

RCRA CLOSURE PLAN

**NEWSDAY LLC
235 PINELAWN ROAD
MELVILLE, NEW YORK 11747**

USEPA ID# NYD052782497

JULY 18, 2018, REV 1

Prepared for:

Newsday LLC
235 Pinelawn Road
Melville, New York 11747

Prepared by:

H2M architects + engineers
290 Broad Hollow Road, Suite 400E
Melville, New York 11747

H2M Project No.: NEWD1803



architects + engineers

**NEWSDAY LLC
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MELVILLE, NEW YORK**

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JULY 18, 2018, REV 1

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1.0 GENERAL INFORMATION

Facility Name:	Newsday LLC
Address:	235 Pinelawn Road Melville, New York 11747
Facility Contact:	Stephen Zimmerman Director of Engineering Services
Telephone No.:	(631) 843-2032
Facility Owner:	Tribune ND, LLC 435 N. Michigan Avenue Chicago, Illinois 60611
Facility Operator:	Newsday LLC 235 Pinelawn Road Melville, New York 11747
RCRA Status:	Large Quantity Generator (LQG)

1.1 Location and Facility Description

The Newsday facility occupies a 50-acre site located at 235 Pinelawn Road in Melville, Long Island, within the Town of Huntington, County of Suffolk, New York. The facility is bounded to the east by Pinelawn Road, to the north by Ruland Road, to the west by Deshon Drive, and to the South by a private service road. Properties surrounding the facility include undeveloped land to the north, Clare Rose Distributor to the south, Pinelawn Cemetery to the east, and Town Apartments to the west. A site location map is provided as **Figure 1**. The facility is improved with one (1) two-story building with a partial basement which was built in 1979 and some later additions.

Operations at the facility include printing, publishing, preparing and distributing a daily newspaper edition. Most recent activities have included, but are not limited to the following: photo platemaking, collating, printing press operation, press maintenance, facility maintenance, housekeeping, wastewater treatment, boiler treatment, cooling tower treatment, and fleet vehicle fueling. Past activities included photographic film development. The facility was historically a Large Quantity Generator (LQG) of hazardous waste, but operated as a Small Quantity Generator (SQG) since approximately 2012. Wastes predominantly include

flammable and corrosive press wastes from printing operations. Other wastes that were historically generated at the facility primarily included ink waste, spent photographic developer and spent photographic fixer. The USEPA Hazardous Waste ID is NYD052782497 and the SCDHS Hazardous Material Storage Permit ID is 02037.

1.2 Scope

This Closure Plan has been prepared by H2M architects + engineers (H2M) on behalf of Newsday LLC in accordance with the requirements outlined in 6 NYCRR Part 373-3.7, Closure and Post-Closure. This Closure Plan shall be implemented to formally cease and document completion of regulated waste activities. The purpose of completing the closure is to eliminate post-closure maintenance of hazardous waste generation sources and hazardous waste storage areas at the subject property and to minimize the potential for a post-closure release of hazardous waste to the environment. The Newsday facility location is shown in **Figure 1**, Site Location Map. The facility site plan is shown in **Figure 2**.

1.3 Process Operations – Hazardous Waste Streams

The Newsday facility generated three hazardous waste streams in its daily operations. The hazardous waste streams included ink waste, spent photographic developer and spent photographic fixer. A brief description of the processes and the wastes generated is provided below:

Ink Waste: The ink waste stream is generated from the cleaning of the printing presses at the end of each day's press run. The presses are washed with a solution of detergent, water and a naphtha solvent. The spent solution is containerized into 55-gallon drums, and then processed in an ink recycler unit. Wastes generated from the recycler unit include the ink waste, the water and naphtha with some residual ink, and a sludge byproduct consisting primarily of paper fibers. The ink that is recovered is re-used for printing. The resulting wastes are drummed and stored in the Ink Recovery Room. Due to the flashpoint and trace amounts of methylene chloride detected in the wastes, the drums were historically listed as D001 and F001 hazardous waste. Most recently these wastes have been non-hazardous. The drums are properly disposed of on a weekly basis by a licensed hauler to a permitted disposal facility.

Spent Photographic Developer and Fixer: Photographic developing was performed in a series of compartments or sinks located in five areas on the second floor of the facility. The compartments or sinks consisted of water rinses, developer and fixer solutions, each with separate drainage systems. The water rinses drained into the industrial waste system that led to the on-site Sewage Treatment Plant. The developer drainage system consisted of glass and polyethylene piping, which drained directly into a 4,000-gallon fiberglass underground storage tank (UST, SCDHS Tank No. 8). The spent fixer solution, which contained silver, also drained through glass and polyethylene piping. The fixer drainage system led to a former 100-gallon polyethylene holding

tank (SCDHS Tank No. 13) located in the Former Silver Recovery Room in the basement. The layout of the Former Silver Recovery Room is shown on **Figure 6**. The spent fixer solution was then circulated through a cathode/anode type electroplating unit to separate the entrained silver before being pumped into the 4,000-gallon UST, mixing with the developer waste. The silver was sold to a reclaimer on a monthly basis.

The 4,000-gallon UST was subsequently removed in June 1989, and the waste stream was subsequently redirected to two 2,000-gallon polyethylene aboveground storage tanks (ASTs, SCDHS Tank Nos. 26 and 27) located in a Former Photo Waste Room that was constructed circa 1989, shown in **Figures 7a and 7b**. One of the two 2,000-gallon ASTs was for emergency use only. The Former Photo Waste Room also consisted of a 100-gallon holding tank (SCDHS Tank No. 43) which held fixer solution that processed through silver reclamation equipment prior to being pumped into the 2,000-gallon ASTs. The developer solution drained directly into the ASTs. When the Former Photo Waste Room was first set up, the fixer/developer waste was pumped out two or three times a month and disposed of at a permitted disposal facility. The fixer/developer mixture that was stored in the ASTs contained elevated levels of cadmium and silver with traces of mercury and selenium. This waste was considered hazardous due to EP Toxicity; however, exact concentrations depended upon composition and silver recovery efficiency. Eventually, in an effort to reduce the volume of wastes, the waste solutions from the two 2,000-gallon ASTs were pumped into a 250-gallon holding tank (SCDHS Tank No. 28) which was then processed through wastewater treatment equipment and discharged through the industrial drain to the on-site wastewater treatment plant (WWTP).

The Former Photo Waste Room was subsequently modified circa 2002, and is shown in **Figure 8**. The two 2,000-gallon ASTs were removed. The fixer solution after running through silver recovery equipment along with the developer solution were pumped into the existing 250-gallon holding tank and a 500-gallon holding tank. From the two holding tanks, the waste mixture was discharged to the on-site WWTP. The Former Photo Waste Room was decommissioned in late 2008. A copy of the

All tanks associated with the fixer and developer wastes have been removed from the facility. Table 1 below shows the year removed for each of the aforementioned tanks. A copy of a SCDHS tank listing, dated April 10, 2014, highlighting the tanks below is provided in **Appendix B**.

Table 1. Tanks Associated with Fixer and Developer Waste.

SCDHS Tank No.	Location	Tank Capacity (gallons)	Year Removed
8	Underground, Outdoor	4,000	1989 (Tyree)
13	Aboveground, Former Silver Recovery Room	100	2001
26	Aboveground, Former Photo Waste Room	2,000	2002
27	Aboveground, Former Photo Waste Room	2,000	2002
28	Aboveground, Former Photo Waste Room	250	2003
43	Aboveground, Former Photo Waste Room	100	2002
83	Aboveground, Former Photo Waste Room	500	2009

2.0 CLOSURE

The closure of Newsday facility will include the removal of all hazardous wastes, decontamination of the hazardous waste storage areas, confirmatory rinsate and subsurface soil sampling, and removal of all wastes generated during closure.

2.1 Closure Description

Facility closure will initiate with the discontinuation of all routine process operations that generate hazardous wastes. Upon shutting down the process operations, all inventories of hazardous wastes will be disposed of in accordance with all applicable federal, state, and local regulations. Wastewaters that are generated during decontamination activities will be collected, containerized, and disposed of in accordance with federal, state and local regulations.

2.2 Closure Performance Standard

This Closure Plan is designed to ensure that the Newsday facility will require no further maintenance or controls following closure of its hazardous waste activities. The contents of the plan are structured to prevent threats to human health and the environment.

Confirmatory sampling will be conducted as part of the closure activities to document that no hazardous materials remain that can adversely impact public health or the environment. Sampling shall include floor surface rinsate sampling and subsurface soil sampling in the areas where hazardous wastes were handled and stored including the Former Silver Recovery Room and the Ink Recovery Room. In addition, rinsate sampling will be performed as necessary for the spent photographic developer, spent photographic fixer waste, and industrial waste piping to confirm that no hazardous materials remain within the piping.

When available, applicable, federal, state, and local environmental quality standards are to be used to determine the adequacy of closure. For rinsate sampling of floors and piping conducted as part of Newsday facility's RCRA Closure, the closure performance standard shall be the NYS Groundwater Effluent Limitations (Class GA), as identified in NYSDEC TOGS 1.1.1 or 6 NYCRR Part 703.6. If any rinsate sample exceeds the groundwater effluent limitations, then the corresponding area shall be re-cleaned and subsequently re-sampled. This procedure shall be repeated until all parameters are within the closure performance standards. Rinsate samples will be collected following the completion of cleaning activities and analyzed for the target analyte list (TAL) of metals, including mercury (Hg), and target compound list (TCL) of volatile organic compounds (VOCs) plus tentatively identified compounds (TICs).

For soil sampling, the closure performance standard shall be the 6 NYCRR Part 375-6.8(a) Unrestricted Use Soil Cleanup Objectives. All soil samples will be analyzed for TAL metals/Hg, and TCL VOCs + TICs.

In order to determine whether the waste piping is characterized as non-hazardous or hazardous, sampling results from the interior deposits of the piping will be compared with the 6 NYCRR Part 371.1(e) Table 1 Maximum Concentration of Contaminants for the Toxicity Characteristic (TCLP Limits). Piping deposit samples will be analyzed for TCLP metals, should sufficient material be collected.

2.3 Maximum Waste Inventory

During the closure of the Newsday facility, any existing hazardous wastes will be properly disposed of off-site. A RCRA regulated facility must identify the maximum inventory of hazardous waste stored on-site over the active life of the facility. Implementation of this closure plan may create additional wastes requiring off-site disposal such as decontamination rinse waters, analytical equipment and contaminated structures, if any. However, the maximum inventory determination excludes wastes generated as a result of facility closure. Based upon the fact that Newsday actively maintains the facility and a licensed hazardous waste transporter routinely hauls hazardous material on a regular basis, the maximum waste inventory that is expected to be on-site at any time is based on the storage capacity of the hazardous storage areas or tanks, and is shown in the following table:

Table 2. Maximum Waste Inventory of On-Site Hazardous Wastes.

Process Generating Waste	Type of Waste	Max. Quantity On-Site
Ink Waste	EPA Waste Codes: D001 & F001 (e.g., Naptha, Methylene Chloride)	1,380 Gallons ¹

(1) Maximum storage capacity of solvent storage area. Most recent ink wastes have been non-hazardous.

2.4 Closure Requirements

The activities to be performed as part of the RCRA Closure at the Newsday facility are described in the following sections:

2.4.1 Former Silver Recovery Underground Storage Tank

As described in Section 1.3, a former 4,000-gallon fiberglass underground storage tank (UST) was utilized to store spent photographic developer and spent photographic fixer waste. The UST was located outdoors near the southeast portion of the building, as shown on **Figure 3**. Following decommissioning of the 4,000-gallon UST in January 1989, the two photographic waste streams were subsequently directed into the two 2,000-gallon polyethylene aboveground storage tanks (ASTs) located in the basement of the facility. The 4,000-gallon UST was removed by Tyree Bros. Environmental Services, Inc. (Tyree) on June 12, 1989 and disposed of at Gershow Recycling in Medford, New York. The UST was removed as part of a basement boiler room expansion project. **Figure 4** shows the basement boiler expansion area and a section view of one of the basement walls. As shown on Figure 4, the basement foundation slab extended 18.5 feet below the first floor slab. The 4,000-gallon UST had a diameter of 7 feet and the bottom of the tank was situated at approximately 12.5 feet below grade. Therefore, at the time of the basement expansion project, the area with the former silver recovery UST was over-excavated to a minimum depth of 18.5 feet below grade. Copies of a request for proposal (Newsday to Tyree, dated April 17, 1989), proposal from Tyree (dated April 25, 1989), a purchase order issued by Newsday to Tyree (dated May 5, 1989), a tank removal confirmation letter (Tyree, dated June 15, 1989), and invoice (Tyree, dated June 15, 1989) are provided in **Appendix C**. As shown on Tyree's invoice, no contaminated soil was identified during the tank excavation.

2.4.2 Former Silver Recovery Room & Photo Waste Room

Hazardous wastes derived from spent photographic developer and fixer solutions generated at the Newsday facility were handled or stored within the Former Silver Recovery Room and Former Photo Waste Room. The locations of the two rooms are shown on **Figure 5**. **Figure 6** shows the layout of the Former Silver Recovery Room. **Figures 7a, 7b and 8** show the two layouts of the Former Photo Waste Room. All silver recovery and waste processing equipment, including the holding tanks, had previously been removed from the two rooms. The Former Silver Recovery Room is currently occupied by a large air compressor, while the Former Photo Waste Room is utilized for the storage of fire extinguishers. Closure of the two rooms shall include decontamination and power washing of the floors, rinsate sampling, and subsurface soil sampling. Specific tasks include the following:

1. Remove and/or properly dispose of all equipment and wastes.
2. Decontaminate and power wash the floors. Contain and collect all decontamination rinse waters and fluids for characterization and proper disposal.

3. Collect one (1) rinsate sample from each room. The proposed rinsate sampling locations in the Former Silver Recovery Room and Former Photo Waste Room are shown on **Figures 6 and 8**, respectively. The rinsate sample shall be collected and analyzed according to the Rinsate Sample Collection Protocol, the Closure Performance Standards as detailed in Section 2.2, and the site-specific Quality Assurance Project Plan (QAPP) provided in **Appendix A**. Should the sampling results exceed the Closure Performance Standards, decontamination of the floors will be repeated until subsequent confirmatory rinsate samples meet the standard.
4. Following completion of the rinsate sampling, one (1) soil boring will be advanced in each of the three former holding tank locations to sample and characterize subsurface soils below the floor slab. Since the tanks are no longer present, the soil boring locations will be approximated. The proposed soil boring locations are shown on **Figures 6 and 8**, and may be adjusted at the discretion of the NYSDEC representative on-site at the time of the closure investigation. The concrete floor shall be core drilled. Using a remote access Geoprobe® 420, or equivalent, direct-push drill rig, the soil borings will be advanced to a total depth of 8 feet below the floor slab. Representative soil samples shall be collected from depth intervals of 0-2, 2-4, 4-6 and 6-8 feet. Soils will be screened for lithology and screened with a portable photo-ionization detector (PID, MiniRAE 3000 or equivalent with a 10.6 eV lamp). The core holes will be backfilled and repaired with cement upon completion of the boring activity. Analytical sampling details are provided in the site-specific QAPP.

2.4.3 Ink Recovery Room

Ink waste is derived from the cleaning of the presses at the end of each day's press run. The waste is collected in pails and transferred to 55-gallon drums stored in the Ink Recovery Room. The location of the Ink Recovery Room on the second floor of the facility is shown in **Figure 9**. Closure of The Ink Recovery Room shall include decontamination and power washing of the floors, and collecting rinsate samples. Specific tasks include the following:

1. Remove and/or properly dispose of all equipment and wastes.
2. Decontaminate and power wash the floors. Contain and collect all decontamination rinse waters and fluids for characterization and proper disposal.
3. Collect two (2) rinsate samples from the recovery equipment area and two (2) rinsate samples from the drum storage area. The proposed rinsate sampling locations are shown on **Figure 9**. The rinsate sample shall be collected and analyzed according to the Rinsate Sample Collection Protocol, the Closure Performance Standards as detailed in Section 2.2, and the site-specific QAPP provided in **Appendix A**. Should the sampling results exceed the

Closure Performance Standards, decontamination of the floors will be repeated until subsequent confirmatory rinsate samples meet the standard.

2.4.4 Fixer, Developer, and Industrial Waste Piping

Waste piping throughout the facility included photographic fixer piping, photographic developer piping, and industrial waste piping. **Figures 10.1 to 10.5** highlight the fixer, developer and industrial waste piping throughout the entire facility. The photographic fixer waste stream contained entrained silver, while the photographic developer waste stream contained little or no entrained silver. The industrial waste stream includes the rinses from photographic developing operations and leads into the on-site sewage treatment plant. It is estimated that the fixer, developer and industrial waste piping each total approximately 1,000 feet of piping.

On April 24, 2018, three (3) 4- to 5-foot sections of the fixer piping were sampled in general accordance with the Rinsate Sample Collection Protocol. The piping was removed from three representative areas of the building, including the mail center, MER-1 room and the basement. Silty deposits were observed along the inside of the piping. In order to collect the rinsate samples, one end of each section of piping was capped utilizing a 3-inch rubber cap (i.e., Fernco). While situated in an empty 55-gallon drum, approximately 0.75 gallons of deionized water was then poured into the piping. Following a contact time of 10 minutes, the samples were transferred from the piping into laboratory-supplied sample bottles. An equipment blank was also collected by pouring the deionized water into the rubber cap. The rinsate samples were analyzed for TAL metals and VOCs. The sampling results are tabulated in **Tables 3.1 and 3.2** and compared with the NYSDEC 6 NYCRR Part 703.6 and TOGS 1.1.1 Groundwater Effluent Limitations (Class GA). The laboratory analytical report is provided as **Appendix D**. As shown in the tables, no VOCs were detected at concentrations above the Class GA Standards. Aluminum was detected in the Fixer Basement sample at a concentration of 3.21 mg/l, exceeding the Class GA Standard of 2 mg/l. Iron was detected in the Fixer MER-1 sample at a concentration of 11.7 mg/l, exceeding the Class GA Standard of 0.6 mg/l. Based on these sampling results, decontamination of the sections of piping in the basement and MER-1 room is necessary. Subsequent rinsate sampling will also be performed.

An additional seventeen (17) representative sections of piping throughout the building will be removed and sampled, as necessary. Visual inspections of the interior of the piping will be conducted in order to determine whether additional rinsate sampling is necessary. If the interior of the piping is observed to show significant differences in comparison to the three sections of fixer piping that were sampled, such as quantity, texture, odor, or discoloration of the silty deposits, the piping will be sampled and analyzed. If the silty deposits are observed to be similar, a sample will not be collected. Sampling and analysis will be performed in general accordance with the Rinsate Sample Collection Protocol, the Closure Performance Standards as detailed in Section 2.2, and the site-specific QAPP provided in **Appendix A**. Should the

sampling results exceed the Closure Performance Standards, decontamination of the piping will be repeated until subsequent confirmatory rinse samples meet the standard.

In addition, the seventeen sections of piping will also be inspected to determine if sufficient material can be scraped from the interior deposits to analyze for TCLP metals. Should there be sufficient material, a sample will be collected from the piping section. If there is not sufficient material, then no sample will be collected. The samples will be analyzed for TCLP metals via EPA Method 1131/6010. The sampling results will be compared with the TCLP Limits identified in 6 NYCRR Part 371.3(e) in order to determine whether the piping is characterized as non-hazardous or hazardous. Should the sampling results exceed the TCLP Limits, the hazardous sections of piping will be removed and properly disposed of in accordance with federal, state and local regulations. If the sampling results indicate that the piping is non-hazardous, the piping will be left in place and handled as C&D debris during future building demolition or renovation.

3.0 CLOSURE CERTIFICATION

Following completion of the closure activities identified herein, a Closure Certification Report will be prepared to document all procedures and the results of sampling and analysis. The Closure Certification Report will be signed by the owner or operator and an independent licensed Professional Engineer, and submitted to the NYSDEC for approval. The proposed outline for the Closure Certification Report is provided below:

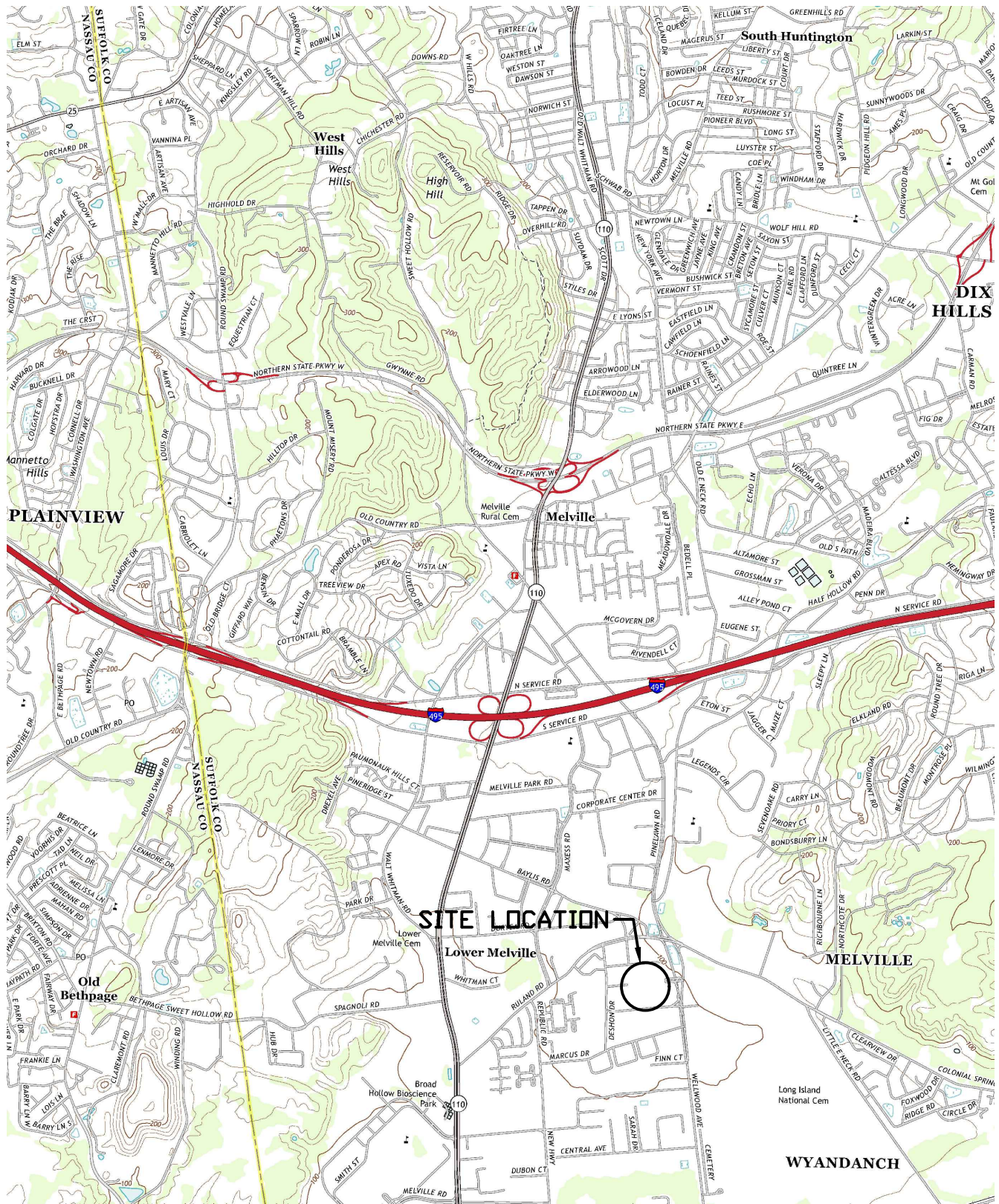
- 1.0 GENERAL INFORMATION
 - 1.1 Location and Facility Description
 - 1.2 Scope
 - 1.3 Process Operations
- 2.0 CLOSURE ACTIVITIES
- 3.0 CLOSURE PROCEDURES
- 4.0 SAMPLING PROGRAM
 - 4.1 Sampling Objective
 - 4.2 Sampling Methodology
 - 4.3 Sampling Results
 - 4.4 Quality Assurance/Data Validation
- 4.0 CLOSURE PERFORMANCE GUIDELINES
- 6.0 ENGINEER'S CERTIFICATION
- 7.0 FACILITY OWNER'S CERTIFICATION

4.0 CLOSURE SCHEDULE

Closure of the Newsday facility is expected to require approximately eight weeks for completion. This includes two weeks for closure activity, four weeks for confirmatory sample analysis, and two weeks for reporting. If the confirmatory sampling results indicate that additional closure activities are required (i.e., additional decontamination, piping removal, etc.), then the closure schedule will be revised at that time.

FIGURES

X:\NEWSD (Newsday) - 445302018\NEWSD1803 - (RCRA Closure)\02-BIM-CADD\env\Fig 1.Site Location Map_LW.dwg Last Modified: May 25, 2018 - 4:30pm Plotted on: May 25, 2018 - 4:31pm By: lwu



CLIENT

NEWSDAY

**235 PINELAWN ROAD
MELVILLE, NY 11747**

Figure 1: Site Location Map

SCALE:

1" = 3280'



PROJECT #:

NEWD1803

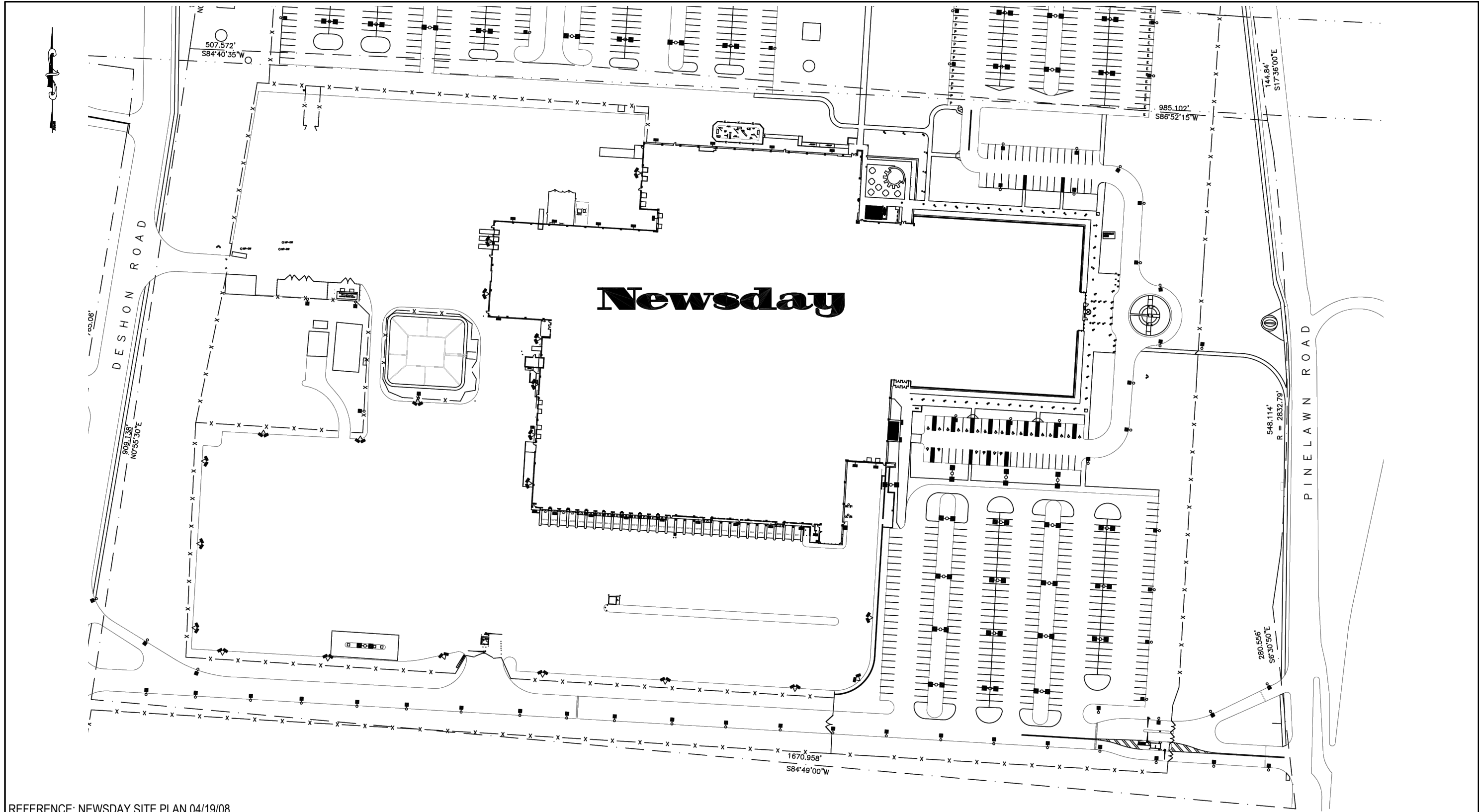
DATE:

MAY 2018



architects + engineers

Melville, NY Albany, NY
New City, NY Parsippany, NJ



REFERENCE: NEWSDAY SITE PLAN 04/19/08

Client

Newsday
235 Pinelawn Road, Melville, NY 11747
RCRA Closure

SHEET #

Figure 2

DATE:

