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M E M O R A N D U M

TO: Lucica Hiller, CPMSM, City of Cambridge

FROM: Lisa Stone, Kleinfelder
Eric Henry, LSP, Kleinfelder

DATE : June 3, 2025

SUBJECT: Environmental Conditions Summary
Cambridge Combined Sewer Overflow Long Term Control Plan
41 Bellis Circle
Cambridge, Massachusetts

CC: Jonnas Jacques, PE, Kleinfelder
Mark Ruberti, PE, Kleinfelder
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This memo summarizes environmental conditions and provides recommendations for soil and groundwater management to support the design associated with the City's combined sewer overflow (CSO) long term control project which includes the 41 Bellis Circle parcel (referred to as the Site). The Site is planned to be developed as a vertical Department of Public Works (DPW) facility with an underground wet weather storage tank and pump station to mitigate CSOs in the vicinity.

Kleinfelder reviewed information presented in databases maintained by state and federal agencies including aerial photographs, city directories and Sanborn fire insurance maps, as well as publicly available reports associated with Massachusetts Department of Environmental Protection (MassDEP) Massachusetts Contingency Plan (MCP) Disposal Sites. Additionally, a preliminary subsurface investigation was performed for geotechnical and environmental purposes. Soil observations, field screening data, and analytical results of soil samples are summarized in this memo.

Environmental Database Review

An ASTM Phase I Environmental Site Assessment (Phase I ESA) was completed by Kleinfelder in July 2023 on behalf of the City of Cambridge for due diligence associated with the purchase of the 41 Bellis Circle property. Findings of the Phase I ESA were presented to the City in a report dated August 11, 2023. As part of the Phase I Kleinfelder contracted a commercial database service, Environmental Data Resources, Inc (EDR), of Milford, Connecticut to perform a government database search for listings within the Site, and to provide historical photographs and maps. Below is a summary of the results of the database search provided in the Phase I ESA report. Refer to **Appendix A** for copies of the historical documentation provided by EDR.

Sanborn Maps

The EDR report included historical Sanborn maps of the Site for the years 1900, 1935, 1950, 1986, 1990 1992, 1995, 2003, 2004, 2005, and 2006. Sanborn maps were reviewed to identify conditions posing potential environmental risks within the Site. In 1900, Sanborn maps depicted the Site as "W Cambridge Depot" with a structure in the eastern portion and two railroad spurs in the western portion. In 1935, the property is labeled as "Diamond Coal Co" with a coal shed, open coal bin and office building. In 1950 three additional structures are present, one to the west of the coal shed and one in the eastern portion. It is difficult to determine the writing on the structure adjacent to the coal shed, but one of the two new structures in the eastern portion is labeled "Pump Shed." There is also a fuel oil tank present to the north of the office. Bolton Street is labeled John F. Bellis Circle beginning with the 1950 map. Beginning in 1986, the Site is depicted as vacant land with the railroad spurs still present; however, the railroad spurs were not present on the 1990 Map.

Aerial Photographs

Coverage for the Site was available on historical aerial photographs obtained for 41 Bellis Circle for the years 1938, 1952, 1955, 1969, 1970, 1978, 1980, 1987, 1995, 2006, 2010, 2014, and 2018. These photographs were reviewed to identify conditions posing potential environmental risks within the Site. The photographs depict the project area to be developed as early as 1938, with multiple structures present that correspond with the Sanborn maps. Beginning in 1952, the Site appears to have additional structures on it, that also correspond with the Sanborn maps. The 1970 photograph depicts all structures removed, with the exception of one, which was removed sometime between 1970 and 1980. In 1987 the Site appears as a paved parking lot.

Historical Topographic Maps

Coverage for the Site was available on historical topographic maps obtained for 41 Bellis Circle for the years 1893, 1903, 1943/1944, 1946/1947, 1949, 1956, 1970/1971, 1977, 1979, 1985/1987, 2012, 2015, and 2018. The topographic maps depict heavy development in the vicinity of Site as early as 1893. The 1903 historical topographic map shows a terminated rail line at the Site. No other significant features were noted on the topographic maps for the Site. Beginning in 1943/1944, the current Danehy Park, a former landfill located to the west, south and southwest of the Site is depicted as a clay pit.

City Directories

The EDR Report included city directories for the years 1896, 1901, 1906, 1910,1944, 1954, 1960, 1965, 1970, 1975, 1984, 1989, 1992, 1995, 2000, 2005, 2010, 2014 and 2020 for 41 Bellis Circle. The Site was not listed in the EDR City Directory.

Records Review

The purpose of the records review is to obtain and review records that would help to evaluate potential environmental concerns in connection with the Site and surrounding properties. Federal,

State and local regulatory agencies publish databases or "lists" of businesses and properties that handle hazardous materials or hazardous waste or are the known location of a release of hazardous substances to soil and/or groundwater. These databases were reviewed through the EDR report for Kleinfelder's 2023 Phase I and updated as part of this assessment using MassDEP online records. Release tracking numbers (RTNs) for sites within or adjacent to the Site with the potential to impact the Site are discussed below, listed in **Table 1**, and shown on **Figure 1**. Sites for which a Class A-1 Response Action Outcome (RAO) statement was submitted, indicating that the site has been remediated to background conditions, were not included.

41 Bellis Circle

A 120-day notification was reported to MassDEP on August 1, 2016 for a release of oil observed in soil during a Phase II Environmental Site Assessment (ESA) and RTN 3-0033725 was assigned. Concentrations of extractable petroleum hydrocarbons (EPH) and volatile petroleum hydrocarbons (VPH) exceeded MCP Reportable Concentrations (RCs) for Category S-1 soils (RCS-1) in soil samples collected from a depth of five to 10 feet below ground surface (bgs) in a soil boring advanced during the investigation. Concentrations of VPH, EPH and volatile organic compounds (VOCs) were also detected in groundwater; however, these concentrations were below the applicable MCP RCGW-2 that applies to the Site. The Phase II also included a ground penetrating radar (GPR) survey and no anomalies indicating the presence of an underground storage tank(s) (USTs) were observed.

A supplemental Phase II was subsequently conducted to evaluate extent of impacts to soil and further evaluate groundwater at the Site. Results of soil samples collected from additional borings concluded that the release was likely attributed to a fuel oil tank associated with heating oil sales by the Diamond Coal Company, a former Site occupant. The USTs were reportedly removed in the early 1980s.

PAHs commonly found in historic fill material were also identified above MCP RCS-1 during the supplemental Phase II investigation. Field observations noted the presence of coal and coal ash in soil at the Site thus release notification was not required per the MCP at 310 CMR 40.0317(9). The supplemental Phase II investigation did not detect any groundwater impacts.

In August 2016, an approximately 60-foot by 60-foot area of petroleum contaminated soil was excavated from the parking lot under a Release Abatement Measure (RAM) Plan. The average depth of the excavation was approximately 13 to 15 feet bgs. Some areas extended to a depth of approximately 18 feet bgs. A total of 21 endpoint soil samples were collected from the sidewalls and base of the excavation and submitted for laboratory analysis of EPH and VPH. Results indicated residual concentrations of VPH and EPH above applicable Method 1 S-1 soil standards in localized areas in the southern, western and northern sidewalls; however, it was determined that the benefit of additional excavation in these areas to reduce concentrations was not feasible. Samples collected from the northern sidewall and base of the excavation did not detect VPH or EPH above laboratory reporting limits and/or applicable Method 1 S-1 soil standards. A total of 2,893 tons of contaminated soil were excavated and transported for off-site recycling.

Following soil excavation, additional soil borings and groundwater monitoring wells were installed to delineate soil endpoint sample results and assess groundwater in areas of residual contamination

as well as the potential for off-site migration. Soil sample results detected VPH and EPH constituents above laboratory reporting limits, but below applicable standards. No groundwater concentrations detected exceeded the applicable Method 1 GW-2 or GW-3 standards.

Following post-excavation soil and groundwater sampling a Method 1 Risk Characterization was performed. Results of the Method 1 Risk Characterization determined that a condition of No Significant Risk existed and a Permanent Solution with No Conditions (PSNC) was submitted in October 2016.

147 Sherman Street

There are two RTN's associated with 147 Sherman Street, which is located approximately 111 feet northeast of the Site. The first RTN 3-0014286 is for a 120-day notification on October 1, 1996, for the release of chlorinated solvents related to electronics manufacturing. Following injections to reduce VOCs in groundwater in two localized areas outside to the south side of the eastern portion of the building, a Class A-2 Response Action Outcome Statement (RAO) was submitted to MassDEP. The MassDEP audited the RAO in 2007 following policy changes and multiple rounds of indoor air sampling were conducted to evaluate conditions. A sub slab depressurization system (SSDS) was installed to mitigate vapor intrusion conditions. In January 2014 a Class C-1 RAO was submitted. An Activity and Use Limitation (AUL) was placed on the property specifying the continued operation of the SSDS. A Permanent Solution with Conditions (PSC) was submitted in July 2017, requiring the ongoing operation of the Active Exposure Pathway Mitigation Measure (AEPMM) to maintain a condition of No Significant Risk. The MCP requires that the current property owner submit an annual certification with regard to the operation and maintenance of the AEPMM.

