CITY: Melville STATE: NY ZIP: 11747

ATTENTION: Stephen Kaplan PHONE: 631 756 8000 x1613

ANALYSIS

DATA TURNAROUND INFORMATION

FAX (RUSH) _____ DAYS*

HARDCOPY (DATA PACKAGE): _____ DAYS*

EDD: _____ DAYS*

TO BE APPROVED BY CHEMTECH

STANDARD HARDCOPY TURNAROUND TIME IS 10 BUSINESS DAYS

DATA DELIVERABLE INFORMATION

☐ Level 1 (Results Only) ☐ Level 4 (QC + Full Raw Data)

☐ Level 2 (Results + QC) ☐ NJ Reduced ☐ US EPA CLP

☐ Level 3 (Results + QC) ☐ NYS ASP A ☐ NYS ASP B

+ Raw Data) ☐ Other _____

☐ EDD FORMAT

Full pink lines facility parameters

PRESERVATIVES

COMMENTS

CHEMTECH SAMPLE ID	PROJECT SAMPLE IDENTIFICATION	SAMPLE MATRIX	SAMPLE TYPE		SAMPLE COLLECTION		# OF BOTTLES										← Specify Preservatives A-HCl B-HNO3 C-H2SO4 D-NaOH E-ICE F-OTHER
			COMP	GRAB	DATE	TIME		1	2	3	4	5	6	7	8	9	
1.	CHAMBER B 72" East	sludge		X	3/22/23	1330	12	X									
2.	CHAMBER B 72" East																
3.																	
4.																	
5.																	
6.																	
7.																	
8.																	
9.																	
10.																	

SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE POSSESSION INCLUDING COURIER DELIVERY

RELINQUISHED BY SAMPLER: 1. <i>[Signature]</i> H2M	DATE/TIME: 3/22/23 1730	RECEIVED BY: 1. <i>[Signature]</i>	Conditions of bottles or coolers at receipt: ☐ COMPLIANT ☐ NON COMPLIANT ☐ COOLER TEMP _____ °C
RELINQUISHED BY SAMPLER: 2. <i>[Signature]</i>	DATE/TIME: 3/23/23 9:50	RECEIVED BY: 2. <i>[Signature]</i>	Comments: See attached white lines facility parameters
RELINQUISHED BY SAMPLER: 3. <i>[Signature]</i>	DATE/TIME:	RECEIVED BY: 3. <i>[Signature]</i>	

Page 1 of 1

CLIENT: ☐ Hand Delivered ☒ Other
CHEMTECH: ☐ Picked Up ☐ Field Sampling

Shipment Complete
☒ YES ☐ NO

Form U Parameters (White Pines)

TCLP Metals

Arsenic
Barium
Cadmium
Chromium
Copper
Lead
Mercury
Nickel
Selenium
Silver
Zinc
Aluminum
Iron

TCLP Semi-Volatiles

O-Cresol
M-Cresol
P-Cresol
1,4 Dichlorobenzene
2,4 Dinitrotoluene
Hexachlorobenzene
Hexachloro 1,3 butadiene
Hexachloroethane
Nitrobenzene
Pentachlorophenol
2,4,5 Trichlorophenol
2,4,6 Trichlorophenol

ASTM Leachate

Ammonia-Nitrogen
Chemical Oxygen Demand
Oil & Grease
Total Petroleum Hydrocarbons

TCLP Volatiles

Benzene
Carbon Tetrachloride
Chlorobenzene
Chloroform
1,2 Dichloroethane
1,1 Dichloroethene
2-Butanone (MEK)
Pyridine
Tetrachloroethene
Trichloroethene
Vinyl Chloride
Toluene
Ethylbenzene
Xylene

TCLP Pesticides/Herbicides

Chlordane
Endrin
Heptachlor
Heptachlor Epoxide
Lindane
Methoxychlor
Toxaphene
2,4 D
2,4,5 TP Silvex

Total Analysis

pH
Free Liquids
Ignitability
Oil & Grease
Total Petroleum Hydrocarbons
PCBs
Reactive Cyanide
Reactive Sulfide
Total Organic Halogens
Total Solids
Total Volatile Solids



284 Sheffield Street, Mountainside, NJ 07092
(908) 789-8900 Fax (908) 789-8922
WWW.CHEMTECH.NET

23031824

CHAIN OF CUSTODY RECORD

Sub Lab INFORMATION	CLIENT PROJECT INFORMATION	CLIENT BILLING INFORMATION
COMPANY : Summit Enviromental Technologies I	ORDER ID : O2057	BILL TO: CHEMTECH PO# : O2057
ADDRESS : 3310 Win St	PROJECT ID:Siphon	ADDRESS : 284, Sheffield Street
CITY:Cuyahoga State :Ohio ZIP :44223	PROJECT MANAGER Samantha	CITY: Mountainside State : NJ ZIP : 07092
E-mail :	E-mail : Samantha@chemtech.net	ATTENTION :Samant
PHONE :330-253-8211	PHONE : (908) 789 8900 FAX: (908) 789 8922	PHONE : (908) 789 8900 FAX : (908) 789 8922

EDD : EXCEL NOCLEAN	Report : Level 1	Comment :
---------------------	------------------	-----------

ID	CLIENT SAMPLE IDENTIFICATION	SAMPLE MATRIX	ANALYSIS	Preservative	Method	SAMPLE COLLECTION		# OF BOTTLES	TAT DAYS
						DATE	TIME		
01	CHAMBER-B-72-EAST	Solid	TOX	Cool 4 deg C	9023	03/22/2023	13:30:00	1	10

SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGES POSSESSION INCLUDING COURIER DELIVERY					
RELINQUISHED BY SAMPLER: 1. <i>CL</i>	DATETIME: 16:00 3/23/23	RECEIVED BY: 1. <i>CL</i>	Conditions of bottles or Coolers at receipt: 4.3+0.1=4.4 ☐ Compliant ☐ Non Compliant	Cooler Temp _____ Ice or Cooler? _____	
RELINQUISHED BY: 2.	DATETIME:	RECEIVED BY: 2.	716 4586 5400 <i>Fedex</i>		
RELINQUISHED BY: 3.	DATETIME:	RECEIVED BY: 3.	Page 1 of 1	☐ OVERNIGHT ☐ OVERNIGHT	Shipment Complete: ☐ YES ☐ NO



Summit Environmental Technologies, Inc.
3310 Win St.
Cuyahoga Falls, Ohio 44223
TEL: (330) 253-8211 FAX: (330) 253-4489
Website: <http://www.settek.com>

Sample Log-In Check List

Client Name: **CHE-NJ-07972**

Work Order Number: **23031824**

RcptNo: **1**

Logged by: **Christina N. Gemma** **3/23/2023 10:15:00 AM**

Completed By: **Tegan A. Richards** **3/24/2023 4:29:42 PM**

Reviewed By: **Jennifer Woolf** **3/27/2023 1:26:29 PM**

C. Gemma
Tegan Richards
Jennifer Woolf

Chain of Custody

1. Is Chain of Custody complete? Yes ☒ No ☐ Not Present ☐
2. How was the sample delivered? FedEx
Tracking No.: 771645865460

Log In

3. Coolers are present? Yes ☒ No ☐ NA ☐
4. Shipping container/cooler in good condition? Yes ☒ No ☐
Custody seals intact on shipping container/cooler? Yes ☐ No ☐ Not Present ☒
No. Seal Date: Signed By:
5. Was an attempt made to cool the samples? Yes ☒ No ☐ NA ☐
6. Were all samples received at a temperature of $>0^{\circ}\text{C}$ to 6.0°C ? Yes ☒ No ☐ NA ☐
7. Sample(s) in proper container(s)? Yes ☒ No ☐
8. Sufficient sample volume for indicated test(s)? Yes ☒ No ☐
9. Are samples (except VOA and ONG) properly preserved? Yes ☒ No ☐
10. Was preservative added to bottles? Yes ☐ No ☒ NA ☐
11. Is the headspace in the VOA vials less than 1/4 inch or 6 mm? Yes ☐ No ☐ No VOA Vials ☒
12. Were any sample containers received broken? Yes ☐ No ☒
13. Does paperwork match bottle labels?
(Note discrepancies on chain of custody) Yes ☒ No ☐
14. Are matrices correctly identified on Chain of Custody? Yes ☒ No ☐
15. Is it clear what analyses were requested? Yes ☒ No ☐
16. Were all holding times able to be met?
(If no, notify customer for authorization.) Yes ☒ No ☐

Special Handling (if applicable)

17. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☒

Person Notified: Date:
By Whom: Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person
Regarding:
Client Instructions:

18. Additional remarks:

Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	4.4	Good	Not Present			

DATA PACKAGE

VOLATILE ORGANICS
GENERAL CHEMISTRY
METALS
GC SEMI-VOLATILES
SEMI-VOLATILE ORGANICS

PROJECT NAME : SIPHON

H2M ARCHITECTS + ENGINEERS

290 Broad Hollow Road

Suite 400E

Melville, NY - 11747

Phone No: 631-756-8000

ORDER ID : 01975

ATTENTION : Stephen I. Kaplan



Laboratory Certification ID # 20012



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Cover Page

Order ID : O1975

Project ID : Siphon

Client : H2M Architects + Engineers

Lab Sample Number

O1975-01
O1975-02
O1975-03
O1975-04
O1975-05
O1975-06

Client Sample Number

CHAMBER-B-72-WEST
CHAMBER-B-72-WEST
CHAMBER-B-72-WEST
CHAMBER-C-72-WEST
CHAMBER-C-72-WEST
CHAMBER-C-72-WEST

I certify that the data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hard copy data package has been authorized by the laboratory manager or his designee, as verified by the following signature.

Signature :

S. M. Jodhani

APPROVED

By Sohil Jodhani, QA/QC Director at 2:30 pm, Apr 04, 2023

NYDOH CERTIFICATION NO - 11376

NJDEP CERTIFICATION NO - 20012

CASE NARRATIVE

H2M Architects + Engineers

Project Name: Siphon

Project # N/A

Chemtech Project # O1975

Test Name: TCLP VOA Group1

A. Number of Samples and Date of Receipt:

6 Solid samples were received on 03/17/2023.

B. Parameters

According to the Chain of Custody document, the following analyses were requested: ASTM Ammonia, ASTM COD, ASTM Leach Extraction, ASTM Oil and Grease, ASTM TPH, Corrosivity, Ignitability, Oil and Grease, Paint Filter, PCB, pH, RCRA CHARACTERISTICS, Reactive Cyanide, Reactive Sulfide, TCLP BNA, TCLP Extraction, TCLP Herbicide, TCLP Mercury, TCLP Pesticide, TCLP VOA Group1, TCLP ZHE Extraction, TCLP Metals Group1, TPH GC, TS and TVS. This data package contains results for TCLP VOA Group1.

C. Analytical Techniques:

The analysis performed on instrument MSVOA_N were done using GC column RXI-624SIL MS 30m 0.25mm 1.4 um. Cat#13868. The analysis of TCLP VOA Group1 was based on method 8260D and TCLP extraction method was 1311.

D. QA/ QC Samples:

The Holding Times were met for all analysis.

The Surrogate recoveries met the acceptable criteria.

The Internal Standards Areas met the acceptable requirements.

The Retention Times were acceptable for all samples.

The RPD for {VN0321WBSD01} with File ID: VN077086.D met criteria except for Vinyl chloride[23%] due to difference in results of BS and BSD.

The Blank Spike met requirements for all samples .

The Blank Spike Duplicate met requirements for all samples .

The Blank analysis did not indicate the presence of lab contamination.

The Initial Calibration met the requirements .

The Continuous Calibration met the requirements .

The Tuning criteria met requirements.

E. Additional Comments:

Samples for MS/MSD for VOC analysis were not provided with this set of samples. The Blank Spike Duplicate is reported with the data.

Trip Blank was not provided with this set of samples.

Please use %D calculated based on Avg RF and CCRF for all compounds using Average Response Factor when the %RSD value for a compound is <15% for the Initial Calibration curve and use %D calculated based on Amount added and Calculated amount for all compounds using Linear Regression when the %RSD value for a compound is > 15% for the Initial Calibration curve for SW-846 analysis.

F. Manual Integration Comments:

Please refer to the Manual integration Report included with the Run Logs for information on the manual integrations performed.

I certify that the data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. The laboratory manager or his designee, as verified by the following signature has authorized release of the data contained in this hard copy data package.

Signature S. M. Jodhani

APPROVED

By Sohil Jodhani, QA/QC Director at 2:30 pm, Apr 04, 2023

CASE NARRATIVE

H2M Architects + Engineers

Project Name: Siphon

Project # N/A

Chemtech Project # O1975

Test Name: TCLP BNA

A. Number of Samples and Date of Receipt:

6 Solid samples were received on 03/17/2023.

B. Parameters

According to the Chain of Custody document, the following analyses were requested: ASTM Ammonia, ASTM COD, ASTM Leach Extraction, ASTM Oil and Grease, ASTM TPH, Corrosivity, Ignitability, Oil and Grease, Paint Filter, PCB, pH, RCRA CHARACTERISTICS, Reactive Cyanide, Reactive Sulfide, TCLP BNA, TCLP Extraction, TCLP Herbicide, TCLP Mercury, TCLP Pesticide, TCLP VOA Group1, TCLP ZHE Extraction, TCLP Metals Group1, TPH GC, TS and TVS. This data package contains results for TCLP BNA.

C. Analytical Techniques:

The samples were analyzed on instrument BNA_M using GC Column ZB-SemiVolatiles Guardian which is 30 meters, 0.25 mm ID, 0.5 um df, Catalog # 7HG-G027-17-GGAThe samples were analyzed on instrument BNA_P using GC Column ZB-SemiVolatiles Guardian which is 30 meters, 0.25 mm ID, 0.5 um df, Catalog # 7HG-G027-17-GGAThe analysis of TCLP BNA was based on method 8270E and extraction was done based on method 3510 and TCLP extraction method was 1311.

D. QA/ QC Samples:

The Holding Times were met for all analysis.

The Surrogate recoveries met the acceptable criteria.

The Internal Standards Areas met the acceptable requirements.

The Retention Times were acceptable for all samples.

The MS recoveries met the requirements for all compounds .

The MSD recoveries met the acceptable requirements .

The RPD met criteria .

The Blank Spike met requirements for all samples .

The Blank analysis did not indicate the presence of lab contamination.

The % RSD is greater than 15% in the Initial Calibration method (Method 8270-BM030823.M) for 2,4-Dinitrotoluene, this compound is passing on Linear Regression

The Continuous Calibration met the requirements .

The Tuning criteria met requirements.

E. Additional Comments:

The Form 6 is not included in the data package because the Initial Calibration was performed using 8 points.

Please use %D calculated based on Avg RF and CCRF for all compounds using Average Response Factor when the %RSD value for a compound is <15% for the Initial Calibration curve and use %D calculated based on Amount added and Calculated amount for all compounds using Linear Regression when the %RSD value for a compound is > 15% for the Initial Calibration curve for SW-846 analysis.

F. Manual Integration Comments:

Please refer to the Manual integration Report included with the Run Logs for information on the manual integrations performed.

I certify that the data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. The laboratory manager or his designee, as verified by the following signature has authorized release of the data contained in this hard copy data package.

Signature S. M. Jodhani

APPROVED

By Sohil Jodhani, QA/QC Director at 2:30 pm, Apr 04, 2023

CASE NARRATIVE

H2M Architects + Engineers

Project Name: Siphon

Project # N/A

Chemtech Project # O1975

Test Name: PCB

A. Number of Samples and Date of Receipt:

6 Solid samples were received on 03/17/2023.

B. Parameters

According to the Chain of Custody document, the following analyses were requested: ASTM Ammonia, ASTM COD, ASTM Leach Extraction, ASTM Oil and Grease, ASTM TPH, Corrosivity, Ignitability, Oil and Grease, Paint Filter, PCB, pH, RCRA CHARACTERISTICS, Reactive Cyanide, Reactive Sulfide, TCLP BNA, TCLP Extraction, TCLP Herbicide, TCLP Mercury, TCLP Pesticide, TCLP VOA Group1, TCLP ZHE Extraction, TCLP Metals Group1, TPH GC, TS and TVS. This data package contains results for PCB.

C. Analytical Techniques:

The analyses were performed on instrument GCECD_O. The front column is ZB-MR1 which is 30 meters, 0.32 mm ID, 0.5 μ m df, Catalogue # 7HM-G016-17. The rear column is ZB-MR2 which is 30 meters, 0.32 mm ID, 0.25 μ m; Catalogue # 7HM-G017-11. The analysis of PCBs was based on method 8082A and extraction was done based on method 3541.

D. QA/ QC Samples:

The Holding Times were met for all analysis.

The Surrogate recoveries met the acceptable criteria except for CHAMBER-C-72-WEST [Tetrachloro-m-xylene(2) - 27%], CHAMBER-C-72-WESTDL [Decachlorobiphenyl(1) - 31%] as per method one surrogate is allowed to fail therefore no corrective action taken.

The Retention Times were acceptable for all samples.

The MS recoveries met the requirements for all compounds .

The MSD recoveries met the acceptable requirements .

The RPD met criteria .

The Blank Spike met requirements for all samples .

The Blank analysis did not indicate the presence of lab contamination.

The Initial Calibration met the requirements .

The Continuous Calibration met the requirements .

Samples CHAMBER-B-72-WEST, CHAMBER-C-72-WEST were diluted due to high concentrations.

E. Additional Comments:

The soil samples results are based on a dry weight basis.

F. Manual Integration Comments:

Please refer to the Manual integration Report included with the Run Logs for information on the manual integrations performed.

I certify that the data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. The laboratory manager or his designee, as verified by the following signature has authorized release of the data contained in this hard copy data package.

Signature S. M. Jodhani

APPROVED

By Sohil Jodhani, QA/QC Director at 2:31 pm, Apr 04, 2023

CASE NARRATIVE

H2M Architects + Engineers

Project Name: Siphon

Project # N/A

Chemtech Project # O1975

Test Name: TCLP Pesticide

A. Number of Samples and Date of Receipt:

6 Solid samples were received on 03/17/2023.

B. Parameters

According to the Chain of Custody document, the following analyses were requested: ASTM Ammonia, ASTM COD, ASTM Leach Extraction, ASTM Oil and Grease, ASTM TPH, Corrosivity, Ignitability, Oil and Grease, Paint Filter, PCB, pH, RCRA CHARACTERISTICS, Reactive Cyanide, Reactive Sulfide, TCLP BNA, TCLP Extraction, TCLP Herbicide, TCLP Mercury, TCLP Pesticide, TCLP VOA Group1, TCLP ZHE Extraction, TCLP Metals Group1, TPH GC, TS and TVS. This data package contains results for TCLP Pesticide.

C. Analytical Techniques:

The analysis was performed on instrument ECD_L. The front column is ZB-MR2 which is 30 meters, 0.32 mm ID, 0.25 um df, Catalog #: 7HMG017- 11 The rear column is ZB-MR1 which is 30 meters, 0.32 mm ID, 0.5 um df, Catalog # 7HM-G016-17. The analysis of TCLP Pesticides was based on method 8081B and extraction was done based on method 3510 and TCLP extraction method was 1311.

D. QA/ QC Samples:

The Holding Times were met for all analysis.

The Surrogate recoveries met the acceptable criteria.

The Retention Times were acceptable for all samples.

The MS recoveries met the requirements for all compounds.

The MSD recoveries met the acceptable requirements.

The RPD met criteria .

The Blank Spike met requirements for all samples .

The Blank analysis did not indicate the presence of lab contamination.

The Initial Calibration met the requirements .

The Continuous Calibration met the requirements .

E. Additional Comments:

F. Manual Integration Comments:

Please refer to the Manual integration Report included with the Run Logs for information on the manual integrations performed.

I certify that the data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. The laboratory manager or his designee, as verified by the following signature has authorized release of the data contained in this hard copy data package.

Signature S. M. Jodhani

APPROVED

By Sohil Jodhani, QA/QC Director at 2:31 pm, Apr 04, 2023

CASE NARRATIVE

H2M Architects + Engineers

Project Name: Siphon

Project # N/A

Chemtech Project # O1975

Test Name: TCLP Herbicide

A. Number of Samples and Date of Receipt:

6 Solid samples were received on 03/17/2023.

B. Parameters

According to the Chain of Custody document, the following analyses were requested: ASTM Ammonia, ASTM COD, ASTM Leach Extraction, ASTM Oil and Grease, ASTM TPH, Corrosivity, Ignitability, Oil and Grease, Paint Filter, PCB, pH, RCRA CHARACTERISTICS, Reactive Cyanide, Reactive Sulfide, TCLP BNA, TCLP Extraction, TCLP Herbicide, TCLP Mercury, TCLP Pesticide, TCLP VOA Group1, TCLP ZHE Extraction, TCLP Metals Group1, TPH GC, TS and TVS. This data package contains results for TCLP Herbicide.

C. Analytical Techniques:

The analysis was performed on instrument ECD_S. The front column is RTX-CLPesticides which is 30 meters, 0.32 mm ID, 0.5 µm df, Catalog # 11139. The rear column is RTX-CLPesticides2 which is 30 meters, 0.32 mm ID, 0.25 µm df, Catalog #: 11324. The analysis of TCLP Herbicides was based on method 8151A and extraction was done based on method 3510 and TCLP extraction method was 1311.

D. QA/ QC Samples:

The Holding Times were met for all analysis.

The Surrogate recoveries met the acceptable criteria.

The Retention Times were acceptable for all samples.

The MS recoveries met the requirements for all compounds .

The MSD recoveries met the acceptable requirements .

The RPD met criteria .

The Blank Spike met requirements for all samples .

The Blank analysis did not indicate the presence of lab contamination.

The Initial Calibration met the requirements .

The Continuous Calibration met the requirements .

E. Additional Comments:

F. Manual Integration Comments:

Please refer to the Manual integration Report included with the Run Logs for information on the manual integrations performed.

I certify that the data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. The laboratory manager or his designee, as verified by the following signature has authorized release of the data contained in this hard copy data package.

Signature S. M. Jodhani

APPROVED

By Sohil Jodhani, QA/QC Director at 2:31 pm, Apr 04, 2023

CASE NARRATIVE

H2M Architects + Engineers

Project Name: Siphon

Project # N/A

Chemtech Project # O1975

Test Name: TPH GC

A. Number of Samples and Date of Receipt:

6 Solid samples were received on 03/17/2023.

B. Parameters

According to the Chain of Custody document, the following analyses were requested: ASTM Ammonia, ASTM COD, ASTM Leach Extraction, ASTM Oil and Grease, ASTM TPH, Corrosivity, Ignitability, Oil and Grease, Paint Filter, PCB, pH, RCRA CHARACTERISTICS, Reactive Cyanide, Reactive Sulfide, TCLP BNA, TCLP Extraction, TCLP Herbicide, TCLP Mercury, TCLP Pesticide, TCLP VOA Group1, TCLP ZHE Extraction, TCLP Metals Group1, TPH GC, TS and TVS. This data package contains results for TPH GC.

C. Analytical Techniques:

The analysis were performed on instrument FID_F and FID_G. The column is RXI-1MS which is 20 meters, 0.18mm ID, 0.18 um df, catalog 13302. The analysis of TPH GC was based on method 8015D and extraction was done based on method 3541.

D. QA/ QC Samples:

The Holding Times were met for all analysis.

The Surrogate recoveries met the acceptable criteria except for 10TH-ST-SUBSTATION-TP2MS [TETRACOSANE-d50 - 165%], 10TH-ST-SUBSTATION-TP2MSD [TETRACOSANE-d50 - 165%] due to matrix interference.

The Retention Times were acceptable for all samples.

The MS {O1998-07MS} with File ID: FG011625.D recoveries met the requirements for all compounds except for Petroleum Hydrocarbons[-102%] due to matrix interference.

The MSD {O1998-07MSD} with File ID: FG011626.D recoveries met the acceptable requirements except for Petroleum Hydrocarbons[-153%] due to matrix interference.

The RPD for {O1998-07MSD} with File ID: FG011626.D met criteria except for Petroleum Hydrocarbons[40%] due to difference in results of MS and MSD.

The Blank Spike met requirements for all samples .

The Blank analysis did not indicate the presence of lab contamination.

The Initial Calibration met the requirements .

The Continuous Calibration met the requirements .

Sample CHAMBER-C-72-WEST was diluted due to bad matrix.

E. Additional Comments:

The soil samples results are based on a dry weight basis.

F. Manual Integration Comments:

Please refer to the Manual integration Report included with the Run Logs for information on the manual integrations performed.

I certify that the data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. The laboratory manager or his designee, as verified by the following signature has authorized release of the data contained in this hard copy data package.

Signature S. M. Jodhani

APPROVED

By Sohil Jodhani, QA/QC Director at 2:31 pm, Apr 04, 2023

CASE NARRATIVE**H2M Architects + Engineers****Project Name: Siphon****Project # N/A****Chemtech Project # O1975****Test Name: TCLP Mercury, TCLP Metals Group1****A. Number of Samples and Date of Receipt:**

6 Solid samples were received on 03/17/2023.

B. Parameters:

According to the Chain of Custody document, the following analyses were requested: ASTM Ammonia, ASTM COD, ASTM Leach Extraction, ASTM Oil and Grease, ASTM TPH, Corrosivity, Ignitability, Oil and Grease, Paint Filter, PCB, pH, RCRA CHARACTERISTICS, Reactive Cyanide, Reactive Sulfide, TCLP BNA, TCLP Extraction, TCLP Herbicide, TCLP Mercury, TCLP Pesticide, TCLP VOA Group1, TCLP ZHE Extraction, TCLP Metals Group1, TPH GC, TS and TVS. This data package contains results for TCLP Mercury, TCLP Metals Group1.

C. Analytical Techniques:

The analysis of TCLP Metals Group1 was based on method 6010D, digestion based on method 3010 (waters). The analysis and digestion of TCLP Mercury was based on method 7470A and TCLP extraction method was 1311.