MAY 2018

Facility Site Plan

NEWD1803

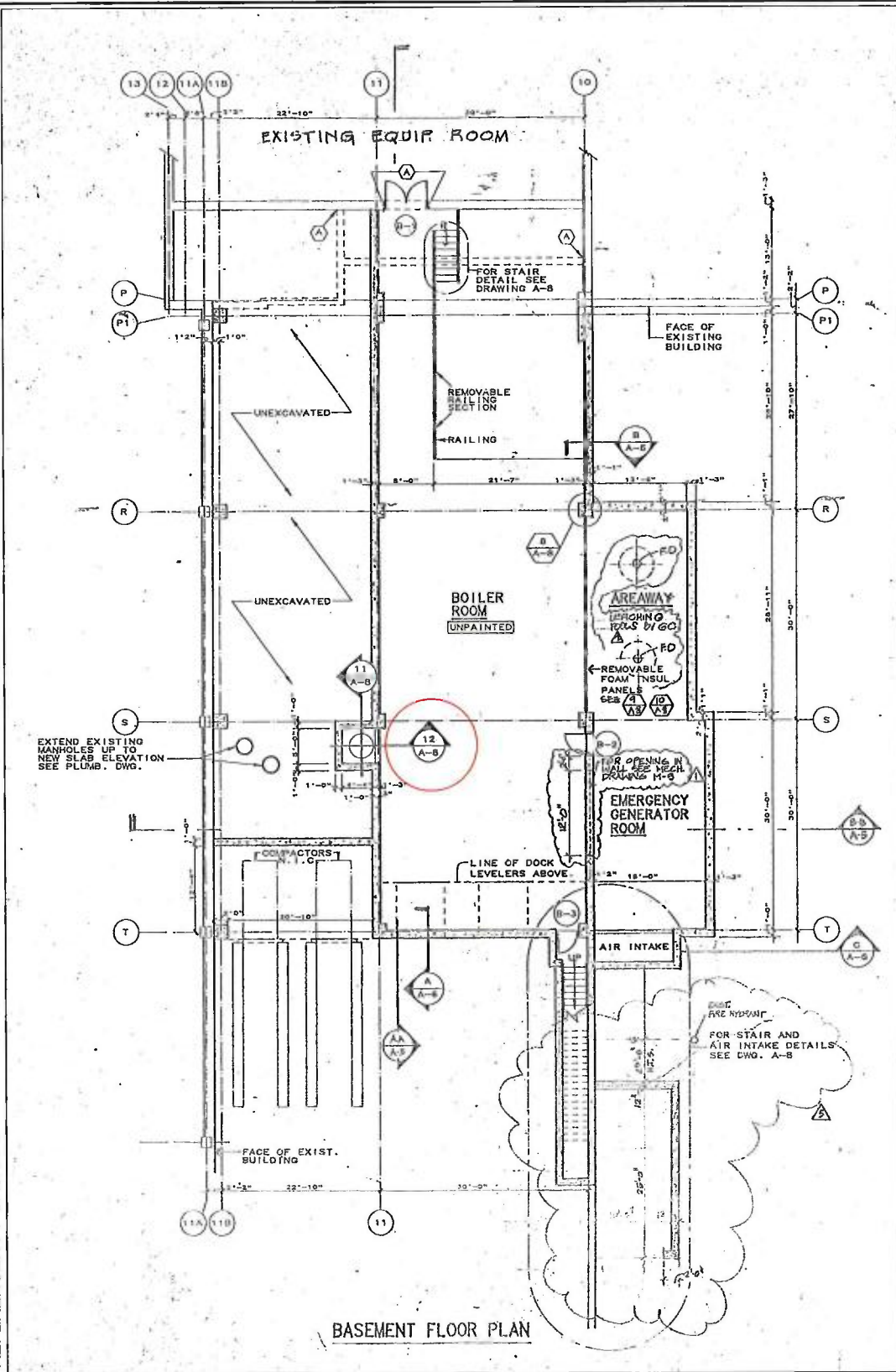
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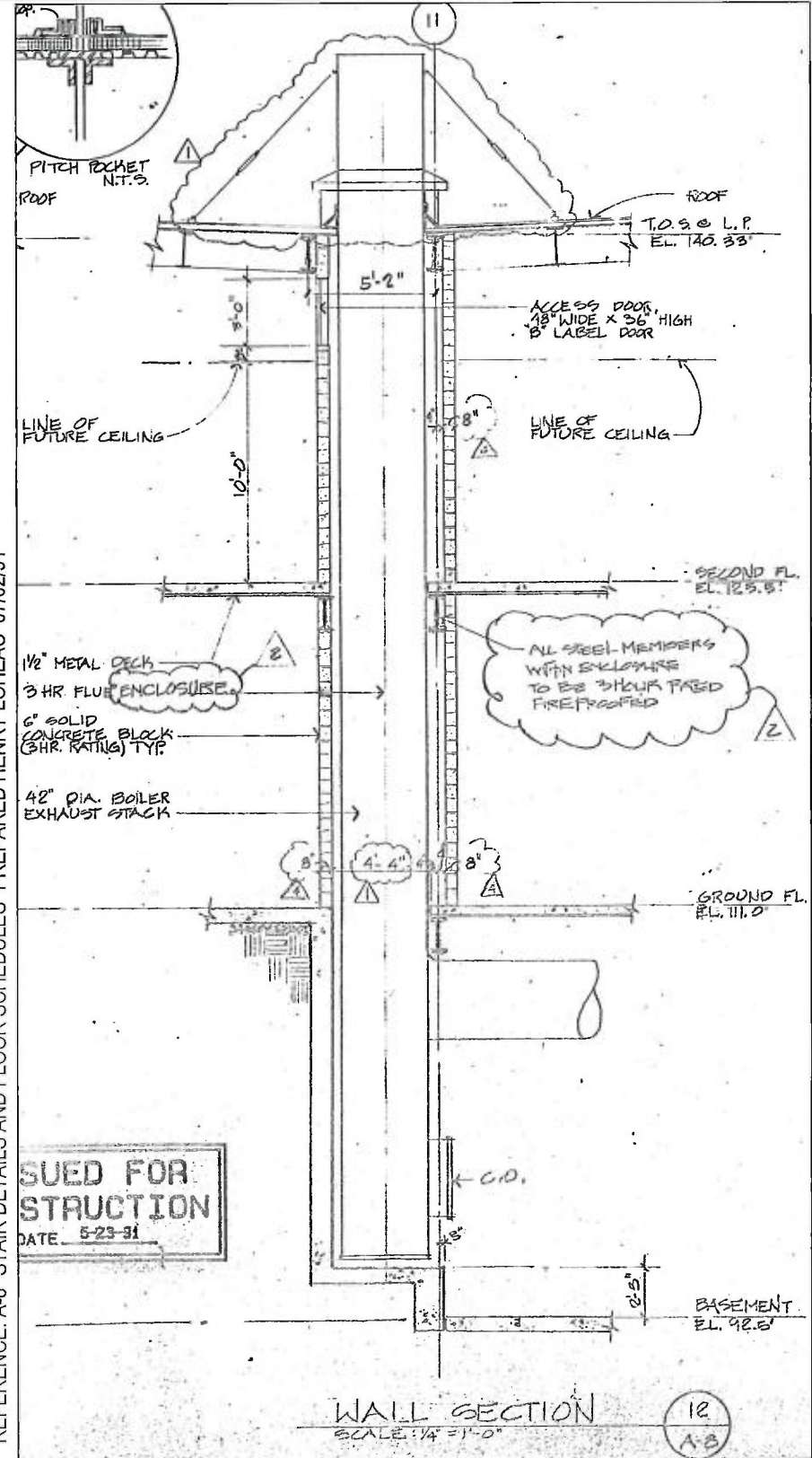
M

architects
+
engineers

REFERENCE: A-4 "BASEMENT AND SECOND FLOOR PLAN" PREPARED HENRY LOHEAC 07/02/91



REFERENCE: A-8 "STAIR DETAILS AND FLOOR SCHEDULES" PREPARED HENRY LOHEAC 07/02/91



Client

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235 Pinelawn Road, Melville, NY 11747
RCRA Closure

SHEET #

Figure 4

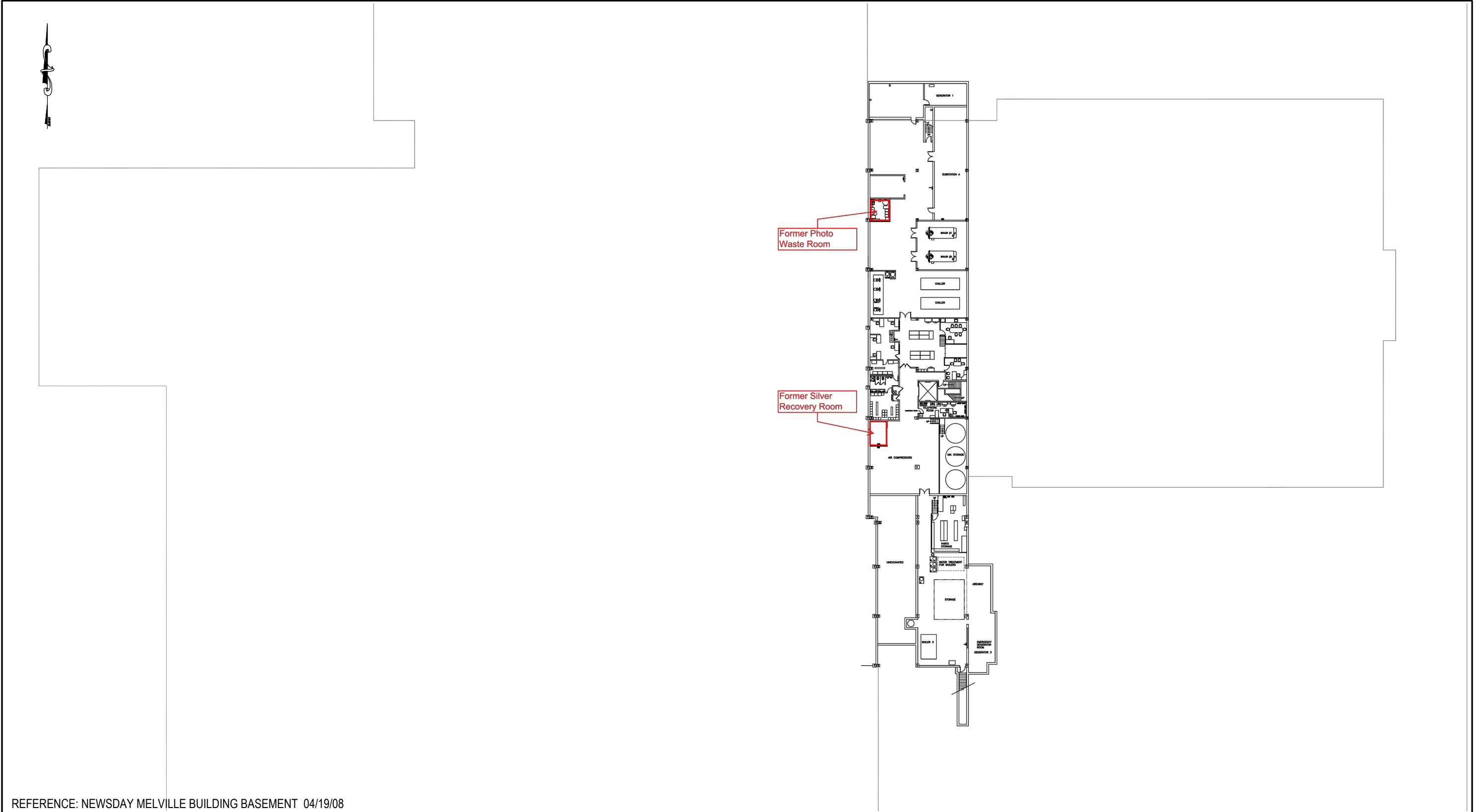
DATE:

MAY 2018

**Basement Boiler Expansion
Floor Plan and Wall Section**

NEWD1803

H 2 M architects
+
engineers

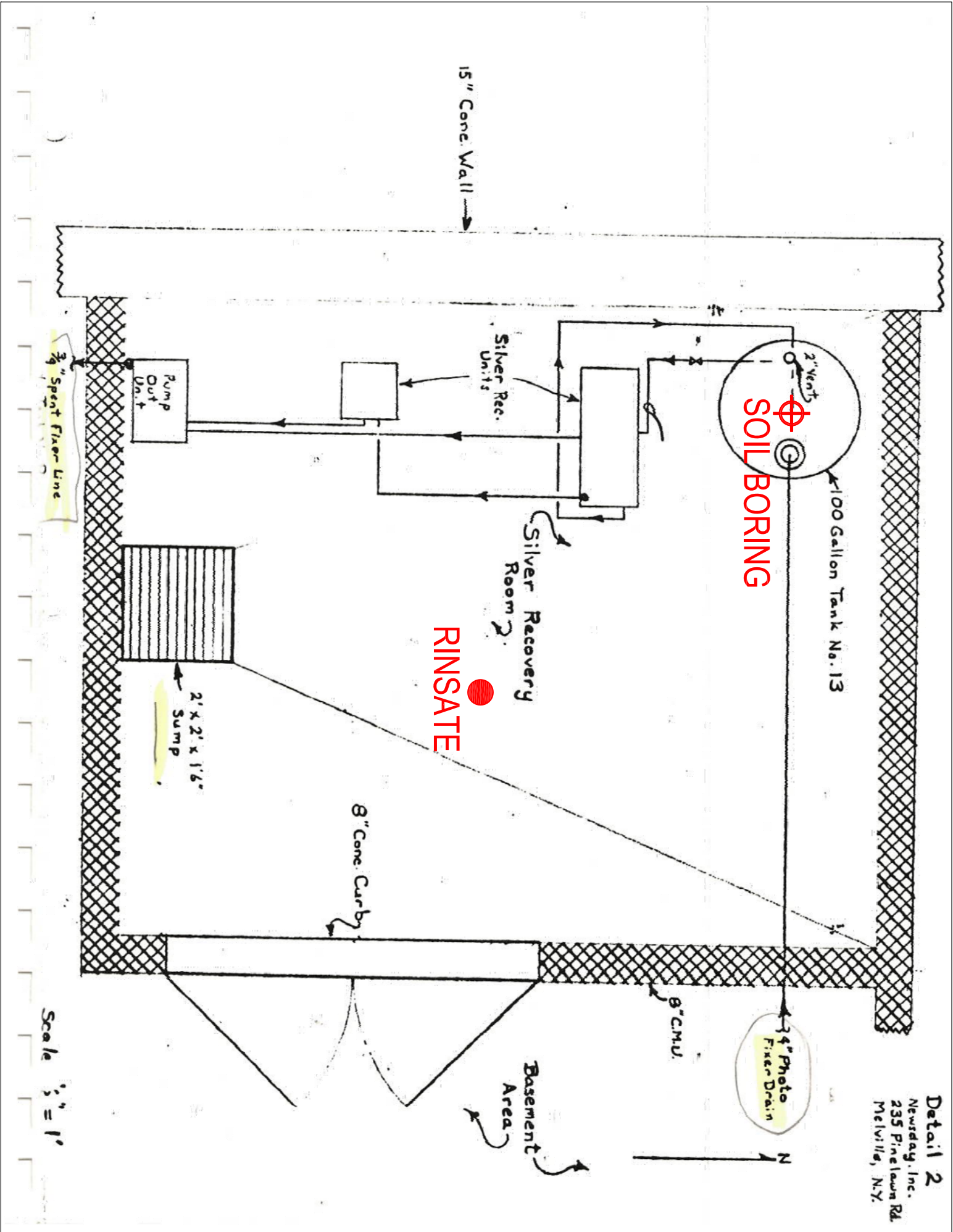


REFERENCE: NEWSDAY MELVILLE BUILDING BASEMENT 04/19/08

Client	Newsday 235 Pinelawn Road, Melville, NY 11747 RCRA Closure	SHEET #	Locations of Former Silver Recovery & Photo Waste NEWD1803	H2M architects + engineers
		DATE:		

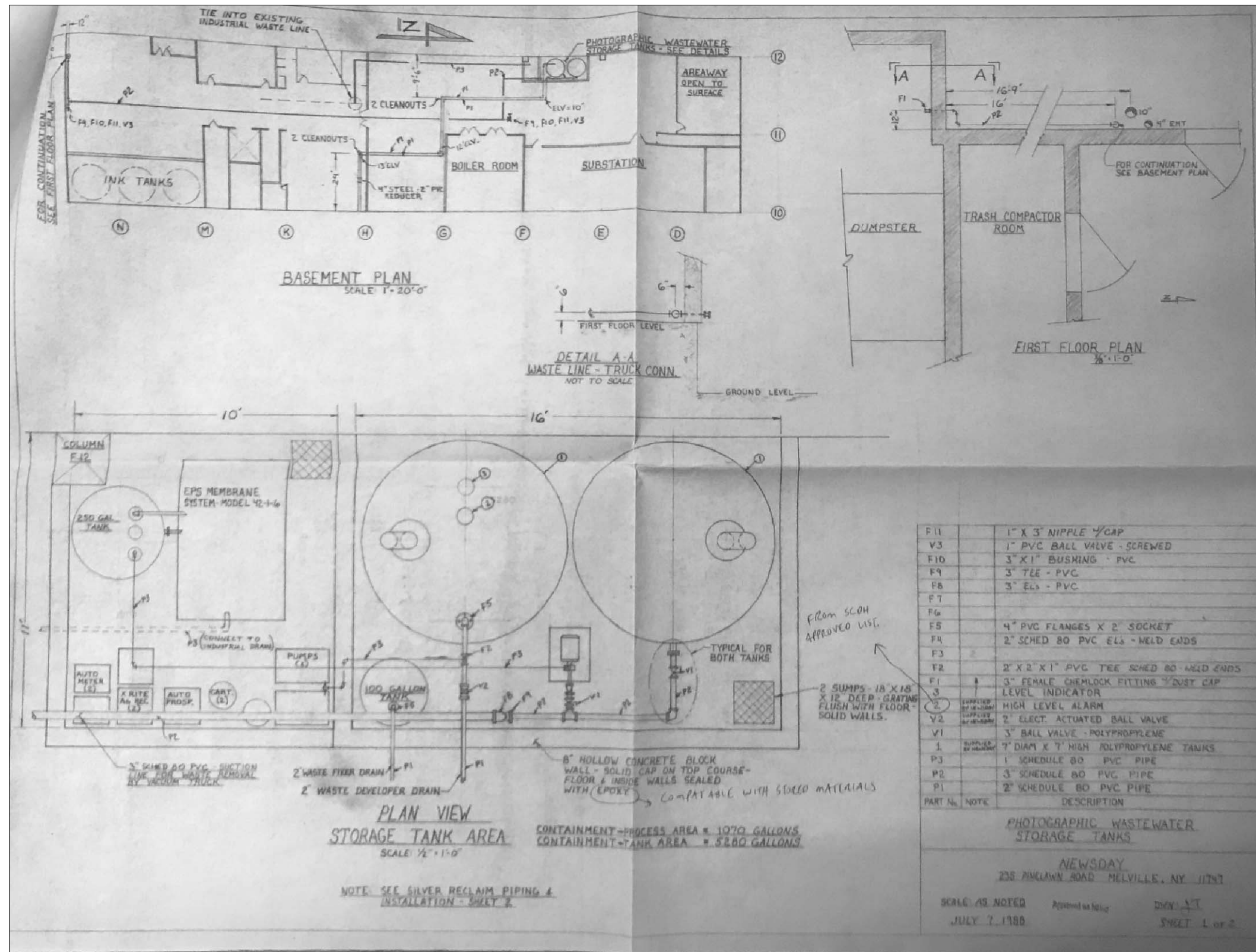
Figure 5

MAY 2018



*NOT TO SCALE
REFERENCE: HAZARDOUS WASTE GENERATION, STORAGE FACILITY AND OPERATION CONTINGENCY DETAIL 2 PAGE 15

Newsday
235 Pinelawn Road, Melville, NY 11747
RCRA Closure



REFERENCE: NEWSDAY "PHOTOGRAPHIC WASTEWATER STORAGE TANKS" SHEET 1, DATED JULY 1988

Client

Newsday
235 Pinelawn Road, Melville, NY 11747
RCRA Closure

SHEET #

Figure 7a

DATE:

MAY 2018

FIRST LAYOUT OF FORMER PHOTO WASTE ROOM (PLAN VIEW)

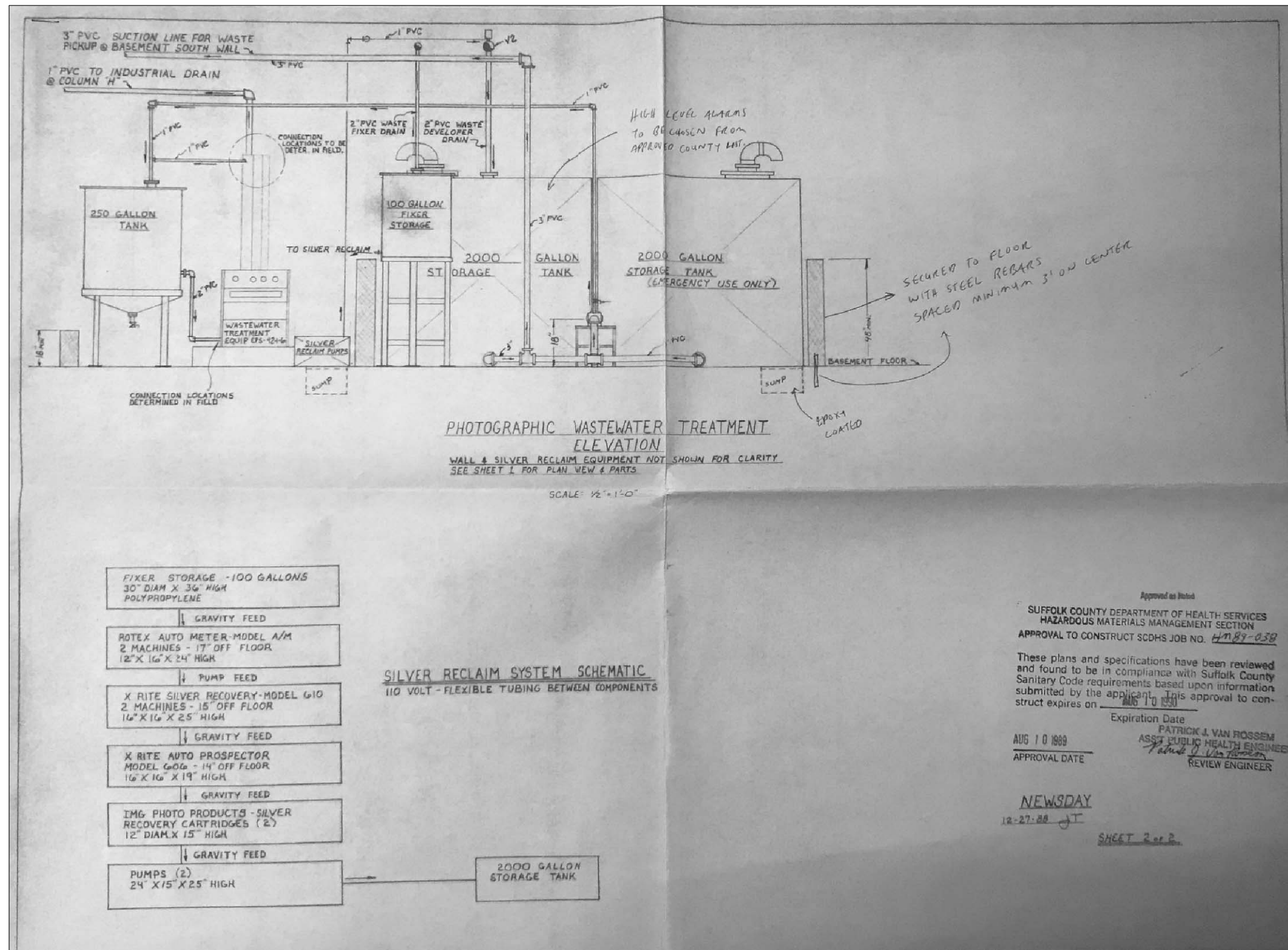
NEWD1803

H

2

architects
+
engineers

M



Approved as Noted

SUFFOLK COUNTY DEPARTMENT OF HEALTH SERVICES
 HAZARDOUS MATERIALS MANAGEMENT SECTION

APPROVAL TO CONSTRUCT SCDHS JOB NO. HN89-038

These plans and specifications have been reviewed and found to be in compliance with Suffolk County Sanitary Code requirements based upon information submitted by the applicant. This approval to construct expires on AUG 10 1990

Expiration Date

AUG 10 1989

APPROVAL DATE

PATRICK J. VAN ROSSEM
 ASST. PUBLIC HEALTH ENGINEER

REVIEW ENGINEER

NEWSDAY

12-27-88 JT

SHEET 2 of 2

REFERENCE: SUFFOLK COUNTY DEPARTMENT OF HEALTH SERVICES APPROVAL TO CONSTRUCT, DATED DECEMBER 1988, APPROVED AUGUST 1989

Client

Newsday
 235 Pinelawn Road, Melville, NY 11747
 RCRA Closure

SHEET #

Figure 7b

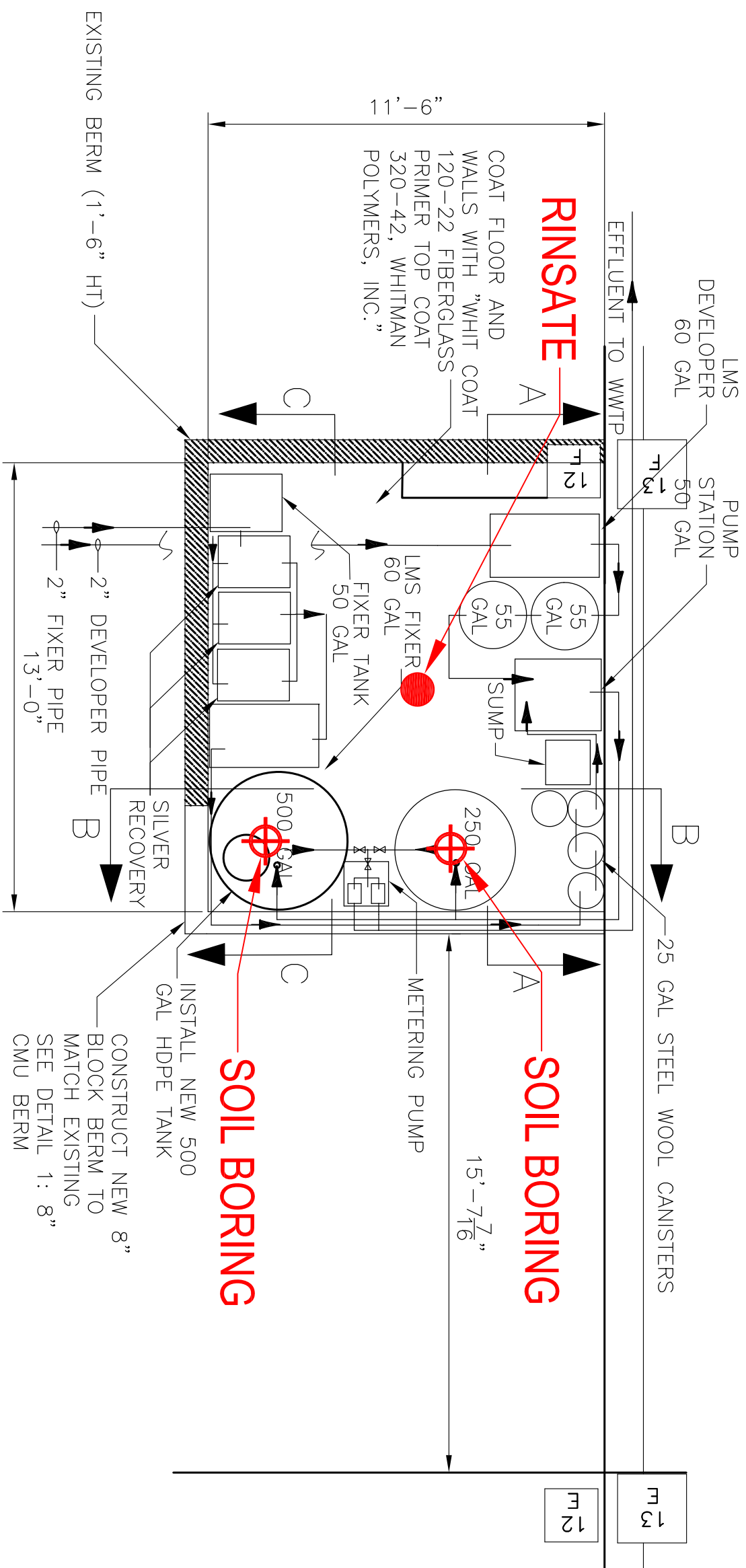
DATE:

MAY 2018

**FIRST LAYOUT OF FORMER PHOTO
 WASTE ROOM (SECTION VIEW)**

NEWD1803

H	2	architects + engineers
	M	



(2)	55 GAL DEVELOPER CANISTERS	=	110 GALS	11.5 FT X 13 FT X 1.5 FT = 224.25 cuFT
(4)	25 GAL STEEL WOOL CANISTERS	=	100 GALS	224.25 cuFT X 7.48 GAL/cuFT = 1677 GAL
(2)	60 GAL LIQUID METERING STATIONS (LMS)	=	120 GALS	1225 X 1.10 = 1347.5 GALS
(1)	50 GAL PUMPING STATION	=	50 GALS	1677GAL(BERM) > 1347.5 GAL(TANKS & 110%)
(1)	50 GAL FIXER TANK	=	50 GALS	
(1)	250 GAL PHOTO WASTE TANKS	=	250 GALS	
(1)	500 GAL PHOTO WASTE TANKS	=	500 GALS	
(3)	15 GAL SILVER PROCESSORS	=	45 GALS	
	TOTAL TANK CAPACITY	=	1225 GALS	