RTN 3-0033114 was assigned for a two-hour notification on August 27, 2015, for the release of approximately 17 gallons of hydraulic fluid from a concrete pumping truck onto asphalt. The oil was subsequently cleaned up and subsurface gravel in areas of large pavement cracks were assessed and determined to be impacted but localized. The impacted gravel was excavated. No soil or groundwater impacts were identified. A PSNC was submitted in November 2015.

Although this property is adjacent, it is separated by railroad tracks from the Site. Further, localized groundwater contamination was not determined to be migrating off-site towards the Site. Based on this information and the current status the property is not likely to affect the Site.

85 Bolton Street

This facility is located approximately 620 feet east-southeast of the Site and was assigned RTN 3-0000275 on January 1, 1987, as a Location to Be Investigated (LTBI). An assessment conducted on the property identified low level impacts to soil and groundwater; however, upon review of the assessment report, the MassDEP issued No Further Action. Based on available information, the contamination associated with RTN 3-0000275 is not likely to affect the Site.

Danehy Park

A Protected Open Space, Danehy Park, is located approximately 130 feet to the west of the Site at its closest point. Historically, Danehy Park operated as a solid waste landfill and prior to the landfill was used as a clay pit. According to the City of Cambridge website the area was predominately clay and between 1847-1952, clay was used to manufacture bricks by the New England Brick Company. The City of Cambridge purchased the site in 1946 from New England Brick Company and used the site as a landfill between 1952 and 1971. In March 1971 the landfill was closed to large scale dumping. Between 1976 and 1982, the site was also used for the placement of excavated material generated from the Massachusetts Bay Transportation Authority (MBTA) construction projects. In February 1990 the City of Cambridge received a final closure permit from MassDEP and the landfill was capped and redeveloped as Danehy Park. Routine landfill monitoring, including semi-annual water quality monitoring and quarterly landfill gas monitoring, has been conducted at the park since 1995. Since 2013, CDM Smith has conducted quarterly post-closure landfill gas monitoring consisting of 40 locations throughout the site and surrounding areas at Danehy Park.

Preliminary Subsurface Investigation

On April 7, 8, 10 and 11, 2025, Kleinfelder advanced four soil borings at the Site (KLF-1 through KLF-4). Borings were selected within the planned work area and are shown in **Figure 1.** Borings were advanced to depths ranging from 26 to 65.5 feet bgs.

Soil samples were continuously collected from the ground surface to termination depth at each boring location and screened for VOCs with a PID. A total of four soil samples were collected for laboratory analysis as grab and/or composite samples, with the grab samples submitted for VOC analysis. Samples were chosen based on proximity to on-site environmental concerns noted during the historical and regulatory database reviews. Due to the planned construction for site redevelopment involving a deeper excavation to install a stormwater UST, one soil sample was collected to characterize native soil located beneath the historic fill layer (KLF-3, 14 to 18 feet bgs). The other three samples were collected of shallow fill material.

Soil PID results ranged from below the instrument detection limit to 3.2 ppmv (KLF-3, 8-10 feet bgs). Soil encountered at the Site in borings KLF-1, KLF-2 and KLF-4 include fill material consisting of poorly graded sand with silt and gravel to a depth of two to five feet bgs, underlain by silt and sand to a depth of 10 feet bgs followed by clay. Glacial till was observed at a depth of 63 feet bgs. Soil boring KLF-3 was located adjacent to the 2016 soil excavation associated with RTN 3-0033725. Soils characterized in KLF-3 include fill material consisting of poorly graded sand, gravel and silt to a depth of 14 feet bgs underlain by clay. PID readings and soil descriptions are included in soil boring logs as **Appendix B**.

The soil samples were submitted to Phoenix Environmental Laboratories, Inc. of Manchester, Connecticut (Phoenix) for the following laboratory analyses:

- Total petroleum hydrocarbons (TPH) by Environmental Protection Agency (EPA) Method 8100M
- VOCs by EPA Method 8260B

- Semi-volatile organic compounds (SVOCs) by EPA Method 8270C
- MCP 14 metals by EPA Methods 6010 and 7471
- Polychlorinated biphenyls (PCBs) by EPA Method 8082A with Soxhlet extraction
- Reactivity by EPA Methods 9014 and 9030A
- Conductivity by EPA Method 2510B
- Corrosivity/pH by EPA Method 9045C
- Flashpoint by EPA Method 1010A-B

Metals were detected above the laboratory reporting limits in all soil samples; however, concentrations were below MCP RCS-1. Pyrene, fluoranthene and benzo(b)fluoranthene were detected above the laboratory reporting limits but below the MCP RCS-1 in soil samples collected from KLF-2 (0-5 feet) and KLF-3 (0-5 feet). PCB aroclor 1248 was also detected above the laboratory reporting limits but below the MCP RCS-1 in the soil sample collected from KLF-3 (0-5 feet). No other analytes were detected above the laboratory reporting limits in these samples. Results of soil samples are provided in **Table 2**, and laboratory analytical reports are attached as **Appendix C**.

One groundwater monitoring was installed during the investigation in soil boring KLF-3, due to its proximity to the remedial excavation conducted in 2016. The monitoring well was constructed to a depth of 15 feet bgs using 10 feet of 2-inch, Schedule 40, 0.010-inch slotted PVC screen and five feet of 2-inch, Schedule 40 PVC riser pipe to just below ground surface. The annual space between the borehole and the screen was backfilled with silica sand to approximately one foot above the screen, followed by a 1.5-foot bentonite seal. The borehole was backfilled to grade using drill cuttings. Surface completion of the monitoring well included a road box secured in concrete. On April 22, 2025, KLF-3 and previously existing well MW-102 were developed using a Waterra pump to remove fine sand and silt from the wells. A total of 50 to 100 gallons of groundwater was purged from the wells. MW-102 was previously installed by CDM Smith between March 19 and 21, 2024 on behalf of the City of Cambridge to further delineate groundwater conditions associated with Danehy Park.

Groundwater samples were collected from monitoring wells KLF-3 and MW-102 on April 28, 2025, using a peristaltic pump and the EPA low flow method. Prior to sampling, depth to groundwater was gauged using an electronic interface probe. Depth to water in the monitoring wells ranged from 7.51 feet to 7.97 feet bgs.

Groundwater samples were submitted to Phoenix for laboratory analysis of:

- TPH by EPA Method 8100M
- VOCs by EPA Method 8260B
- SVOCs by EPA Method 8270C
- MCP 14 metals by EPA Methods 6010 and 7471 (total and dissolved)
- PCBs by EPA Method 8082A with Soxhlet extraction
- Reactivity by EPA Methods 9014 and 9030A
- Conductivity by EPA Method 2510B
- Corrosivity/pH by EPA Method 9045C
- Flashpoint by EPA Method 1010A-B

Total and dissolved metals and SVOCs were detected above their respective laboratory reporting limits in groundwater samples collected from both KLF-3 and MW-102. Additionally, naphthalene was detected above the laboratory reporting limit in the groundwater sample collected from KLF-3. All detected concentrations were below the RCGW-2 concentrations. Results of groundwater samples are provided in **Table 3**, and laboratory reports are attached as **Appendix C.**