D. QA/ QC Samples:

The Holding Times were met for all analysis.

The Blank Spike met requirements for all samples.

The Duplicate analysis met criteria for all samples.

The Matrix Spike analysis met criteria for all samples.

The Matrix Spike Duplicate analysis met criteria for all samples.

The Blank analysis did not indicate the presence of lab contamination.

The Calibration met the requirements.

The Serial Dilution met the acceptable requirements.

E. Additional Comments:

I certify that the data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. The laboratory manager or his designee, as verified by the following signature has authorized release of the data contained in this hard copy data package.

Signature S. M. Jodhani**APPROVED**

By Sohil Jodhani, QA/QC Director at 2:31 pm, Apr 04, 2023

CASE NARRATIVE**H2M Architects + Engineers****Project Name: Siphon****Project # N/A****Chemtech Project # O1975****Test Name: ASTM Ammonia,TS,Oil and Grease,Corrosivity,pH,Paint Filter,TVS,ASTM COD,Ignitability,ASTM Oil and Grease,Reactive Cyanide,ASTM TPH,Reactive Sulfide****A. Number of Samples and Date of Receipt:**

6 Solid samples were received on 03/17/2023.

B. Parameters:

According to the Chain of Custody document, the following analyses were requested: ASTM Ammonia, ASTM COD, ASTM Leach Extraction, ASTM Oil and Grease, ASTM TPH, Corrosivity, Ignitability, Oil and Grease, Paint Filter, PCB, pH, RCRA CHARACTERISTICS, Reactive Cyanide, Reactive Sulfide, TCLP BNA, TCLP Extraction, TCLP Herbicide, TCLP Mercury, TCLP Pesticide, TCLP VOA Group1, TCLP ZHE Extraction, TCLP Metals Group1, TPH GC, TS and TVS. This data package contains results for ASTM Ammonia,TS,Oil and Grease,Corrosivity,pH,Paint Filter,TVS,ASTM COD,Ignitability,ASTM Oil and Grease,Reactive Cyanide,ASTM TPH,Reactive Sulfide.

C. Analytical Techniques:

The analysis of Ignitability was based on method 1030, The analysis of TVS was based on method 160.4, The analysis of ASTM TPH was based on method 1664, The analysis of ASTM Oil and Grease,Oil and Grease was based on method 1664A, The analysis of Reactive Cyanide was based on method 9012B, The analysis of Reactive Sulfide was based on method 9034, The analysis of Corrosivity,pH was based on method 9045D, The analysis of Paint Filter was based on method 9095B, The analysis of TS was based on method SM2540 B, The analysis of ASTM Ammonia was based on method SM4500-NH3 and The analysis of ASTM COD was based on method SM5220 D.

D. QA/ QC Samples:

The Holding Times were met for all samples except for CHAMBER-B-72-WEST of pH, for CHAMBER-B-72-WEST of Corrosivity.for CHAMBER-C-72-WEST of pH.for CHAMBER-C-72-WEST of Corrosivity.

Sample CHAMBER-C-72-WEST was diluted due to high concentrations for ASTM Ammonia.

The Blank Spike met requirements for all samples.

The Duplicate (CHAMBER-B-72-WESTDUP) analysis met criteria for all samples except for ASTM Ammonia.

The Matrix Spike (CHAMBER-B-72-WESTMS) analysis met criteria for all samples except for ASTM COD. The Matrix Spike (CHAMBER-C-72-WESTMS) analysis met criteria for all samples except for Oil and Grease.

The Matrix Spike Duplicate (CHAMBER-B-72-WESTMSD) analysis met criteria for all samples except for ASTM COD. The Matrix Spike Duplicate (CHAMBER-C-72-WESTMSD) analysis met criteria for all samples except for Oil and Grease. The Blank analysis did not indicate the presence of lab contamination. The Calibration met the requirements.

E. Additional Comments:

I certify that the data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. The laboratory manager or his designee, as verified by the following signature has authorized release of the data contained in this hard copy data package.

Signature S. M. Jodhani

APPROVED

By Sohil Jodhani, QA/QC Director at 2:31 pm, Apr 04, 2023

DATA REPORTING QUALIFIERS- INORGANIC

For reporting results, the following “ Results Qualifiers” are used:

J	Indicates the reported value was obtained from a reading that was less than the Contract Required Detection Limit (CRDL), but greater than or equal to the Instrument Detection Limit (IDL).
U	Indicates the analyte was analyzed for, but not detected.
ND	Indicates the analyte was analyzed for, but not detected
E	Indicates the reported value is estimated because of the presence of interference
M	Indicates Duplicate injection precision not met.
N	Indicates the spiked sample recovery is not within control limits.
S	Indicates the reported value was determined by the Method of Standard Addition (MSA).
*	Indicates that the duplicate analysis is not within control limits.
+	Indicates the correlation coefficient for the MSA is less than 0.995.
D	Indicates the reported value is from a secondary analysis with a dilution factor. The original analysis exceeded the calibration range.
M	Method qualifiers “P” for ICP instrument “PM” for ICP when Microwave Digestion is used “CV” for Manual Cold Vapor AA “AV” for automated Cold Vapor AA “CA” for MIDI-Distillation Spectrophotometric “AS” for Semi -Automated Spectrophotometric “C” for Manual Spectrophotometric “T” for Titrimetric “NR” for analyte not required to be analyzed
OR	Indicates the analyte’s concentration exceeds the calibrated range of the instrument for that specific analysis.
Q	Indicates the LCS did not meet the control limits requirements
H	Sample Analysis Out Of Hold Time

DATA REPORTING QUALIFIERS- ORGANIC

For reporting results, the following “Results Qualifiers” are used:

Value	If the result is a value greater than or equal to the detection limit, report the value
U	Indicates the compound was analyzed for but was not detected. Report the minimum detection limit for the sample with the U, i.e. “10 U”. This is not necessarily the instrument detection limit attainable for this particular sample based on any concentration or dilution that may have been required.
ND	Indicates the analyte was analyzed for, but not detected
J	Indicates an estimated value. This flag is used: (1) When estimating a concentration for a tentatively identified compound (library search hits, where a 1:1 response is assumed.) (2) When the mass spectral data indicated the identification, however the result was less than the specified detection limit greater than zero. If the detection limit was 10ug/L and a concentration of 3 ug/L was calculated report as 3 J. This flag is used when similar situation arise on any organic parameter i.e. Pest, PCB and others.
B	Indicates the analyte was found in the blank as well as the sample report as “12 B”.
E	Indicates the analyte ‘s concentration exceeds the calibrated range of the instrument for that specific analysis.
D	This flag identifies all compounds identified in an analysis at a secondary dilution factor.
P	This flag is used for Pesticide/PCB target analyte when there is >25% difference for detected concentrations between the two GC columns. The lower of the two values is reported on Form 1 and flagged with a “P”.
N	This flag indicates presumptive evidence of a compound. This is only used for tentatively identified compounds (TICs), where the identification is based on a mass spectral library search. It applies to all TIC results. For generic characterization of a TIC, such as chlorinated hydrocarbon, the flag is not used.
A	This flag indicates that a Tentatively Identified Compound is a suspected aldol-condensation product.
Q	Indicates the LCS did not meet the control limits requirements

APPENDIX A

QA REVIEW GENERAL DOCUMENTATION

Project #: O1975

Completed

For thorough review, the report must have the following:

GENERAL:

Are all original paperwork present (chain of custody, record of communication,airbill, sample management lab chronicle, login page)

✓

Check chain-of-custody for proper relinquish/return of samples

✓

Is the chain of custody signed and complete

✓

Check internal chain-of-custody for proper relinquish/return of samples /sample extracts

✓

Collect information for each project id from server. Were all requirements followed

✓

COVER PAGE:

Do numbers of samples correspond to the number of samples in the Chain of Custody on login page

✓

Do lab numbers and client Ids on cover page agree with the Chain of Custody

✓

CHAIN OF CUSTODY:

Do requested analyses on Chain of Custody agree with form I results

✓

Do requested analyses on Chain of Custody agree with the log-in page

✓

Were the correct method log-in for analysis according to the Analytical Request and Chain of Castody

✓

Were the samples received within hold time

✓

Were any problems found with the samples at arrival recorded in the Sample Management Laboratory Chronicle

✓

ANALYTICAL:

Was method requirement followed?

✓

Was client requirement followed?

✓

Does the case narrative summarize all QC failure?

✓

All runlogs and manual integration are reviewed for requirements

✓

All manual calculations and /or hand notations verified

✓

1st Level QA Review Signature: MOHAMMAD AHMED

Date: 04/04/2023

2nd Level QA Review Signature:

S. M. Jodhani

APPROVED

By Sohil Jodhani, QA/QC Director at 2:32 pm, Apr 04, 2023

Hit Summary Sheet SW-846

SDG No.: O1975

Client: H2M Architects + Engineers

Sample ID	Client ID	Matrix	Parameter	Concentration	C	MDL	RDL	Units
Client ID:	CHAMBER-B-72-WEST							
O1975-02	CHAMBER-B-72-V TCLP		2-Butanone	11.3	J	1.20	25.0	ug/L
O1975-02	CHAMBER-B-72-V TCLP		Toluene	170	E	0.14	5.00	ug/L
O1975-02	CHAMBER-B-72-V TCLP		Chlorobenzene	1.60	J	0.12	5.00	ug/L
			Total Voc :	183				
			Total Concentration:	183				
Client ID:	CHAMBER-B-72-WESTDL							
O1975-02DL	CHAMBER-B-72-V TCLP		Toluene	160	D	0.56	20.0	ug/L
			Total Voc :	160				
			Total Concentration:	160				
Client ID:	CHAMBER-C-72-WEST							
O1975-05	CHAMBER-C-72-V TCLP		Toluene	1.20	J	0.14	5.00	ug/L
O1975-05	CHAMBER-C-72-V TCLP		Chlorobenzene	1.10	J	0.12	5.00	ug/L
O1975-05	CHAMBER-C-72-V TCLP		Ethyl Benzene	4.50	J	0.13	5.00	ug/L
O1975-05	CHAMBER-C-72-V TCLP		Total Xylenes	21.7		0.46	15.0	ug/L
			Total Voc :	28.5				
			Total Concentration:	28.5				

SAMPLE DATA

Report of Analysis

Client:	H2M Architects + Engineers	Date Collected:	03/16/23
Project:	Siphon	Date Received:	03/17/23
Client Sample ID:	CHAMBER-B-72-WEST	SDG No.:	O1975
Lab Sample ID:	O1975-02	Matrix:	TCLP
Analytical Method:	SW8260	% Solid:	0
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	TCLP VOA Group1
GC Column:	RXI-624 ID : 0.25	Level :	LOW
Prep Method :	SW5035		

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VN077091.D	1		03/21/23 15:29	VN032123

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
TARGETS						
75-01-4	Vinyl Chloride	0.25	U	0.25	5.00	ug/L
75-35-4	1,1-Dichloroethene	0.21	U	0.21	5.00	ug/L
78-93-3	2-Butanone	11.3	J	1.20	25.0	ug/L
56-23-5	Carbon Tetrachloride	0.13	U	0.13	5.00	ug/L
67-66-3	Chloroform	0.14	U	0.14	5.00	ug/L
71-43-2	Benzene	0.12	U	0.12	5.00	ug/L
107-06-2	1,2-Dichloroethane	0.16	U	0.16	5.00	ug/L
79-01-6	Trichloroethene	0.26	U	0.26	5.00	ug/L
108-88-3	Toluene	170	E	0.14	5.00	ug/L
127-18-4	Tetrachloroethene	0.17	U	0.17	5.00	ug/L
108-90-7	Chlorobenzene	1.60	J	0.12	5.00	ug/L
100-41-4	Ethyl Benzene	0.13	U	0.13	5.00	ug/L
1330-20-7	Total Xylenes	0.46	U	0.46	15.0	ug/L
SURROGATES						
17060-07-0	1,2-Dichloroethane-d4	49.1		74 - 125	98%	SPK: 50
1868-53-7	Dibromofluoromethane	44.7		75 - 124	89%	SPK: 50
2037-26-5	Toluene-d8	50.3		86 - 113	101%	SPK: 50
460-00-4	4-Bromofluorobenzene	46.4		64 - 133	93%	SPK: 50
INTERNAL STANDARDS						
363-72-4	Pentafluorobenzene	386000	8.231			
540-36-3	1,4-Difluorobenzene	718000	9.107			
3114-55-4	Chlorobenzene-d5	660000	11.872			
3855-82-1	1,4-Dichlorobenzene-d4	252000	13.795			

U = Not Detected

LOQ = Limit of Quantitation

MDL = Method Detection Limit

LOD = Limit of Detection

E = Value Exceeds Calibration Range

Q = indicates LCS control criteria did not meet requirements

M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value

B = Analyte Found in Associated Method Blank

N = Presumptive Evidence of a Compound

* = Values outside of QC limits

D = Dilution

() = Laboratory InHouse Limit

A = Aldol-Condensation Reaction Products

Report of Analysis

Client:	H2M Architects + Engineers	Date Collected:	03/16/23
Project:	Siphon	Date Received:	03/17/23
Client Sample ID:	CHAMBER-B-72-WESTDL	SDG No.:	O1975
Lab Sample ID:	O1975-02DL	Matrix:	TCLP
Analytical Method:	SW8260	% Solid:	0
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	TCLP VOA Group1
GC Column:	RXI-624 ID : 0.25	Level :	LOW
Prep Method :	SW5035		

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VN077103.D	4		03/22/23 13:17	VN032223

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
TARGETS						
75-01-4	Vinyl Chloride	1.00	UD	1.00	20.0	ug/L
75-35-4	1,1-Dichloroethene	0.84	UD	0.84	20.0	ug/L
78-93-3	2-Butanone	4.80	UD	4.80	100	ug/L
56-23-5	Carbon Tetrachloride	0.52	UD	0.52	20.0	ug/L
67-66-3	Chloroform	0.56	UD	0.56	20.0	ug/L
71-43-2	Benzene	0.48	UD	0.48	20.0	ug/L
107-06-2	1,2-Dichloroethane	0.64	UD	0.64	20.0	ug/L
79-01-6	Trichloroethene	1.00	UD	1.00	20.0	ug/L
108-88-3	Toluene	160	D	0.56	20.0	ug/L
127-18-4	Tetrachloroethene	0.68	UD	0.68	20.0	ug/L
108-90-7	Chlorobenzene	0.48	UD	0.48	20.0	ug/L
100-41-4	Ethyl Benzene	0.52	UD	0.52	20.0	ug/L
1330-20-7	Total Xylenes	1.80	UD	1.80	60.0	ug/L
SURROGATES						
17060-07-0	1,2-Dichloroethane-d4	49.0		74 - 125	98%	SPK: 50
1868-53-7	Dibromofluoromethane	46.3		75 - 124	93%	SPK: 50
2037-26-5	Toluene-d8	48.8		86 - 113	98%	SPK: 50
460-00-4	4-Bromofluorobenzene	44.0		64 - 133	88%	SPK: 50
INTERNAL STANDARDS						
363-72-4	Pentafluorobenzene	366000	8.231			
540-36-3	1,4-Difluorobenzene	657000	9.107			
3114-55-4	Chlorobenzene-d5	573000	11.872			
3855-82-1	1,4-Dichlorobenzene-d4	214000	13.795			

U = Not Detected

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LOD = Limit of Detection

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Q = indicates LCS control criteria did not meet requirements

M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value

B = Analyte Found in Associated Method Blank

N = Presumptive Evidence of a Compound

* = Values outside of QC limits

D = Dilution

() = Laboratory InHouse Limit

A = Aldol-Condensation Reaction Products

Report of Analysis

Client:	H2M Architects + Engineers	Date Collected:	03/16/23
Project:	Siphon	Date Received:	03/17/23
Client Sample ID:	CHAMBER-C-72-WEST	SDG No.:	O1975
Lab Sample ID:	O1975-05	Matrix:	TCLP
Analytical Method:	SW8260	% Solid:	0
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	TCLP VOA Group1
GC Column:	RXI-624 ID : 0.25	Level :	LOW
Prep Method :	SW5035		

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VN077092.D	1		03/21/23 15:53	VN032123

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
TARGETS						
75-01-4	Vinyl Chloride	0.25	U	0.25	5.00	ug/L
75-35-4	1,1-Dichloroethene	0.21	U	0.21	5.00	ug/L
78-93-3	2-Butanone	1.20	U	1.20	25.0	ug/L
56-23-5	Carbon Tetrachloride	0.13	U	0.13	5.00	ug/L
67-66-3	Chloroform	0.14	U	0.14	5.00	ug/L
71-43-2	Benzene	0.12	U	0.12	5.00	ug/L
107-06-2	1,2-Dichloroethane	0.16	U	0.16	5.00	ug/L
79-01-6	Trichloroethene	0.26	U	0.26	5.00	ug/L
108-88-3	Toluene	1.20	J	0.14	5.00	ug/L
127-18-4	Tetrachloroethene	0.17	U	0.17	5.00	ug/L
108-90-7	Chlorobenzene	1.10	J	0.12	5.00	ug/L
100-41-4	Ethyl Benzene	4.50	J	0.13	5.00	ug/L
1330-20-7	Total Xylenes	21.7		0.46	15.0	ug/L
SURROGATES						
17060-07-0	1,2-Dichloroethane-d4	50.5		74 - 125	101%	SPK: 50
1868-53-7	Dibromofluoromethane	45.7		75 - 124	91%	SPK: 50
2037-26-5	Toluene-d8	49.9		86 - 113	100%	SPK: 50
460-00-4	4-Bromofluorobenzene	47.2		64 - 133	94%	SPK: 50
INTERNAL STANDARDS						
363-72-4	Pentafluorobenzene	412000	8.231			
540-36-3	1,4-Difluorobenzene	781000	9.107			
3114-55-4	Chlorobenzene-d5	704000	11.872			
3855-82-1	1,4-Dichlorobenzene-d4	274000	13.795			

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B = Analyte Found in Associated Method Blank

N = Presumptive Evidence of a Compound

* = Values outside of QC limits

D = Dilution

() = Laboratory InHouse Limit

A = Aldol-Condensation Reaction Products



284 Sheffield Street, Mountainside, New Jersey - 07092

Phone: (908) 789 8900 Fax: (908) 789 8922

LAB CHRONICLE

OrderID:	O1975	OrderDate:	3/17/2023 10:20:41 AM
Client:	H2M Architects + Engineers	Project:	Siphon
Contact:	Stephen I. Kaplan	Location:	J11

LabID	ClientID	Matrix	Test	Method	Sample Date	Prep Date	Anal Date	Received
O1975-02	CHAMBER-B-72-WEST	TCLP	TCLP VOA Group1	8260D	03/16/23		03/21/23	03/17/23
O1975-02DL	CHAMBER-B-72-WEST DL	TCLP	TCLP VOA Group1	8260D	03/16/23		03/22/23	03/17/23
O1975-05	CHAMBER-C-72-WEST	TCLP	TCLP VOA Group1	8260D	03/16/23		03/21/23	03/17/23



Hit Summary Sheet
SW-846

SDG No.: O1975
Client: H2M Architects + Engineers

Sample ID	Client ID	Matrix	Parameter	Concentration	C	MDL	RDL	Units
Client ID :	CHAMBER-B-72-WEST							
O1975-02	CHAMBER-B-72-WEST	TCLP	3+4-Methylphenols	130.000		21.6	100	ug/L
			Total Svoc :		130.00			
			Total Concentration:		130.00			

SAMPLE DATA

Report of Analysis

Client:	H2M Architects + Engineers	Date Collected:	03/16/23
Project:	Siphon	Date Received:	03/17/23
Client Sample ID:	CHAMBER-B-72-WEST	SDG No.:	O1975
Lab Sample ID:	O1975-02	Matrix:	TCLP
Analytical Method:	SW8270	% Solid:	0
Sample Wt/Vol:	100 Units: mL	Final Vol:	1000 uL
Soil Aliquot Vol:	uL	Test:	TCLP BNA
Extraction Type :	Decanted : N	Level :	LOW
Injection Volume :	GPC Factor : 1.0	GPC Cleanup :	N PH :
Prep Method :	SW3541		

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
BM039117.D	1	03/18/23 10:44	03/23/23 14:52	PB151516

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
TARGETS						
110-86-1	Pyridine	17.8	U	17.8	50.0	ug/L
106-46-7	1,4-Dichlorobenzene	14.3	U	14.3	50.0	ug/L
95-48-7	2-Methylphenol	20.6	U	20.6	50.0	ug/L
65794-96-9	3+4-Methylphenols	130		21.6	100	ug/L
67-72-1	Hexachloroethane	16.4	U	16.4	50.0	ug/L
98-95-3	Nitrobenzene	17.2	U	17.2	50.0	ug/L
87-68-3	Hexachlorobutadiene	19.3	U	19.3	50.0	ug/L
88-06-2	2,4,6-Trichlorophenol	15.2	U	15.2	50.0	ug/L
95-95-4	2,4,5-Trichlorophenol	15.7	U	15.7	50.0	ug/L
121-14-2	2,4-Dinitrotoluene	25.4	U	25.4	50.0	ug/L
118-74-1	Hexachlorobenzene	19.1	U	19.1	50.0	ug/L
87-86-5	Pentachlorophenol	25.5	U	25.5	100	ug/L
SURROGATES						
367-12-4	2-Fluorophenol	134		10 - 139	89%	SPK: 150
13127-88-3	Phenol-d6	121		10 - 134	81%	SPK: 150
4165-60-0	Nitrobenzene-d5	91.3		49 - 133	91%	SPK: 100
321-60-8	2-Fluorobiphenyl	89.4		52 - 132	89%	SPK: 100
118-79-6	2,4,6-Tribromophenol	164		45 - 141	109%	SPK: 150
1718-51-0	Terphenyl-d14	93.0		45 - 142	93%	SPK: 100
INTERNAL STANDARDS						
3855-82-1	1,4-Dichlorobenzene-d4	252000	7.963			
1146-65-2	Naphthalene-d8	978000	10.775			
15067-26-2	Acenaphthene-d10	558000	14.604			
1517-22-2	Phenanthrene-d10	1180000	17.345			
1719-03-5	Chrysene-d12	1100000	21.527			
1520-96-3	Perylene-d12	1240000	23.962			

Report of Analysis

Client:	H2M Architects + Engineers	Date Collected:	03/16/23
Project:	Siphon	Date Received:	03/17/23
Client Sample ID:	CHAMBER-B-72-WEST	SDG No.:	O1975
Lab Sample ID:	O1975-02	Matrix:	TCLP
Analytical Method:	SW8270	% Solid:	0
Sample Wt/Vol:	100 Units: mL	Final Vol:	1000 uL
Soil Aliquot Vol:	uL	Test:	TCLP BNA
Extraction Type :	Decanted : N	Level :	LOW
Injection Volume :	GPC Factor : 1.0	GPC Cleanup :	N PH :
Prep Method :	SW3541		

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
BM039117.D	1	03/18/23 10:44	03/23/23 14:52	PB151516

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
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U = Not Detected

LOQ = Limit of Quantitation

MDL = Method Detection Limit

LOD = Limit of Detection

E = Value Exceeds Calibration Range

Q = indicates LCS control criteria did not meet requirements

M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value

B = Analyte Found in Associated Method Blank

N = Presumptive Evidence of a Compound

* = Values outside of QC limits

D = Dilution

() = Laboratory InHouse Limit

A = Aldol-Condensation Reaction Products

Report of Analysis

Client:	H2M Architects + Engineers	Date Collected:	03/16/23
Project:	Siphon	Date Received:	03/17/23
Client Sample ID:	CHAMBER-C-72-WEST	SDG No.:	O1975
Lab Sample ID:	O1975-05	Matrix:	TCLP
Analytical Method:	SW8270	% Solid:	0
Sample Wt/Vol:	100 Units: mL	Final Vol:	1000 uL
Soil Aliquot Vol:	uL	Test:	TCLP BNA
Extraction Type :	Decanted : N	Level :	LOW
Injection Volume :	GPC Factor : 1.0	GPC Cleanup :	N PH :
Prep Method :	SW3541		

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
BP014309.D	1	03/18/23 10:44	03/25/23 02:57	PB151516

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
TARGETS						
110-86-1	Pyridine	17.8	U	17.8	50.0	ug/L
106-46-7	1,4-Dichlorobenzene	14.3	U	14.3	50.0	ug/L
95-48-7	2-Methylphenol	20.6	U	20.6	50.0	ug/L
65794-96-9	3+4-Methylphenols	21.6	U	21.6	100	ug/L
67-72-1	Hexachloroethane	16.4	U	16.4	50.0	ug/L
98-95-3	Nitrobenzene	17.2	U	17.2	50.0	ug/L
87-68-3	Hexachlorobutadiene	19.3	U	19.3	50.0	ug/L
88-06-2	2,4,6-Trichlorophenol	15.2	U	15.2	50.0	ug/L
95-95-4	2,4,5-Trichlorophenol	15.7	U	15.7	50.0	ug/L
121-14-2	2,4-Dinitrotoluene	25.4	U	25.4	50.0	ug/L
118-74-1	Hexachlorobenzene	19.1	U	19.1	50.0	ug/L
87-86-5	Pentachlorophenol	25.5	U	25.5	100	ug/L
SURROGATES						
367-12-4	2-Fluorophenol	140		10 - 139	93%	SPK: 150
13127-88-3	Phenol-d6	131		10 - 134	88%	SPK: 150
4165-60-0	Nitrobenzene-d5	102		49 - 133	102%	SPK: 100
321-60-8	2-Fluorobiphenyl	90.5		52 - 132	91%	SPK: 100
118-79-6	2,4,6-Tribromophenol	142		45 - 141	94%	SPK: 150
1718-51-0	Terphenyl-d14	101		45 - 142	101%	SPK: 100
INTERNAL STANDARDS						
3855-82-1	1,4-Dichlorobenzene-d4	178000	8.028			
1146-65-2	Naphthalene-d8	680000	10.852			
15067-26-2	Acenaphthene-d10	447000	14.675			
1517-22-2	Phenanthrene-d10	990000	17.434			
1719-03-5	Chrysene-d12	821000	21.51			
1520-96-3	Perylene-d12	754000	24.033			