SCDHS BERM COMPLIANCE

*NOT TO SCALE
REFERENCE: NEWSDAY ENGINEERING "PHOTO WASTE TX TANK PLAN" SHEET 3, DATED NOVEMBER 2001

Client

SHEET #

Figure 8

SECOND LAYOUT OF FORMER PHOTO WASTE ROOM & PROPOSED SAMPLING



235 Pinelawn Road, Melville, NY 11747
BCBA Closure

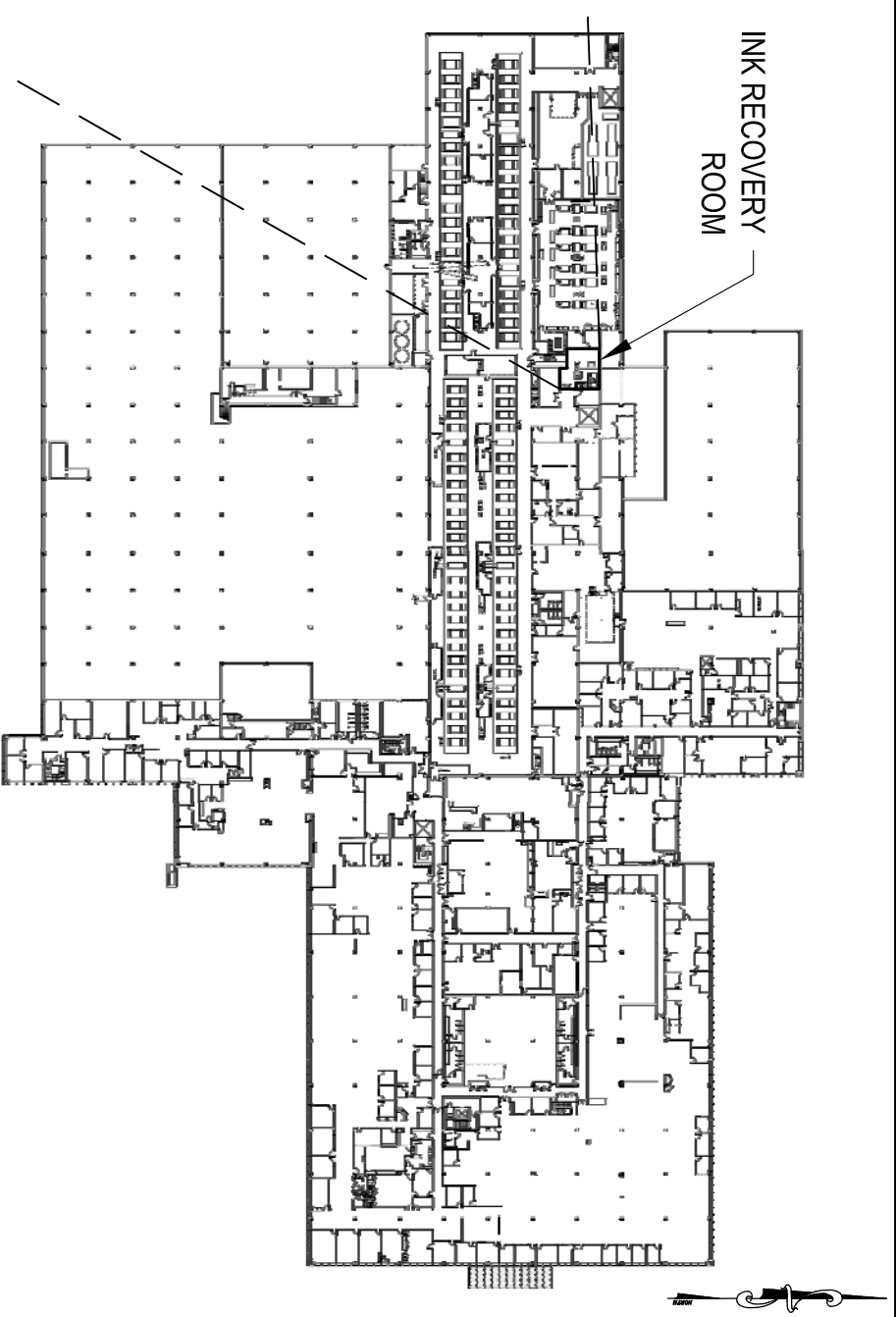
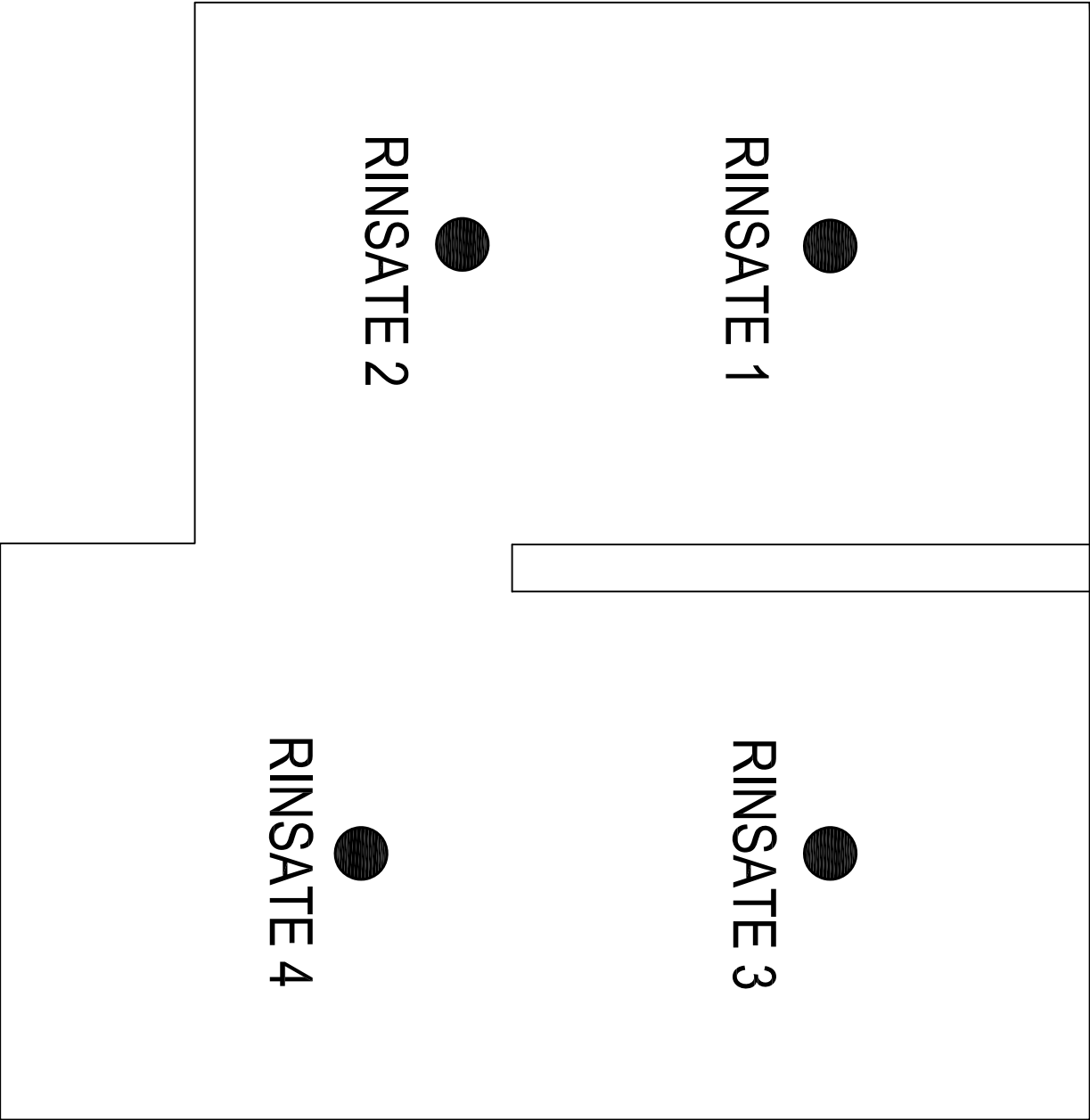
RCRA Closure

DATE:

MAY 2018

NEWMD1803

architects
+
engineers



REFERENCE: NEWSDAY "MELVILLE BUILDING SECOND FLOOR" 04/19/08

Client

Newsday
235 Pinelawn Road, Melville, NY 11747
RCRA Closure

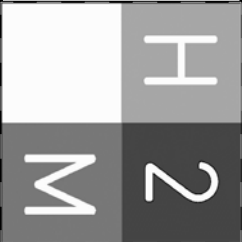
SHEET #

Figure 9

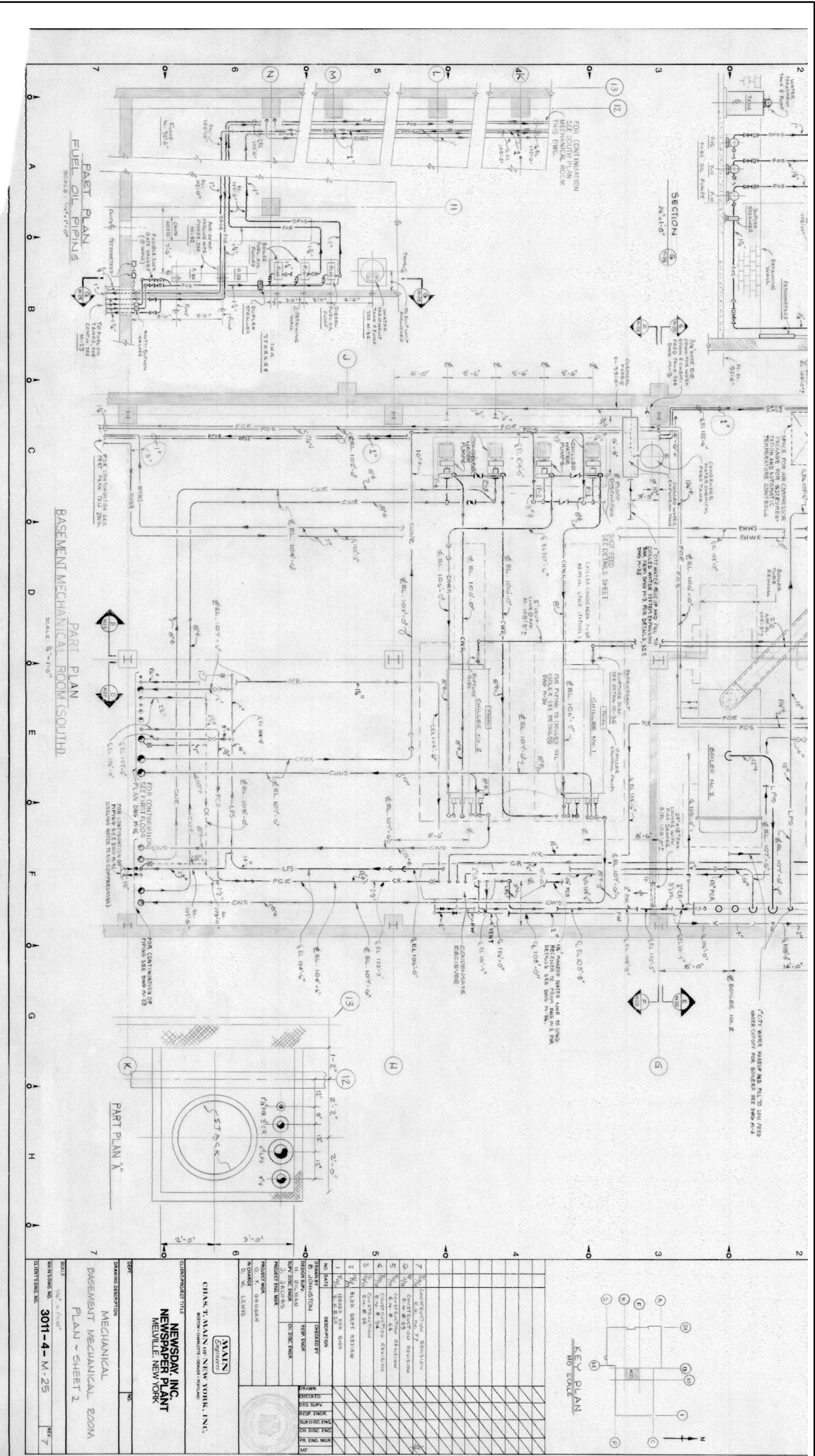
DATE:

MAY 2018

**Proposed Sampling of
Ink Recovery Room**
NEWD1803



architects
+
engineers



Client

SHEET #

Figure 10.1

BASEMENT OFFICE PIPING

DATE:

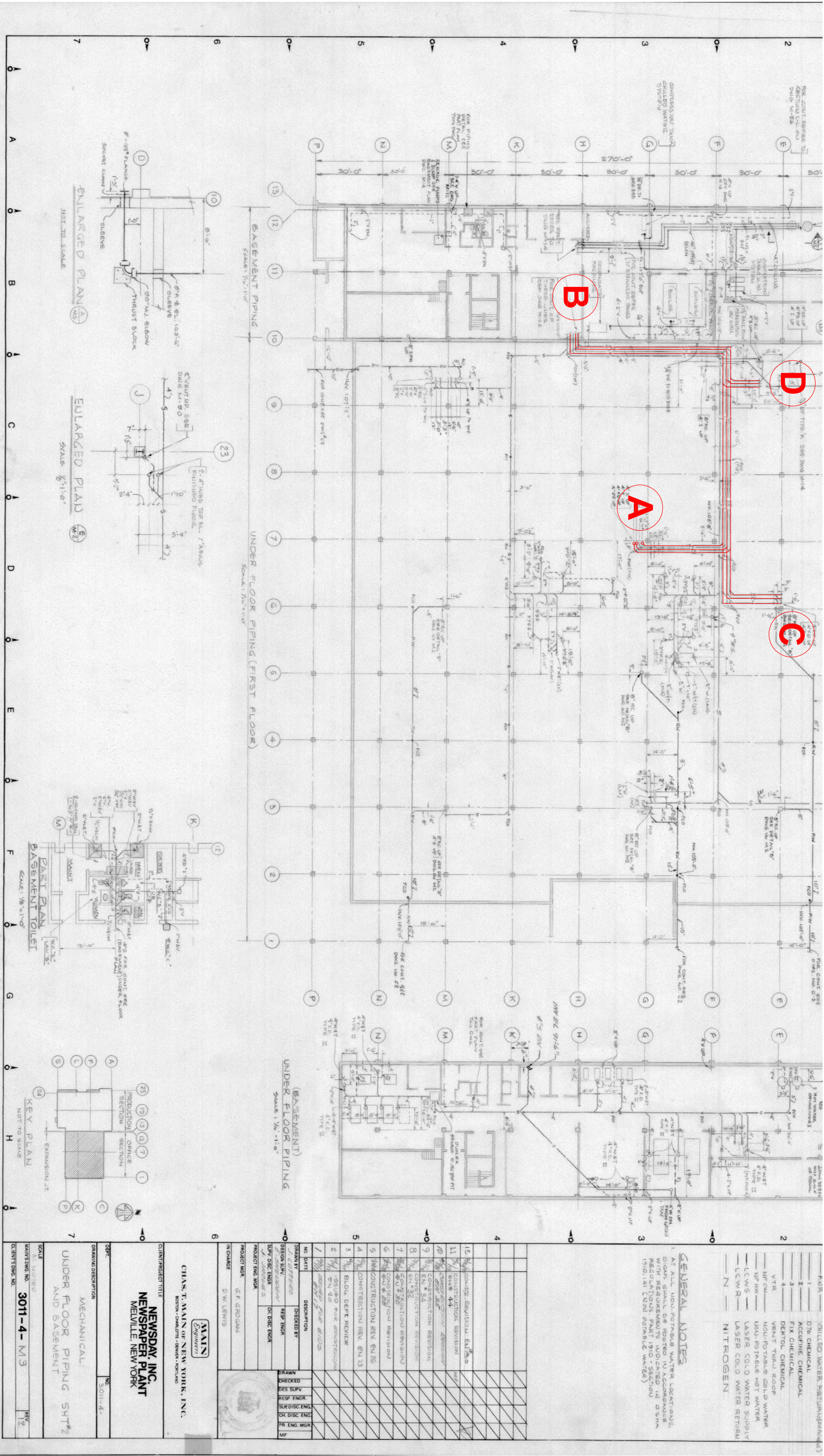
MAY 2018

NEWD1803

H 2 M

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+
engineers

Newsday
235 Pinelawn Road, Melville, NY 11747
RCRA Closure



Client

SHEET #

Figure 10.2

DATE:

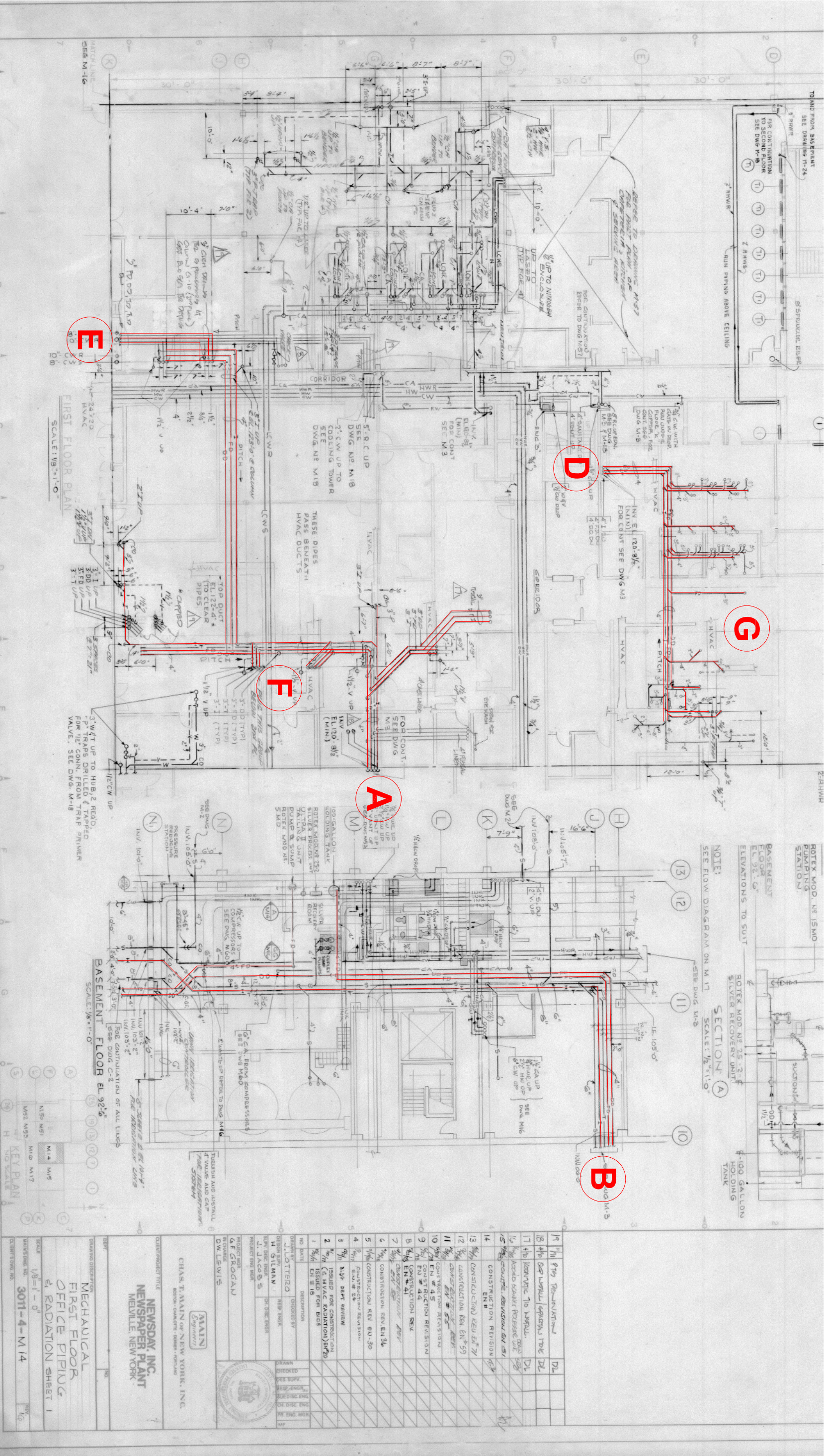
MAY 2018

FIRST FLOOR (UNDER FLOOR)
OFFICE PIPING

NEW1803

H 2

architects
+
engineers



Client

Newsday
235 Pinelawn Road, Melville, NY 11747
RCRA Closure

SHEET #

Figure 10.3

DATE:

MAY 2018

FIRST FLOOR OFFICE PIPING

(SHEET 1 OF 2)

NEWD1803

H 2

architects
+
engineers

TABLES

Newsday - 235 Pinelawn Road, Melville, NY

Table 3.1 - Fixer Piping Sampling Results for Metals - April 24, 2018

Sample ID:	6 NYCRR Part 703.6 ⁽¹⁾ & TOGS 1.1.1 ⁽²⁾ Class GA Standards	Fixer Mail Center	Fixer MER-1	Fixer Basement	Equip Blank
Sample Date:		4/24/2018	4/24/2018	4/24/2018	4/24/2018
Lab Sample ID:		1804167-002	1804167-003	1804167-004	1804167-001
Units:	(mg/l)	(mg/l)	(mg/l)	(mg/l)	(mg/l)
Metals					
Mercury	0.0014	0.00021 J	0.00019 J	0.00017 J	0.00023 J
Aluminum	2	0.0759	0.266	3.21	0.0262
Antimony	0.006	0.005 U	0.005 U	0.005 U	0.005 U
Arsenic	0.05	0.01 U	0.01 U	0.01 U	0.01 U
Barium	2	0.0265	0.0241	0.0278	0.0261
Beryllium	0.003	0.005 U	0.005 U	0.005 U	0.005 U
Cadmium	0.01	0.005 U	0.005 U	0.005 U	0.005 U
Calcium	-	2.67	2.04	2.61	2.57
Chromium	0.1	0.005 U	0.005 U	0.005 U	0.005 U
Cobalt	-	0.005 U	0.005 U	0.005 U	0.005 U
Copper	0.4	0.0346	0.0296	0.00631 J	0.028
Iron	0.6	0.273	11.7	0.145	0.107
Lead	0.05	0.005 U	0.005 U	0.005 U	0.0122 J
Magnesium	35	0.574	0.598	0.528	0.617
Manganese	0.6	0.00537 J	0.031	0.00813 J	0.00594 J
Nickel	0.2	0.005 U	0.00408 J	0.00427 J	0.005 U
Potassium	-	0.0771 J	0.895	0.296	0.0741 J
Selenium	0.02	0.01 U	0.01 U	0.01 U	0.01 U
Silver	0.1	0.005 U	0.0221	0.005 U	0.005 U
Sodium	-	0.28	5.01	4.5	0.457
Thallium	0.0005	0.01 U	0.01 U	0.01 U	0.01 U
Vanadium	-	0.005 U	0.005 U	0.005 U	0.005 U
Zinc	5	0.101	0.0321	0.13	0.0764

Notes:

(1) 6 NYCRR Part 703.6 Groundwater effluent limitations for discharges to Class GA waters, Table 3 Groundwater Effluent Limitations Class GA.

(2) TOGS 1.1.1 Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations, Table 5 NYS Groundwater Effluent Limitations (Class GA).

Qualifiers:

J: The reported value was obtained from a reading that was less than the Limit of Quantitation but greater than or equal to the Limit of Detection Limit (LOD).

U: The analyte was analyzed for but not detected at or above the LOD.

Table 3.2 - Fixer Piping Sampling Results for VOCs - April 24, 2018

Sample ID:	6 NYCRR Part 703.6 ⁽¹⁾ & TOGS 1.1.1 ⁽²⁾	Fixer Mail Center	Fixer MER-1	Fixer Basement	Equip Blank
Sample Date:	Class GA Standards	4/24/2018	4/24/2018	4/24/2018	4/24/2018
Lab Sample ID:		1804167-002	1804167-003	1804167-004	1804167-001
Units:	(ug/l)	(ug/l)	(ug/l)	(ug/l)	(ug/l)
Volatile Organic Compounds					
1,1,1,2-Tetrachloroethane	5	0.25 U	0.25 U	0.25 U	0.25 U
1,1,1-Trichloroethane	5	0.25 U	0.25 U	0.25 U	0.25 U
1,1,2,2-Tetrachloroethane	5	0.25 U	0.25 U	0.25 U	0.25 U
1,1,2-Trichloro-1,2,2-trifluoroethane	5	0.25 U	0.25 U	0.25 U	0.25 U
1,1,2-Trichloroethane	1	0.25 U	0.25 U	0.25 U	0.25 U
1,1-Dichloroethane	5	0.25 U	0.25 U	0.25 U	0.25 U
1,1-Dichloroethene	5	0.25 U	0.25 U	0.25 U	0.25 U
1,1-Dichloropropene	5	0.25 U	0.25 U	0.25 U	0.25 U
1,2,3-Trichlorobenzene	5	0.25 U	0.25 U	0.25 U	0.25 U
1,2,3-Trichloropropane	0.04	0.25 U	0.25 U	0.25 U	0.25 U
1,2,4,5-Tetramethylbenzene	5	0.25 U	0.25 U	0.25 U	0.25 U
1,2,4-Trichlorobenzene	5	0.25 U	0.25 U	0.25 U	0.25 U
1,2,4-Trimethylbenzene	5	0.25 U	0.25 U	0.25 U	0.25 U
1,2-Dibromo-3-chloropropane	0.04	0.03 U	0.03 U	0.03 U	0.03 U
1,2-Dibromoethane	0.0006	0.25 U	0.25 U	0.25 U	0.25 U
1,2-Dichlorobenzene	3	0.25 U	0.25 U	0.25 U	0.25 U
1,2-Dichloroethane	0.6	0.25 U	0.25 U	0.25 U	0.25 U
1,2-Dichloropropane	1	0.25 U	0.25 U	0.25 U	0.25 U
1,3,5-Trimethylbenzene	5	0.25 U	0.25 U	0.25 U	0.25 U
1,3-Dichlorobenzene	3	0.25 U	0.25 U	0.25 U	0.25 U
1,3-dichloropropane	5	0.25 U	0.25 U	0.25 U	0.25 U
1,4-Dichlorobenzene	3	0.25 U	0.25 U	0.25 U	0.25 U
1,4-Dioxane	-	0.25 U	0.25 U	0.25 U	0.25 U
2,2-Dichloropropane	5	0.25 U	0.25 U	0.25 U	0.25 U
2-Butanone	50	0.5 U	0.5 U	0.5 U	0.5 U
2-Chloroethyl vinyl ether	-	0.25 U	0.25 U	0.25 U	0.25 U
2-Chlorotoluene	5	0.25 U	0.25 U	0.25 U	0.25 U
2-Hexanone	50	0.5 U	0.5 U	0.5 U	0.5 U
2-Propanol	-	0.25 U	0.25 U	0.25 U	0.25 U
4-Chlorotoluene	5	0.25 U	0.25 U	0.25 U	0.25 U
4-Isopropyltoluene	5	0.25 U	0.25 U	0.25 U	0.25 U
4-Methyl-2-pentanone	-	0.5 U	0.5 U	0.5 U	0.5 U
Acetone	50	5 U	5 U	5 U	5 U
Benzene	1	0.25 U	0.25 U	0.25 U	0.25 U
Bromobenzene	5	0.25 U	0.25 U	0.25 U	0.25 U
Bromochloromethane	5	0.25 U	0.25 U	0.25 U	0.25 U
Bromodichloromethane	50	0.25 U	0.25 U	0.25 U	0.25 U
Bromoform	50	0.25 U	0.25 U	0.25 U	0.25 U
Bromomethane	5	0.25 U	0.25 U	0.25 U	0.25 U
Carbon disulfide	60	0.25 U	0.25 U	0.25 U	0.25 U
Carbon tetrachloride	5	0.25 U	0.25 U	0.25 U	0.25 U
Chlorobenzene	5	0.25 U	0.25 U	0.25 U	0.25 U
Chlorodifluoromethane	-	0.25 U	0.25 U	0.25 U	0.25 U
Chloroethane	5	0.25 U	0.25 U	0.25 U	0.25 U
Chloroform	7	0.25 U	0.25 U	0.25 U	0.25 U
Chloromethane	5	0.25 U	0.25 U	0.25 U	0.25 U
cis-1,2-Dichloroethene	5	0.25 U	0.25 U	0.25 U	0.25 U
cis-1,3-Dichloropropene	0.4	0.25 U	0.25 U	0.25 U	0.25 U
Cyclohexane	-	0.25 U	0.25 U	0.25 U	0.25 U
Dibromochloromethane	50	0.25 U	0.25 U	0.25 U	0.25 U
Dibromomethane	5	0.25 U	0.25 U	0.25 U	0.25 U
Dichlorodifluoromethane	5	0.25 U	0.25 U	0.25 U	0.25 U
Diisopropyl ether	-	0.5 U	0.5 U	0.5 U	0.5 U
Ethanol	-	2.5 U	2.5 U	2.5 U	2.5 U
Ethylbenzene	5	0.25 U	0.25 U	0.25 U	0.25 U
Freon-114	-	0.25 U	0.25 U	0.25 U	0.25 U
Hexachlorobutadiene	0.5	0.25 U	0.25 U	0.25 U	0.25 U
Isopropylbenzene	5	0.25 U	0.25 U	0.25 U	0.25 U
m,p-Xylene	5	0.5 U	0.5 U	0.5 U	0.5 U
Methyl Acetate	-	0.25 U	0.25 U	0.25 U	0.25 U
Methyl tert-butyl ether	10	0.25 U	0.25 U	0.25 U	0.25 U
Methylene chloride	5	5 U	5 U	5 U	5 U
n-Butylbenzene	5	0.25 U	0.25 U	0.25 U	0.25 U
n-Propylbenzene	5	0.25 U	0.25 U	0.25 U	0.25 U
Naphthalene	10	0.25 U	0.25 U	0.25 U	0.25 U
o-Xylene	5	0.25 U	0.25 U	0.25 U	0.25 U
p-Diethylbenzene	-	0.25 U	0.25 U	0.25 U	0.25 U
p-Ethyltoluene	-	0.25 U	0.25 U	0.25 U	0.25 U
sec-Butylbenzene	5	0.25 U	0.25 U	0.25 U	0.25 U
Styrene	5	0.25 U	0.25 U	0.25 U	0.25 U
t-Butyl alcohol	-	2.5 U	2.5 U	2.5 U	2.5 U
tert-Butylbenzene	5	0.25 U	0.25 U	0.25 U	0.25 U
Tetrachloroethene	5	0.25 U	0.25 U	0.25 U	0.25 U
Toluene	5	0.28 U	0.3 U	0.25 U	0.25 U
trans-1,2-Dichloroethene	5	0.25 U	0.25 U	0.25 U	0.25 U
trans-1,3-Dichloropropene	0.4	0.25 U	0.25 U	0.25 U	0.25 U
Trichloroethene	5	0.25 U	0.25 U	0.25 U	0.25 U
Trichlorofluoromethane	5	0.25 U	0.25 U	0.25 U	0.25 U
Vinyl acetate	-	0.25 U	0.25 U	0.25 U	0.25 U
Vinyl chloride	2	0.25 U	0.25 U	0.25 U	0.25 U
Xylenes, Total	5	0.75 U	0.75 U	0.75 U	0.75 U
Acrolein	5	1 U	1 U	1 U	1 U
Acrylonitrile	5	0.25 U	0.25 U	0.25 U	0.25 U

Notes:

(1) 6 NYCRR Part 703.6 Groundwater effluent limitations for discharges to Class GA waters, Table 3 Groundwater Effluent Limitations Class GA.