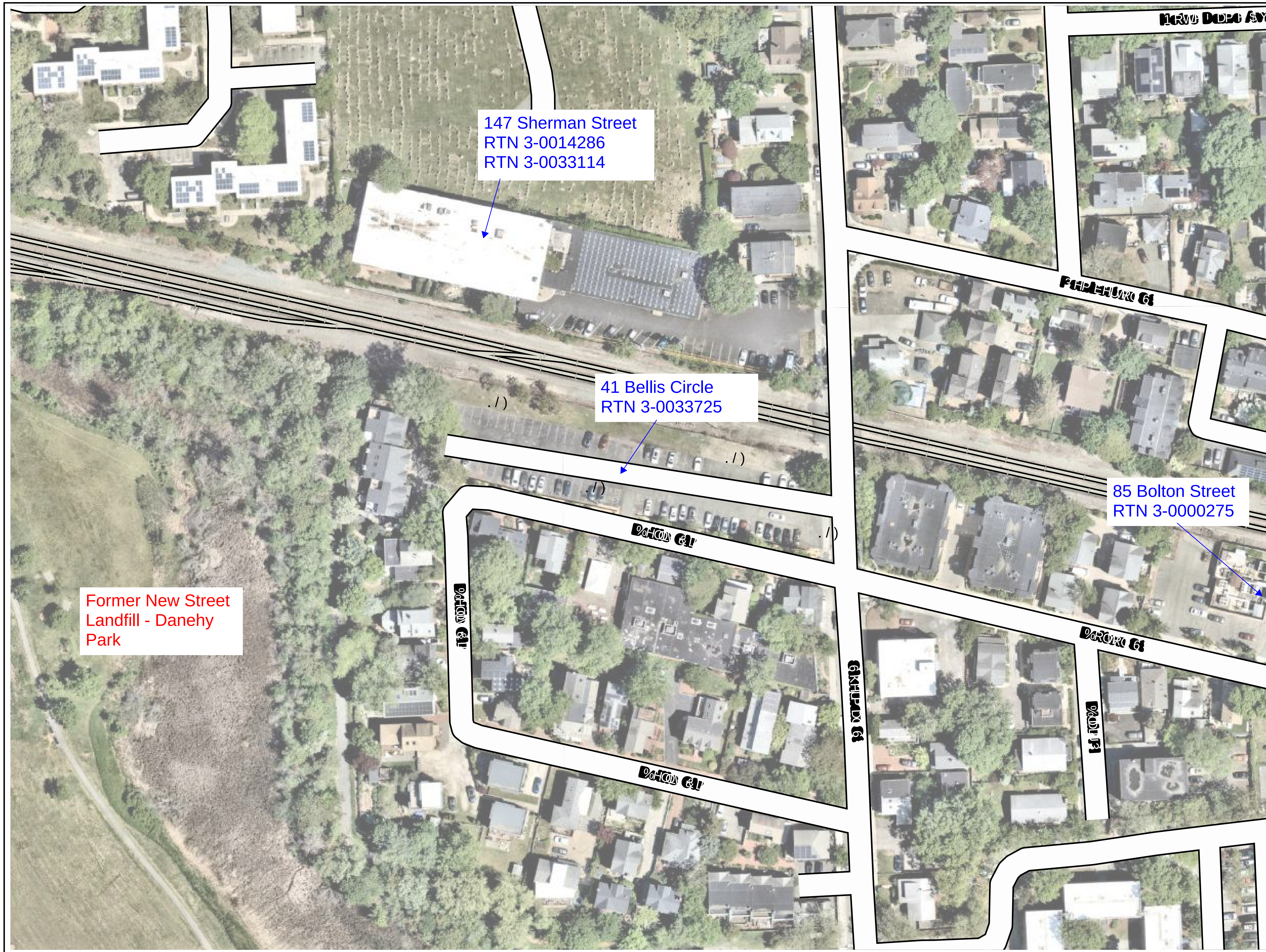
Discussion and Recommendations

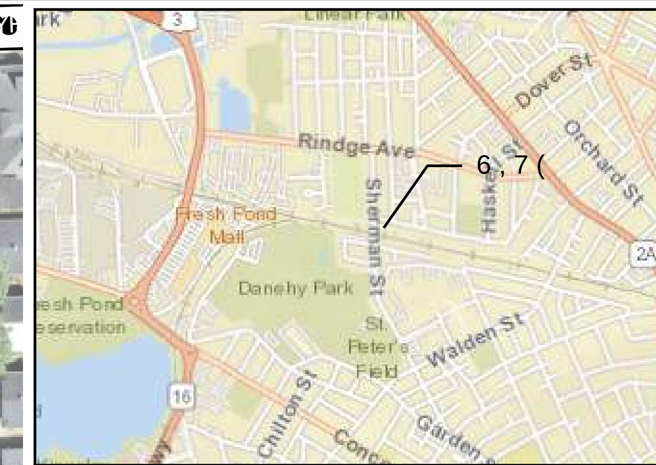
Based on soil data from this investigation, no compounds were detected above the applicable RCS-1 standards. If environmental conditions encountered at the rest of the Site are consistent with the soils encountered during Kleinfelder's boring program, excess soils are likely suitable for disposal or reuse at either a less than (<) RCS-1 facility or at a Massachusetts unlined or lined landfill, as available. Kleinfelder recommends that if a <RCS-1 facility is selected, that facility should have signed an Administrative Consent Order (ACO) issued by MassDEP. An ACO ensures compliance with MCP regulations by setting forth timetables, Fill Management Plan requirements and sampling schedules, third party inspections and reporting requirements to reduce liability associated with soil reuse and disposal. Soil may also be reused at the point of excavation pending approval of the receiving site by a Licensed Site Professional (LSP) representing the City of Cambridge. All <RCS-1 excavated soil requires approval from the receiving facility prior to transportation and reuse and should be transported under a MassDEP Material Shipping Record (MSR).

Based on the review of available records, a historic petroleum release is documented for the Site under RTN 3-0033725. The petroleum contaminated soil was excavated; however, soil endpoint sample results from the excavation detected petroleum constituents above applicable standards. It is likely that residual contamination associated with this release may be encountered during construction activities. If evidence of soil contamination is noted, the soil should be segregated and not reused. If conditions encountered during excavation in these areas differ from those described in the borings advanced at the Project Area, additional analysis may be required, and disposal recommendations may change. If surplus soils with concentrations equaling or exceeding an RCS-1 threshold are identified during construction, these soils will require management under a Post Closure RAM or Utility-Related Abatement Measure (URAM) and must be transported under a Massachusetts Bill of Lading (BOL) signed and stamped by an LSP. Confirmation of contaminant concentrations should be made following excavation due to the variability found in fill soils.

Based on the depth to groundwater observed during this investigation, the need for excavation dewatering is likely. Although groundwater sampling did not detect any analytes above the RCGW-2, groundwater must be characterized prior to discharge. If groundwater is regulated, then it may be discharged in accordance with 310 CMR 40.0045. If this is infeasible, groundwater may be discharged to the stormwater system, under an appropriate National Pollution Discharge Elimination System (NPDES) permit or to the publicly operated treatment works under the appropriate permit. The Contractor will be responsible for obtaining applicable permits, performing required sampling, designing any necessary pretreatment, and ensuring compliance with the permit(s). Alternatively, water may be stored in a fractionation tank or tanker truck and disposed of at a licensed facility. If evidence of groundwater contamination is encountered, work in this area should be performed as a Post Closure RAM or URAM, under direction of the City's LSP.

FIGURES





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Historical Properties of Concern

MassDEP Reportable Site

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MAY 2025

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TABLES

Table 1
MCP Disposal Sites
Cambridge CSO Long Term Control Plan
41 Bellis Circle
Cambridge, MA

Street	RTN	Site Name or Location Aid	Site Address	Notification Date	Compliance Status	Compliance Date	Contaminants of Concern	Depth to Groundwater	Within project area - Does contamination extend into the roadway?	Adjacent to project area?
Bellis Circle	3-0033725	41 Bellis Circle	41 Bellis Circle	8/1/2016	PSNC	11/2/2026	MAEPH and MAVPH	10-20 ft	Site	Site
Sherman Street	3-0014286	NO LOCATION AID	147 Sherman Street	10/1/1996	PSC	7/26/2017	Chlorinated Solvents, VOCs	10-12 ft	no	yes
Sherman Street	3-0033114	Commerical Property	147 Sherman Street	8/27/2015	PNSC	11/2/2015	Hydraulic oil and fluid	NA	no	yes
Bolton Street	3-0000275	Parcel 62	85 Bolton Street	1/15/1987	DEPNFA	5/6/1996	Unknown	6-11 ft	no	yes

Notes:
TCE - Tetrachloroethylene
PSNC - Permanent Solution with No Conditions
RAO - Response Action Outcome Statement
RTN - Release Tracking Number
DEPNFA - Department of Environmental Protection No Further Action
PSC - Permanent Solution with Conditions
ft - feet

Table 2
Summary of Soil Analytical Data
Cambridge CSO Long Term Control Plan
41 Bellis Circle
Cambridge, Massachusetts