Report of Analysis

Client:	H2M Architects + Engineers	Date Collected:	03/16/23
Project:	Siphon	Date Received:	03/17/23
Client Sample ID:	CHAMBER-C-72-WEST	SDG No.:	O1975
Lab Sample ID:	O1975-05	Matrix:	TCLP
Analytical Method:	SW8270	% Solid:	0
Sample Wt/Vol:	100 Units: mL	Final Vol:	1000 uL
Soil Aliquot Vol:	uL	Test:	TCLP BNA
Extraction Type :	Decanted : N	Level :	LOW
Injection Volume :	GPC Factor : 1.0	GPC Cleanup :	N PH :
Prep Method :	SW3541		

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
BP014309.D	1	03/18/23 10:44	03/25/23 02:57	PB151516

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
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U = Not Detected

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() = Laboratory InHouse Limit

A = Aldol-Condensation Reaction Products

Report of Analysis

Client:	H2M Architects + Engineers	Date Collected:	03/18/23
Project:	Siphon	Date Received:	03/18/23
Client Sample ID:	PB151496TB	SDG No.:	O1975
Lab Sample ID:	PB151496TB	Matrix:	TCLP
Analytical Method:	SW8270	% Solid:	0
Sample Wt/Vol:	100 Units: mL	Final Vol:	1000 uL
Soil Aliquot Vol:	uL	Test:	TCLP BNA
Extraction Type :	Decanted : N	Level :	LOW
Injection Volume :	GPC Factor : 1.0	GPC Cleanup :	N PH :
Prep Method :	SW3541		

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
BM039066.D	1	03/18/23 10:44	03/21/23 13:10	PB151516

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
TARGETS						
110-86-1	Pyridine	17.8	U	17.8	50.0	ug/L
106-46-7	1,4-Dichlorobenzene	14.3	U	14.3	50.0	ug/L
95-48-7	2-Methylphenol	20.6	U	20.6	50.0	ug/L
65794-96-9	3+4-Methylphenols	21.6	U	21.6	100	ug/L
67-72-1	Hexachloroethane	16.4	U	16.4	50.0	ug/L
98-95-3	Nitrobenzene	17.2	U	17.2	50.0	ug/L
87-68-3	Hexachlorobutadiene	19.3	U	19.3	50.0	ug/L
88-06-2	2,4,6-Trichlorophenol	15.2	U	15.2	50.0	ug/L
95-95-4	2,4,5-Trichlorophenol	15.7	U	15.7	50.0	ug/L
121-14-2	2,4-Dinitrotoluene	25.4	U	25.4	50.0	ug/L
118-74-1	Hexachlorobenzene	19.1	U	19.1	50.0	ug/L
87-86-5	Pentachlorophenol	25.5	U	25.5	100	ug/L
SURROGATES						
367-12-4	2-Fluorophenol	143		10 - 139	95%	SPK: 150
13127-88-3	Phenol-d6	136		10 - 134	91%	SPK: 150
4165-60-0	Nitrobenzene-d5	87.1		49 - 133	87%	SPK: 100
321-60-8	2-Fluorobiphenyl	85.2		52 - 132	85%	SPK: 100
118-79-6	2,4,6-Tribromophenol	124		45 - 141	83%	SPK: 150
1718-51-0	Terphenyl-d14	95.3		45 - 142	95%	SPK: 100
INTERNAL STANDARDS						
3855-82-1	1,4-Dichlorobenzene-d4	357000	7.969			
1146-65-2	Naphthalene-d8	1390000	10.78			
15067-26-2	Acenaphthene-d10	752000	14.61			
1517-22-2	Phenanthrene-d10	1390000	17.351			
1719-03-5	Chrysene-d12	1080000	21.527			
1520-96-3	Perylene-d12	1190000	23.962			

Report of Analysis

Client:	H2M Architects + Engineers	Date Collected:	03/18/23
Project:	Siphon	Date Received:	03/18/23
Client Sample ID:	PB151496TB	SDG No.:	O1975
Lab Sample ID:	PB151496TB	Matrix:	TCLP
Analytical Method:	SW8270	% Solid:	0
Sample Wt/Vol:	100 Units: mL	Final Vol:	1000 uL
Soil Aliquot Vol:	uL	Test:	TCLP BNA
Extraction Type :	Decanted : N	Level :	LOW
Injection Volume :	GPC Factor : 1.0	GPC Cleanup :	N PH :
Prep Method :	SW3541		

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
BM039066.D	1	03/18/23 10:44	03/21/23 13:10	PB151516

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
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A = Aldol-Condensation Reaction Products



284 Sheffield Street, Mountainside, New Jersey - 07092

Phone: (908) 789 8900 Fax: (908) 789 8922

LAB CHRONICLE

OrderID:	O1975	OrderDate:	3/17/2023 10:20:41 AM
Client:	H2M Architects + Engineers	Project:	Siphon
Contact:	Stephen I. Kaplan	Location:	--Select--,J11

LabID	ClientID	Matrix	Test	Method	Sample Date	Prep Date	Anal Date	Received
O1975-02	CHAMBER-B-72-WEST	TCLP	TCLP BNA	8270E	03/16/23	03/18/23	03/23/23	03/17/23
O1975-05	CHAMBER-C-72-WEST	TCLP	TCLP BNA	8270E	03/16/23	03/18/23	03/25/23	03/17/23

Hit Summary Sheet
SW-846

SDG No.:	O1975	Order ID:	O1975
Client:	H2M Architects + Engineers	Project ID:	Siphon

Sample ID	Client ID	Matrix	Parameter	Concentration	C	MDL	RDL	Units
Client ID :	CHAMBER-B-72-WEST							
O1975-01	CHAMBER-B-72-WE SOIL	Aroclor-1260		2100	E	6.80	34.4	ug/kg
		Total Concentration:		2,100.000				
Client ID :	CHAMBER-B-72-WESTDL							
O1975-01DL	CHAMBER-B-72-WE SOIL	Aroclor-1260		2200	D	33.8	172	ug/kg
		Total Concentration:		2,200.000				
Client ID :	CHAMBER-C-72-WEST							
O1975-04	CHAMBER-C-72-WE SOIL	Aroclor-1260		1500	E	5.80	29.3	ug/kg
		Total Concentration:		1,500.000				
Client ID :	CHAMBER-C-72-WESTDL							
O1975-04DL	CHAMBER-C-72-WE SOIL	Aroclor-1260		1600	DP	28.8	147	ug/kg
		Total Concentration:		1,600.000				

SAMPLE DATA

Report of Analysis

Client:	H2M Architects + Engineers		Date Collected:	03/16/23	
Project:	Siphon		Date Received:	03/17/23	
Client Sample ID:	CHAMBER-B-72-WEST		SDG No.:	O1975	
Lab Sample ID:	O1975-01		Matrix:	SOIL	
Analytical Method:	SW8082A		% Solid:	49.3	Decanted:
Sample Wt/Vol:	30.07	Units: g	Final Vol:	10000	uL
Soil Aliquot Vol:		uL	Test:	PCB	
Extraction Type:			Injection Volume :		
GPC Factor :	1.0	PH :			
Prep Method :	SW3541B				

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
PO093323.D	1	03/18/23 08:14	03/19/23 12:45	PB151510

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
TARGETS						
12674-11-2	Aroclor-1016	7.20	U	7.20	34.4	ug/kg
11104-28-2	Aroclor-1221	11.9	U	11.9	34.4	ug/kg
11141-16-5	Aroclor-1232	9.10	U	9.10	34.4	ug/kg
53469-21-9	Aroclor-1242	6.30	U	6.30	34.4	ug/kg
12672-29-6	Aroclor-1248	5.70	U	5.70	34.4	ug/kg
11097-69-1	Aroclor-1254	7.60	U	7.60	34.4	ug/kg
37324-23-5	Aroclor-1262	5.50	U	5.50	34.4	ug/kg
11100-14-4	Aroclor-1268	6.70	U	6.70	34.4	ug/kg
11096-82-5	Aroclor-1260	2100	E	6.80	34.4	ug/kg
SURROGATES						
877-09-8	Tetrachloro-m-xylene	11.5		40 - 162	58%	SPK: 20
2051-24-3	Decachlorobiphenyl	7.97		32 - 176	40%	SPK: 20

Comments:

U = Not Detected

LOQ = Limit of Quantitation

MDL = Method Detection Limit

LOD = Limit of Detection

E = Value Exceeds Calibration Range

P = Indicates >25% difference for detected concentrations between the two GC columns

Q = indicates LCS control criteria did not meet requirements

M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value

B = Analyte Found in Associated Method Blank

N = Presumptive Evidence of a Compound

* = Values outside of QC limits

D = Dilution

S = Indicates estimated value where valid five-point calibration was not performed prior to analyte detection in sample.

() = Laboratory InHouse Limit

Report of Analysis

Client:	H2M Architects + Engineers		Date Collected:	03/16/23	
Project:	Siphon		Date Received:	03/17/23	
Client Sample ID:	CHAMBER-B-72-WESTDL		SDG No.:	O1975	
Lab Sample ID:	O1975-01DL		Matrix:	SOIL	
Analytical Method:	SW8082A		% Solid:	49.3	Decanted:
Sample Wt/Vol:	30.07	Units: g	Final Vol:	10000	uL
Soil Aliquot Vol:		uL	Test:	PCB	
Extraction Type:			Injection Volume :		
GPC Factor :	1.0	PH :			
Prep Method :	SW3541B				

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
PO093351.D	5	03/18/23 08:14	03/20/23 10:50	PB151510

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
TARGETS						
12674-11-2	Aroclor-1016	36.2	UD	36.2	172	ug/kg
11104-28-2	Aroclor-1221	59.4	UD	59.4	172	ug/kg
11141-16-5	Aroclor-1232	45.7	UD	45.7	172	ug/kg
53469-21-9	Aroclor-1242	31.7	UD	31.7	172	ug/kg
12672-29-6	Aroclor-1248	28.5	UD	28.5	172	ug/kg
11097-69-1	Aroclor-1254	38.0	UD	38.0	172	ug/kg
37324-23-5	Aroclor-1262	27.5	UD	27.5	172	ug/kg
11100-14-4	Aroclor-1268	33.4	UD	33.4	172	ug/kg
11096-82-5	Aroclor-1260	2200	D	33.8	172	ug/kg
SURROGATES						
877-09-8	Tetrachloro-m-xylene	12.4		40 - 162	62%	SPK: 20
2051-24-3	Decachlorobiphenyl	8.15		32 - 176	41%	SPK: 20

Comments:

U = Not Detected

LOQ = Limit of Quantitation

MDL = Method Detection Limit

LOD = Limit of Detection

E = Value Exceeds Calibration Range

P = Indicates >25% difference for detected concentrations between the two GC columns

Q = indicates LCS control criteria did not meet requirements

M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value

B = Analyte Found in Associated Method Blank

N = Presumptive Evidence of a Compound

* = Values outside of QC limits

D = Dilution

S = Indicates estimated value where valid five-point calibration was not performed prior to analyte detection in sample.

() = Laboratory InHouse Limit

Report of Analysis

Client:	H2M Architects + Engineers		Date Collected:	03/16/23	
Project:	Siphon		Date Received:	03/17/23	
Client Sample ID:	CHAMBER-C-72-WEST		SDG No.:	O1975	
Lab Sample ID:	O1975-04		Matrix:	SOIL	
Analytical Method:	SW8082A		% Solid:	57.8	Decanted:
Sample Wt/Vol:	30.08	Units: g	Final Vol:	10000	uL
Soil Aliquot Vol:		uL	Test:	PCB	
Extraction Type:			Injection Volume :		
GPC Factor :	1.0	PH :			
Prep Method :	SW3541B				

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
PO093324.D	1	03/18/23 08:14	03/19/23 13:02	PB151510

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
TARGETS						
12674-11-2	Aroclor-1016	6.20	U	6.20	29.3	ug/kg
11104-28-2	Aroclor-1221	10.1	U	10.1	29.3	ug/kg
11141-16-5	Aroclor-1232	7.80	U	7.80	29.3	ug/kg
53469-21-9	Aroclor-1242	5.40	U	5.40	29.3	ug/kg
12672-29-6	Aroclor-1248	4.90	U	4.90	29.3	ug/kg
11097-69-1	Aroclor-1254	6.50	U	6.50	29.3	ug/kg
37324-23-5	Aroclor-1262	4.70	U	4.70	29.3	ug/kg
11100-14-4	Aroclor-1268	5.70	U	5.70	29.3	ug/kg
11096-82-5	Aroclor-1260	1500	E	5.80	29.3	ug/kg
SURROGATES						
877-09-8	Tetrachloro-m-xylene	8.82		40 - 162	44%	SPK: 20
2051-24-3	Decachlorobiphenyl	7.66		32 - 176	38%	SPK: 20

Comments:

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LOQ = Limit of Quantitation

MDL = Method Detection Limit

LOD = Limit of Detection

E = Value Exceeds Calibration Range

P = Indicates >25% difference for detected concentrations between the two GC columns

Q = indicates LCS control criteria did not meet requirements

M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value

B = Analyte Found in Associated Method Blank

N = Presumptive Evidence of a Compound

* = Values outside of QC limits

D = Dilution

S = Indicates estimated value where valid five-point calibration was not performed prior to analyte detection in sample.

() = Laboratory InHouse Limit

Report of Analysis

Client:	H2M Architects + Engineers		Date Collected:	03/16/23	
Project:	Siphon		Date Received:	03/17/23	
Client Sample ID:	CHAMBER-C-72-WESTDL		SDG No.:	O1975	
Lab Sample ID:	O1975-04DL		Matrix:	SOIL	
Analytical Method:	SW8082A		% Solid:	57.8	Decanted:
Sample Wt/Vol:	30.08	Units: g	Final Vol:	10000	uL
Soil Aliquot Vol:		uL	Test:	PCB	
Extraction Type:			Injection Volume :		
GPC Factor :	1.0	PH :			
Prep Method :	SW3541B				

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
PO093352.D	5	03/18/23 08:14	03/20/23 11:07	PB151510

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
TARGETS						
12674-11-2	Aroclor-1016	30.9	UD	30.9	147	ug/kg
11104-28-2	Aroclor-1221	50.6	UD	50.6	147	ug/kg
11141-16-5	Aroclor-1232	39.0	UD	39.0	147	ug/kg
53469-21-9	Aroclor-1242	27.0	UD	27.0	147	ug/kg
12672-29-6	Aroclor-1248	24.3	UD	24.3	147	ug/kg
11097-69-1	Aroclor-1254	32.4	UD	32.4	147	ug/kg
37324-23-5	Aroclor-1262	23.5	UD	23.5	147	ug/kg
11100-14-4	Aroclor-1268	28.5	UD	28.5	147	ug/kg
11096-82-5	Aroclor-1260	1600	DP	28.8	147	ug/kg
SURROGATES						
877-09-8	Tetrachloro-m-xylene	11.1		40 - 162	55%	SPK: 20
2051-24-3	Decachlorobiphenyl	7.80		32 - 176	39%	SPK: 20

Comments:

U = Not Detected

LOQ = Limit of Quantitation

MDL = Method Detection Limit

LOD = Limit of Detection

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P = Indicates >25% difference for detected concentrations between the two GC columns

Q = indicates LCS control criteria did not meet requirements

M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value

B = Analyte Found in Associated Method Blank

N = Presumptive Evidence of a Compound

* = Values outside of QC limits

D = Dilution

S = Indicates estimated value where valid five-point calibration was not performed prior to analyte detection in sample.

() = Laboratory InHouse Limit

LAB CHRONICLE

OrderID: O1975
Client: H2M Architects + Engineers
Contact: Stephen I. Kaplan

OrderDate: 3/17/2023 10:20:41 AM
Project: Siphon
Location: J11

LabID	ClientID	Matrix	Test	Method	Sample Date	Prep Date	Anal Date	Received
O1975-01	CHAMBER-B-72-WEST	SOIL	PCB	8082A	03/16/23	03/18/23	03/19/23	03/17/23
O1975-01DL	CHAMBER-B-72-WEST DL	SOIL	PCB	8082A	03/16/23	03/18/23	03/20/23	03/17/23
O1975-02	CHAMBER-B-72-WEST	TCLP	TCLP Herbicide	8151A	03/16/23	03/18/23	03/20/23	03/17/23
O1975-04	CHAMBER-C-72-WEST	SOIL	PCB	8082A	03/16/23	03/18/23	03/19/23	03/17/23
O1975-04DL	CHAMBER-C-72-WEST DL	SOIL	PCB	8082A	03/16/23	03/18/23	03/20/23	03/17/23
O1975-05	CHAMBER-C-72-WEST	TCLP	TCLP Herbicide	8151A	03/16/23	03/18/23	03/20/23	03/17/23

Hit Summary Sheet
SW-846

SDG No.: O1975

Order ID: O1975

Client: H2M Architects + Engineers

Project ID: Siphon

A

B

Sample ID	Client ID	Matrix	Parameter	Concentration	C	MDL	RDL	Units
Client ID :								

C

D

Total Concentration: 0.000

SAMPLE DATA

Report of Analysis

Client:	H2M Architects + Engineers		Date Collected:	03/16/23	
Project:	Siphon		Date Received:	03/17/23	
Client Sample ID:	CHAMBER-B-72-WEST		SDG No.:	O1975	
Lab Sample ID:	O1975-02		Matrix:	TCLP	
Analytical Method:	SW8081		% Solid:	0	Decanted:
Sample Wt/Vol:	100	Units: mL	Final Vol:	10000	uL
Soil Aliquot Vol:		uL	Test:	TCLP Pesticide	
Extraction Type:			Injection Volume :		
GPC Factor :	1.0	PH :			
Prep Method :	SW3541B				

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
PL081628.D	1	03/22/23 11:20	03/23/23 01:29	PB151613

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
TARGETS						
58-89-9	gamma-BHC (Lindane)	0.064	U	0.064	0.50	ug/L
76-44-8	Heptachlor	0.073	U	0.073	0.50	ug/L
1024-57-3	Heptachlor epoxide	0.10	U	0.10	0.50	ug/L
72-20-8	Endrin	0.043	U	0.043	0.50	ug/L
72-43-5	Methoxychlor	0.066	U	0.066	0.50	ug/L
8001-35-2	Toxaphene	1.80	U	1.80	10.0	ug/L
57-74-9	Chlordane	0.97	U	0.97	5.00	ug/L
SURROGATES						
2051-24-3	Decachlorobiphenyl	15.4		27 - 142	77%	SPK: 20
877-09-8	Tetrachloro-m-xylene	18.9		60 - 145	94%	SPK: 20

Comments:

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B = Analyte Found in Associated Method Blank

N = Presumptive Evidence of a Compound

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S = Indicates estimated value where valid five-point calibration was not performed prior to analyte detection in sample.

() = Laboratory InHouse Limit

Report of Analysis

Client:	H2M Architects + Engineers		Date Collected:	03/16/23	
Project:	Siphon		Date Received:	03/17/23	
Client Sample ID:	CHAMBER-C-72-WEST		SDG No.:	O1975	
Lab Sample ID:	O1975-05		Matrix:	TCLP	
Analytical Method:	SW8081		% Solid:	0	Decanted:
Sample Wt/Vol:	100	Units: mL	Final Vol:	10000	uL
Soil Aliquot Vol:		uL	Test:	TCLP Pesticide	
Extraction Type:			Injection Volume :		
GPC Factor :	1.0	PH :			
Prep Method :	SW3541B				

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
PL081631.D	1	03/22/23 11:20	03/23/23 02:11	PB151613

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
TARGETS						
58-89-9	gamma-BHC (Lindane)	0.064	U	0.064	0.50	ug/L
76-44-8	Heptachlor	0.073	U	0.073	0.50	ug/L
1024-57-3	Heptachlor epoxide	0.10	U	0.10	0.50	ug/L
72-20-8	Endrin	0.043	U	0.043	0.50	ug/L
72-43-5	Methoxychlor	0.066	U	0.066	0.50	ug/L
8001-35-2	Toxaphene	1.80	U	1.80	10.0	ug/L
57-74-9	Chlordane	0.97	U	0.97	5.00	ug/L
SURROGATES						
2051-24-3	Decachlorobiphenyl	17.8		27 - 142	89%	SPK: 20
877-09-8	Tetrachloro-m-xylene	19.7		60 - 145	98%	SPK: 20

Comments:

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LOQ = Limit of Quantitation

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M = MS/MSD acceptance criteria did not meet requirements

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B = Analyte Found in Associated Method Blank

N = Presumptive Evidence of a Compound

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S = Indicates estimated value where valid five-point calibration was not performed prior to analyte detection in sample.

() = Laboratory InHouse Limit

Report of Analysis

Client:	H2M Architects + Engineers		Date Collected:		
Project:	Siphon		Date Received:	03/22/23	
Client Sample ID:	PB151496TB		SDG No.:	O1975	
Lab Sample ID:	PB151496TB		Matrix:	TCLP	
Analytical Method:	SW8081		% Solid:	0	Decanted:
Sample Wt/Vol:	100	Units: mL	Final Vol:	10000	uL
Soil Aliquot Vol:		uL	Test:	TCLP Pesticide	
Extraction Type:			Injection Volume :		
GPC Factor :	1.0	PH :			
Prep Method :	SW3541B				

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
PL081640.D	1	03/22/23 11:20	03/23/23 04:17	PB151613

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
TARGETS						
58-89-9	gamma-BHC (Lindane)	0.064	U	0.064	0.50	ug/L
76-44-8	Heptachlor	0.073	U	0.073	0.50	ug/L
1024-57-3	Heptachlor epoxide	0.10	U	0.10	0.50	ug/L
72-20-8	Endrin	0.043	U	0.043	0.50	ug/L
72-43-5	Methoxychlor	0.066	U	0.066	0.50	ug/L
8001-35-2	Toxaphene	1.80	U	1.80	10.0	ug/L
57-74-9	Chlordane	0.97	U	0.97	5.00	ug/L
SURROGATES						
2051-24-3	Decachlorobiphenyl	18.9		27 - 142	94%	SPK: 20
877-09-8	Tetrachloro-m-xylene	17.7		60 - 145	89%	SPK: 20

Comments:

U = Not Detected

LOQ = Limit of Quantitation

MDL = Method Detection Limit

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E = Value Exceeds Calibration Range

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J = Estimated Value

B = Analyte Found in Associated Method Blank

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D = Dilution

S = Indicates estimated value where valid five-point calibration was not performed prior to analyte detection in sample.