(2) TOGS 1.1.1 Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations, Table 5 NYS Groundwater Effluent Limitations (Class GA).

Qualifiers:

J: The reported value was obtained from a reading that was less than the Limit of Quantitation but greater than or equal to the Limit of Detection Limit (LOD).

U: The analyte was analyzed for but not detected at or above the LOD.

APPENDIX A

QUALITY ASSURANCE PROJECT PLAN (QAPP)

QUALITY ASSURANCE PROJECT PLAN (QAPP)

**NEWSDAY LLC
235 PINELAWN ROAD
MELVILLE, NEW YORK 11747**

JULY 18, 2018, REV 1

Prepared for:

Newsday LLC
235 Pinelawn Road
Melville, New York 11747

Prepared by:

H2M architects + engineers
290 Broad Hollow Road, Suite 400E
Melville, New York 11747

H2M Project No.: NEWD1803



architects + engineers

**NEWSDAY LLC
235 PINELAWN ROAD
MELVILLE, NEW YORK**

QUALITY ASSURANCE PROJECT PLAN (QAPP)

JULY 18, 2018, REV 1

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**NEWSDAY LLC
235 PINELAWN ROAD
MELVILLE, NEW YORK**

QUALITY ASSURANCE PROJECT PLAN (QAPP)

JULY 18, 2018, REV 1

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NEWSDAY LLC
235 PINELAWN ROAD
MELVILLE, NEW YORK

QUALITY ASSURANCE PROJECT PLAN (QAPP)

JULY 18, 2018, REV 1

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**NEWSDAY LLC
235 PINELAWN ROAD
MELVILLE, NEW YORK**

QUALITY ASSURANCE PROJECT PLAN (QAPP)

JULY 18, 2018, REV 1

1.0 PROJECT DESCRIPTION

H2M architects + engineers (H2M) has prepared this Quality Assurance Project Plan (QAPP) to address sampling activities to be performed as part of the RCRA Closure of the Newsday LLC facility located at 235 Pinelawn Road in Melville, New York.

This QAPP presents procedures to be followed during the sampling and analysis program as well as project organization and personnel responsibilities necessary to carry out these practices. Quality Assurance / Quality Control (QA/QC) and data validation requirements are also summarized in this plan. The closure of the facility will be performed in accordance with a New York State Department of Environmental Conservation (NYSDEC)-approved RCRA Closure Plan.

Operations at the Newsday facility include printing, publishing, preparing and distributing a daily newspaper edition and limited contract printing. The facility is bounded to the east by Pinelawn Road, to the north by Ruland Road, to the west by Deshon Drive, and to the South by a private service road. Properties surrounding the facility include undeveloped land to the north, Clare Rose Distributor to the south, Pinelawn Cemetery to the east, and Town Apartments to the west. A site location map is provided as **Figure 1** and facility site plan is provided as **Figure 2**.

Regulated wastes were generated at the Newsday facility as part of routine printing operations. All hazardous wastes were stored and disposed of in accordance with local, state and federal regulations. Hazardous wastes primarily included ink waste, spent photographic developer and spent photographic fixer. The ink waste is containerized in 55-gallon drums stored in the Ink Recovery Room. Spent photographic developer and fixer solutions drained into holding tanks located in the Former Silver Recovery and Photo Waste Rooms where they were processed through silver recovery equipment. The processed developer and fixer mixture was then pumped into a 4,000-gallon fiberglass underground storage tank, which was subsequently replaced by two (2) 2,000-gallon polyethylene aboveground storage tanks. Following decommissioning of the storage tanks, the developer and fixer waste was eventually discharged to the on-site wastewater treatment plant.

2.0 PROJECT ORGANIZATION AND RESPONSIBILITY

H2M, a professional engineering corporation, has been retained by Newsday for the oversight of the RCRA Closure of the Newsday facility including providing for all sampling services. An organizational chart for the closure activities and field investigation program is provided as **Figure 3**.

For projects involving a field investigation program, a project team is assembled with each team member responsible for specific elements of the work. To ensure that every project is completed with the highest degree of quality, each member of the project team must be aware of the quality assurance objectives for his/her specific element of the work.

As indicated in **Figure 3**, the Principal-in-Charge is the direct contact between the consultant and the client. The Principal-in-Charge is responsible for overall project technical direction and quality assurance, including:

- Defining project objectives;
- Allocation of resources;
- Establishing chains of command; and
- Periodic evaluation of project.

The consultant's Project Manager is responsible for directing and overseeing all technical and administrative elements of the project. This includes:

- Day to day direction, communication and coordination with the project team;
- Review of all project documents;
- Monitoring overall work progress, schedules, project costs; and
- Day to day direction of QA/QC activities.

Reporting directly to the Project Manager is the Field Team Supervisor, who is responsible for directing all field investigation activities. Depending upon the specific project requirements, the field investigation/sampling work is carried out by staff engineers, geologists, hydrogeologists, wetlands specialists, wildlife specialists and/or field technicians.

The Field Team Supervisor is responsible for ensuring that the work performed by the field investigation staff is carried out in a manner consistent with the project QA requirements. Project QA requirements are specified by the NYSDEC and/or the approved closure plan. The Field Team Supervisor is also responsible for direction and coordination of subcontractors, which may be utilized for surveying, drilling and geophysical investigations, and acts as an intermediary between the field staff and the analytical laboratory.

The Quality Assurance Officer (QAO) operates independently of the Project Manager, reporting directly to the Principal-in-Charge. The primary responsibilities of the QAO are as follows:

- Assist in the development of the work plan and evaluate its effectiveness;
- Monitor work to ensure conformance with the requirements of the work plan;
- Evaluate the need for and, if necessary, conduct field and laboratory QA audits;
- Supervise data validation and review all report deliverables.

3.0 QA OBJECTIVES FOR DATA MEASUREMENT

The primary aim of this plan is to establish the procedures to be followed by project personnel when conducting field sampling and analysis. Quality assurance requires careful planning, organization and the dedication of every member of the firm to the concepts of QA/QC. This must be accompanied by the understanding and coordination of the roles of all personnel involved in a particular project, if this quality objective is to be met. The overall QA objective for the closure sampling and analysis associated with the Newsday buildings is to produce data at the highest level to provide direct support for determining the environmental quality of the areas in question.

4.0 FIELD SAMPLING

The field sampling plan associated with the closure of the Newsday facility is anticipated to include the collection and analysis of rinsate samples and subsurface soil samples in the areas where hazardous wastes were handled and stored including the Former Silvery Recovery Room, Former Photo Waste Room and the Ink Recovery Room. Waste piping throughout the facility, including the photographic fixer piping, photographic developer piping and industrial waste piping, will also be visually inspected and sampled, as necessary. The purpose of sampling is to document that no hazardous materials remain following facility closure.

4.1 Sampling Methodology

4.1.1 Floor Rinsate Sampling

Following decontamination of the floors, rinsate sampling will be conducted. The rinsate sampling will be performed in accordance with the Rinsate Sample Collection Protocol provided in **Appendix A**. Rinsate samples will be collected by placing deionized water in contact with the subject surface. A temporary containment area will be created on the surface at the designated sampling area using an inert, pre-cleaned sampling container. Deionized water will then be poured into this temporary collection area. The volume of deionized water will be sufficient to collect all the sample and QC parameters. If the designated sampling area is sloped, the deionized water will be poured starting at the highest elevation. Following a contact time of 10 minutes, the samples will be collected from the temporary collection area using a peristaltic pump

and new dedicated sample tubing, or by an equivalent method. Field personnel will transfer the samples directly into dedicated containers provided by the analytical laboratory. The samples will be transferred to the sample containers with minimal mixing and disruption since the laboratory analysis will include volatile organic compounds (VOCs). The sample containers required for VOC analysis will be filled so that there is no headspace in the sample container. Water sample containers for VOCs will be sealed with Teflon lined septum caps.

4.1.2 Soil Sampling

Soil borings and subsurface soil sampling will be conducted utilizing direct-push sampling methods in accordance with American Society for Testing and Materials (ASTM) D6282-98, Standard Guide for Direct Push Soil Sampling for Environmental Site Characterizations. A remote access Geoprobe® 420, or equivalent, unit will be employed in conjunction with 2-inch outside diameter (OD) cylindrical “macro-core” barrels. The core barrels, fitted with a cutting shoe, will be advanced with a hydraulic drive hammer into the ground to the desired sampling depth. The macro-core sampler will extract samples into the barrel fitted with an acetate liner. As the barrels are removed from the ground, the acetate liner will be removed to permit field screening, fill or soil classification and sample collection. Field screening will include an inspection for visual and olfactory evidence of contamination and field testing with a portable photoionization detector (PID, MiniRAE 3000 or equivalent with a 10.6 eV lamp).

Borings will be recorded by the on-site field personnel. Physical characteristics will be documented using preprinted boring log forms and will include the following:

- Project name, location and job number,
- Date of boring (start, finish),
- Boring number and driller,
- Sample number and depth,
- Method of advancing sampler,
- Type and size of sampler,
- Description of soil or fill,
- Thickness of observed layers,
- Type and make of equipment (i.e., drill rig, etc.) used, and
- Identification of any samples collected and submitted for laboratory analysis.

Subsurface boring descriptions will be made in accordance with the Unified Soil Classification System (USCS).

4.1.3 Piping Rinsate Sampling

Representative sections of the waste piping throughout the building will be removed and visually inspected. Based upon visual inspections, rinsate sampling of the piping will be conducted as necessary. If the interior of the piping is observed to show significant differences in comparison to the three sections of fixer piping that were sampled on April 24, 2018, the piping will be sampled. If the piping interior is observed to be

similar, a sample will not be collected. The rinsate sampling will be performed in general accordance with the Rinsate Sample Collection Protocol. One end of each section of piping will be capped utilizing an inert, pre-cleaned rubber cap (i.e., Fernco). Deionized water will then be poured into the piping. The volume of deionized water will be sufficient to collect all the sample and QC parameters. Following a contact time of 10 minutes, the samples will be transferred directly from the piping into laboratory-supplied bottleware.

In addition to rinsate sampling, the sections of piping will also be inspected to determine if sufficient material can be scraped from the interior deposits to analyze for TCLP metals. Should there be sufficient material, a sample will be collected from the piping section. If there is not sufficient material, then no sample will be collected.

4.1.4 Sampling Equipment Decontamination and Waste Characterization

All non-dedicated sampling equipment that requires re-use will be cleaned and decontaminated using the following procedure:

- 1) Detergent wash (e.g., Alconox®) and potable tap water rinse,
- 2) Double rinse with distilled deionized water.

All contaminated disposable field sampling equipment, decontamination fluids and rinse water will be collected and characterized for proper disposal.

4.2 Sampling Plan

All samples will be submitted to the analytical laboratory for analysis in accordance with NYSDEC ASP Category B protocols. As stated, hazardous wastes generated at the Newsday facility were handled or stored within the building in the Former Silver Recovery Room, Former Photo Waste Room, the Ink Recovery Room, and within the fixer, developer, and industrial waste piping. Closure of these areas shall include decontamination of the hazardous waste storage areas, rinsate sampling and subsurface soil sampling.

4.2.1 Floor Rinsate Sampling

Following sweeping, power washing and decontamination of the floor surfaces in these areas, a total of six rinsate samples will be collected, including one from the Former Silver Recovery Room, one from the Former Photo Waste Room, two from the recovery equipment area in the Ink Recovery Room and two from the drum storage area in the Ink Recovery Room. The exact locations of the rinsate samples will be determined in the field in coordination with the NYSDEC. Additional QA/QC samples, i.e., blank, duplicate and spike samples, will also be collected to satisfy the NYSDEC Category B standards for Data Quality Assessments. Rinsate samples will be analyzed for TAL metals/Hg and TCL VOCs + TICs. Sampling

results will be compared with the NYS Groundwater Effluent Limitations (Class GA), as identified in NYSDEC TOGS 1.1.1 or 6 NYCRR Part 703.6. Should the sampling results exceed the Class GA standards, decontamination of the floors will be repeated until subsequent confirmatory rinsate samples meet the Class GA standards.

4.2.2 Soil Sampling

Three (3) subsurface borings will be advanced in the three former holding tank locations in these areas to sample and characterize subsurface soils from below the floor slab to a depth of 8 feet. The former holding tanks included a 100-gallon polyethylene tank in the Former Silver Recovery Room, a 500-gallon HDPE and a 250-gallon HDPE tank in the Former Photo Waste Room. It is anticipated that the precise sampling location will be dictated by a NYSDEC representative on-site at the time of the closure investigation. The concrete floor, estimated to be 4-6 inches thick, shall be core drilled. As discussed in Section 4.1.2, a remote access direct-push drilling unit will be used to advance the subsurface borings to a total depth of 8 feet below the floor slab. Representative soil samples shall be collected from depth intervals of 0-2, 2-4, 4-6 and 6-8 feet. Additional QA/QC samples, i.e., blank, duplicate and spike samples, will be collected to satisfy the NYSDEC Analytical Services Protocol (ASP) standards for Data Quality Assessments. As the fill media is expected to have low sample recovery due to an anticipated low moisture content, additional borings immediately adjacent may be used for the same collection depths. All samples submitted to the analytical laboratory will be tested for TAL metals/Hg and TCL VOCs + TICs. Soil sampling results will be compared with the 6 NYCRR Part 375-6.8(a) Unrestricted Use Soil Cleanup Objectives. The soil VOC samples shall be collected in conformance with EPA Method 5035 – Terra Core Sampling.

Once all samples are collected, initially only the 0-2 and 2-4 feet samples from each soil boring location will be analyzed by the analytical laboratory. These samples will be analyzed on an accelerated turnaround time, while ensuring compliance with analytical holding times. Should no contamination be identified, then the 4-6 and 6-8 feet samples will not be analyzed.

4.2.3 Piping Rinsate Sampling

Seventeen (17) representative sections of the waste piping throughout the building will be removed and visually inspected. As stated in Section 4.1.3, rinsate sampling of the piping will be conducted as necessary based on visual inspections of the piping. Additional QA/QC samples, i.e., blank, duplicate and spike samples, will also be collected to satisfy the NYSDEC Category B standards for Data Quality Assessments. The piping rinsate samples will be analyzed for TAL metals/Hg and TCL VOCs + TICs. Sampling results will be compared with the NYS Groundwater Effluent Limitations (Class GA), as identified in NYSDEC TOGS 1.1.1 or 6 NYCRR Part 703.6. Should the sampling results exceed the Class GA standards, decontamination of the piping will be repeated until subsequent confirmatory rinsate samples meet the Class GA standards.

5.0 DOCUMENTATION AND CUSTODY

Sample preparation, documentation and custody are important elements of any QA/QC program. Without proper sample preparation and accurate documentation and tracking of sample custody, even well planned and properly implemented field sampling programs can generate data open to interpretation. For the purposes of this QA Plan, sample preparation and custody include containerization, preservation, container transfer to field personnel, field handling and sample custody, sample transfer to the laboratory, and internal laboratory custody during sample analysis.

Sample custody is initiated at the designated laboratory where appropriate sample containers and preservatives, if required, are compiled for use by field personnel.

5.1 Sample Containers

Sample containers are provided by the designated laboratory. Generally, the wide scopes of analyses performed during field and sampling investigations necessitate the use of several different types of sample containers. Container materials are selected so that there will be no interference with the analysis to be performed on the given sample. Each sample container will have a label that contains the information necessary to identify the sample. Care must be taken to ensure that the sample locations identified on the Sample Request Form precisely match those on the container and the Chain of Custody. The information to be provided on the container label will include the following, at a minimum:

- A unique laboratory identification number,
- Sample identification,
- Sample location (and depth, if appropriate),
- Sampler's name,
- Date and time of collection, and
- Identification of any preservatives, if applicable.

CLP bottles, as used during this closure sampling effort, are prepared using only CLP approved cleaning techniques with quality control certified by the vendor. The bottles used will be verified as non-contaminated by filling representative bottles with distilled water and analyzing the bottles for the parameters that would be analyzed using the specific bottle type. If any analytes are detected, the entire affected lot will be discarded and not used until the source of contamination is identified and remedied. Verification data is maintained on file at the laboratory.

5.2 Sample Preservation

Sample preservation is dependent upon the specific type or suite of analyses to be performed. A summary of sample container types and preservation methods is presented in Tables 7.2.1 and 7.2.2. Sample preservatives will be added in the laboratory prior to shipment and identified on the sample bottle labels. Field personnel are responsible for verifying the addition of preservatives by visually examining the sample bottles, sample bottle labels, and the chain of custody. Any discrepancies will be reported immediately to the laboratory and field personnel will not use the bottles in question.

After samples are collected and transferred into their respective sample bottles by field personnel, the samples are packed on ice, maintained at 4°C, and delivered to the laboratory within twenty-four hours of collection. Samples will be maintained in a refrigerator (4°C) in the laboratory prior to analysis.

5.3 Preparation of Sample Bottles and Coolers

Coolers used for sample transport will be scrubbed clean prior to use with a non-contaminating detergent followed by a thorough rinse with organic-free distilled water. Coolers will then be dried before packing and use. All sample bottles are purchased new and specially cleaned and certified by the vendor. As per CLP requirements, the sample bottles for this sampling program will be used once for the specific job intended. Non-CLP projects permit the sample bottles to be re-used after thorough cleaning and verification of non-contamination as discussed earlier. All glass containers to be used will be individually packaged in “bubble-wrap” to prevent breakage during transport.

5.4 Custody Transfer to Field Personnel

A standard chain of custody form is utilized for documenting the receipt, tracking and compilation of sample data. The chain of custody (COC) procedure begins with the preparation of the sample bottles. After the sample bottles have been prepared, the cooler to be used will be sealed with custody tape and an external chain of custody form prepared. At a minimum, the following information will be included on the COC at the time of shipment to field personnel:

- Container types including preservatives, if required;
- Number of containers required at each sample location for each analysis, including matrix spike/matrix spike duplicates (MS/MSD), trip blanks and field blanks;
- Any distinctive sample identification requirements;
- Sample custodian's signature with a date and time of relinquishment;
- Receiver's signature with a date and time of receipt.

Sample coolers will be picked up by field personnel at the laboratory. At this point, field personnel are in custody of the sample bottles.

5.5 Custody Transfer to Laboratory

Upon completion of field sampling, field personnel pack sample bottles, including any blank or duplicate samples, and seal the cooler with custody tape. Any breakage of bottles must be noted on the comment section of the COC. If lab prepared glassware is not to be submitted back to the laboratory for analysis, the line designating the unused sample bottles must be crossed-out with a single line through the entry, and the correction initialed by the person in custody of the samples. All corrections to the COC must be made with a single line through the incorrect entry and must be accompanied by the initials of the person in custody of the samples.

Field personnel must verify that the identification labels on the sample bottles and the COC are identical, and that all sample bottles are accounted. Any discrepancies must be resolved before relinquishing custody of the samples. Once the field personnel are satisfied that the samples are ready for submittal to the lab, the cooler will be returned to the laboratory.

Upon receipt of the sample cooler at the laboratory, the sample custodian examines the exterior of the cooler to ensure that sample integrity has not been impacted. Once the laboratory is satisfied that the sample integrity has not been compromised, a lab sample custodian signs and dates the COC to acknowledge receipt of the samples. The field personnel, when hand delivering samples, shall also sign and date the COC acknowledging that they have transferred custody of the samples to the laboratory.

6.0 QUALITY ASSURANCE/QUALITY CONTROL (QA/QC) SAMPLES

There are generally three types of QA/QC samples collected during field sampling programs: blank samples, duplicate samples, and spiked samples. Each of these types of samples serves a specific purpose. Blank samples provide a measure of contamination that may have been introduced into a sample set in either of two ways:

- in the field while the samples were being collected or transported, or
- in the laboratory during sample preparation or analysis.

Duplicate samples provide a quantitative measurement of the reproducibility of sample results and as such, provide a mechanism for measuring the accuracy of sample collection and laboratory analysis procedures. Spiked samples can be used in several ways; the most common of which are the determination of parameter recoveries and reproducibility of results. Parameter recoveries are important in discussing data usability and the possible use of pseudo-correction factors for site sample results.

6.1 Blanks

There are four basic types of blank samples: trip blanks, field blanks, equipment blanks, laboratory calibration blanks, and laboratory reagent (or method) blanks. Only trip blanks and equipment blanks are utilized by field sampling personnel.

Trip blanks are used to indicate potential contamination due to migration of volatile organic compounds (VOCs) from the air on the site or in the sample shipping containers into the sample. A trip blank consists of laboratory distilled and deionized water in a 40 ml glass vial sealed with a Teflon septum. The blank accompanies the empty sample bottles to the field as well as the samples returning to the laboratory for analysis.

Equipment blanks are used to determine if certain field sampling or cleaning procedures (e.g., decontamination of field equipment) result in cross-contamination of site samples. Like the trip blank, the equipment blank is a sample of distilled and deionized water taken to the field with empty sample bottles and analyzed with the site samples. However, unlike the trip blank, the equipment blank sample is prepared in the field. The equipment blank will be poured through or over the sampling equipment after the equipment has been decontaminated. The equipment blank is collected after cleaning the equipment and before next use. The equipment blank will be containerized and labeled in the same manner as other site samples. One (1) equipment blank per 20 field samples will be collected for each matrix type and submitted to the laboratory for the same analysis parameters as the field samples.

6.2 Duplicate Samples

Duplicate samples are used to assess the accuracy and repeatability of field procedures and laboratory analytical procedures. Duplicate site samples are generally collected so that the laboratory is “blind” to the source of the duplicate. Duplicate samples should be collected by sampling the given matrix in accordance with the procedures established for the project, except that approximately double the quantity of sample should be collected. Since sample recoveries are often a limiting factor as to which samples can be collected as duplicates, initial planning is important to ensure that sufficient sample volume is available for an accurate duplicate.

After collection of the sample, the sample will be divided evenly so that each 'half' sample is representative of the whole (i.e., the two samples should be as close to identical as possible). Each sample will then be labeled. The first sample will be labeled with the actual sample location and description. The second sample will be labeled with a fictitious sample identifier known only to the sampler and those responsible for data interpretation. The laboratory should not be informed of the presence of a duplicate sample. Both samples will then be submitted in an identical manner and documented on the COC. Analysis should include

all parameters required for the original site sample. One (1) duplicate sample per 20 field samples will be collected over the course of the field sampling program.

6.3 Matrix Spiked Samples

Spiked samples are utilized to potentially improve combined sampling and analytical accuracy. The two spiked samples are identified as matrix spike and matrix spike duplicate (MS/MSD). For matrix spiked samples, a selected field sample is collected in triplicate following the same procedure as used for duplicate samples, discussed in Section 6.2. In the laboratory, two of the field samples are spiked with a known concentration of a contaminant of interest. The recovery of the spiked compound is determined after laboratory analysis. The recovery serves as an indicator of the efficiency of the laboratory analysis, and more importantly from the standpoint of the field sampling personnel; the percent recovery can be used as a pseudo-correction factor for other sample results. Sample recoveries outside of a pre-determined control limit can also be used by the personnel responsible for data interpretation to assess the usability of site data. One (1) set of MS/MSD samples will be collected per 20 field samples as part of the field sampling program.

A summary of spiking compounds, method, low and high QC limits for spike recovery and relative percent difference values (RPD) for all matrices are included in **Appendix B**. Tables listing surrogate compounds, method, and acceptability QC limits for all samples matrices are also included.

7.0 ANALYTICAL PROCEDURES AND LABORATORY TESTING

7.1 Analytical Laboratory

Environmental samples will be analyzed by American Analytical Laboratories LLC in Farmingdale, New York, a New York State ELAP-accredited laboratory.

7.2 Sample Analysis

All rinsate and soil samples will include a NYSDEC ASP category B data package that documents the quality of the analytical work. A summary of the desired parameters, methods of analyses, required sample container, preservative and maximum holding time is shown in Table 7.2.1 for water matrices and Table 7.2.2 for soil and solid matrices. An Analytical Methods/Quality Assurance summary including information pertaining to all environmental, performance evaluation and quality control samples is provided in Table 7.2.3.

8.0 CALIBRATION PROCEDURES

8.1 Calibration Practices

Instruments and equipment to be used in the analytical laboratory are controlled by a formal calibration program. The program verifies that equipment is of the proper type, range, accuracy and precision to provide data compatible with the desired requirements. All instruments and equipment that measure a quantity with performance expected at a stated level are subject to calibration. Calibration may be performed by lab personnel using reference standards or externally by calibration agencies or equipment manufacturers.

Implementation of the laboratory calibration program is the responsibility of the Laboratory Manager and Analysts. The Laboratory QA Manager shall review the implementation of the program.

There are two types of calibration pertinent to the laboratory procedures to be utilized during the analysis of samples from the Newsday Facility closure. These are operational and periodic.

- 1.) Operational calibration which is routinely performed as part of the instrument usage, such as the development of a standard curve for use with an Atomic Absorption (AA) Spectrophotometer or Inductively Coupled Plasma (ICP) Spectrophotometer. Operation calibration is generally performed for instrument systems.
- 2.) Periodic calibration is performed at prescribed intervals for equipment such as balances and controlled ovens. In general, equipment that can be calibrated periodically is considered a distinct single purpose unit and is relatively stable in performance.

Whenever possible recognized procedures, such as those published by ASTM, USEPA, or the equipment manufacturers shall be utilized.

8.2 Calibration Frequency

Instruments and equipment shall be calibrated at prescribed intervals and/or as part of the operational use of the equipment. Frequency shall be based on the type of equipment, inherent stability, manufacturer's recommendations, values provided in recognized standards, intended use, effect of error upon the measurement process, and prior experience.

8.3 Calibration Reference Standards

Two (2) types of reference standards are used by American Analytical for calibration. These are physical and chemical.

- 1.) Physical Standards, such as weights for calibrating balances and certified thermometers for calibrating working thermometers and ovens, are generally used for periodic calibration.

- 2.) Chemical Standards are primarily used for operational calibration.

Whenever possible, physical and chemical reference standards shall have known relationships to nationally recognized standards (e.g., National Bureau of Standards) or accepted values of natural physical constants. If national standards do not exist, the basis for the reference standard shall be documented.

8.4 Calibration Failure

Equipment that fails calibration or becomes inoperable during use shall be removed from service and segregated to prevent inadvertent use, or shall be tagged to indicate it is out of calibration. Such equipment shall be repaired and satisfactorily recalibrated before reuse.

8.5 Calibration Records

Records shall be prepared and maintained for each piece of equipment subject to calibration. Records demonstrating accuracy of reference standards shall also be maintained.

For instruments and equipment that are calibrated on an operational basis, calibration generally consists of determining instrumental response against compounds of known composition and concentration or the preparation of a standard response curve of the same compound at different concentrations. Records of these calibrations can be maintained in several ways:

- 1.) The calibration data can be kept with analytical sample data.
- 2.) A logbook can be prepared for each instrument that contains all calibration data.

Method 1 provides response factor information, etc., directly with the analytical data so that the data can be readily processed and verified. Also, the raw data package is completed as a unit.

Method 2 provides an on-going record of calibration undertaken for a specific instrument. However, to process and verify the analytical data, the log must be used in conjunction with the raw data.

For operational calibration of instrumentation used for this project, calibration data will be included with the raw analytical data and maintained in project files.

9.0 DATA REDUCTION, VALIDATION AND REPORTING

9.1 Data Reduction

Laboratory data reduction and analysis for organic analyses involves relating a "peak area" to the mass of a constituent. This is accomplished by digital computers. The computer hardware and software is designed

to allow the analyst to create libraries or files of calibration standards, and then compare raw sample data against these libraries to produce a report that contains the identification and qualification of constituents present in the sample. The analysts manually check the computer-reduced data.

Inorganic analyses are performed with instruments of varying electronic sophistication, but in all instances, data reduction and analysis involves essentially the generation of a standard calibration curve, and then comparing the instrument readout against the calibration curve to obtain a "Quantity" of constituent. The concentration is then manually calculated. The calculated results are manually entered into the computer system.

9.2 Data Validation

Data validation is a process in which field and analytical data quality is assessed relative to the data quality objectives. The validation process examines the acceptability or validity of data, and assesses data usability. Although data validation usually refers to analytical laboratory data, the same review process is applied to all field-generated data.

In order to ensure that data collected in the field is consistent and accurate, standard reporting forms are utilized. These forms are then checked by the Field Team Supervisor to confirm that the information is complete and that any calculations are correct. A minimum of 20% of the field data reports is checked in this manner. If, during the initial review process, errors are identified, the remaining 80% of the data set are reviewed. Items to be checked by the reviewer will be dependent on the type of data being reported, but in general include the following:

- Proper sampling methods and equipment were employed
- Proper sample preservation methods were followed
- Chain of custody information is complete
- Proper QA/QC samples were utilized.
- Equipment decontamination procedures were followed, and
- Instruments were properly calibrated.

The final analytical laboratory category B data package generated as part of the planned closure activities at Newsday will be evaluated for data validation by a third party. For this project, outside validation services will be provided by Nancy Potak. A copy of Ms. Nancy Potak's resume is provided as **Appendix C**.