Analyte	EPA Toxicity Characteristics	MassDEP RCS-1				
Collection Date			4/07/2025	4/07/2025	4/07/2025	4/10/2025
Sample ID			KLF-1	KLF-2	KLF-3	KLF-3
Depth Grab			2-3'	1-2'	2-3'	16-18'
Depth Composite			2-5'	0-5'	0-5'	14-18'
Soil composition			2-5' Native Soil	0-5' Fill Material	0-5' Fill Material	14-18' Native Soil
Miscellaneous/Inorganics						
Percent Solid	--	--	**81**	**87**	**91**	**80**
Conductivity - Soil Matrix (umhos/cm)	--	--	**15**	**43**	**891**	**108**
Corrosivity (pos/neg)	--	--	Negative	Negative	Negative	Negative
Flash Point (F)	--	--	>200	>200	>200	>200
Ignitability (F)	--	--	Passed	Passed	Passed	Passed
pH at 25C - Soil (pH units)	--	--	**6.19**	**7.02**	**11.5**	**7.8**
Reactivity Cyanide (mg/kg)	--	--	< 6	< 5	< 5	< 6
Reactivity Sulfide (mg/kg)	--	--	< 20	< 20	< 20	< 20
Reactivity (pos/neg)	--	--	Negative	Negative	Negative	Negative
Metals, Total (mg/kg)						
Antimony	--	20	< 4.3	< 3.7	< 3.7	< 4.2
Arsenic	--	20	**2.27**	**3.84**	**4.13**	**8.99**
Barium	--	1,000	**19.2**	**47.1**	**70.1**	**104**
Beryllium	--	100	< 0.35	**0.4**	**0.34**	**0.95**
Cadmium	--	80	< 0.43	**1.67**	< 0.37	**0.43**
Chromium	--	100	**12.9**	**11.1**	**25.5**	**48**
Lead	--	200	**6.24**	**51.3**	**22.5**	**11.6**
Mercury	--	20	< 0.03	**0.09**	< 0.03	< 0.03
Nickel	--	700	**9.62**	**8.16**	**16.3**	**31.7**
Selenium	--	400	< 1.7	< 1.5	< 1.5	< 1.7
Silver	--	100	< 0.43	< 0.37	< 0.37	< 0.42
Thallium	--	8	< 3.9	< 3.4	< 3.3	< 3.8
Vanadium	--	500	**21.4**	**19.2**	**32.9**	**59.3**
Zinc	--	1000	**25.2**	**77.1**	**60**	**68.9**
TPH By SW8015D DRO (mg/kg)						
Fuel Oil #2 / Diesel Fuel	--	--	< 61	< 290	< 270	< 61
Fuel Oil #4	--	--	< 61	< 290	< 270	< 61
Fuel Oil #6	--	--	< 61	< 290	< 270	< 61
Kerosene	--	--	< 61	< 290	< 270	< 61
Motor Oil	--	--	< 61	< 290	< 270	< 61
Total TPH	--	1,000	< 61	< 290	< 270	< 61
Unidentified	--	--	< 61	< 290	< 270	< 61
PCBs By SW8082A (ug/kg)						
PCB-1016	--	1,000	< 81	< 75	< 73	< 82
PCB-1221	--	1,000	< 81	< 75	< 73	< 82
PCB-1232	--	1,000	< 81	< 75	< 73	< 82
PCB-1242	--	1,000	< 81	< 75	< 73	< 82
PCB-1248	--	1,000	< 81	< 75	**410**	< 82
PCB-1254	--	1,000	< 81	< 75	< 73	< 82
PCB-1260	--	1,000	< 81	< 75	< 73	< 82
PCB-1262	--	1,000	< 81	< 75	< 73	< 82
PCB-1268	--	1,000	< 81	< 75	< 73	< 82
Volatiles By SW8260C (ug/kg)						
1,1,1,2-Tetrachloroethane	--	100	< 4.9	< 4.6	< 5.7	< 4.2
1,1,1-Trichloroethane	--	30,000	< 4.9	< 4.6	< 5.7	< 4.2
1,1,2,2-Tetrachloroethane	--	5	< 2.9	< 2.7	< 3.4	< 2.5
1,1,2-Trichloroethane	--	100	< 4.9	< 4.6	< 5.7	< 4.2
1,1-Dichloroethane	--	400	< 4.9	< 4.6	< 5.7	< 4.2
1,1-Dichloroethene	--	3,000	< 4.9	< 4.6	< 5.7	< 4.2
1,1-Dichloropropene	--	--	< 4.9	< 4.6	< 5.7	< 4.2
1,2,3-Trichlorobenzene	--	--	< 4.9	< 230	< 5.7	< 4.2
1,2,3-Trichloropropane	--	100,000	< 4.9	< 230	< 5.7	< 4.2
1,2,4-Trichlorobenzene	--	2,000	< 4.9	< 230	< 5.7	< 4.2
1,2,4-Trimethylbenzene	--	1,000,000	< 4.9	< 230	< 5.7	< 4.2
1,2-Dibromo-3-chloropropane	--	10,000	< 4.9	< 230	< 5.7	< 4.2
1,2-Dibromoethane	--	100	< 0.49	< 0.46	< 0.57	< 0.42
1,2-Dichlorobenzene	--	9,000	< 4.9	< 230	< 5.7	< 4.2
1,2-Dichloroethane	--	100	< 4.9	< 4.6	< 5.7	< 4.2
1,2-Dichloropropane	--	100	< 4.9	< 4.6	< 5.7	< 4.2
1,3,5-Trimethylbenzene	--	10,000	< 4.9	< 230	< 5.7	< 4.2
1,3-Dichlorobenzene	--	3,000	< 4.9	< 230	< 5.7	< 4.2
1,3-Dichloropropane	--	500,000	< 4.9	< 4.6	< 5.7	< 4.2
1,4-Dichlorobenzene	--	700	< 4.9	< 230	< 5.7	< 4.2
2,2-Dichloropropane	--	--	< 4.9	< 4.6	< 5.7	< 4.2
2-Chlorotoluene	--	100,000	< 4.9	< 230	< 5.7	< 4.2
2-Hexanone	--	100,000	< 24	< 23	< 29	< 21
2-Isopropyltoluene	--	--	< 4.9	< 230	< 5.7	< 4.2
4-Chlorotoluene	--	--	< 4.9	< 230	< 5.7	< 4.2
4-Methyl-2-pentanone (methyl isobutyl ketone)	--	400	< 24	< 23	< 29	< 21
Acetone	--	6,000	< 240	< 230	< 290	< 210
Acrylonitrile	--	100,000	< 4.9	< 4.6	< 5.7	< 4.2
Benzene	--	2,000	< 4.9	< 4.6	< 5.7	< 4.2
Bromobenzene	--	100,000	< 4.9	< 230	< 5.7	< 4.2
Bromochloromethane	--	--	< 4.9	< 4.6	< 5.7	< 4.2

Table 2
Summary of Soil Analytical Data
Cambridge CSO Long Term Control Plan
41 Bellis Circle
Cambridge, Massachusetts

		Collection Date	4/07/2025	4/07/2025	4/07/2025	4/10/2025
		Sample ID	KLF-1	KLF-2	KLF-3	KLF-3
		Depth Grab	2-3'	1-2'	2-3'	16-18'
		Depth Composite	2-5'	0-5'	0-5'	14-18'
		Soil composition	2-5' Native Soil	0-5' Fill Material	0-5' Fill Material	14-18' Native Soil
Analyte	EPA Toxicity Characteristics	MassDEP RCS-1				
Bromodichloromethane	--	100	< 4.9	< 4.6	< 5.7	< 4.2
Bromoform	--	100	< 4.9	< 4.6	< 5.7	< 4.2
Bromomethane	--	500	< 4.9	< 4.6	< 5.7	< 4.2
Carbon Disulfide	--	100,000	< 4.9	< 4.6	< 5.7	< 4.2
Carbon tetrachloride	--	5,000	< 4.9	< 4.6	< 5.7	< 4.2
Chlorobenzene	--	1,000	< 4.9	< 4.6	< 5.7	< 4.2
Chloroethane	--	100,000	< 4.9	< 4.6	< 5.7	< 4.2
Chloroform	--	200	< 4.9	< 4.6	< 5.7	< 4.2
Chloromethane	--	100,000	< 4.9	< 4.6	< 5.7	< 4.2
cis-1,2-Dichloroethene	--	100	< 4.9	< 4.6	< 5.7	< 4.2
cis-1,3-Dichloropropene	--	10	< 4.9	< 4.6	< 5.7	< 4.2
Dibromochloromethane	--	5	< 2.9	< 2.7	< 3.4	< 2.5
Dibromomethane	--	500,000	< 4.9	< 4.6	< 5.7	< 4.2
Dichlorodifluoromethane	--	1,000,000	< 4.9	< 4.6	< 5.7	< 4.2
Ethylbenzene	--	40,000	< 4.9	< 4.6	< 5.7	< 4.2
Hexachlorobutadiene	--	30,000	< 4.9	< 230	< 5.7	< 4.2
Isopropylbenzene	--	1,000,000	< 4.9	< 230	< 5.7	< 4.2
m&p-Xylene	--	100,000	< 4.9	< 4.6	< 5.7	< 4.2
Methyl Ethyl Ketone	--	4,000	< 29	< 27	< 34	< 25
Methyl t-butyl ether (MTBE)	--	100	< 9.7	< 9.1	< 11	< 8.3
Methylene chloride (dichloromethane)	--	100	< 9.7	< 9.1	< 11	< 8.3
Naphthalene	--	4,000	< 4.9	< 230	< 5.7	< 4.2
n-Butylbenzene	--	--	< 4.9	< 230	< 5.7	< 4.2
n-Propylbenzene	--	100,000	< 4.9	< 230	< 5.7	< 4.2
o-Xylene	--	100,000	< 4.9	< 4.6	< 5.7	< 4.2
p-Isopropyltoluene	--	100,000	< 4.9	< 230	< 5.7	< 4.2
sec-Butylbenzene	--	--	< 4.9	< 230	< 5.7	< 4.2
Styrene	--	3,000	< 4.9	< 4.6	< 5.7	< 4.2
tert-Butylbenzene	--	100,000	< 4.9	< 230	< 5.7	< 4.2
Tetrachloroethene	--	1,000	< 4.9	< 4.6	< 5.7	< 4.2
Tetrahydrofuran (THF)	--	500,000	< 9.7	< 9.1	< 11	< 8.3
Toluene	--	30,000	< 4.9	< 4.6	< 5.7	< 4.2
Total Xylenes	--	100,000	< 4.9	< 4.6	< 5.7	< 4.2
trans-1,2-Dichloroethene	--	1,000	< 4.9	< 4.6	< 5.7	< 4.2
trans-1,3-Dichloropropene	--	10	< 4.9	< 4.6	< 5.7	< 4.2
trans-1,4-dichloro-2-butene	--	10,000	< 9.7	< 460	< 11	< 8.3
Trichloroethene	--	300	< 4.9	< 4.6	< 5.7	< 4.2
Trichlorofluoromethane	--	1,000,000	< 4.9	< 4.6	< 5.7	< 4.2
Trichlorotrifluoroethane	--	--	< 9.7	< 9.1	< 11	< 8.3
Vinyl chloride	--	300	< 4.9	< 4.6	< 5.7	< 4.2
Oxygenates & Dioxane By SW8260C (OXY) (ug/kg)						
1,4-Dioxane	--	200	< 97	< 91	< 110	< 83
Diethyl ether	--	100,000	< 4.9	< 4.6	< 5.7	< 4.2
Di-isopropyl ether	--	100,000	< 4.9	< 4.6	< 5.7	< 4.2
Ethyl tert-butyl ether	--	--	< 4.9	< 4.6	< 5.7	< 4.2
tert-amyl methyl ether	--	--	< 4.9	< 4.6	< 5.7	< 4.2
Semivolatiles By SW8270D (ug/kg)						
1,1-Biphenyl	--	50	< 50	< 50	< 50	< 50
1,2,4,5-Tetrachlorobenzene	--	1,000,000	< 280	< 260	< 250	< 290
1,2,4-Trichlorobenzene	--	2,000	< 280	< 260	< 250	< 290
1,2-Dichlorobenzene	--	9,000	< 280	< 260	< 250	< 290
1,2-Diphenylhydrazine	--	50,000	< 400	< 370	< 360	< 410
1,3-Dichlorobenzene	--	3,000	< 280	< 260	< 250	< 290
1,4-Dichlorobenzene	--	700	< 280	< 260	< 250	< 290
2,2'-Oxybis(1-Chloropropane)	--	700	< 280	< 260	< 250	< 290
2,4,5-Trichlorophenol	--	4,000	< 280	< 260	< 250	< 290
2,4,6-Trichlorophenol	--	700	< 280	< 260	< 250	< 290
2,4-Dichlorophenol	--	700	< 280	< 260	< 250	< 290
2,4-Dimethylphenol	--	700	< 280	< 260	< 250	< 290
2,4-Dinitrophenol	--	3,000	< 400	< 370	< 360	< 410
2,4-Dinitrotoluene	--	700	< 280	< 260	< 250	< 290
2,6-Dinitrotoluene	--	100,000	< 280	< 260	< 250	< 290
2-Chloronaphthalene	--	1,000,000	< 280	< 260	< 250	< 290
2-Chlorophenol	--	700	< 280	< 260	< 250	< 290
2-Methylnaphthalene	--	700	< 280	< 260	< 250	< 290
2-Methylphenol (o-cresol)	--	500,000	< 280	< 260	< 250	< 290
2-Nitroaniline	--	--	< 400	< 370	< 360	< 410
2-Nitrophenol	--	100,000	< 280	< 260	< 250	< 290
3&4-Methylphenol (m&p-cresol)	--	500,000	< 400	< 370	< 360	< 410
3,3'-Dichlorobenzidine	--	3,000	< 280	< 260	< 250	< 290
3-Nitroaniline	--	--	< 400	< 370	< 360	< 410
4,6-Dinitro-2-methylphenol	--	50,000	< 400	< 370	< 360	< 410
4-Bromophenyl phenyl ether	--	100,000	< 400	< 370	< 360	< 410
4-Chloro-3-methylphenol	--	1,000,000	< 280	< 260	< 250	< 290
4-Chloroaniline	--	1,000	< 280	< 260	< 250	< 290
4-Chlorophenyl phenyl ether	--	1,000,000	< 280	< 260	< 250	< 290
4-Nitroaniline	--	1,000,000	< 640	< 600	< 570	< 650
4-Nitrophenol	--	100,000	< 280	< 260	< 250	< 290