() = Laboratory InHouse Limit

LAB CHRONICLE

OrderID: O1975
Client: H2M Architects + Engineers
Contact: Stephen I. Kaplan

OrderDate: 3/17/2023 10:20:41 AM
Project: Siphon
Location: J11

LabID	ClientID	Matrix	Test	Method	Sample Date	Prep Date	Anal Date	Received
O1975-01	CHAMBER-B-72-WEST	SOIL			03/16/23			03/17/23
			PCB	8082A		03/18/23	03/19/23	
			TPH GC	8015D		03/18/23	03/20/23	
O1975-01DL	CHAMBER-B-72-WEST DL	SOIL			03/16/23			03/17/23
			PCB	8082A		03/18/23	03/20/23	
O1975-02	CHAMBER-B-72-WEST	TCLP			03/16/23			03/17/23
			TCLP Herbicide	8151A		03/18/23	03/20/23	
			TCLP Pesticide	8081B		03/22/23	03/23/23	
O1975-04	CHAMBER-C-72-WEST	SOIL			03/16/23			03/17/23
			PCB	8082A		03/18/23	03/19/23	
			TPH GC	8015D		03/18/23	03/20/23	
O1975-04DL	CHAMBER-C-72-WEST DL	SOIL			03/16/23			03/17/23
			PCB	8082A		03/18/23	03/20/23	
O1975-05	CHAMBER-C-72-WEST	TCLP			03/16/23			03/17/23
			TCLP Herbicide	8151A		03/18/23	03/20/23	
			TCLP Pesticide	8081B		03/22/23	03/23/23	

Hit Summary Sheet
SW-846

SDG No.: O1975

Order ID: O1975

Client: H2M Architects + Engineers

Project ID: Siphon

Sample ID	Client ID	Matrix	Parameter	Concentration	C	MDL	RDL	Units
Client ID :								
Total Concentration:				0.000				

SAMPLE DATA

Report of Analysis

Client:	H2M Architects + Engineers		Date Collected:	03/16/23	
Project:	Siphon		Date Received:	03/17/23	
Client Sample ID:	CHAMBER-B-72-WEST		SDG No.:	O1975	
Lab Sample ID:	O1975-02		Matrix:	TCLP	
Analytical Method:	SW8151A		% Solid:	0	Decanted:
Sample Wt/Vol:	100	Units: mL	Final Vol:	10000	uL
Soil Aliquot Vol:		uL	Test:	TCLP Herbicide	
Extraction Type:			Injection Volume :		
GPC Factor :	1.0	PH :			
Prep Method :	8151A				

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
PS022446.D	1	03/18/23 11:25	03/20/23 20:06	PB151517

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
TARGETS						
94-75-7	2,4-D	5.70	U	5.70	20.0	ug/L
93-72-1	2,4,5-TP (Silvex)	5.40	U	5.40	20.0	ug/L
SURROGATES						
19719-28-9	2,4-DCAA	566		16 - 175	113%	SPK: 500

Comments:

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Report of Analysis

Client:	H2M Architects + Engineers		Date Collected:	03/16/23	
Project:	Siphon		Date Received:	03/17/23	
Client Sample ID:	CHAMBER-C-72-WEST		SDG No.:	O1975	
Lab Sample ID:	O1975-05		Matrix:	TCLP	
Analytical Method:	SW8151A		% Solid:	0	Decanted:
Sample Wt/Vol:	100	Units: mL	Final Vol:	10000	uL
Soil Aliquot Vol:		uL	Test:	TCLP Herbicide	
Extraction Type:			Injection Volume :		
GPC Factor :	1.0	PH :			
Prep Method :	8151A				

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
PS022449.D	1	03/18/23 11:25	03/20/23 21:44	PB151517

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
TARGETS						
94-75-7	2,4-D	5.70	U	5.70	20.0	ug/L
93-72-1	2,4,5-TP (Silvex)	5.40	U	5.40	20.0	ug/L
SURROGATES						
19719-28-9	2,4-DCAA	579		16 - 175	116%	SPK: 500

Comments:

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Report of Analysis

Client:	H2M Architects + Engineers		Date Collected:		
Project:	Siphon		Date Received:	03/18/23	
Client Sample ID:	PB151496TB		SDG No.:	O1975	
Lab Sample ID:	PB151496TB		Matrix:	TCLP	
Analytical Method:	SW8151A		% Solid:	0	Decanted:
Sample Wt/Vol:	100	Units: mL	Final Vol:	10000	uL
Soil Aliquot Vol:		uL	Test:	TCLP Herbicide	
Extraction Type:			Injection Volume :		
GPC Factor :	1.0	PH :			
Prep Method :	8151A				

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
PS022451.D	1	03/18/23 11:25	03/20/23 22:33	PB151517

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
TARGETS						
94-75-7	2,4-D	5.70	U	5.70	20.0	ug/L
93-72-1	2,4,5-TP (Silvex)	5.40	U	5.40	20.0	ug/L
SURROGATES						
19719-28-9	2,4-DCAA	450		16 - 175	90%	SPK: 500

Comments:

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M = MS/MSD acceptance criteria did not meet requirements

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() = Laboratory InHouse Limit



284 Sheffield Street, Mountainside, New Jersey - 07092

Phone: (908) 789 8900 Fax: (908) 789 8922

LAB CHRONICLE

OrderID:	O1975	OrderDate:	3/17/2023 10:20:41 AM
Client:	H2M Architects + Engineers	Project:	Siphon
Contact:	Stephen I. Kaplan	Location:	J11

LabID	ClientID	Matrix	Test	Method	Sample Date	Prep Date	Anal Date	Received
O1975-02	CHAMBER-B-72-WEST	TCLP	TCLP Herbicide	8151A	03/16/23	03/18/23	03/20/23	03/17/23
O1975-05	CHAMBER-C-72-WEST	TCLP	TCLP Herbicide	8151A	03/16/23	03/18/23	03/20/23	03/17/23

SAMPLE DATA

Report of Analysis

Client:	H2M Architects + Engineers	Date Collected:	03/16/23
Project:	Siphon	Date Received:	03/17/23
Client Sample ID:	CHAMBER-B-72-WEST	SDG No.:	O1975
Lab Sample ID:	O1975-01	Matrix:	SOIL
Analytical Method:	8015D TPH	% Solid:	49.3
Sample Wt/Vol:	30.06	Units:	g
Soil Aliquot Vol:			uL
Extraction Type:		Test:	TPH GC
GPC Factor :		Injection Volume :	
Prep Method :	SW3541		

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
FF012308.D	1	03/18/23 09:15	03/20/23 11:34	PB151514

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
TARGETS						
PHC	Petroleum Hydrocarbons	109000		814	5740	ug/kg
SURROGATES						
16416-32-3	TETRACOSANE-d50	15.8		37 - 130	79%	SPK: 20

Comments:

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S = Indicates estimated value where valid five-point calibration was not performed prior to analyte detection in sample.

() = Laboratory InHouse Limit

Report of Analysis

Client:	H2M Architects + Engineers	Date Collected:	03/16/23
Project:	Siphon	Date Received:	03/17/23
Client Sample ID:	CHAMBER-C-72-WEST	SDG No.:	O1975
Lab Sample ID:	O1975-04	Matrix:	SOIL
Analytical Method:	8015D TPH	% Solid:	57.8
Sample Wt/Vol:	30.01 Units: g	Final Vol:	1 mL
Soil Aliquot Vol:	uL	Test:	TPH GC
Extraction Type:		Injection Volume :	
GPC Factor :	PH :		
Prep Method :	SW3541		

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
FF012317.D	10	03/18/23 09:15	03/20/23 17:07	PB151514

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units(Dry Weight)
TARGETS						
PHC	Petroleum Hydrocarbons	456000		6950	49000	ug/kg
SURROGATES						
16416-32-3	TETRACOSANE-d50	1.63		37 - 130	81%	SPK: 20

Comments:

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D = Dilution

S = Indicates estimated value where valid five-point calibration was not performed prior to analyte detection in sample.

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LAB CHRONICLE

OrderID:	O1975	OrderDate:	3/17/2023 10:20:41 AM
Client:	H2M Architects + Engineers	Project:	Siphon
Contact:	Stephen I. Kaplan	Location:	J11

LabID	ClientID	Matrix	Test	Method	Sample Date	Prep Date	Anal Date	Received
O1975-01	CHAMBER-B-72-WEST	SOIL			03/16/23			03/17/23
			PCB	8082A		03/18/23	03/19/23	
			TPH GC	8015D		03/18/23	03/20/23	
O1975-01DL	CHAMBER-B-72-WEST DL	SOIL			03/16/23			03/17/23
			PCB	8082A		03/18/23	03/20/23	
O1975-02	CHAMBER-B-72-WEST	TCLP			03/16/23			03/17/23
			TCLP Herbicide	8151A		03/18/23	03/20/23	
O1975-04	CHAMBER-C-72-WEST	SOIL			03/16/23			03/17/23
			PCB	8082A		03/18/23	03/19/23	
			TPH GC	8015D		03/18/23	03/20/23	
O1975-04DL	CHAMBER-C-72-WEST DL	SOIL			03/16/23			03/17/23
			PCB	8082A		03/18/23	03/20/23	
O1975-05	CHAMBER-C-72-WEST	TCLP			03/16/23			03/17/23
			TCLP Herbicide	8151A		03/18/23	03/20/23	



284 Sheffield Street, Mountainside, NJ 07092 Phone: 908 789 8900 Fax: 908 789 8922

Hit Summary Sheet SW-846

SDG No.: O1975

Order ID: O1975

Client: H2M Architects + Engineers

Project ID: Siphon

Sample ID	Client ID	Matrix	Parameter	Concentration	C	MDL	RDL	Units
Client ID : CHAMBER-B-72-WEST								
O1975-02	CHAMBER-B-72-WEST	TCLP	Barium	817		39.2	500	ug/L
O1975-02	CHAMBER-B-72-WEST	TCLP	Iron	57700		185	500	ug/L
O1975-02	CHAMBER-B-72-WEST	TCLP	Nickel	45.3	J	8.50	200	ug/L
O1975-02	CHAMBER-B-72-WEST	TCLP	Zinc	401		17.5	200	ug/L
Client ID : CHAMBER-C-72-WEST								
O1975-05	CHAMBER-C-72-WEST	TCLP	Barium	452	J	39.2	500	ug/L
O1975-05	CHAMBER-C-72-WEST	TCLP	Chromium	9.79	J	8.00	50.0	ug/L
O1975-05	CHAMBER-C-72-WEST	TCLP	Iron	66100		185	500	ug/L
O1975-05	CHAMBER-C-72-WEST	TCLP	Nickel	88.1	J	8.50	200	ug/L
O1975-05	CHAMBER-C-72-WEST	TCLP	Zinc	882		17.5	200	ug/L

SAMPLE DATA

Report of Analysis

Client:	H2M Architects + Engineers	Date Collected:	03/16/23
Project:	Siphon	Date Received:	03/17/23
Client Sample ID:	CHAMBER-B-72-WEST	SDG No.:	O1975
Lab Sample ID:	O1975-02	Matrix:	TCLP
Level (low/med):	low	% Solid:	0

Cas	Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.	Prep Met.
7429-90-5	Aluminum	283	U	1	283	500	ug/L	03/19/23 15:30	03/20/23 21:54	SW6010	SW3050
7440-38-2	Arsenic	34.8	U	1	34.8	100	ug/L	03/19/23 15:30	03/20/23 21:54	SW6010	SW3050
7440-39-3	Barium	817		1	39.2	500	ug/L	03/19/23 15:30	03/20/23 21:54	SW6010	SW3050
7440-43-9	Cadmium	1.00	U	1	1.00	30.0	ug/L	03/19/23 15:30	03/20/23 21:54	SW6010	SW3050
7440-47-3	Chromium	8.00	U	1	8.00	50.0	ug/L	03/19/23 15:30	03/20/23 21:54	SW6010	SW3050
7440-50-8	Copper	70.7	U	1	70.7	100	ug/L	03/19/23 15:30	03/20/23 21:54	SW6010	SW3050
7439-89-6	Iron	57700		1	185	500	ug/L	03/19/23 15:30	03/20/23 21:54	SW6010	SW3050
7439-92-1	Lead	35.1	U	1	35.1	60.0	ug/L	03/19/23 15:30	03/20/23 21:54	SW6010	SW3050
7439-97-6	Mercury	0.78	U	1	0.78	2.00	ug/L	03/21/23 09:40	03/21/23 13:59	SW7470A	
7440-02-0	Nickel	45.3	J	1	8.50	200	ug/L	03/19/23 15:30	03/20/23 21:54	SW6010	SW3050
7782-49-2	Selenium	58.8	U	1	58.8	100	ug/L	03/19/23 15:30	03/20/23 21:54	SW6010	SW3050
7440-22-4	Silver	6.60	U	1	6.60	50.0	ug/L	03/19/23 15:30	03/20/23 21:54	SW6010	SW3050
7440-66-6	Zinc	401		1	17.5	200	ug/L	03/19/23 15:30	03/20/23 21:54	SW6010	SW3050

Color Before:	Colorless	Clarity Before:	Clear	Texture:
Color After:	Colorless	Clarity After:	Clear	Artifacts:
Comments:	TCLP Mercury			

U = Not Detected
 LOQ = Limit of Quantitation
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 E = Indicates the reported value is estimated because of the presence of interference.
 OR = Over Range
 N = Spiked sample recovery not within control limits

Report of Analysis

Client:	H2M Architects + Engineers	Date Collected:	03/16/23
Project:	Siphon	Date Received:	03/17/23
Client Sample ID:	CHAMBER-C-72-WEST	SDG No.:	O1975
Lab Sample ID:	O1975-05	Matrix:	TCLP
Level (low/med):	low	% Solid:	0

Cas	Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.	Prep Met.
7429-90-5	Aluminum	283	U	1	283	500	ug/L	03/19/23 15:30	03/20/23 21:58	SW6010	SW3050
7440-38-2	Arsenic	34.8	U	1	34.8	100	ug/L	03/19/23 15:30	03/20/23 21:58	SW6010	SW3050
7440-39-3	Barium	452	J	1	39.2	500	ug/L	03/19/23 15:30	03/20/23 21:58	SW6010	SW3050
7440-43-9	Cadmium	1.00	U	1	1.00	30.0	ug/L	03/19/23 15:30	03/20/23 21:58	SW6010	SW3050
7440-47-3	Chromium	9.79	J	1	8.00	50.0	ug/L	03/19/23 15:30	03/20/23 21:58	SW6010	SW3050
7440-50-8	Copper	70.7	U	1	70.7	100	ug/L	03/19/23 15:30	03/20/23 21:58	SW6010	SW3050
7439-89-6	Iron	66100		1	185	500	ug/L	03/19/23 15:30	03/20/23 21:58	SW6010	SW3050
7439-92-1	Lead	35.1	U	1	35.1	60.0	ug/L	03/19/23 15:30	03/20/23 21:58	SW6010	SW3050
7439-97-6	Mercury	0.78	U	1	0.78	2.00	ug/L	03/21/23 09:40	03/21/23 14:02	SW7470A	
7440-02-0	Nickel	88.1	J	1	8.50	200	ug/L	03/19/23 15:30	03/20/23 21:58	SW6010	SW3050
7782-49-2	Selenium	58.8	U	1	58.8	100	ug/L	03/19/23 15:30	03/20/23 21:58	SW6010	SW3050
7440-22-4	Silver	6.60	U	1	6.60	50.0	ug/L	03/19/23 15:30	03/20/23 21:58	SW6010	SW3050
7440-66-6	Zinc	882		1	17.5	200	ug/L	03/19/23 15:30	03/20/23 21:58	SW6010	SW3050

Color Before:	Colorless	Clarity Before:	Clear	Texture:
Color After:	Colorless	Clarity After:	Clear	Artifacts:
Comments:	TCLP Mercury			

U = Not Detected
 LOQ = Limit of Quantitation
 MDL = Method Detection Limit
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 Q = indicates LCS control criteria did not meet requirements

J = Estimated Value
 B = Analyte Found in Associated Method Blank
 * = indicates the duplicate analysis is not within control limits.
 E = Indicates the reported value is estimated because of the presence of interference.
 OR = Over Range
 N = Spiked sample recovery not within control limits



284 Sheffield Street, Mountainside, New Jersey - 07092

Phone: (908) 789 8900 Fax: (908) 789 8922

LAB CHRONICLE

OrderID:	O1975	OrderDate:	3/17/2023 10:20:41 AM
Client:	H2M Architects + Engineers	Project:	Siphon
Contact:	Stephen I. Kaplan	Location:	--Select--,J11

LabID	ClientID	Matrix	Test	Method	Sample Date	Prep Date	Anal Date	Received
O1975-02	CHAMBER-B-72-WEST	TCLP			03/16/23			03/17/23
			TCLP Mercury	7470A		03/21/23	03/21/23	
			TCLPMetals Group1	6010D		03/19/23	03/20/23	
O1975-05	CHAMBER-C-72-WEST	TCLP			03/16/23			03/17/23
			TCLP Mercury	7470A		03/21/23	03/21/23	
			TCLPMetals Group1	6010D		03/19/23	03/20/23	

SAMPLE DATA

Report of Analysis

Client:	H2M Architects + Engineers	Date Collected:	03/16/23 10:10
Project:	Siphon	Date Received:	03/17/23
Client Sample ID:	CHAMBER-B-72-WEST	SDG No.:	O1975
Lab Sample ID:	O1975-01	Matrix:	SOIL
		% Solid:	49.3

Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units(Dry Weight)	Prep Date	Date Ana.	Ana Met.
Oil and Grease	273		1	81.1	253	mg/Kg		03/21/23 09:40	1664A
Paint Filter	1.00	U	1	1.00	1.00	ml/100gm		03/21/23 13:15	9095B
pH	6.38	H	1	0	0	pH		03/17/23 13:35	9045D
TS	46.1		1	1.00	5.00	%		03/17/23 10:00	SM 2540 B-15
TVS	15.6		1	1.00	10.0	%		03/17/23 16:00	160.4

Comments: pH result reported at temperature 22.5 °C

U = Not Detected

LOQ = Limit of Quantitation

MDL = Method Detection Limit

LOD = Limit of Detection

D = Dilution

Q = indicates LCS control criteria did not meet requirements

H = Sample Analysis Out Of Hold Time

J = Estimated Value

B = Analyte Found in Associated Method Blank

* = indicates the duplicate analysis is not within control limits.

E = Indicates the reported value is estimated because of the presence of interference.

OR = Over Range

N =Spiked sample recovery not within control limits

Report of Analysis

Client:	H2M Architects + Engineers	Date Collected:	03/16/23 10:10
Project:	Siphon	Date Received:	03/17/23
Client Sample ID:	CHAMBER-B-72-WEST	SDG No.:	O1975
Lab Sample ID:	O1975-02	Matrix:	SOIL
		% Solid:	100

Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
Corrosivity	6.38	H	1	0	0	pH		03/17/23 13:35	9045D
Ignitability	NO		1	0	0	oC		03/21/23 15:48	1030
Reactive Cyanide	0.011	U	1	0.011	0.050	mg/Kg	03/21/23 08:45	03/21/23 12:32	9012B
Reactive Sulfide	6.31	J	1	2.98	10.0	mg/Kg	03/20/23 08:45	03/20/23 13:25	9034

Comments: pH result reported at temperature 22.5 °C

U = Not Detected

LOQ = Limit of Quantitation

MDL = Method Detection Limit

LOD = Limit of Detection

D = Dilution

Q = indicates LCS control criteria did not meet requirements

H = Sample Analysis Out Of Hold Time

J = Estimated Value

B = Analyte Found in Associated Method Blank

* = indicates the duplicate analysis is not within control limits.

E = Indicates the reported value is estimated because of the presence of interference.

OR = Over Range

N =Spiked sample recovery not within control limits

Report of Analysis

Client:	H2M Architects + Engineers	Date Collected:	03/16/23 10:10
Project:	Siphon	Date Received:	03/17/23
Client Sample ID:	CHAMBER-B-72-WEST	SDG No.:	O1975
Lab Sample ID:	O1975-03	Matrix:	WATER
		% Solid:	0

Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
ASTM Ammonia	0.054	J	1	0.045	0.10	mg/L	03/21/23 14:30	03/22/23 13:57	SM 4500-NH3 B plus NH3 G-11
ASTM COD	11.0		1	2.52	10.0	mg/L		03/29/23 16:22	SM 5220 D-11
ASTM Oil and Grease	0.53	U	1	0.53	5.00	mg/L		03/21/23 09:20	SW1664A
ASTM TPH	1.65	U	1	1.65	5.00	mg/L		03/21/23 10:00	SW1664

Comments:

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
D = Dilution
Q = indicates LCS control criteria did not meet requirements
H = Sample Analysis Out Of Hold Time

J = Estimated Value
B = Analyte Found in Associated Method Blank
* = indicates the duplicate analysis is not within control limits.
E = Indicates the reported value is estimated because of the presence of interference.
OR = Over Range
N =Spiked sample recovery not within control limits

Report of Analysis

Client:	H2M Architects + Engineers	Date Collected:	03/16/23 12:50
Project:	Siphon	Date Received:	03/17/23
Client Sample ID:	CHAMBER-C-72-WEST	SDG No.:	O1975
Lab Sample ID:	O1975-04	Matrix:	SOIL
		% Solid:	57.8

Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units(Dry Weight)	Prep Date	Date Ana.	Ana Met.
Oil and Grease	1120		1	69.1	216	mg/Kg		03/21/23 09:40	1664A
Paint Filter	1.00	U	1	1.00	1.00	ml/100gm		03/21/23 13:30	9095B
pH	6.82	H	1	0	0	pH		03/17/23 13:39	9045D
TS	52.5		1	1.00	5.00	%		03/17/23 10:00	SM 2540 B-15
TVS	12.0		1	1.00	10.0	%		03/17/23 16:00	160.4

Comments: pH result reported at temperature 22.7 °C

U = Not Detected

LOQ = Limit of Quantitation

MDL = Method Detection Limit

LOD = Limit of Detection

D = Dilution

Q = indicates LCS control criteria did not meet requirements

H = Sample Analysis Out Of Hold Time

J = Estimated Value

B = Analyte Found in Associated Method Blank

* = indicates the duplicate analysis is not within control limits.

E = Indicates the reported value is estimated because of the presence of interference.

OR = Over Range

N = Spiked sample recovery not within control limits

Report of Analysis

Client:	H2M Architects + Engineers	Date Collected:	03/16/23 12:50
Project:	Siphon	Date Received:	03/17/23
Client Sample ID:	CHAMBER-C-72-WEST	SDG No.:	O1975
Lab Sample ID:	O1975-05	Matrix:	SOIL
		% Solid:	100

Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
Corrosivity	6.82	H	1	0	0	pH		03/17/23 13:39	9045D
Ignitability	NO		1	0	0	oC		03/21/23 15:55	1030
Reactive Cyanide	0.011	U	1	0.011	0.050	mg/Kg	03/21/23 08:45	03/21/23 12:32	9012B
Reactive Sulfide	7.91	J	1	2.98	10.0	mg/Kg	03/20/23 08:45	03/20/23 13:27	9034

Comments: pH result reported at temperature 22.7 °C

U = Not Detected

LOQ = Limit of Quantitation

MDL = Method Detection Limit

LOD = Limit of Detection

D = Dilution

Q = indicates LCS control criteria did not meet requirements

H = Sample Analysis Out Of Hold Time

J = Estimated Value

B = Analyte Found in Associated Method Blank

* = indicates the duplicate analysis is not within control limits.

E = Indicates the reported value is estimated because of the presence of interference.

OR = Over Range

N =Spiked sample recovery not within control limits

Report of Analysis

Client:	H2M Architects + Engineers	Date Collected:	03/16/23 12:50
Project:	Siphon	Date Received:	03/17/23
Client Sample ID:	CHAMBER-C-72-WEST	SDG No.:	O1975
Lab Sample ID:	O1975-06	Matrix:	WATER
		% Solid:	0

Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
ASTM Ammonia	10.5	OR	1	0.045	0.10	mg/L	03/21/23 14:30	03/22/23 13:57	SM 4500-NH3 B plus NH3 G-11
ASTM COD	24.0		1	2.52	10.0	mg/L		03/29/23 16:24	SM 5220 D-11
ASTM Oil and Grease	0.53	U	1	0.53	5.00	mg/L		03/21/23 09:20	SW1664A
ASTM TPH	1.65	U	1	1.65	5.00	mg/L		03/21/23 10:00	SW1664

Comments:

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
D = Dilution
Q = indicates LCS control criteria did not meet requirements
H = Sample Analysis Out Of Hold Time

J = Estimated Value
B = Analyte Found in Associated Method Blank
* = indicates the duplicate analysis is not within control limits.
E = Indicates the reported value is estimated because of the presence of interference.
OR = Over Range
N =Spiked sample recovery not within control limits

Report of Analysis

Client:	H2M Architects + Engineers	Date Collected:	03/16/23 12:50
Project:	Siphon	Date Received:	03/17/23
Client Sample ID:	CHAMBER-C-72-WESTDL	SDG No.:	O1975
Lab Sample ID:	O1975-06DL	Matrix:	WATER
		% Solid:	0

Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
ASTM Ammonia	10.2	D	10	0.45	1.00	mg/L	03/21/23 14:30	03/22/23 14:19	SM 4500-NH3 B plus NH3 G-11

Comments:

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
D = Dilution
Q = indicates LCS control criteria did not meet requirements
H = Sample Analysis Out Of Hold Time

J = Estimated Value
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E = Indicates the reported value is estimated because of the presence of interference.
OR = Over Range
N =Spiked sample recovery not within control limits



284 Sheffield Street, Mountainside, New Jersey - 07092

Phone: (908) 789 8900 Fax: (908) 789 8922

LAB CHRONICLE

OrderID:	O1975	OrderDate:	3/17/2023 10:20:41 AM
Client:	H2M Architects + Engineers	Project:	Siphon
Contact:	Stephen I. Kaplan	Location:	--Select--,J11

LabID	ClientID	Matrix	Test	Method	Sample Date	Prep Date	Anal Date	Received
O1975-01	CHAMBER-B-72-WEST	SOIL			03/16/23 10:10			03/17/23
			Oil and Grease	1664A			03/21/23 09:40	
			Paint Filter	9095B			03/21/23 13:15	
			pH	9045D			03/17/23 13:35	
			TS	SM2540 B			03/17/23 10:00	
			TVS	160.4			03/17/23 16:00	
O1975-02	CHAMBER-B-72-WEST	SOIL			03/16/23 10:10			03/17/23
			Corrosivity	9045D			03/17/23 13:35	
			Ignitability	1030			03/21/23 15:48	
			Reactive Cyanide	9012B		03/21/23	03/21/23 12:32	
			Reactive Sulfide	9034		03/20/23	03/20/23 13:25	
O1975-03	CHAMBER-B-72-WEST	WATER			03/16/23 10:10			03/17/23
			ASTM Ammonia	SM4500-NH3		03/21/23	03/22/23 13:57	
			ASTM COD	SM5220 D			03/29/23 16:22	

LAB CHRONICLE

			ASTM Oil and Grease	1664A		03/21/23 09:20	
			ASTM TPH	1664		03/21/23 10:00	
O1975-04	CHAMBER-C-72-WEST	SOIL			03/16/23 12:50		03/17/23
			Oil and Grease	1664A		03/21/23 09:40	
			Paint Filter	9095B		03/21/23 13:30	
			pH	9045D		03/17/23 13:39	
			TS	SM2540 B		03/17/23 10:00	
			TVS	160.4		03/17/23 16:00	
O1975-05	CHAMBER-C-72-WEST	SOIL			03/16/23 12:50		03/17/23
			Corrosivity	9045D		03/17/23 13:39	
			Ignitability	1030		03/21/23 15:55	
			Reactive Cyanide	9012B		03/21/23 12:32	
			Reactive Sulfide	9034		03/20/23 13:27	
O1975-06	CHAMBER-C-72-WEST	WATER			03/16/23 12:50		03/17/23
			ASTM Ammonia	SM4500-NH3		03/21/23 13:57	
			ASTM COD	SM5220 D		03/29/23 16:24	
			ASTM Oil and Grease	1664A		03/21/23 09:20	
			ASTM TPH	1664		03/21/23 10:00	



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LAB CHRONICLE

O1975-06DL	CHAMBER-C-72-WEST DL	WATER			03/16/23 12:50		03/17/23
			ASTM Ammonia	SM4500-NH3		03/21/23	03/22/23 14:19

SHIPPING DOCUMENTS

CHEMTECH

CHAIN OF CUSTODY RECORD

284 Sheffield Street, Mountainside, NJ 07092
(908) 789-8900 • Fax (908) 789-8922
www.chemtech.net

CHEMTECH PROJECT NO. 01975
QUOTE NO. 01975
COC Number 2038928 01976

13

13.1

CLIENT INFORMATION

REPORT TO BE SENT TO:
COMPANY: H2m Architects + Engineers
ADDRESS: 290 Broad hollow Rd, Suite 400E
CITY Melville STATE: NY ZIP: 11747
ATTENTION: Stephen Kaplan
PHONE: 631-756-8000 x1613 FAX:

CLIENT PROJECT INFORMATION

PROJECT NAME: Norham Blvd Siphon cleaning
PROJECT NO.: NYDP2001 LOCATION: Queens
PROJECT MANAGER: Stephen Kaplan
e-mail: SKaplan@h2m.com
PHONE: 631-756-8000 x1613 FAX:

CLIENT BILLING INFORMATION

BILL TO: H2m Architects + Engineers PO#:
ADDRESS: 290 Broad hollow Rd, Suite 400E
CITY Melville STATE: NY ZIP: 11747
ATTENTION: Stephen Kaplan PHONE: 631-756-8000 x1613

ANALYSIS

DATA TURNAROUND INFORMATION

FAX (RUSH) _____ DAYS*
HARDCOPY (DATA PACKAGE): _____ DAYS*
EDD: _____ DAYS*
*TO BE APPROVED BY CHEMTECH
STANDARD HARDCOPY TURNAROUND TIME IS 10 BUSINESS DAYS

DATA DELIVERABLE INFORMATION

☐ Level 1 (Results Only) ☐ Level 4 (QC + Full Raw Data)
☐ Level 2 (Results + QC) ☐ NJ Reduced ☐ US EPA CLP
☐ Level 3 (Results + QC) ☐ NYS ASP A ☐ NYS ASP B
+ Raw Data) ☐ Other _____
☐ EDD FORMAT _____

Full White Pine analysis

PRESERVATIVES

COMMENTS

CHEMTECH SAMPLE ID	PROJECT SAMPLE IDENTIFICATION	SAMPLE MATRIX	SAMPLE TYPE		SAMPLE COLLECTION		# OF BOTTLES										COMMENTS ← Specify Preservatives A-HCl D-NaOH B-HNO3 E-ICE C-H2SO4 F-OTHER
			COMP	GRAB	DATE	TIME		1	2	3	4	5	6	7	8	9	
1.	Chamber B 72" West	Sludge		X	3/16/23	10:10	12	X									
2.	Chamber C 72" West	Sludge		X	3/16/23	12:50	12	X									
3.																	
4.																	
5.																	
6.																	
7.																	
8.																	
9.																	
10.																	

SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE POSSESSION INCLUDING COURIER DELIVERY

RELINQUISHED BY SAMPLER: 1. <u>Paul Nester / H2m</u>	DATE/TIME: <u>3/16/23</u>	RECEIVED BY: 1. <u>[Signature]</u>	Conditions of bottles or coolers at receipt: ☐ COMPLIANT ☐ NON-COMPLIANT ☐ COOLER TEMP <u>4.6°C</u> Comments: <u>See Attached White Pine Facility Parameters</u>
RELINQUISHED BY SAMPLER: 2. <u>FedEx</u>	DATE/TIME: <u>3-17-23</u> <u>0930</u>	RECEIVED BY: 2. <u>[Signature]</u>	
RELINQUISHED BY SAMPLER: 3.	DATE/TIME:	RECEIVED BY: 3.	

Page ____ of ____

CLIENT: ☐ Hand Delivered ☐ Other _____
CHEMTECH: ☐ Picked Up ☐ Field Sampling

Shipment Complete
☐ YES ☐ NO

Form U Parameters (White Pines)

TCLP Metals

Arsenic
Barium
Cadmium
Chromium
Copper
Lead
Mercury
Nickel
Selenium
Silver
Zinc
Aluminum
Iron

TCLP Volatiles

Benzene
Carbon Tetrachloride
Chlorobenzene
Chloroform
1,2 Dichloroethane
1,1 Dichloroethene
2-Butanone (MEK)
Pyridine
Tetrachloroethene
Trichloroethene
Vinyl Chloride
Toluene
Ethylbenzene
Xylene

TCLP Semi-Volatiles

O-Cresol
M-Cresol
P-Cresol
1,4 Dichlorobenzene
2,4 Dinitrotoluene
Hexachlorobenzene
Hexachloro 1,3 butadiene
Hexachloroethane
Nitrobenzene
Pentachlorophenol
2,4,5 Trichlorophenol
2,4,6 Trichlorophenol

TCLP Pesticides/Herbicides

Chlordane
Endrin
Heptachlor
Heptachlor Epoxide
Lindane
Methoxychlor
Toxaphene
2,4 D
2,4,5 TP Silvex

Total Analysis

pH
Free Liquids
Ignitability
Oil & Grease
Total Petroleum Hydrocarbons
PCBs
Reactive Cyanide
Reactive Sulfide
Total Organic Halogens
Total Solids
Total Volatile Solids

ASTM Leachate

Ammonia-Nitrogen
Chemical Oxygen Demand
Oil & Grease
Total Petroleum Hydrocarbons



Package
US Airbill

FedEx
Tracking
Number

8174 4091 9575

1 From

Date

Sender's
Name

MARK WOOD

Phone

303 274-5400

Company

PACIFIC WESTERN TECHNOLOGIES

Address

3000 YOUNGFIELD ST STE 300

Dept./Floor/Suite/Room

City

DENVER

State

CO

ZIP

80212-6552

2 Your Internal Billing Reference

100 002 02A 221

3 To

Recipient's
Name

Emanuel Hedvat

Phone

708 728-3140

Company

Chemtech Consulting Group

Address

284 Sheffield St.

We cannot deliver to P.O. boxes or P.O. ZIP codes.

Dept./Floor/Suite/Room

Address

Use this line for the HOLD location address or for continuation of your shipping address.

City

Mountainside

State

NJ

ZIP

07092



8174 4091 9575

0389/12722
2/28/23
0727
49°C

Form
10 No.

0215

Recipient's Copy

4 Express Package Service

*To most locations.

Packages up to 150 lbs.
For packages over 150 lbs., use the
FedEx Express Weight US Airbill.

Next Business Day

☒ FedEx First Overnight

*Earliest next business morning delivery to select locations. Friday shipments will be delivered on Monday unless Saturday Delivery is selected.

☐ FedEx Priority Overnight

Next business morning.* Friday shipments will be delivered on Monday unless Saturday Delivery is selected.

☐ FedEx Standard Overnight

Next business afternoon.* Saturday Delivery NOT available.

2 or 3 Business Days

☐ FedEx 2Day A.M.

Second business morning.* Saturday Delivery NOT available.

☐ FedEx 2Day

Second business afternoon.* Thursday shipments will be delivered on Monday unless Saturday Delivery is selected.

☐ FedEx Express Saver

Third business day.* Saturday Delivery NOT available.

5 Packaging

*Declared value limit \$500.

☐ FedEx Envelope*

☐ FedEx Pak*

☐ FedEx Box

☐ FedEx Tube

☒ Other

6 Special Handling and Delivery Signature Options

Fees may apply. See the FedEx Service Guide.

☐ Saturday Delivery

NOT available for FedEx Standard Overnight, FedEx 2Day A.M., or FedEx Express Saver.

☐ No Signature Required

Package may be left without obtaining a signature for delivery.

☒ Direct Signature

Someone at recipient's address may sign for delivery.

☐ Indirect Signature

If no one is available at recipient's address, someone at a neighboring address may sign for delivery. For residential deliveries only.

Does this shipment contain dangerous goods?

One box must be checked.

☒ No

☐ Yes

As per attached Shipper's Declaration.

☐ Yes

Shipper's Declaration not required.

☐ Dry Ice

Dry ice, 9, UN 1845 _____ x _____ kg

☐ Cargo Aircraft Only

Restrictions apply for dangerous goods — see the current FedEx Service Guide.

7 Payment Bill to:

Enter FedEx Acct. No. below

☒ Sender

Acct. No. in Section 1 will be billed.

☐ Recipient

☐ Third Party

Obtain recip.
FedEx Acct. No. ☐

Total Packages

Total Weight

lbs.

Your liability is limited to US\$100 unless you declare a higher value. See the current FedEx Service Guide for details.

611

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fedex.com 1800.GoFedEx 1800.463.3339

fedex.com 1800.GoFedEx 1800.463.3339

Laboratory Certification

Certified By	License No.
CAS EPA CLP Contract	68HERH20D0011
Connecticut	PH-0649
DOD ELAP (L-A-B)	L2219
Maine	2022022
Maryland	296
New Hampshire	255422
New Jersey	20012
New York	11376
Pennsylvania	68-00548
Soil Permit	P330-21-00137
Texas	T104704488-22-15

SUB DATA PACKAGE

PROJECT NAME : SIPHON

PROJECT # : O1976

H2M ARCHITECTS + ENGINEERS

290 Broad Hollow Road

Suite 400E

Melville, NY - 11747

Phone No: 631-756-8000

ORDER ID : O1976

ATTENTION : Stephen I. Kaplan



Cover Page

Order ID : O1976

Project ID : Siphon

Client : H2M Architects + Engineers

Lab Sample Number

O1976-01
O1976-02

Client Sample Number

CHAMBER-B-72-WEST
CHAMBER-C-72-WEST

I certify that the data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hard copy data package has been authorized by the laboratory manager or his designee, as verified by the following signature.

Signature : _

N. N. Pandya

APPROVED

By Nimisha Pandya QA/QC Supervisor at 9:33 am, Mar 31, 2023

Date: 3/31/2023

NYDOH CERTIFICATION NO - 11376

NJDEP CERTIFICATION NO - 20012



Summit Environmental Technologies, Inc.
3310 Win St.
Cuyahoga Falls, Ohio 44223
TEL: (330) 253-8211 FAX: (330) 253-4489
Website: <http://www.settek.com>

March 23, 2023

PM
Chemtech
284 Sheffield Street
Mountainside, NJ 07092
TEL:
FAX:
RE: O1976

Dear PM:

Order No.: 23031468

Summit Environmental Technologies, Inc. received 2 sample(s) on 3/21/2023 for the analyses presented in the following report.

There were no problems with the analytical events associated with this report unless noted in the Case Narrative.

Quality control data is within laboratory defined or method specified acceptance limits except where noted.

If you have any questions regarding these tests results, please feel free to call the laboratory.

Sincerely,

Jennifer Woolf

Project Manager

3310 Win St.
Cuyahoga Falls, Ohio 44223

Arkansas 88-0735, California 2943, Colorado, Connecticut PH-0108, Florida NELAC E87688, Idaho OH00923, Illinois 200061, Indiana C-OH-13, ISO/IEC 17025:2017 119125 L22-544, Kansas E-10347, Kentucky (Underground Storage Tank) 3, Kentucky 90146, Maryland 339, Michigan 9988, Minnesota 1780279, Nevada OH009232020-1, New Hampshire 2996, New Jersey OH006, New York 11777, North Carolina 39705 and 631, North Dakota R-201, Ohio DW, Ohio VAP CL0052, Oklahoma 2019-155, Oregon OH200001, Pennsylvania 68-01335, Rhode Island LA000317, South Carolina 92016001, Texas T104704466-19-16, Utah OH009232020-12, Virginia VELAP 10381, West Virginia 9957C



Summit Environmental Technologies, Inc.
3310 Win St.
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TEL: (330) 253-8211 FAX: (330) 253-4489
Website: <http://www.settek.com>

Case Narrative

WO#: 23031468
Date: 3/23/2023

CLIENT: Chemtech
Project: O1976

WorkOrder Narrative:

23031468: This report in its entirety consists of the following documents: Cover Letter, Case Narrative, Analytical Results, QC Summary Report, Applicable Accreditation Information, Chain-of-Custody, Cooler Receipt Form, and other applicable forms as necessary. All documents contain the Summit Environmental Technologies, Inc., Work Order Number assigned to this report.

Summit Environmental Technologies, Inc., holds the accreditations/certifications listed at the bottom of the cover letter that may or may not pertain to this report. Please refer to the "Accreditation Program Analytes Report" for accredited analytes list.

The information contained in this analytical report is the sole property of Summit Environmental Technologies, Inc. and that of the customer. It cannot be reproduced in any form without the consent of Summit Environmental Technologies, Inc. or the customer for which this report was issued. The results contained in this report are only representative of the samples received. Conditions can vary at different times and at different sampling conditions. Summit Environmental Technologies, Inc. is not responsible for use or interpretation of the data included herein.

All results for Solid Samples are reported on an "as received" or "wet weight" basis unless indicated as "dry weight" using the "-dry" designation on the reporting units.

This report is believed to meet all of the requirements of the accrediting agency, where applicable. Any comments or problems with the analytical events associated with this report are noted below.

WorkOrder Comments:

Sample analyzed by SW846: 9023 EOX due to matrix; Results reported on "as received" basis.

Original

These commonly used Qualifiers and Acronyms may or may not be present in this report.

Qualifiers

U	The compound was analyzed for but was not detected above the MDL.
J	The reported value is greater than the Method Detection Limit but less than the Reporting Limit.
H	The hold time for sample preparation and/or analysis was exceeded. Not Clean Water Act compliant.
D	The result is reported from a dilution.
E	The result exceeded the linear range of the calibration or is estimated due to interference.
MC	The result is below the Minimum Compound Limit.
*	The result exceeds the Regulatory Limit or Maximum Contamination Limit.
m	Manual integration was used to determine the area response.
d	Manual integration in which peak was deleted
N	The result is presumptive based on a Mass Spectral library search assuming a 1:1 response.
P	The second column confirmation exceeded 25% difference.
C	The result has been confirmed by GC/MS.
X	The result was not confirmed when GC/MS Analysis was performed.
B	The analyte was detected in the Method Blank at a concentration greater than the RL.
MB+	The analyte was detected in the Method Blank at a concentration greater than the MDL.
G	The ICB or CCB contained reportable amounts of analyte.
QC-/+	The CCV recovery failed low (-) or high (+).
R/QDR	The RPD was outside of accepted recovery limits.
QL-/+	The LCS or LCSD recovery failed low (-) or high (+).
QLR	The LCS/LCSD RPD was outside of accepted recovery limits.
QM-/+	The MS or MSD recovery failed low (-) or high (+).
QMR	The MS/MSD RPD was outside of accepted recovery limits.
QV-/+	The ICV recovery failed low (-) or high (+).
S	The spike result was outside of accepted recovery limits.
W	Samples were received outside temperature limits (0° – 6° C). Not Clean Water Act compliant.
Z	Deviation; A deviation from the method was performed; Please refer to the Case Narrative for additional information

Acronyms

ND	Not Detected	RL	Reporting Limit
QC	Quality Control	MDL	Method Detection Limit
MB	Method Blank	LOD	Level of Detection
LCS	Laboratory Control Sample	LOQ	Level of Quantitation
LCSD	Laboratory Control Sample Duplicate	PQL	Practical Quantitation Limit
QCS	Quality Control Sample	CRQL	Contract Required Quantitation Limit
DUP	Duplicate	PL	Permit Limit
MS	Matrix Spike	RegLvl	Regulatory Limit
MSD	Matrix Spike Duplicate	MCL	Maximum Contamination Limit
RPD	Relative Percent Different	MinCL	Minimum Compound Limit
ICV	Initial Calibration Verification	RA	Reanalysis
ICB	Initial Calibration Blank	RE	Reextraction
CCV	Continuing Calibration Verification	TIC	Tentatively Identified Compound
CCB	Continuing Calibration Blank	RT	Retention Time
RLC	Reporting Limit Check	CF	Calibration Factor

This list of Qualifiers and Acronyms reflects the most commonly utilized Qualifiers and Acronyms for reporting. Please refer to the Analytical Notes in the Case Narrative for any Qualifiers or Acronyms that do not appear in this list or for additional information regarding the use of these Qualifiers on reported data.

Original



Summit Environmental Technologies, Inc.
3310 Win St.
Cuyahoga Falls, Ohio 44223
TEL: (330) 253-8211 FAX: (330) 253-4489
Website: <http://www.settek.com>

Workorder Sample Summary

WO#: 23031468
23-Mar-23

CLIENT: Chemtech
Project: O1976

Lab SampleID	Client Sample ID	Tag No	Date Collected	Date Received	Matrix
23031468-001	Chamber-B-72-West		3/16/2023 10:10:00 AM	3/21/2023 9:50:00 AM	Solid
23031468-002	Chamber-C-72-West		3/16/2023 12:50:00 PM	3/21/2023 9:50:00 AM	Solid



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DATES REPORT

WO#: 23031468

23-Mar-23

Client: Chemtech

Project: O1976

Sample ID	Client Sample ID	Collection Date	Matrix	Test Name	Leachate Date	Prep Date	Analysis Date
23031468-001A	Chamber-B-72-West	3/16/2023 10:10:00 AM	Solid	Extractable Organic Halides (EOX) (9			3/22/2023 1:00:00 PM
23031468-002A	Chamber-C-72-West	3/16/2023 12:50:00 PM		Extractable Organic Halides (EOX) (9			3/22/2023 1:00:00 PM

Original



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3310 Win St.
Cuyahoga Falls, Ohio 44223
TEL: (330) 253-8211 FAX: (330) 253-4489
Website: <http://www.settek.com>

WO#: 23031468
Date Reported: 3/23/2023
Company: Chemtech
Address: 284 Sheffield Street
Mountainside NJ 07092
Received: 3/21/2023
Project#: O1976

Client ID#	Lab ID#	Collected	Analyte	Result Units	Qual	Matrix	Method	DF	MDL	PQL	Run	Analyst
Chamber-B-72-West	001	3/16/2023	Extractable Organic Halides	19.5 mg/Kg	J	Solid	EPA 9023	1	11.7	40.0	3/22/2023	KMW

Client ID#	Lab ID#	Collected	Analyte	Result Units	Qual	Matrix	Method	DF	MDL	PQL	Run	Analyst
Chamber-C-72-West	002	3/16/2023	Extractable Organic Halides	13.0 mg/Kg	J	Solid	EPA 9023	1	11.7	40.0	3/22/2023	KMW



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Accreditation Program Analytes Report

WO#: 23031468
23-Mar-23

Client: Chemtech

State: NY

Project: O1976

Program Name: DW_WW_SCM_NI

Sample ID	Matrix	Test Name	Analyte	Status
23031468-001A	Solid	Extractable Organic Halides (EOX) (9023)	Extractable Organic Halides	A
23031468-002A	Solid	Extractable Organic Halides (EOX) (9023)	Extractable Organic Halides	A

Key

DW_WW_SCM_NE A Accredited

Original #1



Summit Environmental Technologies, Inc.
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Cuyahoga Falls, Ohio 44223
TEL: (330) 253-8211 FAX: (330) 253-4489
Website: <http://www.settek.com>

QC SUMMARY REPORT

WO#: 23031468

23-Mar-23

Client: Chemtech

Project: O1976

BatchID: R160340

Sample ID: MB-R160340	SampType: MBLK	TestCode: EOX_S(9023) Units: mg/Kg			Prep Date:				RunNo: 160340		
Client ID: PBS	Batch ID: R160340	TestNo: SW9023			Analysis Date: 3/22/2023				SeqNo: 4261034		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Extractable Organic Halides	ND	40.0									U

Sample ID: LCS-R160340	SampType: LCS	TestCode: EOX_S(9023) Units: mg/Kg				Prep Date:			RunNo: 160340		
Client ID: LCSS	Batch ID: R160340	TestNo: SW9023				Analysis Date: 3/22/2023			SeqNo: 4261035		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Extractable Organic Halides	53.8	40.0	50.00	0	108	81	114				

Sample ID: 23031468-002AMS		SampType: MS		TestCode: EOX_S(9023)		Units: mg/Kg		Prep Date:		RunNo: 160340			
Client ID: Chamber-C-72-West		Batch ID: R160340		TestNo: SW9023				Analysis Date: 3/22/2023		SeqNo: 4262010			
Analyte		Result		PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Extractable Organic Halides		550		40.0	500.0	13.00	107	78	116				

Sample ID: 23031468-002AMSD	SampType: MSD	TestCode: EOX_S(9023)	Units: mg/Kg	Prep Date:	RunNo: 160340						
Client ID: Chamber-C-72-West	Batch ID: R160340	TestNo: SW9023		Analysis Date: 3/22/2023	SeqNo: 4262011						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Extractable Organic Halides	520	40.0	500.0	13.00	101	78	116	550.0	5.61	20	

Qualifiers:	B	Analyte detected in the associated Method Blank	E	Value above quantitation range	H	Holding times for preparation or analy
	J	Analyte detected below quantitation limits	M	Manual Integration used to determine area response	MC	Value is below Minimum Compound
	ND	Not Detected	OG1		P	Second column confirmation exceeds
	PL	Permit Limit	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit

Original



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Website: <http://www.settek.com>

QC SUMMARY REPORT

WO#: 23031468

23-Mar-23

Client: Chemtech

Project: O1976

BatchID: R160340

Sample ID: 23031468-002AMSD		SampType: MSD		TestCode: EOX_S(9023)		Units: mg/Kg		Prep Date:			RunNo: 160340		
Client ID: Chamber-C-72-West		Batch ID: R160340		TestNo: SW9023		Analysis Date: 3/22/2023			SeqNo: 4262011				
Analyte		Result		PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Sample ID: MB-R160340	SampType: MBLK	TestCode: EOX_S(9023)	Units: mg/Kg	Prep Date:	RunNo: 160340						
Client ID: PBS	Batch ID: R160340	TestNo: SW9023		Analysis Date: 3/22/2023	SeqNo: 4262014						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Extractable Organic Halides	ND	40.0									U

Qualifiers: B Analyte detected in the associated Method Blank
J Analyte detected below quantitation limits
ND Not Detected
PL Permit Limit

E Value above quantitation range
M Manual Integration used to determine area response
OG1
R RPD outside accepted recovery limits

H Holding times for preparation or analy
MC Value is below Minimum Compound
P Second column confirmation exceeds
RL Reporting Detection Limit

Original

CHEMTECH

CHAIN OF CUSTODY RECORD

284 Sheffield Street, Mountainside, NJ 07092
(908) 789-8900 • Fax (908) 789-8922
www.chemtech.net

CHEMTECH PROJECT NO. 01975
QUOTE NO. 01975
COC Number 2038928 01976

CLIENT INFORMATION

REPORT TO BE SENT TO:
COMPANY: H2m Architects + Engineers
ADDRESS: 290 Broad hollow Rd, Suite 400E
CITY Melville STATE: NY ZIP: 11747
ATTENTION: Stephen Kaplan
PHONE: 631-756-8000 x1613 FAX:

CLIENT PROJECT INFORMATION

PROJECT NAME: Norham Blvd Siphon cleaning
PROJECT NO.: NYDP2001 LOCATION: Queens
PROJECT MANAGER: Stephen Kaplan
e-mail: SKaplan@h2m.com
PHONE: 631-756-8000 x1613 FAX:

CLIENT BILLING INFORMATION

BILL TO: H2m Architects + Engineers PO#:
ADDRESS: 290 Broad hollow Rd, Suite 400E
CITY Melville STATE: NY ZIP: 11747
ATTENTION: Stephen Kaplan PHONE: 631-756-8000 x1613

ANALYSIS

DATA TURNAROUND INFORMATION

FAX (RUSH) _____ DAYS*
HARDCOPY (DATA PACKAGE): _____ DAYS*
EDD: _____ DAYS*
*TO BE APPROVED BY CHEMTECH
STANDARD HARDCOPY TURNAROUND TIME IS 10 BUSINESS DAYS

DATA DELIVERABLE INFORMATION

☐ Level 1 (Results Only) ☐ Level 4 (QC + Full Raw Data)
☐ Level 2 (Results + QC) ☐ NJ Reduced ☐ US EPA CLP
☐ Level 3 (Results + QC) ☐ NYS ASP A ☐ NYS ASP B
+ Raw Data) ☐ Other _____
☐ EDD FORMAT _____

Full White Pine analysis

PRESERVATIVES

COMMENTS

CHEMTECH SAMPLE ID	PROJECT SAMPLE IDENTIFICATION	SAMPLE MATRIX	SAMPLE TYPE		SAMPLE COLLECTION		# OF BOTTLES										← Specify Preservatives A-HCl D-NaOH B-HNO3 E-ICE C-H2SO4 F-OTHER
			COMP	GRAB	DATE	TIME		1	2	3	4	5	6	7	8	9	
1.	Chamber B 72" West	Sludge		X	3/16/23	10:10	12	X									
2.	Chamber C 72" West	Sludge		X	3/16/23	12:50	12	X									
3.																	
4.																	
5.																	
6.																	
7.																	
8.																	
9.																	
10.																	

SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE POSSESSION INCLUDING COURIER DELIVERY

RELINQUISHED BY SAMPLER: 1. <u>Paul Nester / H2m</u>	DATE/TIME: <u>3/16/23</u>	RECEIVED BY: 1. <u>[Signature]</u>	Conditions of bottles or coolers at receipt: ☐ COMPLIANT ☐ NON-COMPLIANT ☐ COOLER TEMP <u>4.6°C</u> Comments: <u>See Attached White Pine Facility Parameters</u>
RELINQUISHED BY SAMPLER: 2. <u>FedEx</u>	DATE/TIME: <u>3-17-23</u> <u>0930</u>	RECEIVED BY: 2. <u>[Signature]</u>	
RELINQUISHED BY SAMPLER:	DATE/TIME:	RECEIVED BY:	

Page ____ of ____

CLIENT: ☐ Hand Delivered ☐ Other _____
CHEMTECH: ☐ Picked Up ☐ Field Sampling

Shipment Complete
☐ YES ☐ NO

Form U Parameters (White Pines)

TCLP Metals

Arsenic
Barium
Cadmium
Chromium
Copper
Lead
Mercury
Nickel
Selenium
Silver
Zinc
Aluminum
Iron

TCLP Semi-Volatiles

O-Cresol
M-Cresol
P-Cresol
1,4 Dichlorobenzene
2,4 Dinitrotoluene
Hexachlorobenzene
Hexachloro 1,3 butadiene
Hexachloroethane
Nitrobenzene
Pentachlorophenol
2,4,5 Trichlorophenol
2,4,6 Trichlorophenol

ASTM Leachate

Ammonia-Nitrogen
Chemical Oxygen Demand
Oil & Grease
Total Petroleum Hydrocarbons

TCLP Volatiles

Benzene
Carbon Tetrachloride
Chlorobenzene
Chloroform
1,2 Dichloroethane
1,1 Dichloroethene
2-Butanone (MEK)
Pyridine
Tetrachloroethene
Trichloroethene
Vinyl Chloride
Toluene
Ethylbenzene
Xylene

TCLP Pesticides/Herbicides

Chlordane
Endrin
Heptachlor
Heptachlor Epoxide
Lindane
Methoxychlor
Toxaphene
2,4 D
2,4,5 TP Silvex

Total Analysis

pH
Free Liquids
Ignitability
Oil & Grease
Total Petroleum Hydrocarbons
PCBs
Reactive Cyanide
Reactive Sulfide
Total Organic Halogens
Total Solids
Total Volatile Solids

CHEMTECH

CHAIN OF CUSTODY RECORD

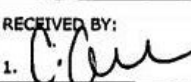
284 Sheffield Street, Mountainside, NJ 07092
(908) 789-8900 Fax (908) 789-8922
WWW.CHEMTECH.NET

23031468

Sub Lab INFORMATION	CLIENT PROJECT INFORMATION	CLIENT BILLING INFORMATION
COMPANY : Summit Enviromental Technologies I	ORDER ID : 01976	BILL TO: CHEMTECH PO# : 01976
ADDRESS : 3310 Win St	PROJECT ID:Siphon	ADDRESS : 284, Sheffield Street
CITY:Cuyahoga State :Ohio ZIP :44223	PROJECT MANAGER Samantha	CITY: Mountainside State : NJ ZIP : 07092
E-mail :	E-mail : Samantha@chemtech.net	ATTENTION :Samant
PHONE :330-253-8211	PHONE : (908) 789 8900 FAX : (908) 789 8922	PHONE : (908) 789 8900 FAX : (908) 789 8922

EDD : EXCEL NOCLEAN	Report : Level 1	Comment :
---------------------	------------------	-----------

ID	CLIENT SAMPLE IDENTIFICATION	SAMPLE MATRIX	ANALYSIS	Preservative	Method	SAMPLE COLLECTION		# OF BOTTLES	TAT DAYS
						DATE	TIME		
01	CHAMBER-B-72-WEST	Solid	TOX	Cool 4 deg C	9023	03/16/2023	10:10:00	1	10
02	CHAMBER-C-72-WEST	Solid	TOX	Cool 4 deg C	9023	03/16/2023	12:50:00	1	10

SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGES POSSESSION INCLUDING COURIER DELIVERY				
RELINQUISHED BY SAMPLER: 1. 	DATETIME: 3/21/23	RECEIVED BY: 1. 	Conditions of bottles or Coolers at receipt: 3/21/23 0950 Fedex 7716 0254 1406	☐ Compliant ☐ Non Compliant Cooler Temp 0.9+0.1 = 1.0 Ice or Cooler? ☒
RELINQUISHED BY: 2.	DATETIME:	RECEIVED BY: 2.		
RELINQUISHED BY: 3.	DATETIME:	RECEIVED BY: 3.	Page 1 of 1	☐ OVERNIGHT ☐ OVERNIGHT Shipment Complete: ☐ YES ☐ NO



Summit Environmental Technologies, Inc.
3310 Win St.
Cuyahoga Falls, Ohio 44223
TEL: (330) 253-8211 FAX: (330) 253-4489
Website: <http://www.settek.com>

Sample Log-In Check List

Client Name: **CHE-NJ-07972**

Work Order Number: **23031468**

RcptNo: **1**

Logged by: **3/21/2023 9:50:00 AM**

Completed By: **Anthony W. Britton** **3/22/2023 9:10:18 AM**

Reviewed By: **Jennifer Woolf** **3/22/2023 10:06:10 AM**

Anthony Britton
Jennifer Woolf

Chain of Custody

1. Is Chain of Custody complete? Yes ☒ No ☐ Not Present ☐
2. How was the sample delivered? FedEx
Tracking No.: 771602541406

Log In

3. Coolers are present? Yes ☒ No ☐ NA ☐
4. Shipping container/cooler in good condition? Yes ☒ No ☐
Custody seals intact on shipping container/cooler? Yes ☐ No ☐ Not Present ☒
No. Seal Date: Signed By:
5. Was an attempt made to cool the samples? Yes ☒ No ☐ NA ☐
6. Were all samples received at a temperature of $>0^{\circ}\text{C}$ to 6.0°C ? Yes ☒ No ☐ NA ☐
7. Sample(s) in proper container(s)? Yes ☒ No ☐
8. Sufficient sample volume for indicated test(s)? Yes ☒ No ☐
9. Are samples (except VOA and ONG) properly preserved? Yes ☒ No ☐
10. Was preservative added to bottles? Yes ☐ No ☒ NA ☐
11. Is the headspace in the VOA vials less than 1/4 inch or 6 mm? Yes ☐ No ☐ No VOA Vials ☒
12. Were any sample containers received broken? Yes ☐ No ☒
13. Does paperwork match bottle labels?
(Note discrepancies on chain of custody) Yes ☒ No ☐
14. Are matrices correctly identified on Chain of Custody? Yes ☒ No ☐
15. Is it clear what analyses were requested? Yes ☒ No ☐
16. Were all holding times able to be met?
(If no, notify customer for authorization.) Yes ☒ No ☐

Special Handling (if applicable)

17. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☒

Person Notified: Date:
By Whom: Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person
Regarding:
Client Instructions:

18. Additional remarks:

Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.0	Good	Not Present			

OU-5 Construction Completion Report
Sunnyside Yard, Queens, New York

APPENDIX D

Sediment Disposal Daily Work Reports and Disposal Tickets



SOLID WASTE TRANSFER STATION & MATERIALS RECOVERY FACILITY

170 Frelinghuysen Ave.
Newark, NJ 07114

February 10, 2025

Dear Mr. Dejesus:

In response to the email and associated analytics received from National Water Main Cleaning Company (NWMCC) on May 28, 2024, it is our understanding that the material represented by the analytics supplied by H2M architects + engineers (H2M) within their April 14, 2023 letter has been classified as a combination of waste types ID 27 and ID 72 and therefore is acceptable at Lemcor.

Lemcor is permitted to accept NJDEP ID waste types 10,13,13C,23,27, and ID 72, including solids collected from stormwater management systems, provided that the materials could not be classified as liquid or dry sewage sludge (ID 74 and ID 12) or septic tank clean-out waste (ID 73).

Please reach out should you have any questions.

Sincerely,

Armand E. Lembo Jr.,
President



Lemcor, Inc
170 Frelinghuysen Ave
Newark, NJ 07114

FACILITY I.D. NO. 132133
RECEIPT DOCUMENT NUMBER
20699097

Bill To:

NYC DEP-97

Hauler:

NATI037930	National WaterMain Cleaning Co 1806 HARRISON AVE KEARNY, NJ 07032-	NATI037930	National WaterMain Cleaning Co 1806 HARRISON AVE KEARNY, NJ 07032-
------------	--	------------	--

Date	Entry Time	Operator	Exit Time	Operator	Gross Weight	Tare Weight	Net Weight
9/3/2024	15:03:10	ASIA	15:33:44	ASIA	96240 LB Scale 1 48.12 Tons	60700 LB Scale 1 30.35 Tons	35540 LB 17.77 Tons

Vehicle No.	Type	Plate	Transaction Type				
AW941K	DUMPER	AW941K	Carrier DEP: 08246	Truck DEP: 111976			

Quantity	W.C.	Description/Origin	Units	Unit Price	Amount
17.77	27	DRY INDUSTRIAL WASTE New York CITY OF NEWARK - HCB FEE RECYCLING TAX	100% Ton Ton Ton		

TLC-22-026
JC-426

I hereby certify that the information provided in this form is true to the best of my knowledge.

DRIVER NAME

Print:

Signature:

9/3/24: Manhole M- ROD Cleaning

Lemcor, Inc
170 Frelinghuysen Ave
Newark, NJ 07114

FACILITY I.D. NO. 132133
RECEIPT DOCUMENT NUMBER
20699354

Bill To:

NYCDEP-97

Hauler:

NATI037930 National WaterMain Cleaning Co
1806 HARRISON AVE
KEARNY, NJ 07032-

NATI037930 National WaterMain Cleaning Co
1806 HARRISON AVE
KEARNY, NJ 07032-

Date	Entry Time	Operator	Exit Time	Operator	Gross Weight	Tare Weight	Net Weight
9/5/2024	16:35:34	ASIA	17:01:48	MURRAY	93180 LB Scale 1 46.59 Tons	55580 LB Scale 1 27.79 Tons	37600 LB 18.80 Tons
Vehicle No.	Type	Plate	Transaction Type				
AX936X	DUMPER	AX936X	Carrier DEP: 08246 Truck DEP: 103969				
Quantity	W.C.	Description/Origin			Units	Unit Price	Amount
18.80	27	DRY INDUSTRIAL WASTE New York CITY OF NEWARK - HCB FEE RECYCLING TAX			100% Ton Ton Ton		

I hereby certify that the information provided in this form is true to the best of my knowledge.

DRIVER NAME

Print:

D. Maldonado

Signature:

D. Maldonado

9-5-24: Manhole M- ROD Cleaning

Lemcor, Inc
170 Frelinghuysen Ave
Newark, NJ 07114

FACILITY I.D. NO. 132133
RECEIPT DOCUMENT NUMBER
20699527

Bill To: NY CDEF-97

Hauler:

NATI037930 National WaterMain Cleaning Co
1806 HARRISON AVE
KEARNY, NJ 07032-

NATI037930 National WaterMain Cleaning Co
1806 HARRISON AVE
KEARNY, NJ 07032-

Date	Entry Time	Operator	Exit Time	Operator	Gross Weight	Tare Weight	Net Weight	
9/6/2024	15:44:08	ASIA	16:06:20	ASIA	92460 LB Scale 1 46.23 Tons	55840 LB Scale 1 27.92 Tons	36620 LB 18.31 Tons	
Vehicle No.	Type	Plate	Transaction Type					
AX936X	DUMPER	AX936X	Carrier DEP: 08246	Truck DEP: 103969				
Quantity	W.C.	Description/Origin				Units	Unit Price	Amount
18.31	27	DRY INDUSTRIAL WASTE New York CITY OF NEWARK - HCB FEE RECYCLING TAX TLC22-026 JC-269 MH-M				100% Ton Ton Ton		
	HCB REC							

I hereby certify that the information provided in this form is true to the best of my knowledge.

DRIVER NAME

Print:

D. Maldonado

Signature:

D. Maldonado

9/6/24: Manhole M- ROD Cleaning



INSPECTOR REPORT - SEWER INVESTIGATION - CCTV

Date: 9/3/24
Day of Week: S M T W T F S
[] [] [x] [] [] [] []

Site No.: TLC22-026
Sheet No.: 1 of 2
Work Started: [x]
Work Complete: []
Work Activity Time: (Start End)

Clear Form

Contract No./Reg: TLC-22 / 20248805636
Project Description: Sewer Investigation
Borough: Queens
Contractor: NWMCC
Inspector's Name: Amanda

Daily Temp.	Low °F	High °F
General Weather Conditions	AM	PM

Location: Northern Blvd and Honeywell St - MTA Midday Storage Yard
General Activity: Cleaning Only If Other:
Subcontractor Used:

ACTIVITY	FROM	TO	DETAILS	PACP Code
Sewer Investigation CCTV: ☐ Sonar: ☐ Sewer Cleaned: ☒ Rev.: ☐	Manhole M	Chamber C	Linear Feet: _____ Size: 113x81 Shape: _____ Material: _____ Type: Combined Breaksheet Required: ☐ Upstream Depth: _____ Downstream Depth: _____	
Sewer Investigation CCTV: ☐ Sonar: ☐ Sewer Cleaned: ☒ Rev.: ☐			Linear Feet: _____ Size: 48" Shape: _____ Material: _____ Type: Combined Breaksheet Required: ☐ Upstream Depth: _____ Downstream Depth: _____	
Sewer Investigation CCTV: ☐ Sonar: ☐ Sewer Cleaned: ☒ Rev.: ☐			Linear Feet: _____ Size: 48x96 Shape: _____ Material: _____ Type: Combined Breaksheet Required: ☐ Upstream Depth: _____ Downstream Depth: _____	
Sewer Investigation CCTV: ☐ Sonar: ☐ Sewer Cleaned: ☐ Rev.: ☐				Linear Feet: _____ Size: _____ Shape: _____ Material: _____ Type: _____ Breaksheet Required: ☐ Upstream Depth: _____ Downstream Depth: _____
Sewer Investigation CCTV: ☐ Sonar: ☐ Sewer Cleaned: ☐ Rev.: ☐			Linear Feet: _____ Size: _____ Shape: _____ Material: _____ Type: _____ Breaksheet Required: ☐ Upstream Depth: _____ Downstream Depth: _____	
Sewer Investigation CCTV: ☐ Sonar: ☐ Sewer Cleaned: ☐ Rev.: ☐			Linear Feet: _____ Size: _____ Shape: _____ Material: _____ Type: _____ Breaksheet Required: ☐ Upstream Depth: _____ Downstream Depth: _____	
Sewer Investigation CCTV: ☐ Sonar: ☐ Sewer Cleaned: ☐ Rev.: ☐			Linear Feet: _____ Size: _____ Shape: _____ Material: _____ Type: _____ Breaksheet Required: ☐ Upstream Depth: _____ Downstream Depth: _____	
Sewer Investigation CCTV: ☐ Sonar: ☐ Sewer Cleaned: ☐ Rev.: ☐			Linear Feet: _____ Size: _____ Shape: _____ Material: _____ Type: _____ Breaksheet Required: ☐ Upstream Depth: _____ Downstream Depth: _____	
Manhole Inspection	MH No: _____		Material: _____ Depth: _____ BS Required: ☐	
Manhole Inspection	MH No: _____		Material: _____ Depth: _____ BS Required: ☐	
Manhole Inspection	MH No: _____		Material: _____ Depth: _____ BS Required: ☐	
Manhole Inspection	MH No: _____		Material: _____ Depth: _____ BS Required: ☐	
Manhole Inspection	MH No: _____		Material: _____ Depth: _____ BS Required: ☐	
Manhole Inspection	MH No: _____		Material: _____ Depth: _____ BS Required: ☐	
Manhole Inspection	MH No: _____		Material: _____ Depth: _____ BS Required: ☐	
Bypass Pumping			Pipe Size Bypassed: _____ Hours: _____	
Tanker Truck			Hours on Site: _____	
Outfall Protection	Outfall No: _____		Description of Protection: _____	
Highway Protection			Hours on Site: _____	
Protruding Connections Cut	Total No.: _____		Mechanically: _____ Manually: _____	
Encrust Deposits Removed	Total CF: _____		Mechanically: _____ Manually: _____	
Chemical Grouting - Mainline			Linear Feet: _____ Size: _____ Joints Tested: _____ Joints Sealed: _____	
Chemical Grouting - Laterals			Host Pipe Size: _____ Laterals Tested: _____ Laterals Sealed: _____	
Manhole Grouting	MH No: _____		Material: _____ Depth: _____	
Manhole Grouting	MH No: _____		Material: _____ Depth: _____	
Map Change Required ☐			No. of Extra Manholes: _____ No. of Missing Manholes: _____ Sewer D.N.E.: ☐ Unmapped Sewer: ☐ Wrong Sewer Size: ☐ Wrong Sewer Shape: ☐ Other (see Comments): ☐	

Comments

Additional work, critical issues, notes, etc.:

Field Sketch

Equipment and Labor				Pay Items and Site Safety					
Equipment in Use		Model / Size	Prime	Sub	Item No.	Unit	Pay Qty	Qty Chk (Initials)	Description of Item
TV Truck	☐		☐		1	Tons	17.77	AB	Cleaning
Vactor Truck	☒		☒						
Pick-up Truck	☐		☐						
Sonar Truck	☐		☐						
Attenuator	☐		☐						
Bypass Pump	☐		☐						
			☐						
			☐						
			☐						
			☐						
			☐						
Laborer Name		Title	Prime	Sub	MPT / Safety		Y	N	Remarks
Danny	Operator	☒			Plastic Barrels	☐	☐		
Victor P.	Laborer	☒			Pedestrian Barricades	☐	☐		
Jose	Laborer	☒			Timber Curbs	☐	☐		
					Timber/Breakaway Barricades	☐	☐		
					General Safety Conditions	☐	☐		
					Local Emergency Access	☐	☐		
					Fencing	☐	☐		
					Steel Plates	☐	☐		
					Arrow Board	☐	☐		
					Site Cleaned and Secured	☐	☐		
					Sewer down and running	☐	☐		

The above described work was incorporated into this project and was constructed in conformance with all plans, specifications, and standards unless otherwise noted.

Inspector's Signature

Inspector's Title

9/3/24
Date



INSPECTOR REPORT - SEWER INVESTIGATION - CCTV

Date: 9/5/24
Day of Week: S M T W T F S

Site No.: TLC22-026
Sheet No.: 1 of 2
Work Started: [checked]
Work Complete: []
Work Activity Time: (Start End)

Clear Form

Contract No./Reg: TLC-22 / 20248805636
Project Description: Sewer Investigation
Borough: Queens
Contractor: NWMCC
Inspector's Name: Amanda

Daily Temp.	Low °F	High °F
General Weather Conditions	AM	PM

Location: Northern Blvd and Honeywell St - MTA Midday Storage Yard
General Activity: Cleaning Only If Other:
Subcontractor Used:

ACTIVITY	FROM	TO	DETAILS	PACP Code				
Sewer Investigation CCTV: ☐ Sonar: ☐ Sewer Cleaned: ☒ Rev.: ☐	Manhole M	Manhole X	Linear Feet: _____ Size: 48x96 Shape: _____ Material: _____ Type: Combined Breaksheet Required: ☐ Upstream Depth: _____ Downstream Depth: _____					
Sewer Investigation CCTV: ☐ Sonar: ☐ Sewer Cleaned: ☒ Rev.: ☐			Manhole M	Chamber C	Linear Feet: _____ Size: 113x81 Shape: _____ Material: _____ Type: Combined Breaksheet Required: ☐ Upstream Depth: _____ Downstream Depth: _____			
Sewer Investigation CCTV: ☐ Sonar: ☐ Sewer Cleaned: ☒ Rev.: ☐					Manhole J	Manhole G	Linear Feet: _____ Size: 42" Shape: _____ Material: _____ Type: _____ Breaksheet Required: ☐ Upstream Depth: _____ Downstream Depth: _____	
Sewer Investigation CCTV: ☐ Sonar: ☐ Sewer Cleaned: ☐ Rev.: ☐								Linear Feet: _____ Size: _____ Shape: _____ Material: _____ Type: _____ Breaksheet Required: ☐ Upstream Depth: _____ Downstream Depth: _____
Sewer Investigation CCTV: ☐ Sonar: ☐ Sewer Cleaned: ☐ Rev.: ☐		Linear Feet: _____ Size: _____ Shape: _____ Material: _____ Type: _____ Breaksheet Required: ☐ Upstream Depth: _____ Downstream Depth: _____						
Sewer Investigation CCTV: ☐ Sonar: ☐ Sewer Cleaned: ☐ Rev.: ☐		Linear Feet: _____ Size: _____ Shape: _____ Material: _____ Type: _____ Breaksheet Required: ☐ Upstream Depth: _____ Downstream Depth: _____						
Sewer Investigation CCTV: ☐ Sonar: ☐ Sewer Cleaned: ☐ Rev.: ☐			Linear Feet: _____ Size: _____ Shape: _____ Material: _____ Type: _____ Breaksheet Required: ☐ Upstream Depth: _____ Downstream Depth: _____					
Sewer Investigation CCTV: ☐ Sonar: ☐ Sewer Cleaned: ☐ Rev.: ☐			Linear Feet: _____ Size: _____ Shape: _____ Material: _____ Type: _____ Breaksheet Required: ☐ Upstream Depth: _____ Downstream Depth: _____					
Sewer Investigation CCTV: ☐ Sonar: ☐ Sewer Cleaned: ☐ Rev.: ☐			Linear Feet: _____ Size: _____ Shape: _____ Material: _____ Type: _____ Breaksheet Required: ☐ Upstream Depth: _____ Downstream Depth: _____					
Manhole Inspection	MH No: _____		Material: _____ Depth: _____ BS Required: ☐					
Manhole Inspection	MH No: _____		Material: _____ Depth: _____ BS Required: ☐					
Manhole Inspection	MH No: _____		Material: _____ Depth: _____ BS Required: ☐					
Manhole Inspection	MH No: _____		Material: _____ Depth: _____ BS Required: ☐					
Manhole Inspection	MH No: _____		Material: _____ Depth: _____ BS Required: ☐					
Manhole Inspection	MH No: _____		Material: _____ Depth: _____ BS Required: ☐					
Manhole Inspection	MH No: _____		Material: _____ Depth: _____ BS Required: ☐					
Manhole Inspection	MH No: _____		Material: _____ Depth: _____ BS Required: ☐					
Bypass Pumping			Pipe Size Bypassed: _____ Hours: _____					
Tanker Truck			Hours on Site: _____					
Outfall Protection	Outfall No: _____		Description of Protection: _____					
Highway Protection			Hours on Site: _____					
Protruding Connections Cut	Total No.: _____		Mechanically: _____ Manually: _____					
Encrust Deposits Removed	Total CF: _____		Mechanically: _____ Manually: _____					
Chemical Grouting - Mainline			Linear Feet: _____ Size: _____ Joints Tested: _____ Joints Sealed: _____					
Chemical Grouting - Laterals			Host Pipe Size: _____ Laterals Tested: _____ Laterals Sealed: _____					
Manhole Grouting	MH No: _____		Material: _____ Depth: _____					
Manhole Grouting	MH No: _____		Material: _____ Depth: _____					
Map Change Required ☐			No. of Extra Manholes: _____ No. of Missing Manholes: _____ Sewer D.N.E.: ☐ Unmapped Sewer: ☐ Wrong Sewer Size: ☐ Wrong Sewer Shape: ☐ Other (see Comments): ☐					

Comments

Additional work, critical issues, notes, etc.:

Field Sketch

Equipment and Labor

Equipment in Use	Model / Size	Prime	Sub
TV Truck			
Vactor Truck	✓	✗	
Pick-up Truck			
Sonar Truck			
Attenuator			
Bypass Pump			
Laborer Name	Title	Prime	Sub
Danny	Operator	✗	
Victor P.	Laborer	✗	
Jose	Laborer	✗	
Victor F.	Operator	✗	
Luis	Operator	✗	

Pay Items and Site Safety

Item No.	Unit	Pay Qty	Qty Chk (Initials)	Description of Item
1	Tons	38.58	AB	Cleaning
MPT / Safety		Y	N	Remarks
Plastic Barrels				
Pedestrian Barricades				
Timber Curbs				
Timber/Breakaway Barricades				
General Safety Conditions				
Local Emergency Access				
Fencing				
Steel Plates				
Arrow Board				
Site Cleaned and Secured				
Sewer down and running				

The above described work was incorporated into this project and was constructed in conformance with all plans, specifications, and standards unless otherwise noted.