9.3 Data Reporting

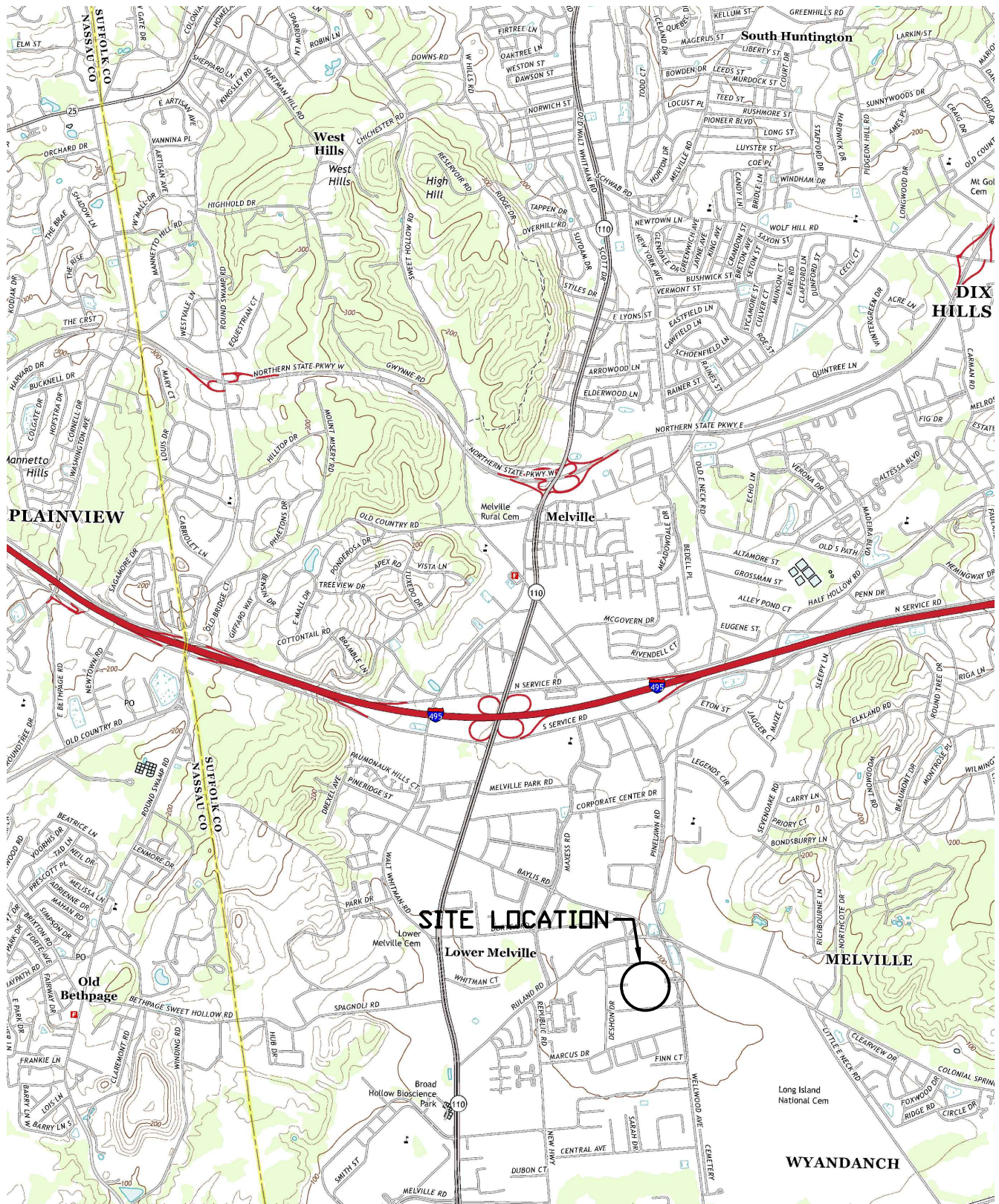
The following are applicable to data presentation:

- 1.) The final presentation shall be checked in accordance with data verification requirements and approved by the Laboratory QA Manager.
- 2.) Data presentation will include:
 - a) Sample identification number used by American Analytical and/or the sample identification provided to the laboratory (if different).
 - b) Chemical parameters analyzed reported values, and units of measurements.
 - c) Detection limit of the analytical procedure, if the reported value is less than the reporting limit.
 - d) Reporting limit for non-detects flagged with the "U" qualifier.
 - e) Data for a chemical parameter are reported with consistent significant figures for all samples.
 - f) Results of QA/QC sample analysis, if appropriate.
 - g) Footnotes referenced to specific data, if required to explain reported values.

The format for reporting will follow the NYSDEC ASP category B data package. All data will be made available in EQUIS Electronic Data Deliverable (EDD) Format.

QAPP FIGURES

X:\NEWSD (Newsday) - 445302018\NEWSD1803 - (RCRA Closure)\02-BIM-CADD\env\Fig 1.Site Location Map_LW.dwg Last Modified: May 25, 2018 - 4:30pm Plotted on: May 25, 2018 - 4:31pm By: lwu



CLIENT

NEWSDAY

**235 PINELAWN ROAD
MELVILLE, NY 11747**

Figure 1: Site Location Map

SCALE:

1" = 3280'



PROJECT #:

NEWD1803

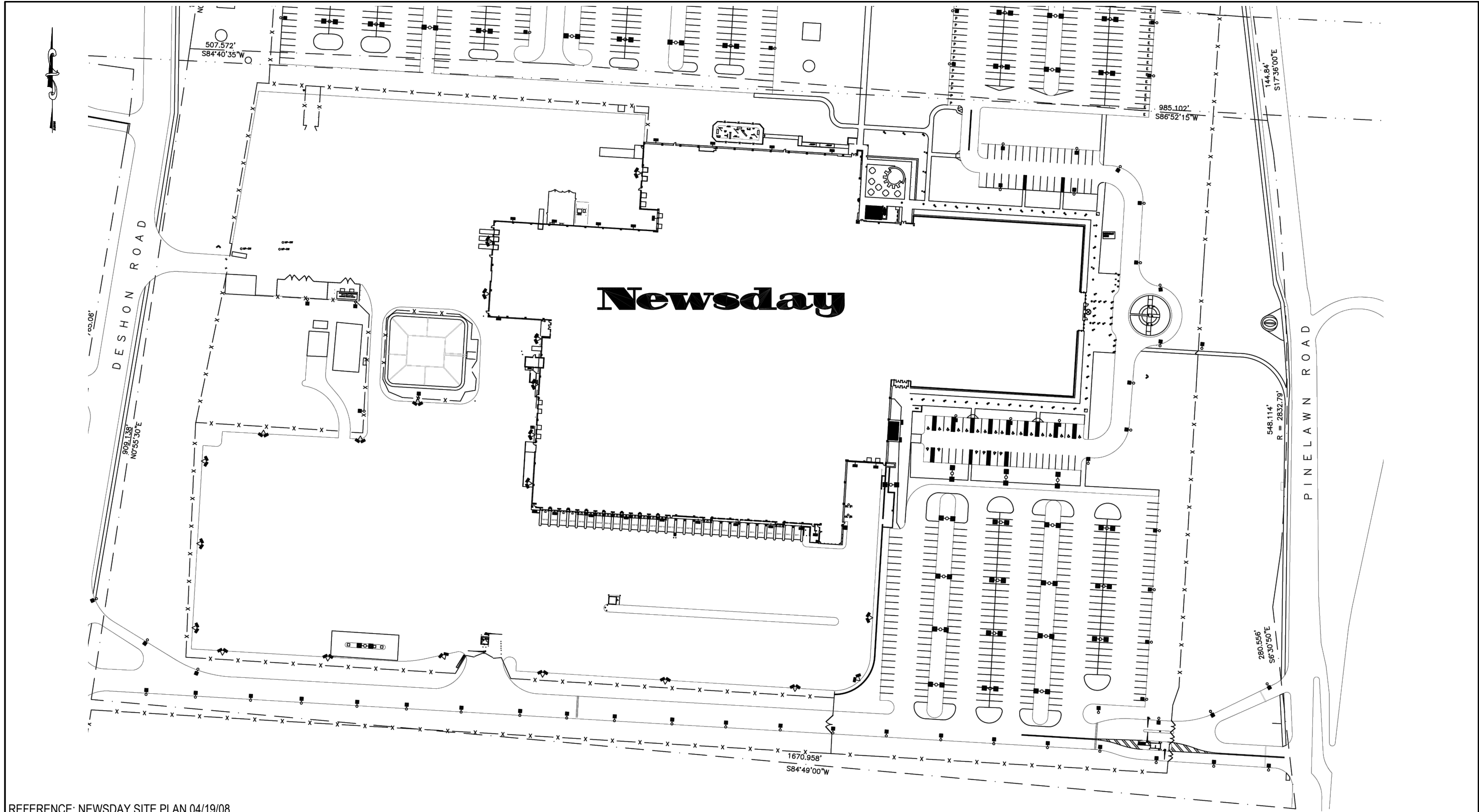
DATE:

MAY 2018



architects + engineers

Melville, NY Albany, NY
New City, NY Parsippany, NJ



REFERENCE: NEWSDAY SITE PLAN 04/19/08

Client

Newsday
235 Pinelawn Road, Melville, NY 11747
RCRA Closure

SHEET #

Figure 2

DATE:

MAY 2018

Facility Site Plan

NEWD1803

H

2

M

architects
+
engineers

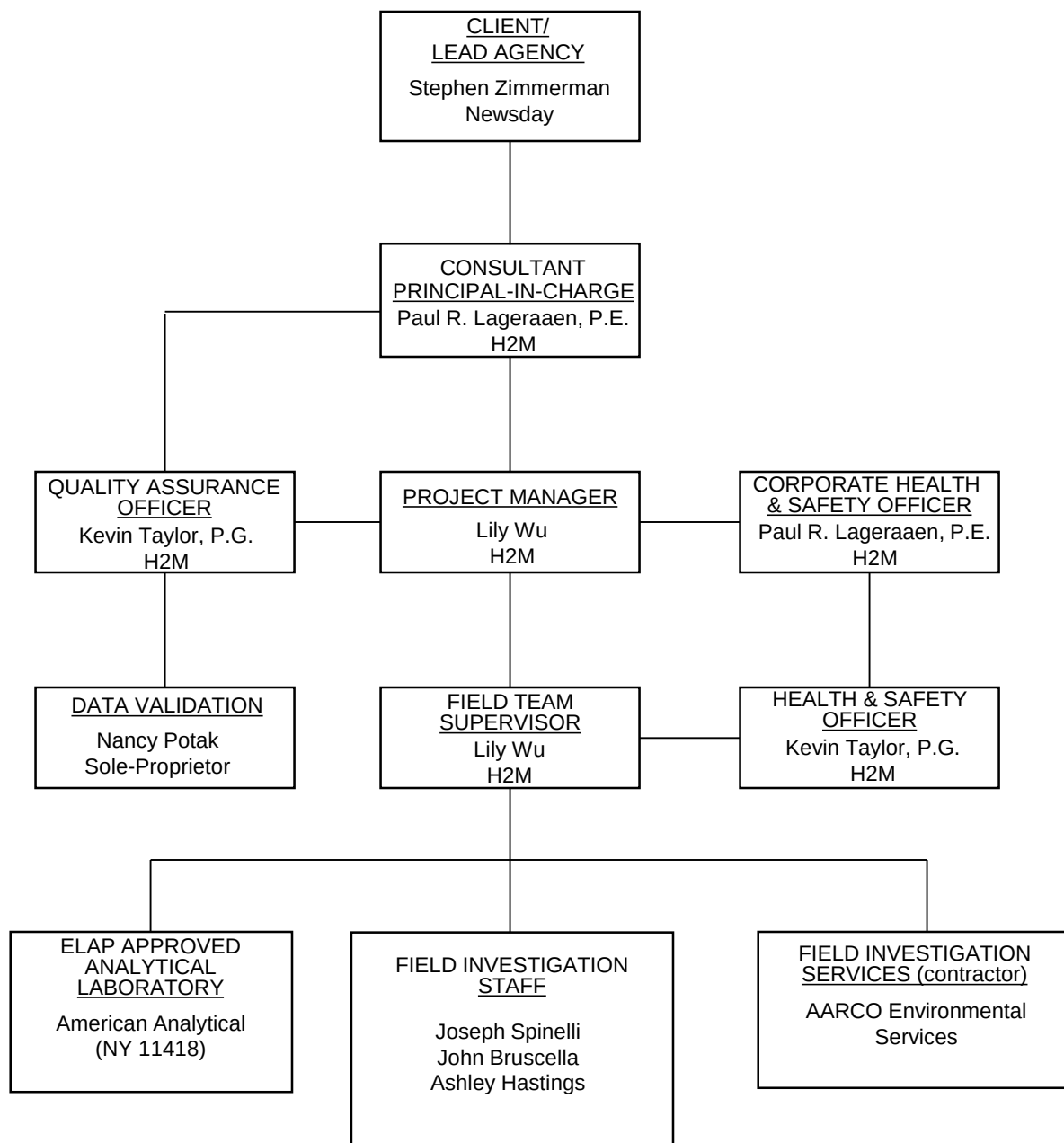


Figure 3. Organization Chart for Field Sampling and Analysis Program

QAPP TABLES

Table 7.2.1. Water Matrix Analysis Requirements and Methods

Parameter	Method	Container	Preservative	Max. Holding Time*
VOCs	ASP 2005 8260C	40 ml vial	Cool, 4°C; HCl to pH<2	7 days unpreserved; 14 days preserved.
Metals / Hg	ASP 2005 6010C / 7470A	500 ml plastic	Cool, 4°C; HNO ₃ to pH<2	6 months / 28 days.

*All holding times from verified time of sample receipt (VTSR) as per NYSDEC ASP Category B.

Table 7.2.2. Soil and Solid Matrix Analysis Requirements and Methods

Parameter	Method	Container	Preservative	Max. Holding Time*
VOCs (High Level)	ASP 2005 8260C / 5035	40 ml vial	Cool, 4°C; Methanol	14 days preserved.
VOCs (Low Level)	ASP 2005 8260C / 5035	40 ml vial	Cool, 4°C (48 hours) or Freeze, < -7°C; DI Water	14 days preserved.
Metals / Hg	ASP 2005 6010C / 7471B	8 oz jar	Cool, 4°C	6 months / 28 days.

* All holding times from VTSR as per NYSDEC ASP Category B.

Table 7.2.3. Analytical Methods/Quality Assurance Summary

Sampling Location	Matrix	No. of Samples	Analysis	Methods
1. Closure Sampling				
a. Floor Rinsate Sampling	Liquid	6	Metals	6010/7470
			VOCs	8260
b. Soil Sampling	Soil	12 ^[1]	Metals	6010/7471
			VOCs	8260
c. Piping Rinsate Sampling	Liquid	As Necessary	Metals	6010/7470
			VOCs	8260
2. QA/QC Sampling				
a. Trip Blank	Liquid	1 ^[2]	VOCs	8260
b1. Equipment Blank - Floor Rinsate	Liquid	1 ^[3]	Metals	6010/7470
			VOCs	8260
b2. Equipment Blank - Soil	Liquid	1 ^[3]	Metals	6010/7470
			VOCs	8260
b3. Equipment Blank - Piping Rinsate	Liquid	1 ^[3]	Metals	6010/7470
			VOCs	8260
c. Duplicate	Soil	1 ^[3]	Metals	6010/7471
			VOCs	8260
	Liquid	1 ^[3]	Metals	6010/7470
			VOCs	8260
d. MS/MSD	Soil	1 ^[3]	Metals	6010/7471
			VOCs	8260
	Liquid	1 ^[3]	Metals	6010/7470
			VOCs	8260

^[1] Soil samples collected using EPA Method 5035 will be collected in duplicate.

^[2] One trip blank per day.

^[3] Minimum of one set of QA samples per sample delivery group (SDG), i.e., 1 per 20.

QAPP APPENDIX A

RINSATE SAMPLE COLLECTION PROTOCOL

Attachment A

Rinsate Sample Collection Protocol

This procedure is intended to be used to collect samples for analysis of concrete floors, secondary containment areas and sumps, including surfaces that have been coated, to establish whether or not there is any contamination on the concrete surfaces. This procedure is to be performed after the surfaces have been cleaned and decontaminated pursuant to the approved closure plan. This procedure may also be suitable for use on other surfaces on a case-by-case basis.

1. Mark areas to be sampled on a facility floor plan for the area(s) to be closed. Sketches should include locations of building columns, walls, fixed equipment, and the rinsate sampling locations themselves to accurately locate the rinsate sampling points within the buildings.
2. Assemble and clean all equipment necessary for sample collection. Equipment needs to be cleaned, if not already pre-cleaned by the laboratory.
3. Create a temporary containment area on the floor using an inert, pre-cleaned, flexible boom.
4. Label the sample containers with a unique sample code, information on the site, sample location and date/time sample was collected. Affix appropriate labels for test parameters on the sample containers. Put on a new pair of disposable nitrile gloves.
5. At each sampling location, slowly pour the minimum quantity of de-ionized water (start with one gallon for metals analysis, much less for only volatiles) needed to collect all sample parameters, including QC samples, onto the concrete area. If the individual area is sloped, start pouring at the highest elevation. The de-ionized water may be provided by the analytical laboratory, purchased, or generated on-site.
6. Allow de-ionized water to collect and remain in the sample location for 10 minutes.
7. Collect the number of samples as specified in the closure plan along with appropriate QA/QC samples. Samples may be collected using dedicated, sterile glass pipettes provided by the laboratory, or any other suitable device approved in the closure plan. The pipettes are used to transfer the sample fluids into the appropriate laboratory supplied containers. Volatile sample containers shall be filled first to minimize loss of volatiles.
8. Samples must not be composited.
9. Cap the sample container and place sample containers in a cooler with ice to maintain a temperature of 4 °C.
10. Remove and discard the gloves. Place all disposable gloves into a plastic bag designated

for proper disposal.

11. Fill out sampling details in field log book. Photographs of the sample locations, wetted areas, equipment, and actual sampling events may be taken by the facility or Department staff and a list of the photographs shall be recorded in the field book.
12. Fill out the chain-of-custody and any other sample forms. Prepare the samples for storage and shipping in the cooler with ice to maintain a temperature of $4 \pm 2^{\circ}\text{C}$. Ship overnight to the laboratory for analysis.
13. Follow the chain-of custody procedures as detailed in the Quality Assurance Project Plan.

QAPP APPENDIX B

QC LIMITS FOR SPIKING AND SURROGATE COMPOUNDS

Volatile Organic Compounds (VOCs), Method 8260B - Water (ug/l)

Lab Fortified Blank (LFB)		QC Limits (%R)	
Analyte	Spike Concentration	Low	High
1,1,1-Trichloroethane	50	66	126
1,1,2,2-Tetrachloroethane	50	77	120
1,1,2-Trichloroethane	50	82	116
1,1-Dichloroethane	50	77	114
1,1-Dichloroethene	50	67	120
1,2-Dichloroethane	50	76	120
1,2-Dichloroethene (total)	100	78	128
1,2-Dichloropropane	50	81	115
2-Butanone	50	74	121
2-Hexanone	50	76	119
4-Methyl-2-pentanone	50	79	121
Acetone	50	71	125
Benzene	50	77	116
Bromodichloromethane	50	78	118
Bromoform	50	75	121
Bromomethane	50	50	136
Carbon disulfide	50	61	126
Carbon tetrachloride	50	64	126
Chlorobenzene	50	72	124
Chloroethane	50	71	116
Chloroform	50	75	119
Chloromethane	50	70	114
cis-1,3-Dichloropropene	50	79	116
Dibromochloromethane	50	75	125
Ethylbenzene	50	68	128
Methylene chloride	50	80	112
Styrene	50	72	124
Tetrachloroethene	50	59	133
Toluene	50	70	125
trans-1,3-Dichloropropene	50	77	120
Trichloroethene	50	72	121
Vinyl chloride	50	66	117
Xylene (total)	150	78	133

VOCs (continued), Method 8260B - Water (ug/l)

MS/MSD		QC Limits (%R)		RPD
Analyte	Spike Concentration	Low	High	
1,1-Dichloroethene	50	61	145	14
Benzene	50	76	127	11
Chlorobenzene	50	75	130	13
Toluene	50	76	125	13
Trichloroethene	50	71	120	14

Surrogates		QC Limits (%R)	
Analyte	Spike Concentration	Low	High
1,2-Dichloroethane-d4	50	76	114
4-Bromofluorobenzene	50	86	115
Toluene-d8	50	88	110

Volatile Organic Compounds (VOCs), Method 8260B - Soil (ug/kg)

Lab Fortified Blank (LFB)		QC Limits (%R)	
Analyte	Spike Concentration	Low	High
1,1,1-Trichloroethane	50	78	127
1,1,2,2-Tetrachloroethane	50	72	152
1,1,2-Trichloroethane	50	80	139
1,1-Dichloroethane	50	67	141
1,1-Dichloroethene	50	65	142
1,2-Dichloroethane	50	65	147
1,2-Dichloroethene (total)	100	57	150
1,2-Dichloropropane	50	81	132
2-Butanone	50	30	226
2-Hexanone	50	59	163
4-Methyl-2-pentanone	50	64	170
Acetone	50	50	187
Benzene	50	71	142
Bromodichloromethane	50	78	137
Bromoform	50	81	142
Bromomethane	50	58	144
Carbon disulfide	50	52	143
Carbon tetrachloride	50	70	136
Chlorobenzene	50	85	128
Chloroethane	50	33	153
Chloroform	50	68	140
Chloromethane	50	33	149
cis-1,3-Dichloropropene	50	78	131
Dibromochloromethane	50	82	136
Ethylbenzene	50	80	129
Methylene chloride	50	46	157
Styrene	50	85	126
Tetrachloroethene	50	67	144
Toluene	50	83	129
trans-1,3-Dichloropropene	50	59	147
Trichloroethene	50	72	145
Vinyl chloride	50	20	164
Xylene (total)	150	79	133

VOCs (continued), Method 8260B - Soil (ug/kg)

MS/MSD		QC Limits (%R)		RPD
Analyte	Spike Concentration	Low	High	
1,1-Dichloroethene	50	59	172	22
Benzene	50	66	142	21
Chlorobenzene	50	60	133	21
Toluene	50	59	139	21
Trichloroethene	50	62	137	24

Surrogates		QC Limits (%R)	
Analyte	Spike Concentration	Low	High
1,2-Dichloroethane-d4	50	70	121
4-Bromofluorobenzene	50	59	113
Toluene-d8	50	84	138

Metals, Method 6010/7471 - Soil (mg/kg)

LCS		QC Limits	
Analyte	Spike Concentration	Low	High
Aluminum	10600	52.36	147.2
Antimony	103	0	207.8
Arsenic	107	79.5	119.6
Barium	331	79.2	120.8
Beryllium	74.1	73.9	118.5
Cadmium	244	73.4	118
Calcium	9690	75.4	117.6
Chromium	80.6	79.5	120.3
Cobalt	85.8	81.9	117.7
Copper	65.3	80.4	119.6
Iron	18400	50.6	149.5
Lead	107	80.3	119.6
Magnesium	4100	74.6	125.1
Manganese	452	76.3	119.2
Mercury	3	71.7	128.4
Nickel	96.8	79.8	119.8
Potassium	4490	72.2	127.8
Selenium	177	78.5	122
Silver	46.2	66.2	133.8
Sodium	1060	73.8	126.4
Thallium	272	80.9	119.5
Vanadium	115	79.6	120
Zinc	378	78.3	122

Metals (continued), Method 6010/7471 - Soil (mg/kg)

Matrix Spike (MS)		QC Limits (%R)	
Analyte	Spike Concentration	Low	High
Antimony	50	75	125
Arsenic	4	75	125
Barium	200	75	125
Beryllium	5	75	125
Cadmium	5	75	125
Chromium	20	75	125
Cobalt	50	75	125
Copper	25	75	125
Lead	2	75	125
Manganese	50	75	125
Mercury	0.167	75	125
Nickel	50	75	125
Selenium	1	75	125
Silver	5	75	125
Thallium	5	75	125
Vanadium	50	75	125
Zinc	50	75	125

Sample Duplicate – 20% RPD

QAPP APPENDIX C

RESUME OF MS. NANCY POTAK (THIRD PARTY DATA VALIDATOR)

Nancy J. Potak
1796 Craftsbury Road
Greensboro, Vermont 05841

Phone (802) 533-9206
Fax (802) 533-9206
email: npotak@vtlink.net

PROFESSIONAL EXPERIENCE

Data Validation / Client List – NYS DEC

First Project 2007	Earth Tech
First Project 2007	OP-TECH Environmental Sciences
First Project 2007	Camp Dresser McKee (CDM)
First Project 2006	EA Science & Technology
First Project 2005	H2M, Inc.
First Project 2004	GEI Consultants
First Project 2003	Vanasse Hangen Brustlin, Inc
First Project 2000	O'Brien & Gere, Syracuse, NY
First Project 2000	EPM, Lake Success, NY
First Project 1998	IT International Technology Corporation / Shaw Environmental, New Jersey
First Project 1997	Cluogh Harbour and Associates
First Project 1997	Roux Associates, Islandia, New York
First Project 1996	Lawler, Matusky and Skelly Enngineers, Pearl River, NY
First Project 1996	ABB, Portland Maine
First Project 1996	Malcolm Pirnie, Buffalo, Albany, New York
First Project 1995	AKRF Associates, New York, New York
First Project 1992	Dvirka & Bartilucci, Woodbury, New York
First Project 1992	Eckenfelder, Inc., Mahwah, New Jersey
First Project 1991	C&S Engineering, Liverpool, New York

1989 - 1993	EDER ASSOCIATES , Locust Valley, New York Perform independent third party data validations for NY CLP projects. Review analytical data from projects in several states for appropriate methodology, detection limits, and quality assurance practices. Compose laboratory analytical contracts detailing methods, deliverables and laboratory quality assurance requirements. Advise on potential analytical problems which may be encountered at specific sites.
1988 -1993	WOODWARD CLYDE CONSULTANTS , Wayne, New Jersey Perform independent third party data validation for CLP analyses of all samples collected for the Pelham Bay Landfill. Design data validation documentation for dioxin and furan analyses.
1989 - 1990	SMC MARTIN , Valley Forge, PA Perform independent data validations for the New Jersey CLP program.

- 1987 - 1988 **KILLAM ASSOCIATES**, Millburn, New Jersey
Laboratory Director
Supervise a staff of 14 chemists and technicians in methodologies for GC/MS, GC, and inorganic analyses.
Responsible for the quality of all data and the final review of all analytical reports produced by the laboratory.
Developed the laboratory quality assurance program
Responsible for the hiring of all technical and administrative personnel.
- 1982 - 1987 **GENERAL TESTING CORPORATION**, Hackensack, NJ
Laboratory Director, 1986 through 1987
Coordinate all analytical and field projects originating in the New York metropolitan area involving water quality analyses, site investigation, and industrial monitoring.
- Laboratory Manager, 1983 - 1986
Hired, trained, and evaluated all technical personnel.
Directly responsible for all data originating at the New Jersey laboratory.
Extensive experience in all aspects of large scale water quality monitoring studies.
- 1982 **HUDSONIA**, Annandale, NY
Consultant
Assisted in a study to determine the feasibility of the use of apple cider wastes as a soil amendment and fuel.
- HUDSON RIVER SLOOP CLEARWATER**, Poughkeepsie, NY
Consultant
Studied the effectiveness of the NY SPDES program. Examined the engineering files of the major dischargers in the Hudson River valley to determine the reasons for permit violations.
- 1981 **LAWLER, MATUSKY, AND SKELLY ENGINEERS**, Pearl River, NY
Analyst: Performed wet chemical analyses for environmental monitoring.
- 1977 - 1979 **UNIVERSITY OF GEORGIA**, Athens, GA
Research assistant in several projects involving soil and water chemistry. Extensive experience in inorganic analyses.
- 1972 - 1976 **UNIVERSITY OF MASSACHUSETTS**, Amherst, MA
Assisted in experiments designed to study the effects of sludge on plant growth and heavy metal uptake. Performed all of the inorganics analyses for the project.