Table 2
Summary of Soil Analytical Data
Cambridge CSO Long Term Control Plan
41 Bellis Circle
Cambridge, Massachusetts

Analyte	EPA Toxicity Characteristics	MassDEP RCS-1				
Collection Date			4/07/2025	4/07/2025	4/07/2025	4/10/2025
Sample ID			KLF-1	KLF-2	KLF-3	KLF-3
Depth Grab			2-3'	1-2'	2-3'	16-18'
Depth Composite			2-5'	0-5'	0-5'	14-18'
Soil composition			2-5' Native Soil	0-5' Fill Material	0-5' Fill Material	14-18' Native Soil
Acenaphthene	--	4,000	< 280	< 260	< 250	< 290
Acenaphthylene	--	2,000	< 280	< 260	< 250	< 290
Acetophenone	--	1,000,000	< 280	< 260	< 250	< 290
Aniline	--	1,000,000	< 400	< 370	< 360	< 410
Anthracene	--	1,000,000	< 280	< 260	< 250	< 290
Benz(a)anthracene	--	20,000	< 280	< 260	< 250	< 290
Benzidine	--	10,000	< 280	< 260	< 250	< 290
Benzo(a)pyrene	--	2,000	< 280	< 260	< 250	< 290
Benzo(b)fluoranthene	--	20,000	< 280	**330**	**280**	< 290
Benzo(ghi)perylene	--	1,000,000	< 280	< 260	< 250	< 290
Benzo(k)fluoranthene	--	200,000	< 280	< 260	< 250	< 290
Benzoic acid	--	1,000,000	< 800	< 750	< 720	< 810
Benzyl butyl phthalate	--	100,000	< 280	< 260	< 250	< 290
Bis(2-chloroethoxy)methane	--	500,000	< 280	< 260	< 250	< 290
Bis(2-chloroethyl)ether	--	700	< 400	< 370	< 360	< 410
Bis(2-ethylhexyl)phthalate	--	100,000	< 400	< 370	< 360	< 410
Carbazole	--	--	< 400	< 370	< 360	< 410
Chrysene	--	200,000	< 280	< 260	< 250	< 290
Dibenz(a,h)anthracene	--	2,000	< 280	< 260	< 250	< 290
Dibenzofuran	--	100,000	< 280	< 260	< 250	< 290
Diethyl phthalate	--	10,000	< 280	< 260	< 250	< 290
Dimethylphthalate	--	700	< 280	< 260	< 250	< 290
Di-n-butylphthalate	--	50,000	< 400	< 370	< 360	< 410
Di-n-octylphthalate	--	1,000,000	< 280	< 260	< 250	< 290
Fluoranthene	--	1,000,000	< 280	**350**	**480**	< 290
Fluorene	--	1,000,000	< 280	< 260	< 250	< 290
Hexachlorobenzene	--	700	< 280	< 260	< 250	< 290
Hexachlorobutadiene	--	30,000	< 280	< 260	< 250	< 290
Hexachlorocyclopentadiene	--	50,000	< 280	< 260	< 250	< 290
Hexachloroethane	--	700	< 280	< 260	< 250	< 290
Indeno(1,2,3-cd)pyrene	--	20,000	< 280	< 260	< 250	< 290
Isophorone	--	100,000	< 280	< 260	< 250	< 290
Naphthalene	--	4,000	< 280	< 260	< 250	< 290
Nitrobenzene	--	500,000	< 280	< 260	< 250	< 290
N-Nitrosodimethylamine	--	50,000	< 400	< 370	< 360	< 410
N-Nitrosodi-n-propylamine	--	50,000	< 280	< 260	< 250	< 290
N-Nitrosodiphenylamine	--	100,000	< 400	< 370	< 360	< 410
Pentachloronitrobenzene	--	100,000	< 400	< 370	< 360	< 410
Pentachlorophenol	--	3,000	< 400	< 370	< 360	< 410
Phenanthrene	--	10,000	< 280	< 260	< 250	< 290
Phenol	--	900	< 280	< 260	< 250	< 290
Pyrene	--	1,000,000	< 280	**320**	**420**	< 290
Pyridine	--	500,000	< 400	< 370	< 360	< 410

Notes:
<5 - result is below the method detection limit
(MDL)
Bold - Result detected above MDL but below applicable standard
Bold/Shading - Result was detected above the applicable standard
-- Standard not available or soil not analyzed for that parameter
mg/kg - milligrams per kilogram
ug/kg - micrograms per kilogram
ft - feet
mg/L - milligrams per liter
F - Degrees Farenheit

Table 3
Summary of Groundwater Analytical Data
Cambridge CSO Long Term Control Plan
41 Bellis Circle
Cambridge, Massachusetts