Inspector's Signature

Inspector's Title

9/5/24
Date



INSPECTOR REPORT - SEWER INVESTIGATION - CCTV

Date: 9/6/24
Day of Week: S M T W T F S

Site No.: TLC22-026
Sheet No.: 1 of 2
Work Started: [checked]
Work Complete: []
Work Activity Time: (Start End)

Clear Form

Contract No./Reg: TLC-22 / 20248805636
Project Description: Sewer Investigation
Borough: Queens
Contractor: NWMCC
Inspector's Name: Amanda

Daily Temp.	Low °F	High °F
General Weather Conditions	AM	PM

Location: Northern Blvd and Honeywell St - MTA Midday Storage Yard
General Activity: Cleaning Only If Other:
Subcontractor Used:

ACTIVITY	FROM	TO	DETAILS	PACP Code				
Sewer Investigation CCTV: ☐ Sonar: ☐ Sewer Cleaned: ☒ Rev.: ☐	Manhole M	Manhole X	Linear Feet: _____ Size: 48x96 Shape: _____ Material: _____ Type: Combined Breaksheet Required: ☐ Upstream Depth: _____ Downstream Depth: _____					
Sewer Investigation CCTV: ☐ Sonar: ☐ Sewer Cleaned: ☒ Rev.: ☐			Manhole M	Chamber C	Linear Feet: _____ Size: 113x81 Shape: _____ Material: _____ Type: Combined Breaksheet Required: ☐ Upstream Depth: _____ Downstream Depth: _____			
Sewer Investigation CCTV: ☐ Sonar: ☐ Sewer Cleaned: ☒ Rev.: ☐					Manhole K	Manhole H	Linear Feet: _____ Size: 42" Shape: _____ Material: _____ Type: _____ Breaksheet Required: ☐ Upstream Depth: _____ Downstream Depth: _____	
Sewer Investigation CCTV: ☐ Sonar: ☐ Sewer Cleaned: ☐ Rev.: ☐								Linear Feet: _____ Size: _____ Shape: _____ Material: _____ Type: _____ Breaksheet Required: ☐ Upstream Depth: _____ Downstream Depth: _____
Sewer Investigation CCTV: ☐ Sonar: ☐ Sewer Cleaned: ☐ Rev.: ☐		Linear Feet: _____ Size: _____ Shape: _____ Material: _____ Type: _____ Breaksheet Required: ☐ Upstream Depth: _____ Downstream Depth: _____						
Sewer Investigation CCTV: ☐ Sonar: ☐ Sewer Cleaned: ☐ Rev.: ☐		Linear Feet: _____ Size: _____ Shape: _____ Material: _____ Type: _____ Breaksheet Required: ☐ Upstream Depth: _____ Downstream Depth: _____						
Sewer Investigation CCTV: ☐ Sonar: ☐ Sewer Cleaned: ☐ Rev.: ☐			Linear Feet: _____ Size: _____ Shape: _____ Material: _____ Type: _____ Breaksheet Required: ☐ Upstream Depth: _____ Downstream Depth: _____					
Sewer Investigation CCTV: ☐ Sonar: ☐ Sewer Cleaned: ☐ Rev.: ☐			Linear Feet: _____ Size: _____ Shape: _____ Material: _____ Type: _____ Breaksheet Required: ☐ Upstream Depth: _____ Downstream Depth: _____					
Manhole Inspection	MH No: _____		Material: _____ Depth: _____ BS Required: ☐					
Manhole Inspection	MH No: _____		Material: _____ Depth: _____ BS Required: ☐					
Manhole Inspection	MH No: _____		Material: _____ Depth: _____ BS Required: ☐					
Manhole Inspection	MH No: _____		Material: _____ Depth: _____ BS Required: ☐					
Manhole Inspection	MH No: _____		Material: _____ Depth: _____ BS Required: ☐					
Manhole Inspection	MH No: _____		Material: _____ Depth: _____ BS Required: ☐					
Manhole Inspection	MH No: _____		Material: _____ Depth: _____ BS Required: ☐					
Manhole Inspection	MH No: _____		Material: _____ Depth: _____ BS Required: ☐					
Bypass Pumping			Pipe Size Bypassed: _____ Hours: _____					
Tanker Truck			Hours on Site: _____					
Outfall Protection	Outfall No: _____		Description of Protection: _____					
Highway Protection			Hours on Site: _____					
Protruding Connections Cut	Total No.: _____		Mechanically: _____ Manually: _____					
Encrust Deposits Removed	Total CF: _____		Mechanically: _____ Manually: _____					
Chemical Grouting - Mainline			Linear Feet: _____ Size: _____ Joints Tested: _____ Joints Sealed: _____					
Chemical Grouting - Laterals			Host Pipe Size: _____ Laterals Tested: _____ Laterals Sealed: _____					
Manhole Grouting	MH No: _____		Material: _____ Depth: _____					
Manhole Grouting	MH No: _____		Material: _____ Depth: _____					
Map Change Required ☐			No. of Extra Manholes: _____ No. of Missing Manholes: _____ Sewer D.N.E.: ☐ Unmapped Sewer: ☐ Wrong Sewer Size: ☐ Wrong Sewer Shape: ☐ Other (see Comments): ☐					

Comments

Additional work, critical issues, notes, etc.:

Field Sketch

Equipment and Labor

Equipment in Use	Model / Size	Prime	Sub
TV Truck			
Vactor Truck	✓	✗	
Pick-up Truck			
Sonar Truck			
Attenuator			
Bypass Pump			
Laborer Name	Title	Prime	Sub
Danny	Operator	✗	
Victor P.	Laborer	✗	
Jose	Laborer	✗	
Victor F.	Operator	✗	
Luis	Operator	✗	

Pay Items and Site Safety

Item No.	Unit	Pay Qty	Qty Chk (Initials)	Description of Item
1	Tons	39.03	AB	Cleaning
MPT / Safety		Y	N	Remarks
Plastic Barrels				
Pedestrian Barricades				
Timber Curbs				
Timber/Breakaway Barricades				
General Safety Conditions				
Local Emergency Access				
Fencing				
Steel Plates				
Arrow Board				
Site Cleaned and Secured				
Sewer down and running				

The above described work was incorporated into this project and was constructed in conformance with all plans, specifications, and standards unless otherwise noted.

9/6/24

Inspector's Signature

Inspector's Title

Date

OU-5 Construction Completion Report
Sunnyside Yard, Queens, New York

APPENDIX E

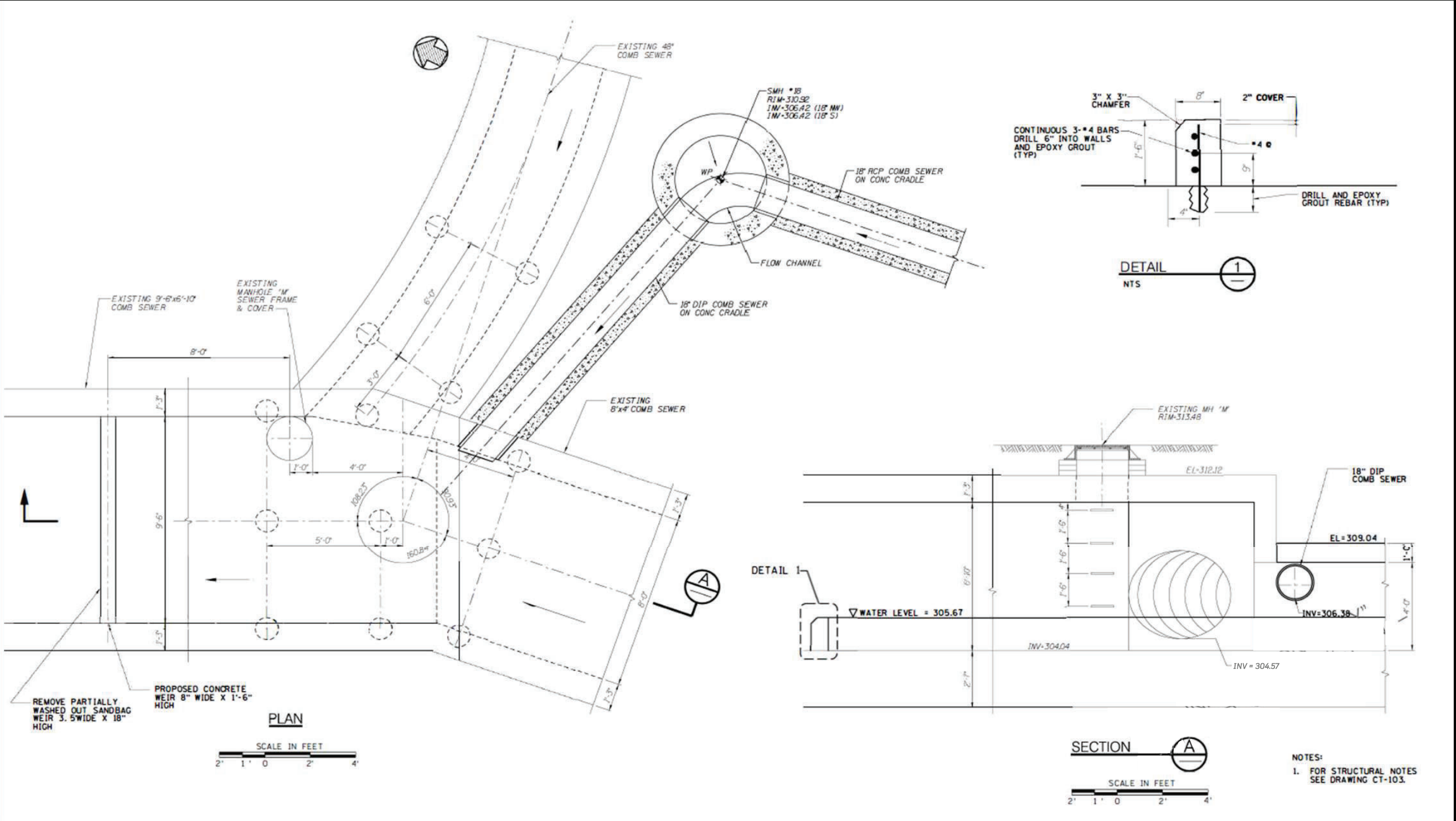
Weir Replacement Daily Work Reports and As-Built Drawing

Start Date: 9/30/2024 Sewer Completion Date: 10/4/24 Final Restoration:	City of New York Department of Environmental Protection Bureau of Water & Sewer Operations, Division of Engineering & Construction	As-Built: Weir Wall @ Manhole M Between: Amtrack Sunnyside Yard And: Northern Blvd	
Professional Engineer 11/18/24	Construction Engineers Construction Contractor: JLJ IV Enterprises Inc. Resident Engineer: Brian Koch	Project Title Reconstruction of Collapsed or Otherwise Defective Storm, Sanitary, or Combined Sewers in Various Locations, City Wide Borough: Queens	Project Information Project Number: EC-SEC24 Registration Number: 20248803509 Site No.: 24-014-Q06

Start Date: 9/30/2024
Sewer Completion Date: 10/4/24
Final Restoration:

City of New York
Department of Environmental Protection
Bureau of Water & Sewer Operations, Division of Engineering & Construction

As-Built: Weir Wall @ Manhole M
Between: Amtrack Sunnyside Yard
And: Northern Blvd



Professional Engineer

11/18/24



Construction Engineers

Construction Contractor: JLJ IV Enterprises Inc.
Resident Engineer: Brian Koch

Project Title

Reconstruction of Collapsed or Otherwise
Defective Storm, Sanitary, or Combined Sewers in
Various Locations, City Wide

Project Information

Project Number: EC-SEC24
Registration Number: 20248803509

Borough: Queens

Site No.: 24-014-Q06

Sheet 2 of 2



Rohit Aggarwala
Commissioner

Anastasios Georgelis, P.E.
Deputy Commissioner
Bureau of Water &
Sewer Operations
TasosG@dep.nyc.gov

59-17 Junction Boulevard
Flushing, NY 11373

October 9, 2024

MTA/LIRR
Sunnyside Yard
Queens, New York 11101

Attention: Mr. Tenzin Lhundup - Construction & Development - ESA

Re: Project: Permanent Weir Wall At Manhole M

Contract No.: EC-SEC24 - JLJ - Subcontractor: KNR Management
Location: 38-38 43rd Street, Long Island City, NY 11101

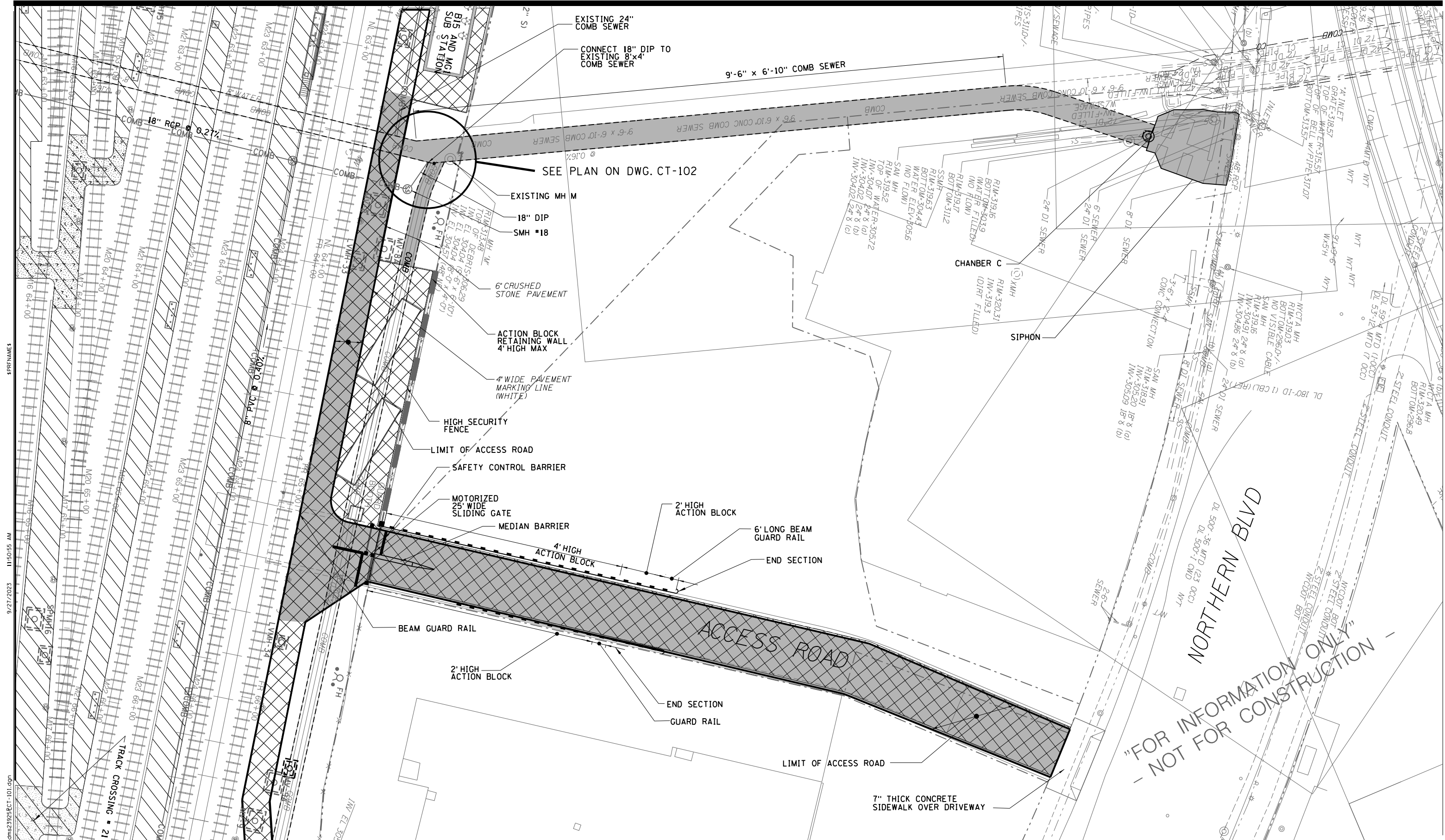
Mr. Tenzin Lhundup,

Please see the attached pages. DEP respectfully submits the attached field reports from the above mentioned project. If you have any questions please feel free to reach out to me.

Very truly yours,

A handwritten signature in blue ink, appearing to read 'B. Koch'.

Brian Koch, P.E.
Deputy Chief
Emergency Contruction



9/27/2023 11:50:55 AM \$PRNAME\$ c:\projects\self-foundation\p\ms2395\CT-101.dgn



Construction & Development



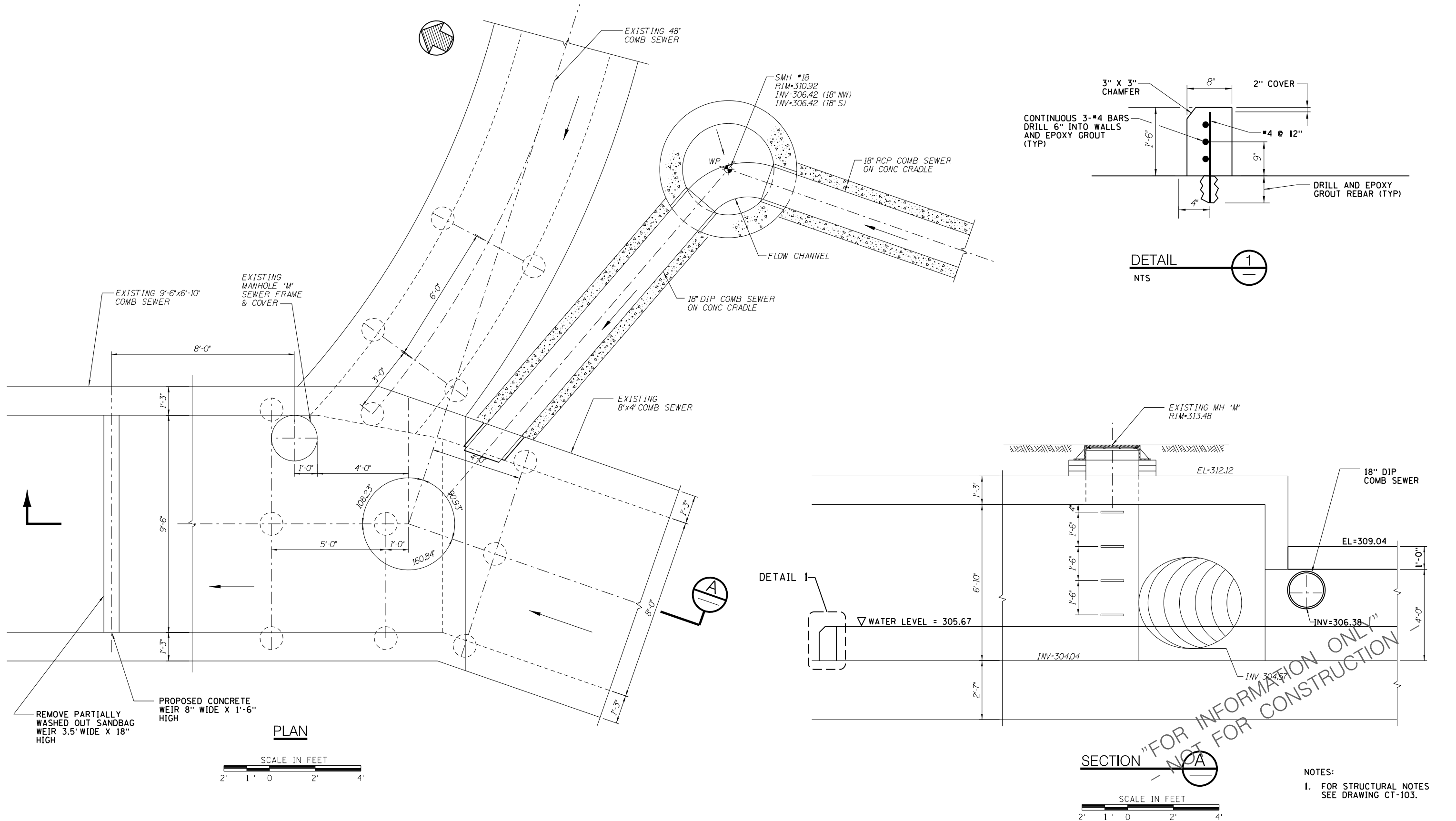
East Side Access

DESIGN OF PERMANENT WEIR AT MANHOLE M
GENERAL CIVIL – LOCATION PLAN
DWG. CT-101



WSP
STV
PARSONS
General Engineering Consultant

WSP USA
STV INCORPORATED
PARSONS TRANSPORTATION
GROUP OF NEW YORK INC.
469 Seventh Avenue • New York, NY • 10018



STRUCTURAL NOTES:

1.

CAST-IN-PLACE CONCRETE

F'C = 4,000 PSI
2.

EPOXY COATED REINFORCING STEEL (ASTM A775 GRADE 60)

FY = 60,000 PSI
3.

MINIMUM COVER FOR REINFORCEMENT

3"
4.

ALL EXPOSED CAST-IN-PLACE CONCRETE EDGES SHALL BE CHAMFERED 3/4" X 3/4" UNLESS NOTED OTHERWISE

CONCRETE

- A. USE PREMIX HIGH STRENGTH CONCRETE MIX BY SAKRETE OR APPROVED EQUAL
- B. THE WATER USED FOR MIXING CONCRETE SHALL BE POTABLE FRESH WATER.
- C. ALLOWED SLUMP SHALL BE 4 INCHES +/- 1 IN.
- D. SUBMIT PRODUCT FOR ENGINEER'S APPROVAL

EPOXY GROUTING OF REINFORCING

- A. NONSHRINK EPOXY GROUT SHALL BE A 100% SOLIDS, VERY HIGH STRENGTH, HIGH PERFORMANCE, PRE-PACKAGED SYSTEM CONTAINING THERMOSETTING EPOXY RESINS, EXPANSIVE ADDITIVES AND INERT FILLERS. THE MANUFACTURER SHALL BE ISO 9001 CERTIFIED AND HAVE AT LEAST 10 YEARS EXPERIENCE IN THE MANUFACTURE OF NONSHRINK EPOXY GROUTS. THE MANUFACTURER SHALL OFFER TECHNICAL SERVICES AND PROVIDE A REPRESENTATIVE AT THE JOBSITE FOR PRODUCT TRAINING PRIOR TO PRODUCT INSTALLATION UPON FIVE DAYS ADVANCE NOTICE.
- B. THE MATERIAL SHALL MEET ALL THE FOLLOWING TYPICAL PERFORMANCE CRITERIA WHEN POST CURED AT 70°F
 1. COMPRESSIVE STRENGTH, ASTM C 579 B* UNIT TYPE STANDARD GRADE STRENGTH COMP. STRENGTH 1 DAY 16,500 PSI, 7 DAY 17,500 PSI, 28 DAYS 20,000 PSI
 2. HEIGHT CHANGE, ASTM C 827 70 F POSITIVE EXPANSION POSITIVE EXPANSION
 3. EFFECTIVE BEARING AREA 95%
 4. TENSILE STRENGTH, ASTM C 307 70 F (2,000 PSI)
 5. CREEP, ASTM C 1181 1 YEAR, 400 PSI, 140F 0.5 X 10-3 IN/IN 1.0 X 10-3 IN/IN
 6. FLEXURAL STRENGTH, ASTM C 580 5,000 PSI
 7. BOND TO CONCRETE, ASTM C 882 CONCRETE FAILURE CONCRETE FAILURE
 8. COEFFICIENT OF EXPANSION, ASTM C 531 16 X 10-6 IN/IN/OF 17 X 10-6 IN/IN/OF
- C. CONCRETE SURFACES
SHALL BE DIMENSIONALLY STABLE, FREE OF OIL, GREASE, LAITANCE AND OTHER CONTAMINANTS. MECHANICALLY ROUGHEN SURFACES TO OBTAIN CLEAN, SOUND CONCRETE BY ACCEPTABLE MECHANICAL MEANS, EXPOSING COARSE AGGREGATE. USE TOOLS SUCH AS PNEUMATIC CHIPPING GUNS FOR MECHANICAL SURFACE PREPARATION. DO NOT USE JACK HAMMERS TO PREPARE CONCRETE SURFACES.
- D. PRIOR TO PLACEMENT, CONCRETE SURFACES SHALL BE VISIBLY DRY AND BLOWN FREE OF DUST AND DEBRIS USING OIL-FREE COMPRESSED AIR
- E. SUBMIT EPOXY PRODUCT FOR ENGINEER'S APPROVAL.

EXECUTION

- DEWATER THE WORK AREA BY BLOCKING THE FLOW IN THE CULVERT UP STREAM PUMPING THE FLOW AROUND THE WORK AREA.
- REMOVE ALL ACCUMULATED DEBRIS INCLUDING ANY REMAINING SANDBAGS FROM THE WORK AREA. THOROUGHLY CLEAN ALL SURFACES OF THE EXISTING CONCRETE THAT WILL ABOUT THE NEW CONCRETE.
- DRILL AND EPOXY GROUT REBAR AS SHOWN ON THE PLANS.
- FORM THE WEIR AS SHOWN ON THE PLANS.
- CAST IN PLACE CONCRETE.
- FORMS CAN BE STRIPPED AFTER 48 HOURS AND INSPECTION BY THE ENGINEER. ANY VOIDS OR HONEYCOMBING SHALL BE REPAIRED.
- DEWATERING CAN BE REMOVED WITH THE ENGINEERS ACCEPTANCE OF THE CONCRETE WORKMANSHIP.

"FOR INFORMATION ONLY"
- NOT FOR CONSTRUCTION -

Location: LIRR Yard Skillman Ave

Borough: Queens

Date/Day: 9/20/24

Contractor: SLS Subcontractor / KNR

Project #

Time: 7:00am - 3:30pm

Resident Engineer: Yannis Dapoutis

Contract # EC-SEC-24

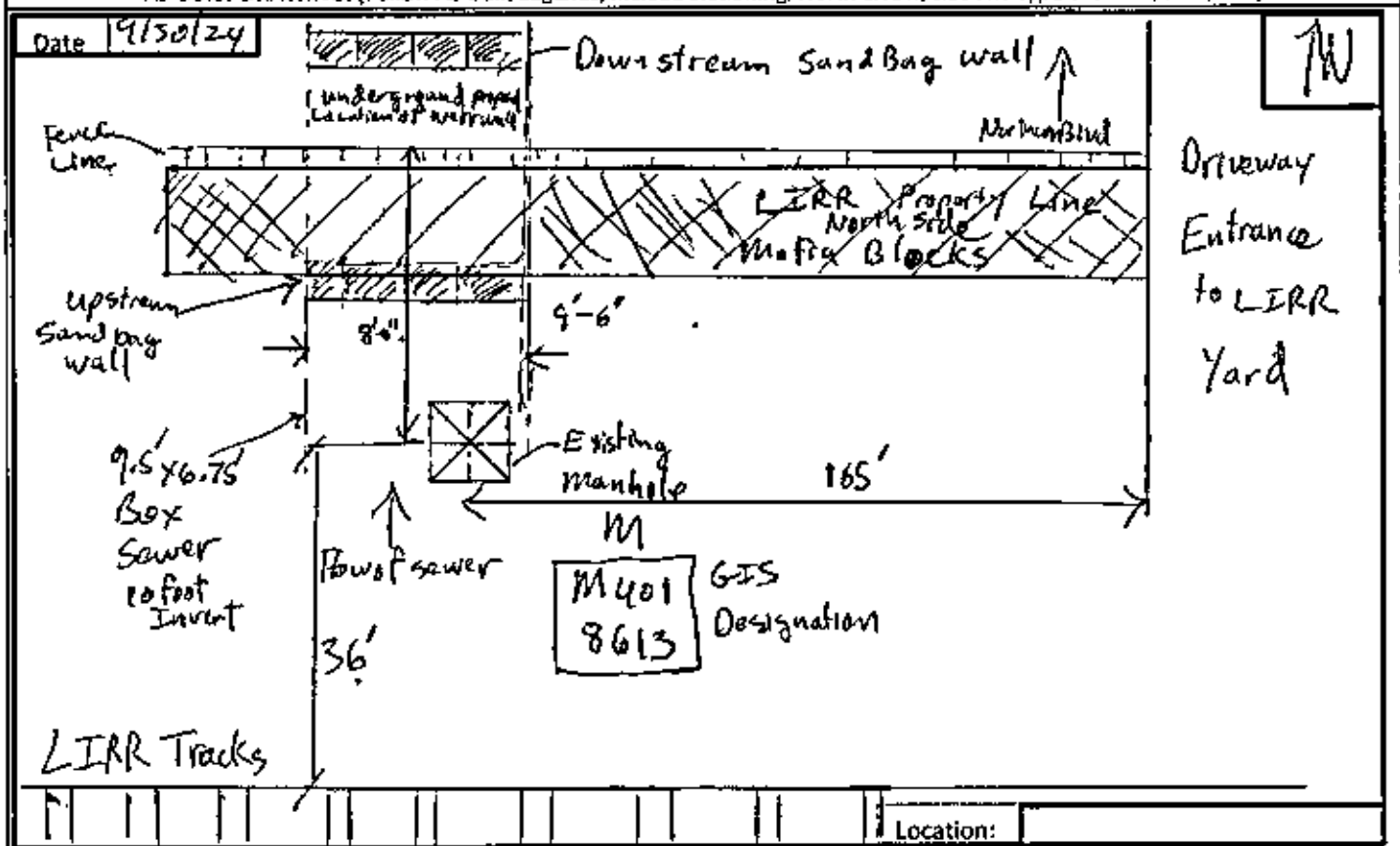
Weather: Mild Clear

LABOR/NAME	LOCAL	TITLE	EQUIPMENT	QTY	PAY ITEMS / MATERIAL
	731	Labor/Fore		100	(1) Sand Bags 100 Quantity
	731	Laborer	Cat M318D		(2)
Narine Wood	731	Laborer			(3)
	731	Laborer	Dump Truck		(4)
	1556	Timberman	Utility Truck	1	(5)
	15	Exca Oper.	Flat Bed		(6)
	282	Teamster	Boom Truck		
Kumar Ramlogan	14	operator	Compressor		
			Pump (3" trash) / w. hose	1	3" trash pump was used
William Lema	1010	Formatter	Jumping Jack Tamper		to attempt pumping
			Plate Tamper		
Nick Dellasperanza	45	Carpenter	Roller		
			Steel Plates		
			Barricades		W.O.B
			Laser		
			Circular / Chain Saw		

Description of Work: Located existing manhole M on the north property line of the LIRR Yard. Attempted to place sandbags inside of the 9.5' x 6.75' Box sewer to form an up stream and down stream wall (18 inches high). The bottom of the sewer pipe invert is 10 feet deep. Attempted to pump the work area it was determined that more robust pumps were required. Site was cleaned + secured.