EDUCATION

University of Massachusetts, Amherst, MA
B.S. - Plant and Soil Sciences, Honors Program, 1976

University of Georgia, Athens, GA
Graduate work in environmental chemistry and ecology

APPENDIX B

SCDHS TANK LISTING, APRIL 10, 2014

Facility Info: NEWSDAY LLC
235 PINELAWN RD
MELVILLE, NY 11747

Reg. No.: 4-0094
Ref. No.: 02037
Tax Lot: 0400 270.00 002 001.000

Tank Listing as of 04/10/2014

STATUS KEY:
REM = removed

NI = never installed

HP = permitted

EX = exempt

ABD = abandoned

81, 82, 85 = non-compliant tanks

SIC Code: 2711
Rank: D03
EPA: Y
X Coord.: 2164274
Y Coord.: 196590

No.	Location	Vol	Status	Job No	Contents	Constr / Contain	Rem/Abd	Permit	Register
1	UNDER OUT UNKNOWN	25000	86REM		DIESEL NONE	STEEL/ IRON	01/01/86		
2	UNDER OUT UNKNOWN	25000	86REM		DIESEL NONE	STEEL/ IRON	01/01/86		
3	UNDER OUT UNKNOWN	25000	86REM		DIESEL NONE	STEEL/ IRON	01/01/86		
4	UNDER OUT UNKNOWN	12000	86REM		GASOLINE NONE	STEEL/ IRON	01/01/86		
5	UNDER OUT UNKNOWN	2000	88ABD		SPILL CONT NONE	STEEL/ IRON	06/28/88		
6	UNDER OUT UNDERGROUND	25000	14ABD		#2 FUEL OI NONE	STEEL/ IRON	03/20/14		
7	UNDER OUT UNDERGROUND	25000	14ABD		#2 FUEL OI NONE	STEEL/ IRON	03/20/14		
8	UNDER OUT UNKNOWN	4000	87REM		INDUSTRIAL FIBER REINFORCED PLA NONE		01/01/87		
9	ABOVE IN ABOVEGROUND - IN CONTACT WITH IMPERVI	275	EX		DIESEL NONE	STEEL/ IRON			
10	ABOVE IN ABOVEGROUND - IN CONTACT WITH IMPERVI	7900	11P	HM02-049R3	BLACK INK DIKE - CONCRETE	STEEL/ IRON		02/27/06	
11	ABOVE IN ABOVEGROUND - IN CONTACT WITH IMPERVI	7900	11P	HM02-049R3	BLACK INK DIKE - CONCRETE	STEEL/ IRON		02/27/06	
12	ABOVE IN ABOVEGROUND - IN CONTACT WITH IMPERVI	7900	11P	HM02-049R3	BLACK INK DIKE - CONCRETE	STEEL/ IRON		02/27/06	
13	ABOVE IN UNKNOWN	100	01REM		INDUSTRIAL REFER TO PAPER FILE NONE		02/06/01		
14	UNDER OUT UNKNOWN	20000	10REM	HU-052R	DIESEL NONE	FIBER REINFORCED PLA	04/28/10		
15	UNDER OUT UNKNOWN	20000	10REM	HU-052R	DIESEL NONE	FIBER REINFORCED PLA	04/28/10		
16	UNDER OUT UNKNOWN	20000	10REM	HU-052R	DIESEL NONE	FIBER REINFORCED PLA	04/28/10		
17	ABOVE IN ABOVEGROUND - IN CONTACT WITH IMPERVI	100	EX		DIESEL DIKE - STEEL	STEEL/ IRON			
18	UNDER OUT UNDERGROUND	2500	92P	HU-052	#2 FUEL OI SECONDARY WALL - FIBERGLASS	FIBER REINFORCED PLA			
19	UNDER OUT UNKNOWN	4000	NI	HM86-068R3	INDUSTRIAL SECONDARY WALL - STI-P3 PROTECTED	STEEL/ IRON			
20	UNDER OUT UNKNOWN	10000	NI	HU-052	GASOLINE NONE	FIBER REINFORCED PLA			
21	ABOVE IN UNKNOWN	4675	NI	HM88-141	DRUM STORA UNKNOWN				
22	ABOVE IN ABOVEGROUND - IN CONTACT WITH IMPERVI	1380	96P	HM88-141R1	DRUM STORA DIKE - CONCRETE	STEEL/ IRON		04/19/91	
23	ABOVE IN ABOVEGROUND - IN CONTACT WITH IMPERVI	200	96P	HM88-141R1	INDUSTRIAL DIKE - CONCRETE	STEEL/ IRON		04/19/91	
24	ABOVE IN	200	96P	HM88-141R1	INDUSTRIAL	STEEL/ IRON		04/19/91	

ABOVEGROUND - IN CONTACT WITH IMPERVI DIKE - CONCRETE					
(25)	ABOVE IN	500 96P	HM88-141R1	INDUSTRIAL STEEL/ IRON	04/19/91
ABOVEGROUND - IN CONTACT WITH IMPERVI DIKE - CONCRETE					
26	ABOVE IN	2000 02REM	HM89-038	INDUSTRIAL POLYETHYLENE	12/16/02
	UNKNOWN			NONE	
27	ABOVE IN	2000 02REM	HM89-038	INDUSTRIAL POLYETHYLENE	12/16/02
	UNKNOWN			NONE	
28	ABOVE IN	250 03REM	HM89-038	INDUSTRIAL REFER TO PAPER FILE	07/29/03
	UNKNOWN			NONE	
29	ABOVE IN	2640 03REM	HM91-442R2	DRUM STORA UNKNOWN	07/29/03 02/06/01
	UNKNOWN			UNKNOWN	
30	ABOVE IN	1500 06REM	HM93-159R2	CAUSTIC (N STEEL/ IRON	02/23/06 02/06/01
	UNKNOWN			NONE	
(31)	ABOVE IN	7900 13P	HM02-048R3	BLACK INK STEEL/ IRON	12/22/08
ABOVEGROUND - IN CONTACT WITH IMPERVI DIKE - CONCRETE					
(32)	ABOVE IN	7900 13P	HM02-048R3	BLACK INK STEEL/ IRON	12/22/08
ABOVEGROUND - IN CONTACT WITH IMPERVI DIKE - CONCRETE					
(33)	ABOVE IN	7900 13P	HM02-048R3	BLACK INK STEEL/ IRON	12/22/08
ABOVEGROUND - IN CONTACT WITH IMPERVI DIKE - CONCRETE					
(34)	ABOVE IN	1900 13P	HM02-048R3	CYAN INK STEEL/ IRON	12/22/08
ABOVEGROUND - IN CONTACT WITH IMPERVI DIKE - CONCRETE					
(35)	ABOVE IN	1900 13P	HM02-048R3	YELLOW INK STEEL/ IRON	12/22/08
ABOVEGROUND - IN CONTACT WITH IMPERVI DIKE - CONCRETE					
(36)	ABOVE IN	1900 13P	HM02-048R3	RED INK STEEL/ IRON	12/22/08
ABOVEGROUND - IN CONTACT WITH IMPERVI DIKE - CONCRETE					
(37)	ABOVE IN	1900 13P	HM02-048R3	MAGENTA IN STEEL/ IRON	12/22/08
ABOVEGROUND - IN CONTACT WITH IMPERVI DIKE - CONCRETE					
(38)	ABOVE IN	125 EX		DIESEL STEEL/ IRON	
ABOVEGROUND - IN CONTACT WITH IMPERVI DIKE - STEEL					
39	ABOVE IN	300 03REM		COOLING TO REFER TO PAPER FILE	07/29/03
	UNKNOWN			NONE	
(40)	ABOVE IN	25 EX		#2 FUEL OI STEEL/ IRON	
ABOVEGROUND - IN CONTACT WITH IMPERVI NONE					
41	ABOVE IN	550 13REM		COOLING WA POLYETHYLENE	06/19/13
ABOVEGROUND - IN CONTACT WITH IMPERVI NONE					
42	ABOVE IN	50 13REM	HM01-278R1	INDUSTRIAL POLYETHYLENE	06/19/13 07/29/03
ABOVEGROUND - IN CONTACT WITH IMPERVI DIKE - CONCRETE					
43	ABOVE IN	100 02REM	HM01-137	INDUSTRIAL REFER TO PAPER FILE	12/16/02
	UNKNOWN			REFER TO PAPER FILE	
44	ABOVE IN	55 08REM	HM01-137,H	DEVELOPER REFER TO PAPER FILE	09/10/08 02/27/06
	UNKNOWN			REFER TO PAPER FILE	
45	ABOVE IN	100 08REM	HM01-137,H	DEVELOPER UNKNOWN	09/10/08 02/27/06
	UNKNOWN			UNKNOWN	
46	ABOVE IN	100 08REM	HM01-137,H	FIXER REFER TO PAPER FILE	09/10/08 02/27/06
	UNKNOWN			NONE	
47	ABOVE IN	100 08REM	HM01-137,H	FIXER REFER TO PAPER FILE	09/10/08 02/27/06
	UNKNOWN			NONE	
48	ABOVE IN	66 08REM	HM01-137,H	PHOTO CHEM UNKNOWN	09/10/08 02/27/06
	UNKNOWN			UNKNOWN	
49	ABOVE IN	200 08REM	HM01-137	DRY PHOTO UNKNOWN	09/10/08 02/27/06
	UNKNOWN			UNKNOWN	
(50)	ABOVE IN	200 82	HM01-137	SOLVENT PA STEEL/ IRON	
ABOVEGROUND - IN CONTACT WITH IMPERVI NONE					
51	ABOVE IN	330 02REM	HM01-137	FOUNTAIN S UNKNOWN	12/16/02
	UNKNOWN			UNKNOWN	
52	ABOVE IN	330 02REM	HM01-137	FOUNTAIN S UNKNOWN	12/16/02
	UNKNOWN			UNKNOWN	
53	ABOVE IN	330 02REM		FOUNTAIN S UNKNOWN	12/16/02
	UNKNOWN			UNKNOWN	
54	ABOVE IN	330 02REM		FOUNTAIN S UNKNOWN	12/16/02

UNKNOWN			UNKNOWN		
55 ABOVE OUT	1250 06REM		DIESEL	STEEL/ IRON	02/23/06
UNKNOWN			NONE		
56 ABOVE OUT	1250 06REM		DIESEL	STEEL/ IRON	02/23/06
UNKNOWN			NONE		
57 ABOVE IN	80 08P	HM02-100R1	BOILER CHE	POLYETHYLENE	07/29/03
ABOVEGROUND -	IN CONTACT WITH IMPERVI		DIKE -	STEEL	
58 ABOVE IN	80 08P	HM02-100R1	BOILER CHE	POLYETHYLENE	07/29/03
ABOVEGROUND -	IN CONTACT WITH IMPERVI		DIKE -	STEEL	
59 ABOVE IN	80 08P	HM02-100R1	BOILER CHE	POLYETHYLENE	07/29/03
ABOVEGROUND -	IN CONTACT WITH IMPERVI		DIKE -	STEEL	
60 ABOVE IN	80 08P	HM02-100R1	BOILER CHE	POLYETHYLENE	07/29/03
ABOVEGROUND -	IN CONTACT WITH IMPERVI		DIKE -	STEEL	
61 ABOVE IN	80 08P	HM02-100R1	COOLING TO	POLYETHYLENE	07/29/03
ABOVEGROUND -	IN CONTACT WITH IMPERVI		DIKE -	STEEL	
62 ABOVE IN	140 08P	HM02-100R1	COOLING TO	POLYETHYLENE	07/29/03
ABOVEGROUND -	IN CONTACT WITH IMPERVI		DIKE -	STEEL	
63 ABOVE IN	80 08P	HM02-100R1	COOLING TO	POLYETHYLENE	07/29/03
ABOVEGROUND -	IN CONTACT WITH IMPERVI		DIKE -	STEEL	
64 ABOVE IN	140 08P	HM02-100R1	COOLING TO	POLYETHYLENE	07/29/03
ABOVEGROUND -	IN CONTACT WITH IMPERVI		DIKE -	STEEL	
65 ABOVE IN	220 EX		DRUM STORA	STEEL/ IRON	
ABOVEGROUND -	IN CONTACT WITH IMPERVI		NONE		
66 ABOVE IN	595 08P	HM02-179R1	DRUM STORA	STEEL/ IRON	07/29/03
ABOVEGROUND -	IN CONTACT WITH IMPERVI		DIKE -	STEEL	
67 ABOVE IN	440 03REM		DRUM STORA	UNKNOWN	07/29/03
UNKNOWN			UNKNOWN		
68 ABOVE IN	5280 08P	HM01-291R2	DRUM STORA	STEEL/ IRON	07/29/03
UNKNOWN			DIKE -	CONCRETE	
69 ABOVE OUT	10 01REM		SALT STORA	UNKNOWN	10/16/02
UNKNOWN			UNKNOWN		
70 ABOVE IN	101 EX		OTHER OIL	STEEL/ IRON	
ABOVEGROUND -	IN CONTACT WITH IMPERVI		NONE		
71 ABOVE IN	81 13REM		OTHER OIL	STEEL/ IRON	06/19/13
ABOVEGROUND -	IN CONTACT WITH IMPERVI		NONE		
72 ABOVE IN	600 01REM		HYDRAULIC	STEEL/ IRON	10/16/02
UNKNOWN			NONE		
73 ABOVE IN	120 EX		HYDRAULIC	STEEL/ IRON	
ABOVEGROUND -	IN CONTACT WITH IMPERVI		NONE		
74 ABOVE IN	275 01REM		DRUM STORA	UNKNOWN	10/16/02
UNKNOWN			UNKNOWN		
75 ABOVE IN	500 07P	HM01-277R1	FOUNTAIN S	POLYETHYLENE	12/16/02
ABOVEGROUND -	IN CONTACT WITH IMPERVI		DIKE -	CONCRETE	
76 ABOVE IN	500 07P	HM01-277R1	FOUNTAIN S	POLYETHYLENE	12/16/02
ABOVEGROUND -	IN CONTACT WITH IMPERVI		DIKE -	CONCRETE	
77 ABOVE IN	500 07P	HM01-277R1	FOUNTAIN S	POLYETHYLENE	12/16/02
ABOVEGROUND -	IN CONTACT WITH IMPERVI		DIKE -	CONCRETE	
78 ABOVE IN	500 07P	HM01-277R1	FOUNTAIN S	POLYETHYLENE	12/16/02
ABOVEGROUND -	IN CONTACT WITH IMPERVI		DIKE -	CONCRETE	
79 ABOVE IN	660 07P	HM01-277R1	TRANSFER F	POLYETHYLENE	12/16/02
ABOVEGROUND -	IN CONTACT WITH IMPERVI		SECONDARY WALL -	FIBERGLASS	
80 ABOVE IN	60 09REM	HM01-278R1	INDUSTRIAL REFER TO PAPER FILE		12/14/09 07/29/03
UNKNOWN			REFER TO PAPER FILE		
81 ABOVE IN	60 09REM	HM01-278R1	INDUSTRIAL REFER TO PAPER FILE		12/14/09 07/29/03
UNKNOWN			REFER TO PAPER FILE		
82 ABOVE IN	50 09REM	HM01-278R1	INDUSTRIAL REFER TO PAPER FILE		12/14/09 07/29/03
UNKNOWN			REFER TO PAPER FILE		
83 ABOVE IN	500 09REM	HM01-278R1	INDUSTRIAL REFER TO PAPER FILE		12/14/09 07/29/03
UNKNOWN			REFER TO PAPER FILE		
84 ABOVE OUT	2860 07P	HM01-288R1	DRUM STORA	STEEL/ IRON	12/16/02

	ABOVEGROUND	-	IN CONTACT WITH IMPERVI	DIKE - CONCRETE		
85	ABOVE IN	200 10P	HM01-289R2	DEGREASER STEEL/ IRON		01/06/05
	ABOVEGROUND	-	IN CONTACT WITH IMPERVI	DIKE - CONCRETE		
86	ABOVE OUT	1100 11P	HM03-122R4	DIESEL STEEL/ IRON		02/27/06
	ABOVEGROUND	-	IN CONTACT WITH IMPERVI	SECONDARY WALL - EPOXY COATED STEEL		
87	ABOVE OUT	1100 11P	HM03-122R4	DIESEL STEEL/ IRON		02/27/06
	ABOVEGROUND	-	IN CONTACT WITH IMPERVI	SECONDARY WALL - EPOXY COATED STEEL		
88	ABOVE IN	210 82		O/W SEPARA POLYETHYLENE		
	ABOVEGROUND	-	IN CONTACT WITH IMPERVI	NONE		
89	ABOVE IN	210 82		O/W SEPARA POLYETHYLENE		
	ABOVEGROUND	-	IN CONTACT WITH IMPERVI	NONE		
90	ABOVE IN	210 82		O/W SEPARA POLYETHYLENE		
	ABOVEGROUND	-	IN CONTACT WITH IMPERVI	NONE		
91	ABOVE IN	120 13REM		ENZYMATIC POLYETHYLENE		06/19/13
	ABOVEGROUND	-	IN CONTACT WITH IMPERVI	NONE		
92	ABOVE IN	50 13REM		INDUSTRIAL POLYETHYLENE		06/19/13
	ABOVEGROUND	-	IN CONTACT WITH IMPERVI	NONE		
93	UNDER OUT	20000 15P	HM08-301	DIESEL FIBER REINFORCED PLA		07/23/10
	UNDERGROUND			SECONDARY WALL - FIBERGLASS		
94	UNDER OUT	20000 15P	HM08-301	DIESEL FIBER REINFORCED PLA		07/23/10
	UNDERGROUND			SECONDARY WALL - FIBERGLASS		
95	UNDER OUT	20000 15P	HM08-301	DIESEL FIBER REINFORCED PLA		07/23/10
	UNDERGROUND			SECONDARY WALL - FIBERGLASS		
96	ABOVE OUT	300 14REMUR		CHLORINE (POLYETHYLENE		03/20/14
	ABOVEGROUND	-	IN CONTACT WITH SOIL	NONE		
97	ABOVE OUT	15000 18P	HM13-105	#2 FUEL OI STEEL/ IRON		12/06/13
	ABOVEGROUND	-	ON CRIB, RACK OR CRADLE	SECONDARY WALL - EPOXY COATED STEEL		

APPENDIX C

FORMER SILVER RECOVERY UST REMOVAL DOCUMENTATION

Newsday

Long Island, NY 11747

April 17, 1989

Mr. Larry Lucks
Tyree Environmental Services
208 Route 109
Farmingdale, NY 11735

Dear Mr. Lucks:

Please provide a price quotation for the removal of the following underground storage tanks:

- 1) 4000 Gallon Single Wall Fiberglass Tank
Installed 1980
Contained Photographic Wastewater
7' Diameter, 14' Length
12'- 6" Inverted Elevation
- 2) 550 Gallon Steel Tank
Installed 1980
Contained Methanol Solution
4' Diameter, 6' Length
5'- 6" Inverted Elevation

Work is to be performed in accordance with all applicable regulations of the New York State Department of Environmental Conservation, Suffolk County Department of Health, and the Town of Huntington. Notifications and permits are to be the responsibility of Tyree Environmental Services.

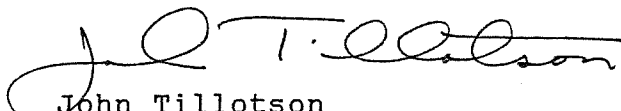
The proposal is to include:

- Excavation
- Tank Removal and Disposal
- Tank Cleaning
- Remove vent pipes to grade
- Seal connecting piping
- Permits
- Backfill and compact to grade
- Waste Disposal (Waste generated from Tank number one is to be removed by Newsday's present waste hauler. Waste generated from Tank number two is to be disposed of into Newday's Sewage Treatment Plant is directed).
- Opening repair to be completed by others.

Mr. Larry Lucks
Page 2
April 17, 1989

Please provide two price quotations: one for the removal of Tank number one and a second for the removal of Tank number two. Contact me at 756-3833 for a site visit.

Sincerely,



John Tillotson
Environmental Coordinator

/ra

ESTIMATE

Tyree Bros. Environmental Services Inc.

4/25/89

208 ROUTE 109 • FARMINGDALE, NY 11735

TB 89-154

- EMERGENCY SPILL RESPONSE
- RECOVERY OPERATIONS
- SOLID WASTE TRANSPORTATION

- LIQUID WASTE TRANSPORTATION
- PETRO-TITE TESTING
- DRILLING & WELL INSTALLATION

Newsday
Pinelawn Road
Melville, NY

Attn: John Tillotson

Re: Premises

We propose to make the following installation at the above location:

Excavate, remove and properly dispose of one (1) - 4,000 gallon tank: cut open and clean tank of up to one (1) D.O.T. drum of bottom sludge; properly dispose of tank steel and bottom sludge; backfill excavation to grade with clean fill material; lay bluestone base over excavation:

TOTAL: \$2,600.00
Plus all applicable taxes

NOTE: (1) Pumping and disposal of oil/gas/contaminated water, add \$76.00 per hour trucking and .85 per gallon disposal.

(2) Removal and disposal of tank bottom sludge in excess of drum in base bid, add \$475.00 per drum

(3) Excavation and disposal of contaminated soil, if required by N.Y.S. Dept. of Environmental Conservation, add
1-5 cubic yards \$1,500.00
over 5 cubic yards-add \$125.00 per yard

(4) TERMS: 50% down prior to commencement of job, balance due upon completion of all work

PLEASE NOTE
THIS ESTIMATE MAY BE SUBJECT
TO ADDITIONAL COSTS DUE TO
ENVIRONMENTAL REGULATIONS

All the above work to be completed in a first class workmanlike manner. Any unforeseen conditions encountered such as rock or water will be billed as an extra on a time and material basis.

ACCEPTED:

TYREE BROS. ENVIRONMENTAL SERVICES INC.

DATE

By: 

Newsday

Long Island, NY 11747

INVOICE TO ABOVE - ATT: ACCOUNTS PAYABLE

PURCHASE ORDER

NO. 54477

SHIP TO: ☒ **Newsday, Inc.** 235 Pinelawn Road
Melville, L.I., N.Y. 11747

SHIP TO: ☐

TYREE BROS. ENVIRONMENTAL SERVICES, INC.
208 ROUTE 109
FARMINGDALE, NY 11735

Deliveries will be accepted only between
9:00 A.M. & 4:30 P.M. Mon. - Fri.

DATE 5-5-89	SHIP VIA YOUR SERVICE	TERMS NET 30	F.O.B. ☒ DELIVERED ☐ SHIPPING POINT (PPD & ADD)
DELIVERY DATE 6-12-89	TAX EXEMPT ☒	INTERNAL DISTRIBUTION (NAME, ROOM NO., LOCATION, ETC.) JOHN TILLOTSON - ADMIN SVC	

ITEM NO.	QUANTITY	DESCRIPTION	ACCOUNT NUMBER	UNIT PRICE
1		THIS PURCHASE ORDER IS ISSUED TO HAVE TYREE BROS. ENVIRONMENTAL SERVICES EXCAVATE & REMOVE ONE - 4000 GALLON FIBERGLASS TANK . SURFACE REPAIR BY OTHERS. EXCAVATE TANKS IN ACCORDANCE WITH TOWN OF HUNTINGTON, SUFFOLK COUNTY AND NEW YORK STATE REGULATIONS. PERMITS TO BE OBTAINED BY TYREE. LIQUID DISPOSAL TO BE ARRANGED BY NEWSDAY, SEE ATTACHED QUOTATION TB 89-154 CONFIRMED TO: CARI FLORE ON: 5-5-89	CAPITAL AUTH. 88-78	2,600.00 TOTAL

RECEIVING REPORT MUST BE SIGNED BY JOHN TILLOTSON

THIS ORDER IS PLACED BY NEWSDAY (THE "BUYER") SUBJECT TO THE TERMS AND CONDITIONS APPEARING HEREON AND ON THE REVERSE SIDE HEREOF, AND BY ACCEPTING THIS ORDER SELLER AGREES TO BE BOUND THEREBY.

PURCHASE ORDER NUMBER must appear on all invoices, packages, packing slips, bills of lading and correspondence pertaining to this order. COMPLETE PACKING SLIP must accompany each shipment, and indicate whether "complete" or "partial" shipment. INVOICE IN DUPLICATE together with bills of lading to the attention of Accounts Payable.

SELLER ACCEPTS THIS ORDER SUBJECT TO THE TERMS AND CONDITIONS ENUMERATED ON THE FACE AND BACK OF THE ORIGINAL COPY AND WILL SHIP ON THE SPECIFIED DATES SHOWN.

IL

Newsday, Inc.

BY M. Lustig

MIKE LUSTIG - PURCHASING MANAGER

☒ A Times Mirror
☒ Newspaper

(516) 249-3150

**TYREE BROS.
ENVIRONMENTAL SERVICES, INC.**

208 ROUTE 109 • FARMINGDALE, NEW YORK 11735

DATE

June 15, 1989

Suffolk County Dept. of Health
15 Horseblock Place
Farmingville, New York 11738

Attention: Mr. John Gladys

Re:

Thursday
235 Phillips Rd.
Melville

Dear Mr. Gladys:

This letter is to confirm that on 6-12-89
at the above mentioned location, TYREE BROTHERS ENVIRONMENTAL
SERVICES, INC. removed 1-550 and 1-4000
and disposed of same at Gershow Recycling, Medford, New York.

Very truly yours,

Matthew C. Milne
Matthew C. Milne
T.B.E.S., Inc.

MCM:dls

INVOICE
Tyree Bros.
Environmental Services, Inc.

208 ROUTE 109 • FARMINGDALE, N.Y. 11735

- EMERGENCY SPILL RESPONSE
- RECOVERY OPERATIONS
- SOLID WASTE TRANSPORTATION

- LIQUID WASTE TRANSPORTATION
- PETRO-TITE TESTING
- DRILLING & WELL INSTALLATION

NO0070
 NEWSDAY
 SOLD TO PINELAWN ROAD
 MELVILLE, NY 11747

NO.
 DATE 792092
 WORKSITE ADDRESS 6/15/89

ATTN: JOHN TILLOTSON

235 PINELAWN RD.
 MELVILLE, NY

DESCRIPTION

AMOUNT

6-12-89

REMOVED AND PROPERLY DISPOSED OF 1-550 AND 1-4000 GAL TANK
 ABOVE LOCATION.

1-550
 1-4000

1,700.00
 2,600.00

EXTRA IN EXCESS OF BASE BID
 DOT DRUM @ 475.00

475.00

NET AMOUNT
 TAX

4,775.00
 358.13

INVOICE TOTAL

5,133.13

NEWSDAY, INC.
ACCOUNTS PAYABLE VOUCHER

VOUCHER NUMBER

SPECIAL INSTRUCTIONS

APPROVALS

ACCOUNT DISTRIBUTION

DISTRIBUTION

CODE

ACCOUNT

SUB ACC'T

COST CENTER

AMOUNTS

JT
 6/19/89

CAPITAL
 AUTH
 68,78

\$5,133.13

DESCRIPTION: TANK REMOVAL

APPENDIX D

LABORATORY ANALYTICAL REPORT – FIXER PIPING, APRIL 24, 2018



American Analytical Laboratories, LLC.
56 Toledo Street
Farmingdale, New York 11735
TEL: (631) 454-6100 FAX: (631) 454-8027
Website: www.American-Analytical.com

April 30, 2018

Joseph Spinelli
H2M Architects & Engineers
538 Broadhollow Road, 4th Floor East
Melville, NY 11747
TEL: (631) 756-8000
FAX

RE: Fixer Pipe Sampling, RCRA Closure, Melvi

Order No.: 1804167

Dear Joseph Spinelli:

American Analytical Laboratories, LLC. received 4 sample(s) on 4/24/2018 for the analyses presented in the following report.

Samples were analyzed in accordance with the test procedures documented on the chain of custody and detailed throughout the text of this report. The results reported herein relate only to the items tested or to the samples as received by the laboratory. This report may not be reproduced, except in full, without the approval of American Analytical Laboratories, LLC and is not considered complete without a cover page and chain of custody documentation. The limits (LOQ) provided in the data package are analytical reporting limits and not Federal or Local mandated values to which the sample results should be compared.

There were no problems with the analyses and all data for associated QC met laboratory specifications. If there are any exceptions a Case Narrative is provided in the report or the data is qualified either on the sample results or in the QC section of the report. This package has been reviewed by American Analytical Laboratories' QA Department/Laboratory Director to comply with NELAC standards prior to report submittal.

If you have any questions regarding these tests results, please do not hesitate to call (631) 454-6100 or email me directly at lbeyer@american-analytical.com.

Sincerely,

Lori Beyer
Lab Director
American Analytical Laboratories, LLC.



American Analytical Laboratories, LLC.
56 Toledo Street
Farmingdale, New York 11735
TEL: (631) 454-6100 FAX: (631) 454-8027
Website: www.American-Analytical.com

Workorder Sample Summary

WO#: **1804167**
30-Apr-18

CLIENT: H2M Architects & Engineers
Project: Fixer Pipe Sampling, RCRA Closure, Melville,

Lab SampleID	Client Sample ID	Tag No	Date Collected	Date Received	Matrix
1804167-001A	Equip Blank		4/24/2018 10:30:00 AM	4/24/2018 12:30:51 PM	Liquid
1804167-001B	Equip Blank		4/24/2018 10:30:00 AM	4/24/2018 12:30:51 PM	Liquid
1804167-002A	Fixer Mail Center		4/24/2018 10:50:00 AM	4/24/2018 12:30:51 PM	Liquid
1804167-002B	Fixer Mail Center		4/24/2018 10:50:00 AM	4/24/2018 12:30:51 PM	Liquid
1804167-003A	Fixer MER-1		4/24/2018 11:04:00 AM	4/24/2018 12:30:51 PM	Liquid
1804167-003B	Fixer MER-1		4/24/2018 11:04:00 AM	4/24/2018 12:30:51 PM	Liquid
1804167-004A	Fixer Basement		4/24/2018 11:18:00 AM	4/24/2018 12:30:51 PM	Liquid
1804167-004B	Fixer Basement		4/24/2018 11:18:00 AM	4/24/2018 12:30:51 PM	Liquid

Original





American Analytical Laboratories, LLC.
56 Toledo Street
Farmingdale, New York 11735
TEL: (631) 454-6100 FAX: (631) 454-8027
Website: www.American-Analytical.com

Sample Log-In Check List

Client Name: **H2M ARCHITECTS**

Work Order Number: **1804167**

RcptNo: **1**

Logged by: **Jenny Mullady** **4/24/2018 12:30:51 PM**

Jenny Mullady

Completed By: **Jenny Mullady** **4/24/2018**

Jenny Mullady

Reviewed By: **Lori Beyer** **4/24/2018 12:39:13 PM**

Lori Beyer

Chain of Custody

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

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:

Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
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American Analytical Laboratories, LLC.
56 Toledo Street
Farmingdale, New York 11735
TEL: (631) 454-6100 FAX: (631) 454-8027
Website: www.American-Analytical.com

Case Narrative

WO#: 1804167
Date: 4/30/2018

CLIENT: H2M Architects & Engineers
Project: Fixer Pipe Sampling, RCRA Closure, Melville,

Samples were analyzed using the methods outlined in the following references:

Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, SW846 and additional methods as detailed throughout the text of the report. All method blanks, laboratory spikes, and/or matrix spikes met quality assurance objectives with exceptions notated in this Narrative discussion of this report.

Volatile LCS are analyzed with preservatives - HCL/NaHSO₄/Methanol depending on level of analysis (high/low) similar to sample analysis. Outliers can be attributed to the presence of chemical preservatives. 2-Chloroethyl vinyl ether readily breaks down under acidic conditions. Samples that are acid preserved, including standards will exhibit breakdown. The data user should take note.