Sample ID Collection Date	Reportable RCGW-2	KLF-3 4/28/2025	MW-102S 4/28/2025
Depth to Water (feet)		7.97	7.51
Miscellaneous/Inorganics			
Conductivity (umhos/cm)	--	**462**	**2,250**
Corrosivity	--	**Negative**	**Negative**
Flash Point (Degree F)	--	>200	>200
Ignitability (Degree F)	--	Passed	Passed
pH (pH units)	--	**11.6**	**6.95**
Reactivity Cyanide (mg/kg)	--	< 2.0	< 2.0
Reactivity Sulfide (mg/kg)	--	< 5	< 5
Reactivity (Pos/Neg)	--	Negative	Negative
Metals Total (mg/L)			
Antimony	8	< 0.005	< 0.005
Arsenic	0.9	**0.005**	**< 0.004**
Barium	50	**0.016**	**0.109**
Beryllium	0.2	< 0.001	< 0.001
Cadmium	0.008	< 0.001	< 0.001
Chromium	0.3	**< 0.001**	**0.005**
Lead	0.01	**< 0.001**	**0.006**
Mercury	0.02	< 0.0002	< 0.0002
Nickel	0.2	**0.00**	**0.009**
Selenium	0.05	< 0.010	< 0.010
Silver	0.007	< 0.001	< 0.001
Thallium	3	< 0.0010	< 0.0010
Vanadium	4	**0.01**	**0.006**
Zinc	0.9	**< 0.004**	**0.014**
Metals Dissolved (mg/L)			
Antimony	8	< 0.005	< 0.005
Arsenic	0.9	< 0.004	< 0.004
Barium	50	**0.016**	**0.088**
Beryllium	0.2	< 0.001	< 0.001
Cadmium	0.008	< 0.001	< 0.001
Chromium	0.3	< 0.001	**< 0.001**
Thallium	3	< 0.0006	< 0.0006
Lead	0.01	< 0.002	< 0.002
Mercury	0.02	< 0.0002	< 0.0002
Nickel	0.2	**0.004**	**0.006**
Selenium	0.05	< 0.011	< 0.011
Silver	0.007	< 0.001	< 0.001
Vanadium	4	**0.013**	**< 0.002**
Zinc	0.9	< 0.002	**0.003**
TPH By SW8015D DRO (mg/L)			
Aviation Fuel/Kerosene	--	< 0.48	< 0.49
Fuel Oil #2/ Diesel Fuel	--	< 0.48	< 0.49
Fuel Oil #4	--	< 0.48	< 0.49
Fuel Oil #6	--	< 0.48	< 0.49
Motor Oil	--	< 0.48	< 0.49
Total TPH	5	< 0.48	< 0.49
Unidentified	--	< 0.48	< 0.49
PCBs By SW8082A (ug/L)			
PCB-1016	5	< 0.25	< 0.25
PCB-1221	5	< 0.25	< 0.25
PCB-1232	5	< 0.25	< 0.25
PCB-1242	5	< 0.25	< 0.25
PCB-1248	5	< 0.25	< 0.25
PCB-1254	5	< 0.25	< 0.25
PCB-1260	5	< 0.25	< 0.25
PCB-1262	--	< 0.25	< 0.25
PCB-1268	--	< 0.25	< 0.25
Volatiles By SW8260C (ug/L)			
1,1,1,2-Tetrachloroethane	10	< 1.0	< 1.0
1,1,1-Trichloroethane	4000	< 1.0	< 1.0
1,1,2,2-Tetrachloroethane	9	< 0.50	< 0.50
1,1,2-Trichloroethane	900	< 1.0	< 1.0
1,1-Dichloroethane	2000	< 1.0	< 1.0
1,1-Dichloroethene	80	< 1.0	< 1.0
1,1-Dichloropropene	--	< 1.0	< 1.0
1,2,3-Trichlorobenzene	--	< 1.0	< 1.0
1,2,3-Trichloropropane	10,000	< 1.0	< 1.0
1,2,4-Trichlorobenzene	200	< 1.0	< 1.0
1,2,4-Trimethylbenzene	100,000	< 1.0	< 1.0
1,2-Dibromo-3-chloropropane	1000	< 1.0	< 1.0
1,2-Dibromoethane	2	< 1.0	< 1.0
1,2-Dichlorobenzene	2,000	< 1.0	< 1.0
1,2-Dichloroethane	5	< 0.60	< 0.60
1,2-Dichloropropane	3	< 1.0	< 1.0
1,3,5-Trimethylbenzene	--	< 1.0	< 1.0
1,3-Dichlorobenzene	6,000	< 1.0	< 1.0
1,3-Dichloropropane	50,000	< 1.0	< 1.0
1,4-Dichlorobenzene	60	< 1.0	< 1.0
2,2-Dichloropropane	--	< 1.0	< 1.0
2-Chlorotoluene	--	< 1.0	< 1.0
2-Hexanone	10,000	< 5.0	< 5.0
2-Isopropyltoluene	--	< 1.0	< 1.0
4-Chlorotoluene	--	< 1.0	< 1.0
4-Methyl-2-pentanone	50,000	< 5.0	< 5.0
Acetone	50,000	< 25	< 25
Acrylonitrile	10,000	< 1.0	< 1.0
Benzene	1,000	< 0.70	< 0.70
Bromobenzene	10,000	< 1.0	< 1.0
Bromochloromethane	20	< 1.0	< 1.0
Bromodichloromethane	6	< 0.50	< 0.50
Bromoform	700	< 1.0	< 1.0
Bromomethane	7	< 1.0	< 1.0
Carbon Disulfide	10,000	< 5.0	< 5.0
Carbon tetrachloride	2	< 1.0	< 1.0
Chlorobenzene	200	< 1.0	< 1.0
Chloroethane	10,000	< 1.0	< 1.0
Chloroform	50	< 1.0	< 1.0
Chloromethane	10,000	< 1.0	< 1.0
cis-1,2-Dichloroethene	100	< 1.0	< 1.0
cis-1,3-Dichloropropene	--	< 0.40	< 0.40
Dibromochloromethane	20	< 0.50	< 0.50
Dibromomethane	50,000	< 1.0	< 1.0
Dichlorodifluoromethane	100,000	< 1.0	< 1.0
Ethylbenzene	5,000	< 1.0	< 1.0
Hexachlorobutadiene	50	< 0.40	< 0.40
Isopropylbenzene	--	< 1.0	< 1.0
m&p-Xylene	3,000	< 1.0	< 1.0
Methyl ethyl ketone	50,000	< 5.0	< 5.0
Methyl t-butyl ether (MTBE)	5,000	< 1.0	< 1.0
Methylene chloride	2,000	< 1.0	< 1.0
Naphthalene	700	**18.0**	< 1.0
n-Butylbenzene	--	< 1.0	< 1.0
n-Propylbenzene	--	< 1.0	< 1.0
o-Xylene	3,000	< 1.0	< 1.0
p-Isopropyltoluene	--	< 1.0	< 1.0
sec-Butylbenzene	--	< 1.0	< 1.0

Table 3
Summary of Groundwater Analytical Data
Cambridge CSO Long Term Control Plan
41 Bellis Circle
Cambridge, Massachusetts

Sample ID Collection Date	Reportable RCGW-2	KLF-3 4/28/2025	MW-102S 4/28/2025
Styrene	100	< 1.0	< 1.0
tert-Butylbenzene	--	< 1.0	< 1.0
Tetrachloroethene	50	< 1.0	< 1.0
Tetrahydrofuran (THF)	50,000	< 2.5	< 2.5
Toluene	40,000	< 1.0	< 1.0
Total Xylenes	3,000	< 1.0	< 1.0
trans-1,2-Dichloroethene	80	< 1.0	< 1.0
trans-1,3-Dichloropropene	--	< 0.40	< 0.40
trans-1,4-dichloro-2-butene	--	< 5.0	< 5.0
Trichloroethene	5	< 1.0	< 1.0
Trichlorofluoromethane	--	< 1.0	< 1.0
Trichlorotrifluoroethane	--	< 1.0	< 1.0
Vinyl chloride	2	< 1.0	< 1.0
1,4-Dioxane	6,000	< 100	< 100
Diethyl ether	10000	< 1.0	< 1.0
Di-isopropyl ether	--	< 1.0	< 1.0
Ethyl tert-butyl ether	--	< 1.0	< 1.0
tert-amyl methyl ether	--	< 1.0	< 1.0
Semivolatiles By SW8270D (ug/L)			
1,1-Biphenyl	200	< 3.4	< 3.4
1,2,4,5-Tetrachlorobenzene	100,000	< 3.4	< 3.4
1,2,4-Trichlorobenzene	200	< 4.8	< 4.9
1,2-Dichlorobenzene	2,000	< 2.4	< 2.4
1,2-Diphenylhydrazine	5,000	< 4.8	< 4.9
1,3-Dichlorobenzene	6,000	< 2.4	< 2.4
1,4-Dichlorobenzene	60	< 2.4	< 2.4
2,2'-Oxybis(1-Chloropropane)	100	< 4.8	< 4.9
2,4,5- trichlorophenol	3,000	< 0.96	< 0.97
2,4,6-Trichlorophenol	500	< 0.96	< 0.97
2,4-Dichlorophenol	2,000	< 0.96	< 0.97
2,4-Dimethylphenol	40,000	< 0.96	< 0.97
2,4-Dinitrophenol	20,000	< 0.96	< 0.97
2,4-Dinitrotoluene	20,000	< 4.8	< 4.9
2,6-Dinitrotoluene	10,000	< 4.8	< 4.9
2-Chloronaphthalene	100,000	< 4.8	< 4.9
2-Chlorophenol	7,000	< 0.96	< 0.97
2-Methylphenol (o-cresol)	50,000	< 0.96	< 0.97
2-Nitroaniline	--	< 4.8	< 4.9
2-Nitrophenol	10,000	< 0.96	< 0.97
3&4-Methylphenol (m&p-cresol)	50,000	< 9.6	< 9.7
3,3'-Dichlorobenzidine	2,000	< 4.8	< 4.9
3-Nitroaniline	--	< 4.8	< 4.9
4,6-Dinitro-2-methylphenol	5,000	< 0.96	< 0.97
4-Bromophenyl phenyl ether	10,000	< 4.8	< 4.9
4-Chloro-3-methylphenol	100,000	< 0.96	< 0.97
4-Chloroaniline	300	< 4.8	< 4.9
4-Chlorophenyl phenyl ether	100,000	< 0.96	< 0.97
4-Nitroaniline	100,000	< 4.8	< 4.9
4-Nitrophenol	10,000	< 0.96	< 0.97
Acetophenone	100,000	< 4.8	< 4.9
Aniline	100,000	< 4.8	< 4.9
Benzidine	1,000	< 4.8	< 4.9
Benzoic acid	100,000	< 48	< 49
Benzyl butyl phthalate	10,000	< 4.8	< 4.9
Bis(2-chloroethoxy)methane	50,000	< 4.8	< 4.9
Bis(2-chloroethyl)ether	100	< 0.96	< 0.97
Bis(2-ethylhexyl)phthalate	50,000	< 0.96	< 0.97
Carbazole	--	< 4.8	< 4.9
Dibenzofuran	10,000	< 4.8	< 4.9
Diethyl phthalate	9,000	< 4.8	< 4.9
Dimethylphthalate	50,000	< 4.8	< 4.9
Di-n-butylphthalate	5,000	< 4.8	< 4.9
Di-n-octylphthalate	100,000	< 4.8	< 4.9
Hexachloroethane	100	< 0.96	< 0.97
Isophorone	10,000	**6**	< 4.9
N-Nitrosodi-n-propylamine	5,000	< 4.8	< 4.9
N-Nitrosodiphenylamine	10,000	< 4.8	< 4.9
Pentachloronitrobenzene	10,000	< 2.4	< 2.4
Phenol	2,000	< 0.96	< 0.97
2-Methylnaphthalene	2,000	< 0.48	< 0.49
Acenaphthene	10,000	**1.6**	< 0.49
Acenaphthylene	40	**0.13**	< 0.10
Anthracene	30	**0.22**	< 0.09
Benzo(a)anthracene	1,000	< 0.10	< 0.10
Benzo(a)pyrene	500	< 0.19	< 0.19
Benzo(b)fluoranthene	400	< 0.10	< 0.10
Benzo(ghi)perylene	20	0.02	< 0.02
Benzo(k)fluoranthene	100	< 0.10	< 0.10
Chrysene	70	< 0.05	< 0.05
Dibenz(a,h)anthracene	40	< 0.02	< 0.02
Fluoranthene	200	< 0.48	< 0.49
Fluorene	40	**0.5**	< 0.10
Hexachlorobenzene	1	< 0.48	< 0.49
Hexachlorobutadiene	50	< 0.48	< 0.49
Hexachlorocyclopentadiene	5000	< 0.48	< 0.49
Indeno(1,2,3-cd)pyrene	100	< 0.10	< 0.10
Naphthalene	700	< 0.48	< 0.49
Nitrobenzene	50,000	< 0.48	< 0.49
N-Nitrosodimethylamine	5,000	< 0.48	< 0.49
Pentachlorophenol	200	< 0.48	< 0.49
Phenanthrene	10,000	< 0.48	< 0.49
Pyrene	20	**0.18**	**0.08**
Pyridine	50,000	< 0.48	< 0.49