Utilities Interference: No direct utility interference.

AS-BUILT DRAWING: (Follow As-built Legends; include stationing, North arrow, size and type of sewer, flow, etc.)



September 30, 2024 (Day 1)



September 30th (Day 1): Contractor (KNR Management) attempted to sandbag the sewer but due to unknown flow issues at the siphon the contractor was unsuccessful.

INSPECTOR'S DAILY REPORT

Record#

Location: LIRR Yard Skillman Ave Borough: Queens Date/Day: 10/2/2024
 Contractor: SLC Subcontractor KNR Project # Time: 7:00am - 3:30pm
 Resident Engineer: Yannick Dupont Contract # EC-SEC-24 Weather: Mild Clear

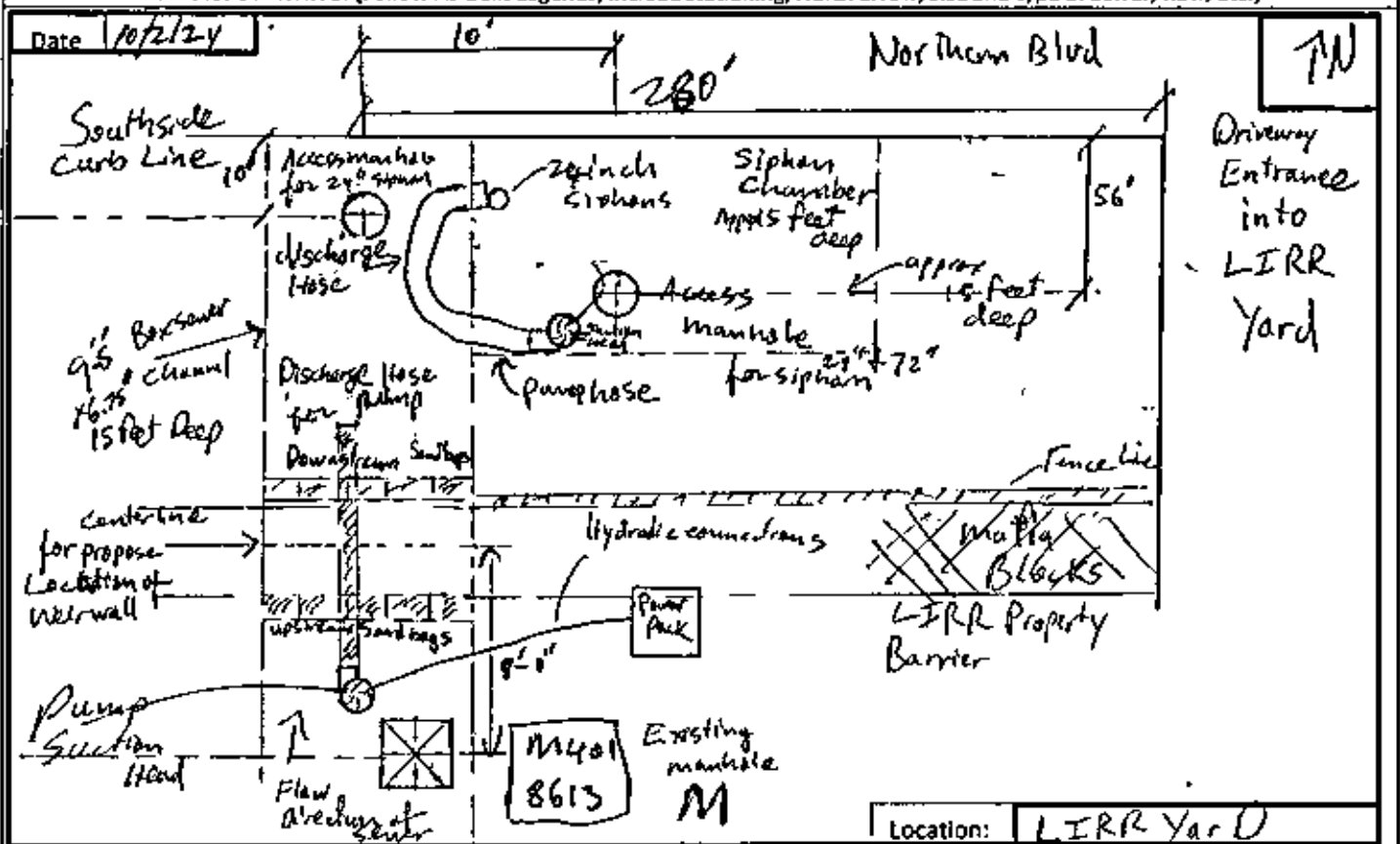
LABOR/NAME	LOCAL	TITLE	EQUIPMENT	QTY	PAY ITEMS / MATERIAL
	731	Labor/Fore		3	1) Waiters (3)
	731	Laborer	Cat M318D		2)
Norme Nane	731	Laborer			3) Rental of power pack pumps (2)
	731	Laborer	Dump Truck		4)
	1556	Timberman	Utility Truck		5)
	15	Exca Oper.	Flat Bed		6)
	282	Teamster	Boom Truck		
Kamer Ramlogan	14	Operator	Compressor		
			Pump (3" trash)/ w.hose		
			Jumping Jack Tamper		
			Plate Tamper		
			Roller		
NICK DeHasperuza	45	Carpenter	Steel Plates		
Sohn Lanza	212	Carpenter	Barricades		W.O#
			Laser		
			Circular / Chain Saw		

Description of Work: Received and set up robust 1700 GPM power pack pumps to operate in tandem to reduce the water level of our proposed work space. The pump that was set up downstream redirected all the flows into one of the two 24-inch siphon drains located on Northern Blvd. This pump ran continuously overnight & was refueled during that course of time. The other power pack pump was set up inside the LIRR Yard & was operated to insure feasibility of the work plan. This pump was shut down till the next scheduled work day. Site was cleaned & secured.

Utilities Interference:

N/A

AS-BUILT DRAWING: (Follow As-built Legends; include stationing, North arrow, size and type of sewer, flow, etc.)



October 2, 2024 (Day 2)



October 2nd (Day 2): Two (2) six (6) inch hydraulic pumps were sent to the site and set up in hopes of solving the flow issue at the siphon.

Sheet: 3 of 4

NEW YORK CITY DEP

Site #

INSPECTOR'S DAILY REPORT

Record#

Location: LIRR Yard S

Borough: Queens

Date/Day: 10/3/2024

Contractor: JLS Subcontractor KNR

Project #

Time: 7:00am - 3:30pm

Resident Engineer: Yannick Depwell

Contract # EC-56C24

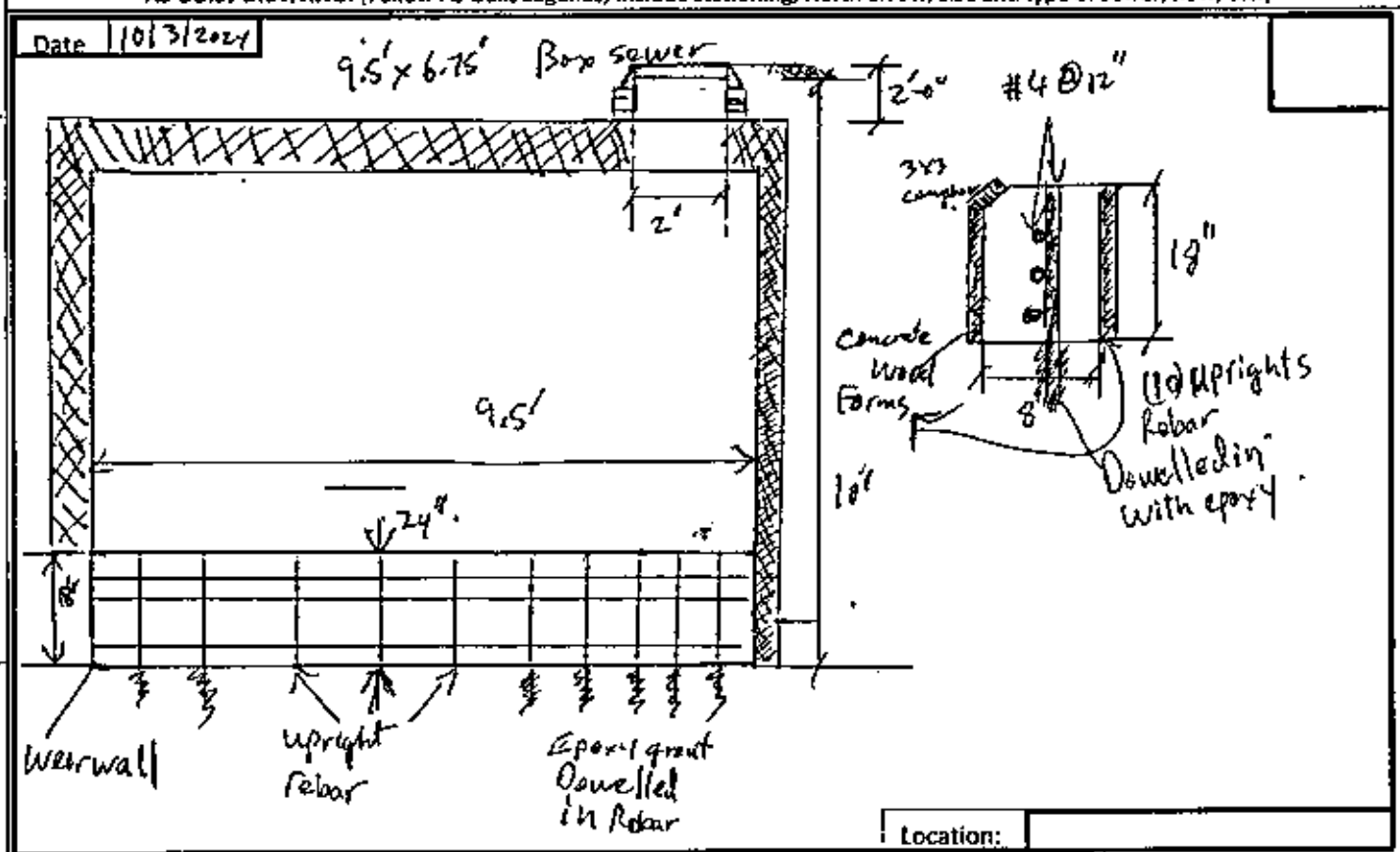
Weather: Mild Clear

LABOR/NAME	LOCAL	TITLE	EQUIPMENT	QTY	PAY ITEMS / MATERIAL
	731	Labor/Fore		1)	Wood used for Forms
	731	Laborer	Cat M318D	2)	
Alarine Ng:000	731	Laborer		3)	Rebar #4
	731	Laborer	Dump Truck	4)	Concrete 800PSI 204bags
	1556	Timberman	Utility Truck	5)	1 Bucket of Anti-Hydro
	15	Exca Oper.	Flat Bed	6)	
	282	Teamster	Boom Truck		
Kumar Ramtegan	14	operator	Compressor		
			Pump (3" trash)/ w.hose		
			Jumping Jack Tamper		
John Lau 24	212	Carpenter	Plate Tamper		
			Roller		
			Steel Plates		
William Lewis	1010	Laborer	Barricades	W.O#	
			Laser		
			Circular / Chain Saw		

Description of Work: Turned on and operated the power pack hydraulic pump in the LIRR Yard to dewater the proposed work area to the location of the weir wall. Drilled Holes to Epoxy grout Rebar into the sewer floor. (10) upright rebar was used along with (3) cross members from wall to wall of the sewer. Concrete forms were made according to the specific dimensions for the proposed wall 18" x 8" x 9.5'. All rebar was doweled into the sewer walls + floor. Concrete was mixed on site with an anti-hydro additive to better facilitate the curing process in a damp environment. Slump test was performed in the field, concrete

Utilities Interference: Mixture was less than 4" inches of slump. Site was cleared + secured. Both pumps were operated over night to keep constructed wall dry. Pumps were serviced. No utility interference overnight.

AS-BUILT DRAWING: [Follow As-built Legends; include stationing, North arrow, size and type of sewer, flow, etc.]



October 3, 2024 (Day 3)



October 3rd (Day 3): Utilization of the pumps on day two was successful and the contractor (KNR Management) doweled in rebar and installed form work in the sewer as per the design documents.



Concrete was mixed and slump test performed. Three (3) inch slump was observed.

October 3, 2024 (Day 3 Continued)



Contractor (KNR) poured the concrete weir wall.



Anti-Hydro concrete admixture was used to boost workability and stability in the wet environment.

Sheet: 4 of 4

NEW YORK CITY DEP
INSPECTOR'S DAILY REPORT

Site #

Record #

Location: LIRR Yard

Borough: Queens

Date/Day: 10/4/25

Contractor: SLX Subcontractor KNR

Project #

Time: 7:00am - 3:30pm

Resident Engineer: Yannis K. Dapwell

Contract # EC-56224

Weather: Mild clear

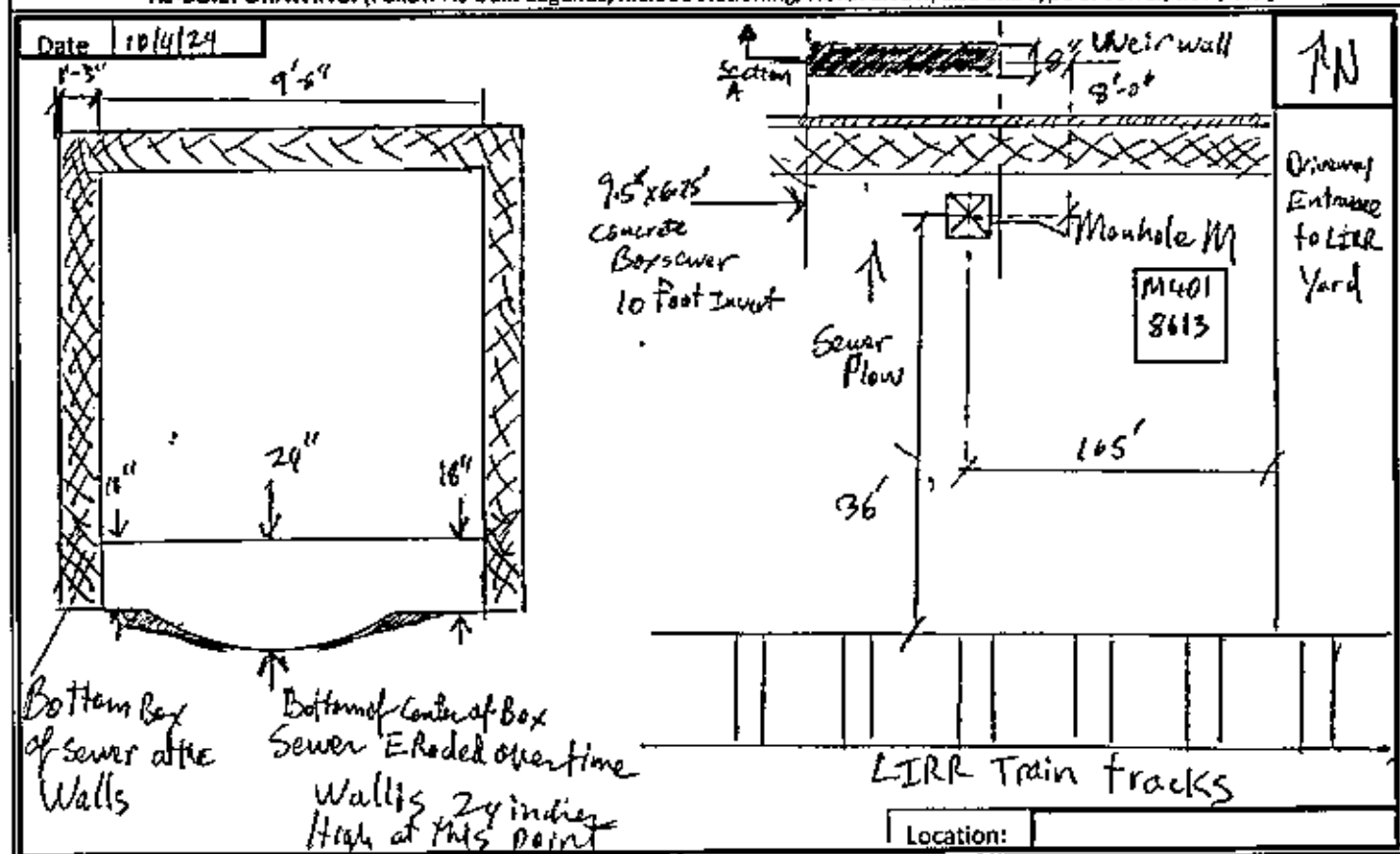
LABOR/NAME	LOCAL	TITLE	EQUIPMENT	QTY	PAY ITEMS / MATERIAL
	731	Labor/Fore			1) Oil dry absorption sand
	731	Laborer	Cat M318D		2)
Narine Nait Dao	731	Laborer			3)
	731	Laborer	Dump Truck		4)
	1556	Timberman	Utility Truck		5)
	15	Exca Oper.	Flat Bed		6)
	282	Teamster	Boom Truck		
Kumar Ramlogan	14	operator	Compressor		
			Pump (3" trash)/ w. hose		
Sohn Lanza	212	Carpenter	Jumping Jack Tamper		
			Plate Tamper		
William Lema	1010	Formster	Roller		
			Steel Plates		
Lewis Re			Barricades		W.O #
			Laser		
			Circular / Chain Saw		

Description of Work: Removed wooden concrete forms + removed downstream then upstream sand bags. Removed discharge hoses with suction heads + hydraulic hose connections. Returned sewer flow back to regular flowing conditions. All equipment and materials were removed from the sewer other than the constructed weir wall. Site was cleaned + scanned

Utilities Interference:

N/A

AS-BUILT DRAWING: (Follow As-built Legends; Include stationing, North arrow, size and type of sewer, flow, etc.)



October 4, 2024 (Day 4)



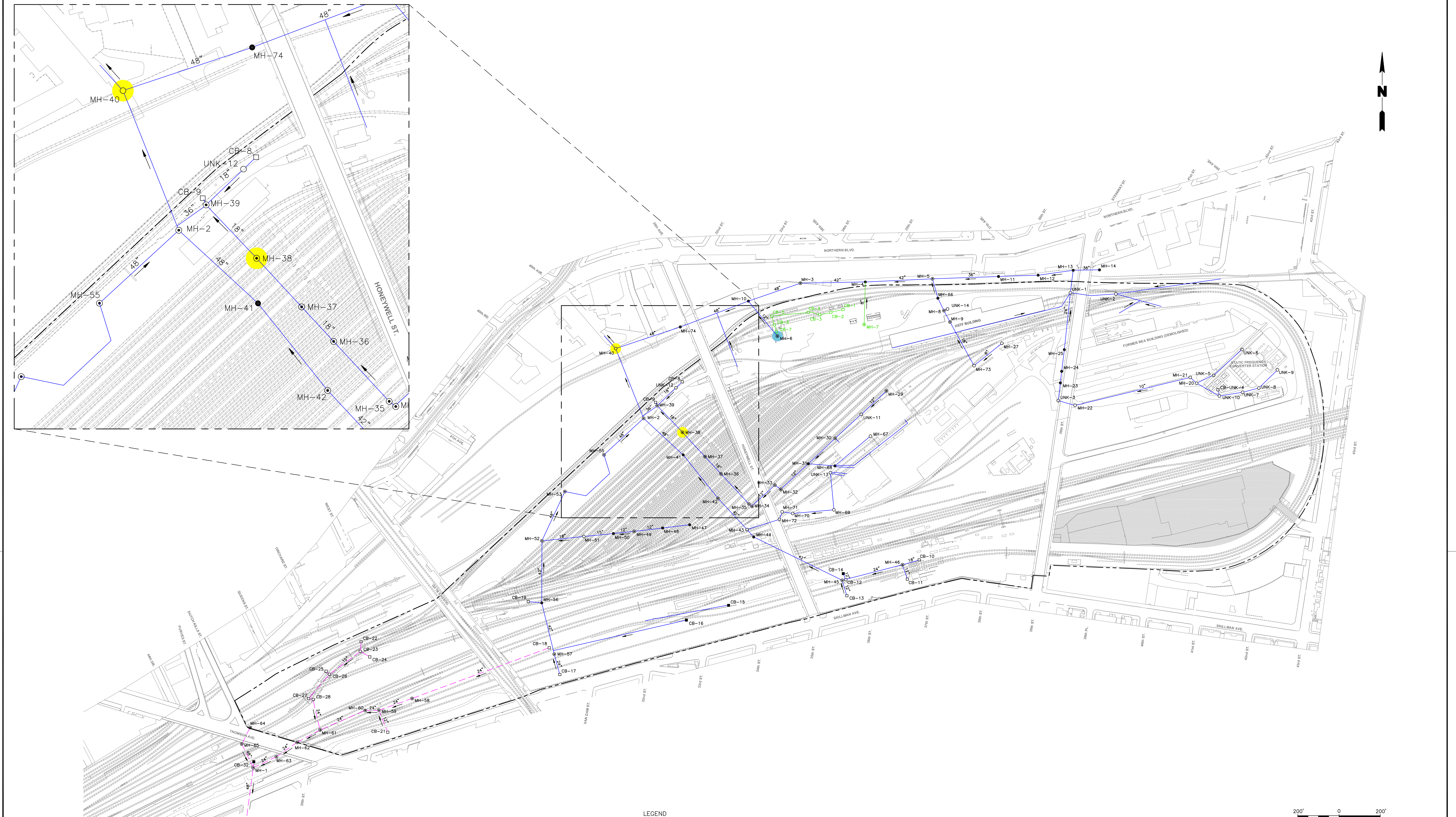
October 4 (Day 4): Contractor stripped the form work, removed sandbags, pumps, and cleaned up the site before leaving.

OU-5 Construction Completion Report
Sunnyside Yard, Queens, New York

PLATES

Site Plan Sewer System Base Map

V:\CAD\PROJECTS\005501\135_0055_0050Y135.04.DWG



LEGEND

- PRIMARY SEWER SYSTEM (COMBINED SEWER SYSTEM)
- SECONDARY SEWER SYSTEM (STORM SEWER SYSTEM)
- REMOVED OR INOPERABLE SECTIONS OF SEWER SYSTEM
- APPROXIMATE PROPERTY BOUNDARY
- PRIVATE PROPERTY NOT OWNED BY AMTRAK
- MANHOLE LOCATED IN THE FIELD BUT NOT SHOWN IN AVAILABLE SEWER MAPS
- LOCATION AND DESIGNATION OF SEWER MANHOLE WITH GRATE COVER
- LOCATION AND DESIGNATION OF SEWER MANHOLE WITH SOLID COVER
- LOCATION AND DESIGNATION OF SEWER MANHOLE NOT LOCATED OR COMPLETELY BURIED
- LOCATION AND DESIGNATION OF CATCH BASIN
- LOCATION AND DESIGNATION OF CATCH BASIN NOT LOCATED OR COMPLETELY BURIED
- DIAMETER OF SEWER PIPE (INCHES)
- DIRECTION OF SEWER FLOW
- MANHOLE IN WHICH REMEDIAL ACTIVITIES WERE CONDUCTED AS PART OF OU-5 FINAL REMEDY (MH-38 AND MH-40)
- MANHOLE REMEDIATED AN IRM (MH-6)

200' 0 200'

Title:

SITE PLAN / SEWER SYSTEM BASEMAP

OPERABLE UNIT 5 CONSTRUCTION COMPLETION REPORT
SUNNYSIDE YARD, QUEENS, NEW YORK

Prepared For:

AMTRAK

Remedial

REMEDIAL ENGINEERING, P.C.
ENVIRONMENTAL ENGINEERS

Compiled by: J.G. Date: 04JUN14
Prepared by: J.A.D. Scale: AS SHOWN
Project Mgr: R.S.K. Project: 0055.0050Y008
File: 0055.0050Y135.04.DWG

PLATE

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