The test results meet the requirements of the NYSDOH and NELAC standards, except where noted. The information contained in this analytical report is the sole property of American Analytical Laboratories, LLC. or the client for which this report was issued. The results contained in this report are only representative of the samples received. The sample receipt checklist is included as part of this lab report. Conditions can vary at different times and at different sampling conditions. American Analytical is not responsible for the use or interpretation of the data included herein.

Original



American Analytical Laboratories, LLC.
56 Toledo Street
Farmingdale, New York 11735
TEL: (631) 454-6100 FAX: (631) 454-8027
Website: www.American-Analytical.com

Definition Only

WO#: 1804167
Date: 4/30/2018

Definitions:

Sample Result and QC Summary Qualifiers - Level I and Level II Reports

ND - Not detected at the reporting limit/Limit of Quantitation

B - The analyte was detected in the associated method blank. For volatiles, methylene chloride and acetone are common lab contaminants. Data users should consider anything <5x the blank value as artifact.

E - The value is above the quantitation range

D - Analyte concentration was obtained from diluted analysis or from analysis using reduced sample volume.

J - The analyte was detected below the limit of quantitation but greater than the established Limit of Detection (LOD). There is greater uncertainty associated with these results and data should be considered as estimated.

U - The compound was analyzed for but not detected.

H - Holding time for preparation or analysis has been exceeded.

S - Spike recovery is outside accepted recovery limits.

R - RPD is outside accepted recovery range.

P - Secondary column exceeds 40% difference for GC test.

* - Calibration exceeds method requirement. Due to the large number of analytes for organic testing, the method allows 10% of analytes to have %RSD and/or %D to be >20%.

LOD - Limit of Detection; the lowest level the analyte can be determined to be statistically different from a blank.

LOQ - Limit of Quantitation; the lowest amount of analyte in a sample that can be quantitatively determined with suitable precision and accuracy.

PQL - Practical Quantitation Limit; the lowest level that can be reliably achieved within the specific limits of Precision and accuracy. Listed on the QC Summary Forms.

m - Analyte was manually integrated for GC/MS.

+

Original

American Analytical Laboratories, LLC.

Date: 30-Apr-18

ELAP ID : 11418**CLIENT:** H2M Architects & Engineers**Client Sample ID:** Equip Blank**Lab Order:** 1804167**Collection Date:** 4/24/2018 10:30:00 AM**Project:** Fixer Pipe Sampling, RCRA Closure, Melville,**Matrix:** LIQUID**Lab ID:** 1804167-001A**Certificate of Results**

Analyses	Sample Result	LOD	LOQ	Qual	Units	DF	Date/Time Analyzed
VOLATILE SW-846 METHOD 8260			SW8260C	SW5030C	Analyst: LA		
1,1,1,2-Tetrachloroethane	ND	0.25	2.0	U	µg/L	1	4/24/2018 4:06:00 PM
1,1,1-Trichloroethane	ND	0.25	2.0	U	µg/L	1	4/24/2018 4:06:00 PM
1,1,2,2-Tetrachloroethane	ND	0.25	2.0	U	µg/L	1	4/24/2018 4:06:00 PM
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	0.25	2.0	U	µg/L	1	4/24/2018 4:06:00 PM
1,1,2-Trichloroethane	ND	0.25	2.0	U	µg/L	1	4/24/2018 4:06:00 PM
1,1-Dichloroethane	ND	0.25	2.0	U	µg/L	1	4/24/2018 4:06:00 PM
1,1-Dichloroethene	ND	0.25	2.0	U	µg/L	1	4/24/2018 4:06:00 PM
1,1-Dichloropropene	ND	0.25	2.0	U	µg/L	1	4/24/2018 4:06:00 PM
1,2,3-Trichlorobenzene	ND	0.25	2.0	U	µg/L	1	4/24/2018 4:06:00 PM
1,2,3-Trichloropropane	ND	0.25	2.0	U	µg/L	1	4/24/2018 4:06:00 PM
1,2,4,5-Tetramethylbenzene	ND	0.25	2.0	U	µg/L	1	4/24/2018 4:06:00 PM
1,2,4-Trichlorobenzene	ND	0.25	2.0	U	µg/L	1	4/24/2018 4:06:00 PM
1,2,4-Trimethylbenzene	ND	0.25	2.0	U	µg/L	1	4/24/2018 4:06:00 PM
1,2-Dibromo-3-chloropropane	ND	0.030	2.0	U	µg/L	1	4/24/2018 4:06:00 PM
1,2-Dibromoethane	ND	0.25	2.0	U	µg/L	1	4/24/2018 4:06:00 PM
1,2-Dichlorobenzene	ND	0.25	2.0	U	µg/L	1	4/24/2018 4:06:00 PM
1,2-Dichloroethane	ND	0.25	2.0	U	µg/L	1	4/24/2018 4:06:00 PM
1,2-Dichloropropane	ND	0.25	2.0	U	µg/L	1	4/24/2018 4:06:00 PM
1,3,5-Trimethylbenzene	ND	0.25	2.0	U	µg/L	1	4/24/2018 4:06:00 PM
1,3-Dichlorobenzene	ND	0.25	2.0	U	µg/L	1	4/24/2018 4:06:00 PM
1,3-dichloropropane	ND	0.25	2.0	U	µg/L	1	4/24/2018 4:06:00 PM
1,4-Dichlorobenzene	ND	0.25	2.0	U	µg/L	1	4/24/2018 4:06:00 PM
1,4-Dioxane	ND	0.25	1.0	U	µg/L	1	4/24/2018 4:06:00 PM
2,2-Dichloropropane	ND	0.25	2.0	U	µg/L	1	4/24/2018 4:06:00 PM
2-Butanone	ND	0.50	4.0	U	µg/L	1	4/24/2018 4:06:00 PM
2-Chloroethyl vinyl ether	ND	0.25	2.0	U	µg/L	1	4/24/2018 4:06:00 PM
2-Chlorotoluene	ND	0.25	2.0	U	µg/L	1	4/24/2018 4:06:00 PM
2-Hexanone	ND	0.50	4.0	U	µg/L	1	4/24/2018 4:06:00 PM
2-Propanol	ND	0.25	2.0	U	µg/L	1	4/24/2018 4:06:00 PM
4-Chlorotoluene	ND	0.25	2.0	U	µg/L	1	4/24/2018 4:06:00 PM
4-Isopropyltoluene	ND	0.25	2.0	U	µg/L	1	4/24/2018 4:06:00 PM
4-Methyl-2-pentanone	ND	0.50	4.0	U	µg/L	1	4/24/2018 4:06:00 PM
Acetone	ND	5.0	5.0	U	µg/L	1	4/24/2018 4:06:00 PM

American Analytical Laboratories, LLC., 56 Toledo Street, Farmingdale, New York, Zip - 11735

Tel - (631) 454-6100 Fax - (631) 454-8027 www.american-analytical.com



Original

American Analytical Laboratories, LLC.

Date: 30-Apr-18

ELAP ID : 11418**CLIENT:** H2M Architects & Engineers**Client Sample ID:** Equip Blank**Lab Order:** 1804167**Collection Date:** 4/24/2018 10:30:00 AM**Project:** Fixer Pipe Sampling, RCRA Closure, Melville,**Matrix:** LIQUID**Lab ID:** 1804167-001A**Certificate of Results**

Analyses	Sample Result	LOD	LOQ	Qual	Units	DF	Date/Time Analyzed
VOLATILE SW-846 METHOD 8260			SW8260C		SW5030C		Analyst: LA
Benzene	ND	0.25	2.0	U	µg/L	1	4/24/2018 4:06:00 PM
Bromobenzene	ND	0.25	2.0	U	µg/L	1	4/24/2018 4:06:00 PM
Bromochloromethane	ND	0.25	2.0	U	µg/L	1	4/24/2018 4:06:00 PM
Bromodichloromethane	ND	0.25	2.0	U	µg/L	1	4/24/2018 4:06:00 PM
Bromoform	ND	0.25	2.0	U	µg/L	1	4/24/2018 4:06:00 PM
Bromomethane	ND	0.25	2.0	U	µg/L	1	4/24/2018 4:06:00 PM
Carbon disulfide	ND	0.25	2.0	U	µg/L	1	4/24/2018 4:06:00 PM
Carbon tetrachloride	ND	0.25	2.0	U	µg/L	1	4/24/2018 4:06:00 PM
Chlorobenzene	ND	0.25	2.0	U	µg/L	1	4/24/2018 4:06:00 PM
Chlorodifluoromethane	ND	0.25	2.0	U	µg/L	1	4/24/2018 4:06:00 PM
Chloroethane	ND	0.25	2.0	U	µg/L	1	4/24/2018 4:06:00 PM
Chloroform	ND	0.25	2.0	U	µg/L	1	4/24/2018 4:06:00 PM
Chloromethane	ND	0.25	2.0	U	µg/L	1	4/24/2018 4:06:00 PM
cis-1,2-Dichloroethene	ND	0.25	2.0	U	µg/L	1	4/24/2018 4:06:00 PM
cis-1,3-Dichloropropene	ND	0.25	2.0	U	µg/L	1	4/24/2018 4:06:00 PM
Cyclohexane	ND	0.25	2.0	U	µg/L	1	4/24/2018 4:06:00 PM
Dibromochloromethane	ND	0.25	2.0	U	µg/L	1	4/24/2018 4:06:00 PM
Dibromomethane	ND	0.25	2.0	U	µg/L	1	4/24/2018 4:06:00 PM
Dichlorodifluoromethane	ND	0.25	2.0	U	µg/L	1	4/24/2018 4:06:00 PM
Diisopropyl ether	ND	0.50	2.0	U	µg/L	1	4/24/2018 4:06:00 PM
Ethanol	ND	2.5	10	U	µg/L	1	4/24/2018 4:06:00 PM
Ethylbenzene	ND	0.25	2.0	U	µg/L	1	4/24/2018 4:06:00 PM
Freon-114	ND	0.25	2.0	U	µg/L	1	4/24/2018 4:06:00 PM
Hexachlorobutadiene	ND	0.25	2.0	U	µg/L	1	4/24/2018 4:06:00 PM
Isopropylbenzene	ND	0.25	2.0	U	µg/L	1	4/24/2018 4:06:00 PM
m,p-Xylene	ND	0.50	4.0	U	µg/L	1	4/24/2018 4:06:00 PM
Methyl Acetate	ND	0.25	2.0	U	µg/L	1	4/24/2018 4:06:00 PM
Methyl tert-butyl ether	ND	0.25	2.0	U	µg/L	1	4/24/2018 4:06:00 PM
Methylene chloride	ND	5.0	5.0	U	µg/L	1	4/24/2018 4:06:00 PM
n-Butylbenzene	ND	0.25	2.0	U	µg/L	1	4/24/2018 4:06:00 PM
n-Propylbenzene	ND	0.25	2.0	U	µg/L	1	4/24/2018 4:06:00 PM
Naphthalene	ND	0.25	2.0	U	µg/L	1	4/24/2018 4:06:00 PM
o-Xylene	ND	0.25	2.0	U	µg/L	1	4/24/2018 4:06:00 PM

American Analytical Laboratories, LLC., 56 Toledo Street, Farmingdale, New York, Zip - 11735

Tel - (631) 454-6100 Fax - (631) 454-8027 www.american-analytical.com



Original

American Analytical Laboratories, LLC.

Date: 30-Apr-18

ELAP ID : 11418**CLIENT:** H2M Architects & Engineers**Client Sample ID:** Equip Blank**Lab Order:** 1804167**Collection Date:** 4/24/2018 10:30:00 AM**Project:** Fixer Pipe Sampling, RCRA Closure, Melville,**Matrix:** LIQUID**Lab ID:** 1804167-001A**Certificate of Results**

Analyses	Sample Result	LOD	LOQ	Qual	Units	DF	Date/Time Analyzed
VOLATILE SW-846 METHOD 8260			SW8260C		SW5030C		Analyst: LA
p-Diethylbenzene	ND	0.25	2.0	U	µg/L	1	4/24/2018 4:06:00 PM
p-Ethyltoluene	ND	0.25	2.0	U	µg/L	1	4/24/2018 4:06:00 PM
sec-Butylbenzene	ND	0.25	2.0	U	µg/L	1	4/24/2018 4:06:00 PM
Styrene	ND	0.25	2.0	U	µg/L	1	4/24/2018 4:06:00 PM
t-Butyl alcohol	ND	2.5	10	U	µg/L	1	4/24/2018 4:06:00 PM
tert-Butylbenzene	ND	0.25	2.0	U	µg/L	1	4/24/2018 4:06:00 PM
Tetrachloroethene	ND	0.25	2.0	U	µg/L	1	4/24/2018 4:06:00 PM
Toluene	ND	0.25	2.0	U	µg/L	1	4/24/2018 4:06:00 PM
trans-1,2-Dichloroethene	ND	0.25	2.0	U	µg/L	1	4/24/2018 4:06:00 PM
trans-1,3-Dichloropropene	ND	0.25	2.0	U	µg/L	1	4/24/2018 4:06:00 PM
Trichloroethene	ND	0.25	2.0	U	µg/L	1	4/24/2018 4:06:00 PM
Trichlorofluoromethane	ND	0.25	2.0	U	µg/L	1	4/24/2018 4:06:00 PM
Vinyl acetate	ND	0.25	2.0	U	µg/L	1	4/24/2018 4:06:00 PM
Vinyl chloride	ND	0.25	2.0	U	µg/L	1	4/24/2018 4:06:00 PM
Xylenes, Total	ND	0.75	6.0	U	µg/L	1	4/24/2018 4:06:00 PM
Acrolein	ND	1.0	10	U	µg/L	1	4/24/2018 4:06:00 PM
Acrylonitrile	ND	0.25	2.0	U	µg/L	1	4/24/2018 4:06:00 PM

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Original

American Analytical Laboratories, LLC.

Date: 30-Apr-18

ELAP ID : 11418

CLIENT:	H2M Architects & Engineers	Client Sample ID:	Equip Blank
Lab Order:	1804167	Collection Date:	4/24/2018 10:30:00 AM
Project:	Fixer Pipe Sampling, RCRA Closure, Melville,	Matrix:	LIQUID
Lab ID:	1804167-001B		

Certificate of Results

Analyses	Sample Result	LOD	LOQ	Qual	Units	DF	Date/Time Analyzed
MERCURY, TOTAL							
		E245.1 REV3.0 1994		E245.1 REV3.0		Analyst: JP	
Mercury	0.000230	0.000150	0.000300	J	mg/L	1	4/30/2018 11:13:26 AM
TOTAL METALS							
		E200.7 REV4.4 1994		E200.7 REV4.4		Analyst: JP	
Aluminum	0.0262	0.00500	0.0200		mg/L	1	4/30/2018 10:13:48 AM
Antimony	ND	0.00500	0.0200	U	mg/L	1	4/30/2018 10:13:48 AM
Arsenic	ND	0.0100	0.0250	U	mg/L	1	4/30/2018 10:13:48 AM
Barium	0.0261	0.00500	0.0200		mg/L	1	4/30/2018 10:13:48 AM
Beryllium	ND	0.00500	0.0200	U	mg/L	1	4/30/2018 10:13:48 AM
Cadmium	ND	0.00500	0.0100	U	mg/L	1	4/30/2018 10:13:48 AM
Calcium	2.57	0.00500	0.0250		mg/L	1	4/30/2018 10:13:48 AM
Chromium	ND	0.00500	0.0200	U	mg/L	1	4/30/2018 10:13:48 AM
Cobalt	ND	0.00500	0.0200	U	mg/L	1	4/30/2018 10:13:48 AM
Copper	0.0280	0.00500	0.0200		mg/L	1	4/30/2018 10:13:48 AM
Iron	0.107	0.00500	0.0200		mg/L	1	4/30/2018 10:13:48 AM
Lead	0.0122	0.00500	0.0150	J	mg/L	1	4/30/2018 10:13:48 AM
Magnesium	0.617	0.00500	0.0200		mg/L	1	4/30/2018 10:13:48 AM
Manganese	0.00594	0.00500	0.0200	J	mg/L	1	4/30/2018 10:13:48 AM
Nickel	ND	0.00500	0.0200	U	mg/L	1	4/30/2018 10:13:48 AM
Potassium	0.0741	0.0500	0.200	J	mg/L	1	4/30/2018 10:13:48 AM
Selenium	ND	0.0100	0.0250	U	mg/L	1	4/30/2018 10:13:48 AM
Silver	ND	0.00500	0.0200	U	mg/L	1	4/30/2018 10:13:48 AM
Sodium	0.457	0.0100	0.0300		mg/L	1	4/30/2018 10:13:48 AM
Thallium	ND	0.0100	0.0150	U	mg/L	1	4/30/2018 10:13:48 AM
Vanadium	ND	0.00500	0.0200	U	mg/L	1	4/30/2018 10:13:48 AM
Zinc	0.0764	0.00500	0.0200		mg/L	1	4/30/2018 10:13:48 AM

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Original

American Analytical Laboratories, LLC.

Date: 30-Apr-18

ELAP ID : 11418**CLIENT:** H2M Architects & Engineers**Client Sample ID:** Fixer Mail Center**Lab Order:** 1804167**Collection Date:** 4/24/2018 10:50:00 AM**Project:** Fixer Pipe Sampling, RCRA Closure, Melville,**Matrix:** LIQUID**Lab ID:** 1804167-002A**Certificate of Results**

Analyses	Sample Result	LOD	LOQ	Qual	Units	DF	Date/Time Analyzed
VOLATILE SW-846 METHOD 8260			SW8260C	SW5030C	Analyst: LA		
1,1,1,2-Tetrachloroethane	ND	0.25	2.0	U	µg/L	1	4/24/2018 4:36:00 PM
1,1,1-Trichloroethane	ND	0.25	2.0	U	µg/L	1	4/24/2018 4:36:00 PM
1,1,2,2-Tetrachloroethane	ND	0.25	2.0	U	µg/L	1	4/24/2018 4:36:00 PM
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	0.25	2.0	U	µg/L	1	4/24/2018 4:36:00 PM
1,1,2-Trichloroethane	ND	0.25	2.0	U	µg/L	1	4/24/2018 4:36:00 PM
1,1-Dichloroethane	ND	0.25	2.0	U	µg/L	1	4/24/2018 4:36:00 PM
1,1-Dichloroethene	ND	0.25	2.0	U	µg/L	1	4/24/2018 4:36:00 PM
1,1-Dichloropropene	ND	0.25	2.0	U	µg/L	1	4/24/2018 4:36:00 PM
1,2,3-Trichlorobenzene	ND	0.25	2.0	U	µg/L	1	4/24/2018 4:36:00 PM
1,2,3-Trichloropropane	ND	0.25	2.0	U	µg/L	1	4/24/2018 4:36:00 PM
1,2,4,5-Tetramethylbenzene	ND	0.25	2.0	U	µg/L	1	4/24/2018 4:36:00 PM
1,2,4-Trichlorobenzene	ND	0.25	2.0	U	µg/L	1	4/24/2018 4:36:00 PM
1,2,4-Trimethylbenzene	ND	0.25	2.0	U	µg/L	1	4/24/2018 4:36:00 PM
1,2-Dibromo-3-chloropropane	ND	0.030	2.0	U	µg/L	1	4/24/2018 4:36:00 PM
1,2-Dibromoethane	ND	0.25	2.0	U	µg/L	1	4/24/2018 4:36:00 PM
1,2-Dichlorobenzene	ND	0.25	2.0	U	µg/L	1	4/24/2018 4:36:00 PM
1,2-Dichloroethane	ND	0.25	2.0	U	µg/L	1	4/24/2018 4:36:00 PM
1,2-Dichloropropane	ND	0.25	2.0	U	µg/L	1	4/24/2018 4:36:00 PM
1,3,5-Trimethylbenzene	ND	0.25	2.0	U	µg/L	1	4/24/2018 4:36:00 PM
1,3-Dichlorobenzene	ND	0.25	2.0	U	µg/L	1	4/24/2018 4:36:00 PM
1,3-dichloropropane	ND	0.25	2.0	U	µg/L	1	4/24/2018 4:36:00 PM
1,4-Dichlorobenzene	ND	0.25	2.0	U	µg/L	1	4/24/2018 4:36:00 PM
1,4-Dioxane	ND	0.25	1.0	U	µg/L	1	4/24/2018 4:36:00 PM
2,2-Dichloropropane	ND	0.25	2.0	U	µg/L	1	4/24/2018 4:36:00 PM
2-Butanone	ND	0.50	4.0	U	µg/L	1	4/24/2018 4:36:00 PM
2-Chloroethyl vinyl ether	ND	0.25	2.0	U	µg/L	1	4/24/2018 4:36:00 PM
2-Chlorotoluene	ND	0.25	2.0	U	µg/L	1	4/24/2018 4:36:00 PM
2-Hexanone	ND	0.50	4.0	U	µg/L	1	4/24/2018 4:36:00 PM
2-Propanol	ND	0.25	2.0	U	µg/L	1	4/24/2018 4:36:00 PM
4-Chlorotoluene	ND	0.25	2.0	U	µg/L	1	4/24/2018 4:36:00 PM
4-Isopropyltoluene	ND	0.25	2.0	U	µg/L	1	4/24/2018 4:36:00 PM
4-Methyl-2-pentanone	ND	0.50	4.0	U	µg/L	1	4/24/2018 4:36:00 PM
Acetone	ND	5.0	5.0	U	µg/L	1	4/24/2018 4:36:00 PM

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Original

American Analytical Laboratories, LLC.

Date: 30-Apr-18

ELAP ID : 11418**CLIENT:** H2M Architects & Engineers**Client Sample ID:** Fixer Mail Center**Lab Order:** 1804167**Collection Date:** 4/24/2018 10:50:00 AM**Project:** Fixer Pipe Sampling, RCRA Closure, Melville,**Matrix:** LIQUID**Lab ID:** 1804167-002A**Certificate of Results**

Analyses	Sample Result	LOD	LOQ	Qual	Units	DF	Date/Time Analyzed
VOLATILE SW-846 METHOD 8260			SW8260C		SW5030C		Analyst: LA
Benzene	ND	0.25	2.0	U	µg/L	1	4/24/2018 4:36:00 PM
Bromobenzene	ND	0.25	2.0	U	µg/L	1	4/24/2018 4:36:00 PM
Bromochloromethane	ND	0.25	2.0	U	µg/L	1	4/24/2018 4:36:00 PM
Bromodichloromethane	ND	0.25	2.0	U	µg/L	1	4/24/2018 4:36:00 PM
Bromoform	ND	0.25	2.0	U	µg/L	1	4/24/2018 4:36:00 PM
Bromomethane	ND	0.25	2.0	U	µg/L	1	4/24/2018 4:36:00 PM
Carbon disulfide	ND	0.25	2.0	U	µg/L	1	4/24/2018 4:36:00 PM
Carbon tetrachloride	ND	0.25	2.0	U	µg/L	1	4/24/2018 4:36:00 PM
Chlorobenzene	ND	0.25	2.0	U	µg/L	1	4/24/2018 4:36:00 PM
Chlorodifluoromethane	ND	0.25	2.0	U	µg/L	1	4/24/2018 4:36:00 PM
Chloroethane	ND	0.25	2.0	U	µg/L	1	4/24/2018 4:36:00 PM
Chloroform	ND	0.25	2.0	U	µg/L	1	4/24/2018 4:36:00 PM
Chloromethane	ND	0.25	2.0	U	µg/L	1	4/24/2018 4:36:00 PM
cis-1,2-Dichloroethene	ND	0.25	2.0	U	µg/L	1	4/24/2018 4:36:00 PM
cis-1,3-Dichloropropene	ND	0.25	2.0	U	µg/L	1	4/24/2018 4:36:00 PM
Cyclohexane	ND	0.25	2.0	U	µg/L	1	4/24/2018 4:36:00 PM
Dibromochloromethane	ND	0.25	2.0	U	µg/L	1	4/24/2018 4:36:00 PM
Dibromomethane	ND	0.25	2.0	U	µg/L	1	4/24/2018 4:36:00 PM
Dichlorodifluoromethane	ND	0.25	2.0	U	µg/L	1	4/24/2018 4:36:00 PM
Diisopropyl ether	ND	0.50	2.0	U	µg/L	1	4/24/2018 4:36:00 PM
Ethanol	ND	2.5	10	U	µg/L	1	4/24/2018 4:36:00 PM
Ethylbenzene	ND	0.25	2.0	U	µg/L	1	4/24/2018 4:36:00 PM
Freon-114	ND	0.25	2.0	U	µg/L	1	4/24/2018 4:36:00 PM
Hexachlorobutadiene	ND	0.25	2.0	U	µg/L	1	4/24/2018 4:36:00 PM
Isopropylbenzene	ND	0.25	2.0	U	µg/L	1	4/24/2018 4:36:00 PM
m,p-Xylene	ND	0.50	4.0	U	µg/L	1	4/24/2018 4:36:00 PM
Methyl Acetate	ND	0.25	2.0	U	µg/L	1	4/24/2018 4:36:00 PM
Methyl tert-butyl ether	ND	0.25	2.0	U	µg/L	1	4/24/2018 4:36:00 PM
Methylene chloride	ND	5.0	5.0	U	µg/L	1	4/24/2018 4:36:00 PM
n-Butylbenzene	ND	0.25	2.0	U	µg/L	1	4/24/2018 4:36:00 PM
n-Propylbenzene	ND	0.25	2.0	U	µg/L	1	4/24/2018 4:36:00 PM
Naphthalene	ND	0.25	2.0	U	µg/L	1	4/24/2018 4:36:00 PM
o-Xylene	ND	0.25	2.0	U	µg/L	1	4/24/2018 4:36:00 PM

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Original

American Analytical Laboratories, LLC.

Date: 30-Apr-18

ELAP ID : 11418**CLIENT:** H2M Architects & Engineers**Client Sample ID:** Fixer Mail Center**Lab Order:** 1804167**Collection Date:** 4/24/2018 10:50:00 AM**Project:** Fixer Pipe Sampling, RCRA Closure, Melville,**Matrix:** LIQUID**Lab ID:** 1804167-002A**Certificate of Results**

Analyses	Sample Result	LOD	LOQ	Qual	Units	DF	Date/Time Analyzed
VOLATILE SW-846 METHOD 8260			SW8260C		SW5030C		Analyst: LA
p-Diethylbenzene	ND	0.25	2.0	U	µg/L	1	4/24/2018 4:36:00 PM
p-Ethyltoluene	ND	0.25	2.0	U	µg/L	1	4/24/2018 4:36:00 PM
sec-Butylbenzene	ND	0.25	2.0	U	µg/L	1	4/24/2018 4:36:00 PM
Styrene	ND	0.25	2.0	U	µg/L	1	4/24/2018 4:36:00 PM
t-Butyl alcohol	ND	2.5	10	U	µg/L	1	4/24/2018 4:36:00 PM
tert-Butylbenzene	ND	0.25	2.0	U	µg/L	1	4/24/2018 4:36:00 PM
Tetrachloroethene	ND	0.25	2.0	U	µg/L	1	4/24/2018 4:36:00 PM
Toluene	0.28	0.25	2.0	J	µg/L	1	4/24/2018 4:36:00 PM
trans-1,2-Dichloroethene	ND	0.25	2.0	U	µg/L	1	4/24/2018 4:36:00 PM
trans-1,3-Dichloropropene	ND	0.25	2.0	U	µg/L	1	4/24/2018 4:36:00 PM
Trichloroethene	ND	0.25	2.0	U	µg/L	1	4/24/2018 4:36:00 PM
Trichlorofluoromethane	ND	0.25	2.0	U	µg/L	1	4/24/2018 4:36:00 PM
Vinyl acetate	ND	0.25	2.0	U	µg/L	1	4/24/2018 4:36:00 PM
Vinyl chloride	ND	0.25	2.0	U	µg/L	1	4/24/2018 4:36:00 PM
Xylenes, Total	ND	0.75	6.0	U	µg/L	1	4/24/2018 4:36:00 PM
Acrolein	ND	1.0	10	U	µg/L	1	4/24/2018 4:36:00 PM
Acrylonitrile	ND	0.25	2.0	U	µg/L	1	4/24/2018 4:36:00 PM

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Original

American Analytical Laboratories, LLC.

Date: 30-Apr-18

ELAP ID : 11418

CLIENT:	H2M Architects & Engineers	Client Sample ID:	Fixer Mail Center
Lab Order:	1804167	Collection Date:	4/24/2018 10:50:00 AM
Project:	Fixer Pipe Sampling, RCRA Closure, Melville,	Matrix:	LIQUID
Lab ID:	1804167-002B		

Certificate of Results

Analyses	Sample Result	LOD	LOQ	Qual	Units	DF	Date/Time Analyzed
MERCURY, TOTAL							
		E245.1 REV3.0 1994		E245.1 REV3.0			Analyst: JP
Mercury	0.000210	0.000150	0.000300	J	mg/L	1	4/30/2018 11:15:33 AM
TOTAL METALS							
		E200.7 REV4.4 1994		E200.7 REV4.4			Analyst: JP
Aluminum	0.0759	0.00500	0.0200		mg/L	1	4/30/2018 10:15:53 AM
Antimony	ND	0.00500	0.0200	U	mg/L	1	4/30/2018 10:15:53 AM
Arsenic	ND	0.0100	0.0250	U	mg/L	1	4/30/2018 10:15:53 AM
Barium	0.0265	0.00500	0.0200		mg/L	1	4/30/2018 10:15:53 AM
Beryllium	ND	0.00500	0.0200	U	mg/L	1	4/30/2018 10:15:53 AM
Cadmium	ND	0.00500	0.0100	U	mg/L	1	4/30/2018 10:15:53 AM
Calcium	2.67	0.00500	0.0250		mg/L	1	4/30/2018 10:15:53 AM
Chromium	ND	0.00500	0.0200	U	mg/L	1	4/30/2018 10:15:53 AM
Cobalt	ND	0.00500	0.0200	U	mg/L	1	4/30/2018 10:15:53 AM
Copper	0.0346	0.00500	0.0200		mg/L	1	4/30/2018 10:15:53 AM
Iron	0.273	0.00500	0.0200		mg/L	1	4/30/2018 10:15:53 AM
Lead	ND	0.00500	0.0150	U	mg/L	1	4/30/2018 10:15:53 AM
Magnesium	0.574	0.00500	0.0200		mg/L	1	4/30/2018 10:15:53 AM
Manganese	0.00537	0.00500	0.0200	J	mg/L	1	4/30/2018 10:15:53 AM
Nickel	ND	0.00500	0.0200	U	mg/L	1	4/30/2018 10:15:53 AM
Potassium	0.0771	0.0500	0.200	J	mg/L	1	4/30/2018 10:15:53 AM
Selenium	ND	0.0100	0.0250	U	mg/L	1	4/30/2018 10:15:53 AM
Silver	ND	0.00500	0.0200	U	mg/L	1	4/30/2018 10:15:53 AM
Sodium	0.280	0.0100	0.0300		mg/L	1	4/30/2018 10:15:53 AM
Thallium	ND	0.0100	0.0150	U	mg/L	1	4/30/2018 10:15:53 AM
Vanadium	ND	0.00500	0.0200	U	mg/L	1	4/30/2018 10:15:53 AM
Zinc	0.101	0.00500	0.0200		mg/L	1	4/30/2018 10:15:53 AM

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Original

American Analytical Laboratories, LLC.