Notes:
mg/L - milligrams per liter
ug/L - micrograms per liter
<0.50 - less than the laboratory's method detection limit (MDL)
Bold - concentration is greater than MDL
Bold/Shading - concentration is greater than applicable standard
2014 MCP Method 1 Groundwater Standards
-- - No standard available or not analyzed

APPENDIX A
ENVIRONMENTAL DATABASE REPORT
HISTORICAL RESOURCES

City of Cambridge- Bellis Circle

41 Bellis Cirlce

Cambridge, MA 02140

Inquiry Number: 7385010.3

July 10, 2023

Certified Sanborn® Map Report

6 Armstrong Road, 4th floor
Shelton, CT 06484
Toll Free: 800.352.0050
www.edrnet.com

Certified Sanborn® Map Report

07/10/23

Site Name:

City of Cambridge- Bellis Circle
41 Bellis Cirlce
Cambridge, MA 02140
EDR Inquiry # 7385010.3

Client Name:

Kleinfelder SEA
One Beacon Street, Suite 8100
BOSTON, MA 02108
Contact: Patrick Monahan

The Sanborn Library has been searched by EDR and maps covering the target property location as provided by Kleinfelder SEA were identified for the years listed below. The Sanborn Library is the largest, most complete collection of fire insurance maps. The collection includes maps from Sanborn, Bromley, Perris & Browne, Hopkins, Barlow, and others. Only Environmental Data Resources Inc. (EDR) is authorized to grant rights for commercial reproduction of maps by the Sanborn Library LLC, the copyright holder for the collection. Results can be authenticated by visiting www.edrnet.com/sanborn.

The Sanborn Library is continually enhanced with newly identified map archives. This report accesses all maps in the collection as of the day this report was generated.

Certified Sanborn Results:

Certification # 2B5E-4E96-B6C0

PO # NA

Project 20231168.002A

Maps Provided:

2006	1950
2005	1935
2004	1900
2003	
1995	
1992	
1990	
1986	

Sanborn® Library search results

Certification #: 2B5E-4E96-B6C0

The Sanborn Library includes more than 1.2 million fire insurance maps from Sanborn, Bromley, Perris & Browne, Hopkins, Barlow and others which track historical property usage in approximately 12,000 American cities and towns. Collections searched:

- ☑ Library of Congress
- ☑ University Publications of America
- ☑ EDR Private Collection

The Sanborn Library LLC Since 1866™

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Kleinfelder SEA (the client) is permitted to make up to FIVE photocopies of this Sanborn Map transmittal and each fire insurance map accompanying this report solely for the limited use of its customer. No one other than the client is authorized to make copies. Upon request made directly to an EDR Account Executive, the client may be permitted to make a limited number of additional photocopies. This permission is conditioned upon compliance by the client, its customer and their agents with EDR's copyright policy; a copy of which is available upon request.

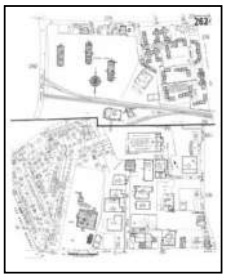
Sanborn Sheet Key

This Certified Sanborn Map Report is based upon the following Sanborn Fire Insurance map sheets.

2006 Source Sheets

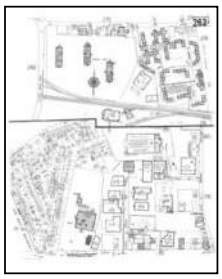
Volume 2, Sheet 261
2006

Volume 2, Sheet 263
2006



Volume 2, Sheet 262
2006

2005 Source Sheets



Volume 2, Sheet 262
2005

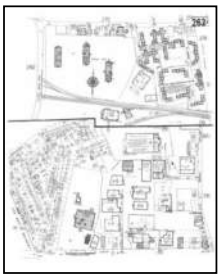
Volume 2, Sheet 261
2005

Volume 2, Sheet 263
2005

2004 Source Sheets

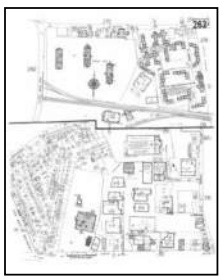
Volume 2, Sheet 263
2004

Volume 2, Sheet 261
2004



Volume 2, Sheet 262
2004

2003 Source Sheets



Volume 2, Sheet 262
2003

Volume 2, Sheet 261
2003

Volume 2, Sheet 263
2003

Sanborn Sheet Key

This Certified Sanborn Map Report is based upon the following Sanborn Fire Insurance map sheets.

1995 Source Sheets


Volume 2, Sheet 263
1995


Volume 2, Sheet 261
1995


Volume 2, Sheet 262
1995

1992 Source Sheets


Volume 2, Sheet 262
1992


Volume 2, Sheet 263
1992


Volume 2, Sheet 261
1992

1990 Source Sheets


Volume 2, Sheet 261
1990


Volume 2, Sheet 263
1990


Volume 2, Sheet 262
1990

1986 Source Sheets


Volume 2, Sheet 262
1986


Volume 2, Sheet 263
1986


Volume 2, Sheet 261
1986

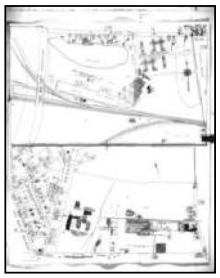
Sanborn Sheet Key

This Certified Sanborn Map Report is based upon the following Sanborn Fire Insurance map sheets.