Date: 30-Apr-18

ELAP ID : 11418**CLIENT:** H2M Architects & Engineers**Client Sample ID:** Fixer MER-1**Lab Order:** 1804167**Collection Date:** 4/24/2018 11:04:00 AM**Project:** Fixer Pipe Sampling, RCRA Closure, Melville,**Matrix:** LIQUID**Lab ID:** 1804167-003A**Certificate of Results**

Analyses	Sample Result	LOD	LOQ	Qual	Units	DF	Date/Time Analyzed
VOLATILE SW-846 METHOD 8260			SW8260C		SW5030C		Analyst: LA
1,1,1,2-Tetrachloroethane	ND	0.25	2.0	U	µg/L	1	4/24/2018 5:06:00 PM
1,1,1-Trichloroethane	ND	0.25	2.0	U	µg/L	1	4/24/2018 5:06:00 PM
1,1,2,2-Tetrachloroethane	ND	0.25	2.0	U	µg/L	1	4/24/2018 5:06:00 PM
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	0.25	2.0	U	µg/L	1	4/24/2018 5:06:00 PM
1,1,2-Trichloroethane	ND	0.25	2.0	U	µg/L	1	4/24/2018 5:06:00 PM
1,1-Dichloroethane	ND	0.25	2.0	U	µg/L	1	4/24/2018 5:06:00 PM
1,1-Dichloroethene	ND	0.25	2.0	U	µg/L	1	4/24/2018 5:06:00 PM
1,1-Dichloropropene	ND	0.25	2.0	U	µg/L	1	4/24/2018 5:06:00 PM
1,2,3-Trichlorobenzene	ND	0.25	2.0	U	µg/L	1	4/24/2018 5:06:00 PM
1,2,3-Trichloropropane	ND	0.25	2.0	U	µg/L	1	4/24/2018 5:06:00 PM
1,2,4,5-Tetramethylbenzene	ND	0.25	2.0	U	µg/L	1	4/24/2018 5:06:00 PM
1,2,4-Trichlorobenzene	ND	0.25	2.0	U	µg/L	1	4/24/2018 5:06:00 PM
1,2,4-Trimethylbenzene	ND	0.25	2.0	U	µg/L	1	4/24/2018 5:06:00 PM
1,2-Dibromo-3-chloropropane	ND	0.030	2.0	U	µg/L	1	4/24/2018 5:06:00 PM
1,2-Dibromoethane	ND	0.25	2.0	U	µg/L	1	4/24/2018 5:06:00 PM
1,2-Dichlorobenzene	ND	0.25	2.0	U	µg/L	1	4/24/2018 5:06:00 PM
1,2-Dichloroethane	ND	0.25	2.0	U	µg/L	1	4/24/2018 5:06:00 PM
1,2-Dichloropropane	ND	0.25	2.0	U	µg/L	1	4/24/2018 5:06:00 PM
1,3,5-Trimethylbenzene	ND	0.25	2.0	U	µg/L	1	4/24/2018 5:06:00 PM
1,3-Dichlorobenzene	ND	0.25	2.0	U	µg/L	1	4/24/2018 5:06:00 PM
1,3-dichloropropane	ND	0.25	2.0	U	µg/L	1	4/24/2018 5:06:00 PM
1,4-Dichlorobenzene	ND	0.25	2.0	U	µg/L	1	4/24/2018 5:06:00 PM
1,4-Dioxane	ND	0.25	1.0	U	µg/L	1	4/24/2018 5:06:00 PM
2,2-Dichloropropane	ND	0.25	2.0	U	µg/L	1	4/24/2018 5:06:00 PM
2-Butanone	ND	0.50	4.0	U	µg/L	1	4/24/2018 5:06:00 PM
2-Chloroethyl vinyl ether	ND	0.25	2.0	U	µg/L	1	4/24/2018 5:06:00 PM
2-Chlorotoluene	ND	0.25	2.0	U	µg/L	1	4/24/2018 5:06:00 PM
2-Hexanone	ND	0.50	4.0	U	µg/L	1	4/24/2018 5:06:00 PM
2-Propanol	ND	0.25	2.0	U	µg/L	1	4/24/2018 5:06:00 PM
4-Chlorotoluene	ND	0.25	2.0	U	µg/L	1	4/24/2018 5:06:00 PM
4-Isopropyltoluene	ND	0.25	2.0	U	µg/L	1	4/24/2018 5:06:00 PM
4-Methyl-2-pentanone	ND	0.50	4.0	U	µg/L	1	4/24/2018 5:06:00 PM
Acetone	ND	5.0	5.0	U	µg/L	1	4/24/2018 5:06:00 PM

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Original

American Analytical Laboratories, LLC.

Date: 30-Apr-18

ELAP ID : 11418**CLIENT:** H2M Architects & Engineers**Client Sample ID:** Fixer MER-1**Lab Order:** 1804167**Collection Date:** 4/24/2018 11:04:00 AM**Project:** Fixer Pipe Sampling, RCRA Closure, Melville,**Matrix:** LIQUID**Lab ID:** 1804167-003A**Certificate of Results**

Analyses	Sample Result	LOD	LOQ	Qual	Units	DF	Date/Time Analyzed
VOLATILE SW-846 METHOD 8260			SW8260C		SW5030C		Analyst: LA
Benzene	ND	0.25	2.0	U	µg/L	1	4/24/2018 5:06:00 PM
Bromobenzene	ND	0.25	2.0	U	µg/L	1	4/24/2018 5:06:00 PM
Bromochloromethane	ND	0.25	2.0	U	µg/L	1	4/24/2018 5:06:00 PM
Bromodichloromethane	ND	0.25	2.0	U	µg/L	1	4/24/2018 5:06:00 PM
Bromoform	ND	0.25	2.0	U	µg/L	1	4/24/2018 5:06:00 PM
Bromomethane	ND	0.25	2.0	U	µg/L	1	4/24/2018 5:06:00 PM
Carbon disulfide	ND	0.25	2.0	U	µg/L	1	4/24/2018 5:06:00 PM
Carbon tetrachloride	ND	0.25	2.0	U	µg/L	1	4/24/2018 5:06:00 PM
Chlorobenzene	ND	0.25	2.0	U	µg/L	1	4/24/2018 5:06:00 PM
Chlorodifluoromethane	ND	0.25	2.0	U	µg/L	1	4/24/2018 5:06:00 PM
Chloroethane	ND	0.25	2.0	U	µg/L	1	4/24/2018 5:06:00 PM
Chloroform	ND	0.25	2.0	U	µg/L	1	4/24/2018 5:06:00 PM
Chloromethane	ND	0.25	2.0	U	µg/L	1	4/24/2018 5:06:00 PM
cis-1,2-Dichloroethene	ND	0.25	2.0	U	µg/L	1	4/24/2018 5:06:00 PM
cis-1,3-Dichloropropene	ND	0.25	2.0	U	µg/L	1	4/24/2018 5:06:00 PM
Cyclohexane	ND	0.25	2.0	U	µg/L	1	4/24/2018 5:06:00 PM
Dibromochloromethane	ND	0.25	2.0	U	µg/L	1	4/24/2018 5:06:00 PM
Dibromomethane	ND	0.25	2.0	U	µg/L	1	4/24/2018 5:06:00 PM
Dichlorodifluoromethane	ND	0.25	2.0	U	µg/L	1	4/24/2018 5:06:00 PM
Diisopropyl ether	ND	0.50	2.0	U	µg/L	1	4/24/2018 5:06:00 PM
Ethanol	ND	2.5	10	U	µg/L	1	4/24/2018 5:06:00 PM
Ethylbenzene	ND	0.25	2.0	U	µg/L	1	4/24/2018 5:06:00 PM
Freon-114	ND	0.25	2.0	U	µg/L	1	4/24/2018 5:06:00 PM
Hexachlorobutadiene	ND	0.25	2.0	U	µg/L	1	4/24/2018 5:06:00 PM
Isopropylbenzene	ND	0.25	2.0	U	µg/L	1	4/24/2018 5:06:00 PM
m,p-Xylene	ND	0.50	4.0	U	µg/L	1	4/24/2018 5:06:00 PM
Methyl Acetate	ND	0.25	2.0	U	µg/L	1	4/24/2018 5:06:00 PM
Methyl tert-butyl ether	ND	0.25	2.0	U	µg/L	1	4/24/2018 5:06:00 PM
Methylene chloride	ND	5.0	5.0	U	µg/L	1	4/24/2018 5:06:00 PM
n-Butylbenzene	ND	0.25	2.0	U	µg/L	1	4/24/2018 5:06:00 PM
n-Propylbenzene	ND	0.25	2.0	U	µg/L	1	4/24/2018 5:06:00 PM
Naphthalene	ND	0.25	2.0	U	µg/L	1	4/24/2018 5:06:00 PM
o-Xylene	ND	0.25	2.0	U	µg/L	1	4/24/2018 5:06:00 PM

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Original

American Analytical Laboratories, LLC.

Date: 30-Apr-18

ELAP ID : 11418**CLIENT:** H2M Architects & Engineers**Client Sample ID:** Fixer MER-1**Lab Order:** 1804167**Collection Date:** 4/24/2018 11:04:00 AM**Project:** Fixer Pipe Sampling, RCRA Closure, Melville,**Matrix:** LIQUID**Lab ID:** 1804167-003A**Certificate of Results**

Analyses	Sample Result	LOD	LOQ	Qual	Units	DF	Date/Time Analyzed
VOLATILE SW-846 METHOD 8260			SW8260C	SW5030C	Analyst: LA		
p-Diethylbenzene	ND	0.25	2.0	U	µg/L	1	4/24/2018 5:06:00 PM
p-Ethyltoluene	ND	0.25	2.0	U	µg/L	1	4/24/2018 5:06:00 PM
sec-Butylbenzene	ND	0.25	2.0	U	µg/L	1	4/24/2018 5:06:00 PM
Styrene	ND	0.25	2.0	U	µg/L	1	4/24/2018 5:06:00 PM
t-Butyl alcohol	ND	2.5	10	U	µg/L	1	4/24/2018 5:06:00 PM
tert-Butylbenzene	ND	0.25	2.0	U	µg/L	1	4/24/2018 5:06:00 PM
Tetrachloroethene	ND	0.25	2.0	U	µg/L	1	4/24/2018 5:06:00 PM
Toluene	0.30	0.25	2.0	J	µg/L	1	4/24/2018 5:06:00 PM
trans-1,2-Dichloroethene	ND	0.25	2.0	U	µg/L	1	4/24/2018 5:06:00 PM
trans-1,3-Dichloropropene	ND	0.25	2.0	U	µg/L	1	4/24/2018 5:06:00 PM
Trichloroethene	ND	0.25	2.0	U	µg/L	1	4/24/2018 5:06:00 PM
Trichlorofluoromethane	ND	0.25	2.0	U	µg/L	1	4/24/2018 5:06:00 PM
Vinyl acetate	ND	0.25	2.0	U	µg/L	1	4/24/2018 5:06:00 PM
Vinyl chloride	ND	0.25	2.0	U	µg/L	1	4/24/2018 5:06:00 PM
Xylenes, Total	ND	0.75	6.0	U	µg/L	1	4/24/2018 5:06:00 PM
Acrolein	ND	1.0	10	U	µg/L	1	4/24/2018 5:06:00 PM
Acrylonitrile	ND	0.25	2.0	U	µg/L	1	4/24/2018 5:06:00 PM

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Original

American Analytical Laboratories, LLC.

Date: 30-Apr-18

ELAP ID : 11418

CLIENT:	H2M Architects & Engineers	Client Sample ID:	Fixer MER-1
Lab Order:	1804167	Collection Date:	4/24/2018 11:04:00 AM
Project:	Fixer Pipe Sampling, RCRA Closure, Melville,	Matrix:	LIQUID
Lab ID:	1804167-003B		

Certificate of Results

Analyses	Sample Result	LOD	LOQ	Qual	Units	DF	Date/Time Analyzed
MERCURY, TOTAL							
		E245.1 REV3.0 1994		E245.1 REV3.0		Analyst: JP	
Mercury	0.000190	0.000150	0.000300	J	mg/L	1	4/30/2018 11:17:41 AM
TOTAL METALS							
		E200.7 REV4.4 1994		E200.7 REV4.4		Analyst: JP	
Aluminum	0.266	0.00500	0.0200		mg/L	1	4/30/2018 10:17:59 AM
Antimony	ND	0.00500	0.0200	U	mg/L	1	4/30/2018 10:17:59 AM
Arsenic	ND	0.0100	0.0250	U	mg/L	1	4/30/2018 10:17:59 AM
Barium	0.0241	0.00500	0.0200		mg/L	1	4/30/2018 10:17:59 AM
Beryllium	ND	0.00500	0.0200	U	mg/L	1	4/30/2018 10:17:59 AM
Cadmium	ND	0.00500	0.0100	U	mg/L	1	4/30/2018 10:17:59 AM
Calcium	2.04	0.00500	0.0250		mg/L	1	4/30/2018 10:17:59 AM
Chromium	ND	0.00500	0.0200	U	mg/L	1	4/30/2018 10:17:59 AM
Cobalt	ND	0.00500	0.0200	U	mg/L	1	4/30/2018 10:17:59 AM
Copper	0.0296	0.00500	0.0200		mg/L	1	4/30/2018 10:17:59 AM
Iron	11.7	0.00500	0.0200		mg/L	1	4/30/2018 10:17:59 AM
Lead	ND	0.00500	0.0150	U	mg/L	1	4/30/2018 10:17:59 AM
Magnesium	0.598	0.00500	0.0200		mg/L	1	4/30/2018 10:17:59 AM
Manganese	0.0310	0.00500	0.0200		mg/L	1	4/30/2018 10:17:59 AM
Nickel	0.00408	0.00500	0.0200	J	mg/L	1	4/30/2018 10:17:59 AM
Potassium	0.895	0.0500	0.200		mg/L	1	4/30/2018 10:17:59 AM
Selenium	ND	0.0100	0.0250	U	mg/L	1	4/30/2018 10:17:59 AM
Silver	0.0221	0.00500	0.0200		mg/L	1	4/30/2018 10:17:59 AM
Sodium	5.01	0.0100	0.0300		mg/L	1	4/30/2018 10:17:59 AM
Thallium	ND	0.0100	0.0150	U	mg/L	1	4/30/2018 10:17:59 AM
Vanadium	ND	0.00500	0.0200	U	mg/L	1	4/30/2018 10:17:59 AM
Zinc	0.0321	0.00500	0.0200		mg/L	1	4/30/2018 10:17:59 AM

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Original

American Analytical Laboratories, LLC.

Date: 30-Apr-18

ELAP ID : 11418**CLIENT:** H2M Architects & Engineers**Client Sample ID:** Fixer Basement**Lab Order:** 1804167**Collection Date:** 4/24/2018 11:18:00 AM**Project:** Fixer Pipe Sampling, RCRA Closure, Melville,**Matrix:** LIQUID**Lab ID:** 1804167-004A**Certificate of Results**

Analyses	Sample Result	LOD	LOQ	Qual	Units	DF	Date/Time Analyzed
VOLATILE SW-846 METHOD 8260			SW8260C		SW5030C		Analyst: LA
1,1,1,2-Tetrachloroethane	ND	0.25	2.0	U	µg/L	1	4/24/2018 5:36:00 PM
1,1,1-Trichloroethane	ND	0.25	2.0	U	µg/L	1	4/24/2018 5:36:00 PM
1,1,2,2-Tetrachloroethane	ND	0.25	2.0	U	µg/L	1	4/24/2018 5:36:00 PM
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	0.25	2.0	U	µg/L	1	4/24/2018 5:36:00 PM
1,1,2-Trichloroethane	ND	0.25	2.0	U	µg/L	1	4/24/2018 5:36:00 PM
1,1-Dichloroethane	ND	0.25	2.0	U	µg/L	1	4/24/2018 5:36:00 PM
1,1-Dichloroethene	ND	0.25	2.0	U	µg/L	1	4/24/2018 5:36:00 PM
1,1-Dichloropropene	ND	0.25	2.0	U	µg/L	1	4/24/2018 5:36:00 PM
1,2,3-Trichlorobenzene	ND	0.25	2.0	U	µg/L	1	4/24/2018 5:36:00 PM
1,2,3-Trichloropropane	ND	0.25	2.0	U	µg/L	1	4/24/2018 5:36:00 PM
1,2,4,5-Tetramethylbenzene	ND	0.25	2.0	U	µg/L	1	4/24/2018 5:36:00 PM
1,2,4-Trichlorobenzene	ND	0.25	2.0	U	µg/L	1	4/24/2018 5:36:00 PM
1,2,4-Trimethylbenzene	ND	0.25	2.0	U	µg/L	1	4/24/2018 5:36:00 PM
1,2-Dibromo-3-chloropropane	ND	0.030	2.0	U	µg/L	1	4/24/2018 5:36:00 PM
1,2-Dibromoethane	ND	0.25	2.0	U	µg/L	1	4/24/2018 5:36:00 PM
1,2-Dichlorobenzene	ND	0.25	2.0	U	µg/L	1	4/24/2018 5:36:00 PM
1,2-Dichloroethane	ND	0.25	2.0	U	µg/L	1	4/24/2018 5:36:00 PM
1,2-Dichloropropane	ND	0.25	2.0	U	µg/L	1	4/24/2018 5:36:00 PM
1,3,5-Trimethylbenzene	ND	0.25	2.0	U	µg/L	1	4/24/2018 5:36:00 PM
1,3-Dichlorobenzene	ND	0.25	2.0	U	µg/L	1	4/24/2018 5:36:00 PM
1,3-dichloropropane	ND	0.25	2.0	U	µg/L	1	4/24/2018 5:36:00 PM
1,4-Dichlorobenzene	ND	0.25	2.0	U	µg/L	1	4/24/2018 5:36:00 PM
1,4-Dioxane	ND	0.25	1.0	U	µg/L	1	4/24/2018 5:36:00 PM
2,2-Dichloropropane	ND	0.25	2.0	U	µg/L	1	4/24/2018 5:36:00 PM
2-Butanone	ND	0.50	4.0	U	µg/L	1	4/24/2018 5:36:00 PM
2-Chloroethyl vinyl ether	ND	0.25	2.0	U	µg/L	1	4/24/2018 5:36:00 PM
2-Chlorotoluene	ND	0.25	2.0	U	µg/L	1	4/24/2018 5:36:00 PM
2-Hexanone	ND	0.50	4.0	U	µg/L	1	4/24/2018 5:36:00 PM
2-Propanol	ND	0.25	2.0	U	µg/L	1	4/24/2018 5:36:00 PM
4-Chlorotoluene	ND	0.25	2.0	U	µg/L	1	4/24/2018 5:36:00 PM
4-Isopropyltoluene	ND	0.25	2.0	U	µg/L	1	4/24/2018 5:36:00 PM
4-Methyl-2-pentanone	ND	0.50	4.0	U	µg/L	1	4/24/2018 5:36:00 PM
Acetone	ND	5.0	5.0	U	µg/L	1	4/24/2018 5:36:00 PM

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Original

American Analytical Laboratories, LLC.

Date: 30-Apr-18

ELAP ID : 11418**CLIENT:** H2M Architects & Engineers**Client Sample ID:** Fixer Basement**Lab Order:** 1804167**Collection Date:** 4/24/2018 11:18:00 AM**Project:** Fixer Pipe Sampling, RCRA Closure, Melville,**Matrix:** LIQUID**Lab ID:** 1804167-004A**Certificate of Results**

Analyses	Sample Result	LOD	LOQ	Qual	Units	DF	Date/Time Analyzed
VOLATILE SW-846 METHOD 8260			SW8260C		SW5030C		Analyst: LA
Benzene	ND	0.25	2.0	U	µg/L	1	4/24/2018 5:36:00 PM
Bromobenzene	ND	0.25	2.0	U	µg/L	1	4/24/2018 5:36:00 PM
Bromochloromethane	ND	0.25	2.0	U	µg/L	1	4/24/2018 5:36:00 PM
Bromodichloromethane	ND	0.25	2.0	U	µg/L	1	4/24/2018 5:36:00 PM
Bromoform	ND	0.25	2.0	U	µg/L	1	4/24/2018 5:36:00 PM
Bromomethane	ND	0.25	2.0	U	µg/L	1	4/24/2018 5:36:00 PM
Carbon disulfide	ND	0.25	2.0	U	µg/L	1	4/24/2018 5:36:00 PM
Carbon tetrachloride	ND	0.25	2.0	U	µg/L	1	4/24/2018 5:36:00 PM
Chlorobenzene	ND	0.25	2.0	U	µg/L	1	4/24/2018 5:36:00 PM
Chlorodifluoromethane	ND	0.25	2.0	U	µg/L	1	4/24/2018 5:36:00 PM
Chloroethane	ND	0.25	2.0	U	µg/L	1	4/24/2018 5:36:00 PM
Chloroform	ND	0.25	2.0	U	µg/L	1	4/24/2018 5:36:00 PM
Chloromethane	ND	0.25	2.0	U	µg/L	1	4/24/2018 5:36:00 PM
cis-1,2-Dichloroethene	ND	0.25	2.0	U	µg/L	1	4/24/2018 5:36:00 PM
cis-1,3-Dichloropropene	ND	0.25	2.0	U	µg/L	1	4/24/2018 5:36:00 PM
Cyclohexane	ND	0.25	2.0	U	µg/L	1	4/24/2018 5:36:00 PM
Dibromochloromethane	ND	0.25	2.0	U	µg/L	1	4/24/2018 5:36:00 PM
Dibromomethane	ND	0.25	2.0	U	µg/L	1	4/24/2018 5:36:00 PM
Dichlorodifluoromethane	ND	0.25	2.0	U	µg/L	1	4/24/2018 5:36:00 PM
Diisopropyl ether	ND	0.50	2.0	U	µg/L	1	4/24/2018 5:36:00 PM
Ethanol	ND	2.5	10	U	µg/L	1	4/24/2018 5:36:00 PM
Ethylbenzene	ND	0.25	2.0	U	µg/L	1	4/24/2018 5:36:00 PM
Freon-114	ND	0.25	2.0	U	µg/L	1	4/24/2018 5:36:00 PM
Hexachlorobutadiene	ND	0.25	2.0	U	µg/L	1	4/24/2018 5:36:00 PM
Isopropylbenzene	ND	0.25	2.0	U	µg/L	1	4/24/2018 5:36:00 PM
m,p-Xylene	ND	0.50	4.0	U	µg/L	1	4/24/2018 5:36:00 PM
Methyl Acetate	ND	0.25	2.0	U	µg/L	1	4/24/2018 5:36:00 PM
Methyl tert-butyl ether	ND	0.25	2.0	U	µg/L	1	4/24/2018 5:36:00 PM
Methylene chloride	ND	5.0	5.0	U	µg/L	1	4/24/2018 5:36:00 PM
n-Butylbenzene	ND	0.25	2.0	U	µg/L	1	4/24/2018 5:36:00 PM
n-Propylbenzene	ND	0.25	2.0	U	µg/L	1	4/24/2018 5:36:00 PM
Naphthalene	ND	0.25	2.0	U	µg/L	1	4/24/2018 5:36:00 PM
o-Xylene	ND	0.25	2.0	U	µg/L	1	4/24/2018 5:36:00 PM

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Original

American Analytical Laboratories, LLC.

Date: 30-Apr-18

ELAP ID : 11418**CLIENT:** H2M Architects & Engineers**Client Sample ID:** Fixer Basement**Lab Order:** 1804167**Collection Date:** 4/24/2018 11:18:00 AM**Project:** Fixer Pipe Sampling, RCRA Closure, Melville,**Matrix:** LIQUID**Lab ID:** 1804167-004A**Certificate of Results**

Analyses	Sample Result	LOD	LOQ	Qual	Units	DF	Date/Time Analyzed
VOLATILE SW-846 METHOD 8260			SW8260C		SW5030C		Analyst: LA
p-Diethylbenzene	ND	0.25	2.0	U	µg/L	1	4/24/2018 5:36:00 PM
p-Ethyltoluene	ND	0.25	2.0	U	µg/L	1	4/24/2018 5:36:00 PM
sec-Butylbenzene	ND	0.25	2.0	U	µg/L	1	4/24/2018 5:36:00 PM
Styrene	ND	0.25	2.0	U	µg/L	1	4/24/2018 5:36:00 PM
t-Butyl alcohol	ND	2.5	10	U	µg/L	1	4/24/2018 5:36:00 PM
tert-Butylbenzene	ND	0.25	2.0	U	µg/L	1	4/24/2018 5:36:00 PM
Tetrachloroethene	ND	0.25	2.0	U	µg/L	1	4/24/2018 5:36:00 PM
Toluene	ND	0.25	2.0	U	µg/L	1	4/24/2018 5:36:00 PM
trans-1,2-Dichloroethene	ND	0.25	2.0	U	µg/L	1	4/24/2018 5:36:00 PM
trans-1,3-Dichloropropene	ND	0.25	2.0	U	µg/L	1	4/24/2018 5:36:00 PM
Trichloroethene	ND	0.25	2.0	U	µg/L	1	4/24/2018 5:36:00 PM
Trichlorofluoromethane	ND	0.25	2.0	U	µg/L	1	4/24/2018 5:36:00 PM
Vinyl acetate	ND	0.25	2.0	U	µg/L	1	4/24/2018 5:36:00 PM
Vinyl chloride	ND	0.25	2.0	U	µg/L	1	4/24/2018 5:36:00 PM
Xylenes, Total	ND	0.75	6.0	U	µg/L	1	4/24/2018 5:36:00 PM
Acrolein	ND	1.0	10	U	µg/L	1	4/24/2018 5:36:00 PM
Acrylonitrile	ND	0.25	2.0	U	µg/L	1	4/24/2018 5:36:00 PM

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Original

American Analytical Laboratories, LLC.

Date: 30-Apr-18

ELAP ID : 11418

CLIENT:	H2M Architects & Engineers	Client Sample ID:	Fixer Basement
Lab Order:	1804167	Collection Date:	4/24/2018 11:18:00 AM
Project:	Fixer Pipe Sampling, RCRA Closure, Melville,	Matrix:	LIQUID
Lab ID:	1804167-004B		

Certificate of Results

Analyses	Sample Result	LOD	LOQ	Qual	Units	DF	Date/Time Analyzed
MERCURY, TOTAL							
		E245.1 REV3.0 1994		E245.1 REV3.0			Analyst: JP
Mercury	0.000170	0.000150	0.000300	J	mg/L	1	4/30/2018 11:19:49 AM
TOTAL METALS							
		E200.7 REV4.4 1994		E200.7 REV4.4			Analyst: JP
Aluminum	3.21	0.00500	0.0200		mg/L	1	4/30/2018 10:20:04 AM
Antimony	ND	0.00500	0.0200	U	mg/L	1	4/30/2018 10:20:04 AM
Arsenic	ND	0.0100	0.0250	U	mg/L	1	4/30/2018 10:20:04 AM
Barium	0.0278	0.00500	0.0200		mg/L	1	4/30/2018 10:20:04 AM
Beryllium	ND	0.00500	0.0200	U	mg/L	1	4/30/2018 10:20:04 AM
Cadmium	ND	0.00500	0.0100	U	mg/L	1	4/30/2018 10:20:04 AM
Calcium	2.61	0.00500	0.0250		mg/L	1	4/30/2018 10:20:04 AM
Chromium	ND	0.00500	0.0200	U	mg/L	1	4/30/2018 10:20:04 AM
Cobalt	ND	0.00500	0.0200	U	mg/L	1	4/30/2018 10:20:04 AM
Copper	0.00631	0.00500	0.0200	J	mg/L	1	4/30/2018 10:20:04 AM
Iron	0.145	0.00500	0.0200		mg/L	1	4/30/2018 10:20:04 AM
Lead	ND	0.00500	0.0150	U	mg/L	1	4/30/2018 10:20:04 AM
Magnesium	0.528	0.00500	0.0200		mg/L	1	4/30/2018 10:20:04 AM
Manganese	0.00813	0.00500	0.0200	J	mg/L	1	4/30/2018 10:20:04 AM
Nickel	0.00427	0.00500	0.0200	J	mg/L	1	4/30/2018 10:20:04 AM
Potassium	0.296	0.0500	0.200		mg/L	1	4/30/2018 10:20:04 AM
Selenium	ND	0.0100	0.0250	U	mg/L	1	4/30/2018 10:20:04 AM
Silver	ND	0.00500	0.0200	U	mg/L	1	4/30/2018 10:20:04 AM
Sodium	4.50	0.0100	0.0300		mg/L	1	4/30/2018 10:20:04 AM
Thallium	ND	0.0100	0.0150	U	mg/L	1	4/30/2018 10:20:04 AM
Vanadium	ND	0.00500	0.0200	U	mg/L	1	4/30/2018 10:20:04 AM
Zinc	0.130	0.00500	0.0200		mg/L	1	4/30/2018 10:20:04 AM

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