1950 Source Sheets

Volume 2, Sheet 261
1950

Volume 2, Sheet 263
1950



Volume 2, Sheet 262
1950

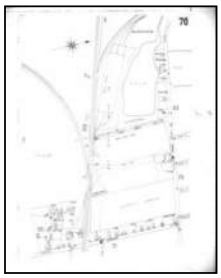
1935 Source Sheets

Volume 2, Sheet 262
1935

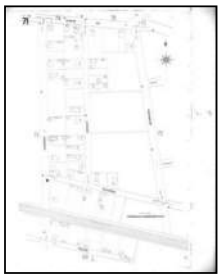
Volume 2, Sheet 263
1935

Volume 2, Sheet 261
1935

1900 Source Sheets

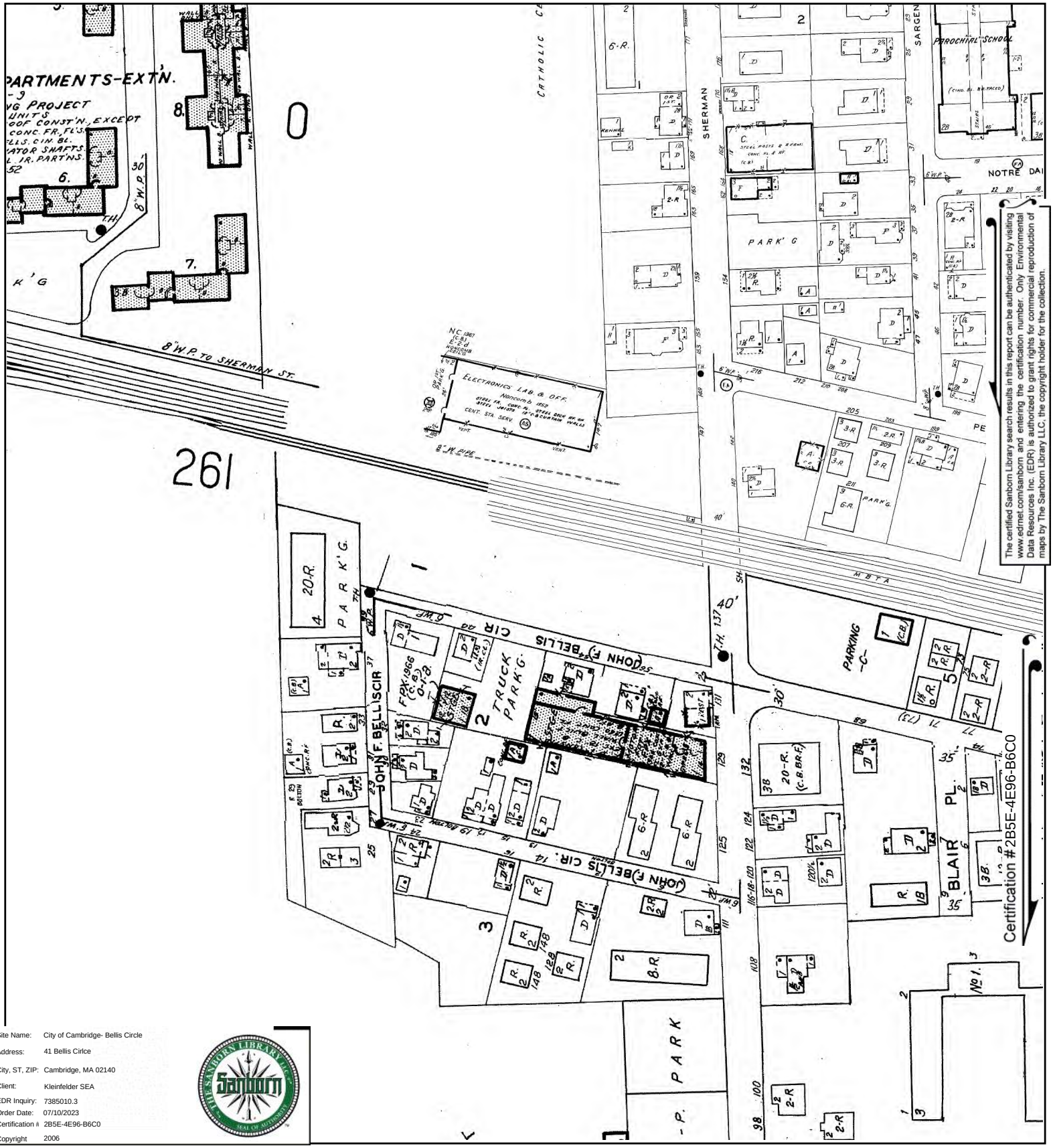


Volume 2, Sheet 70
1900



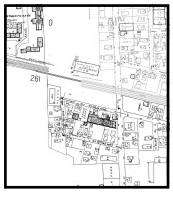
Volume 2, Sheet 71
1900

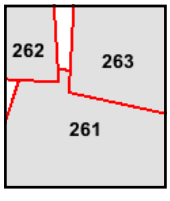
Volume 2, Sheet 69
1900



Site Name:	City of Cambridge- Bellis Circle
Address:	41 Bellis Cirlce
City, ST, ZIP:	Cambridge, MA 02140
Client:	Kleinfelder SEA
EDR Inquiry:	7385010.3
Order Date:	07/10/2023
Certification #	2B5E-4E96-B6C0
Copyright	2006

This Certified Sanborn Map combines the following sheets.
Outlined areas indicate map sheets within the collection.





Volume 2, Sheet 262
Volume 2, Sheet 263
Volume 2, Sheet 261

0 Feet 150 300 600

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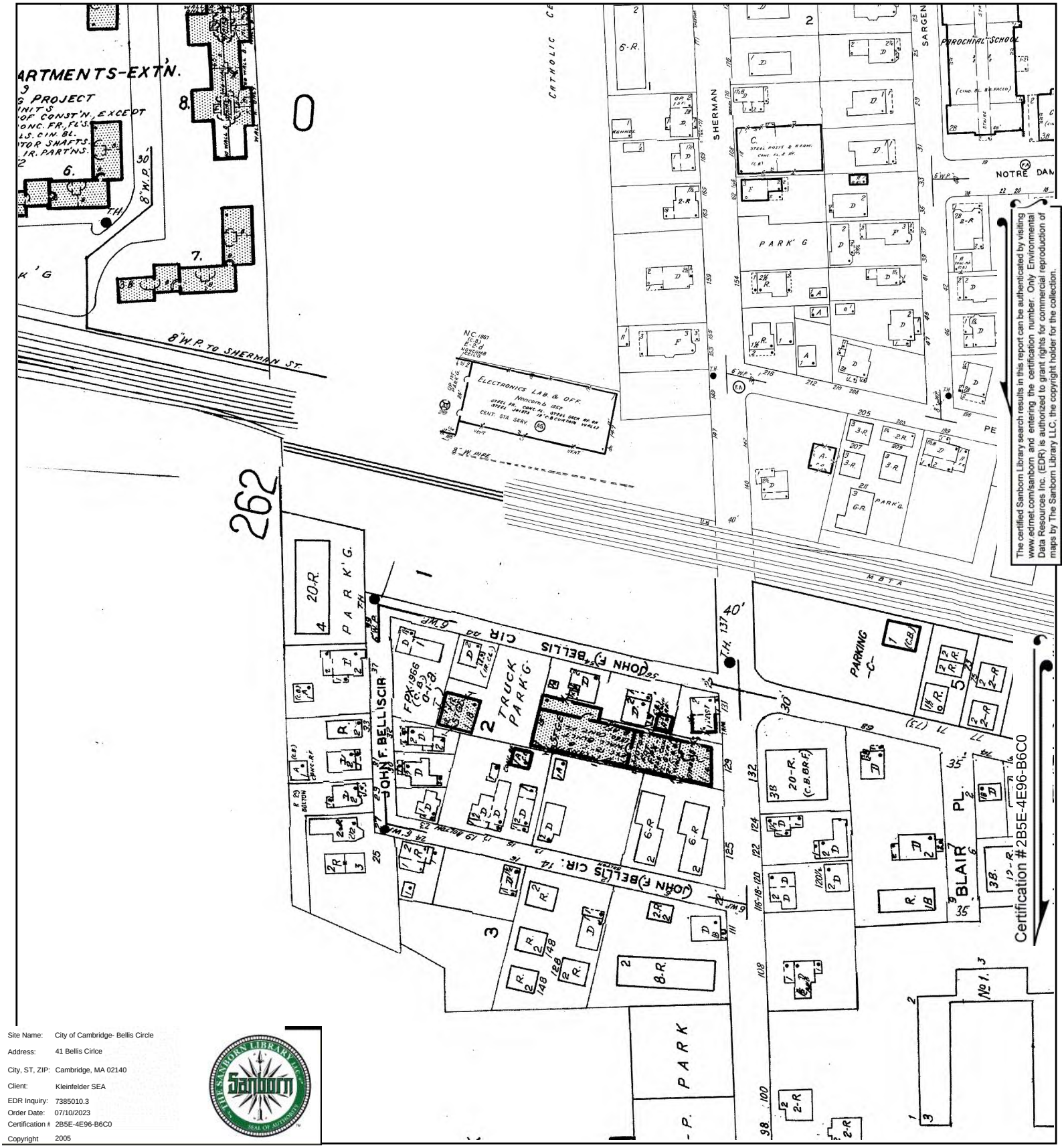

Site Name:	City of Cambridge- Bellis Circle
Address:	41 Bellis Cirlce
City, ST, ZIP:	Cambridge, MA 02140
Client:	Kleinfelder SEA
EDR Inquiry:	7385010.3
Order Date:	07/10/2023
Certification #	2B5E-4E96-B6C0
Copyright	2005

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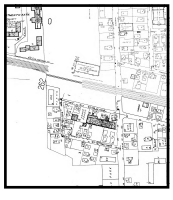

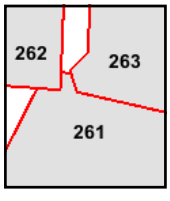

Volume 2, Sheet 263
Volume 2, Sheet 261
Volume 2, Sheet 262

0 Feet 150 300 600

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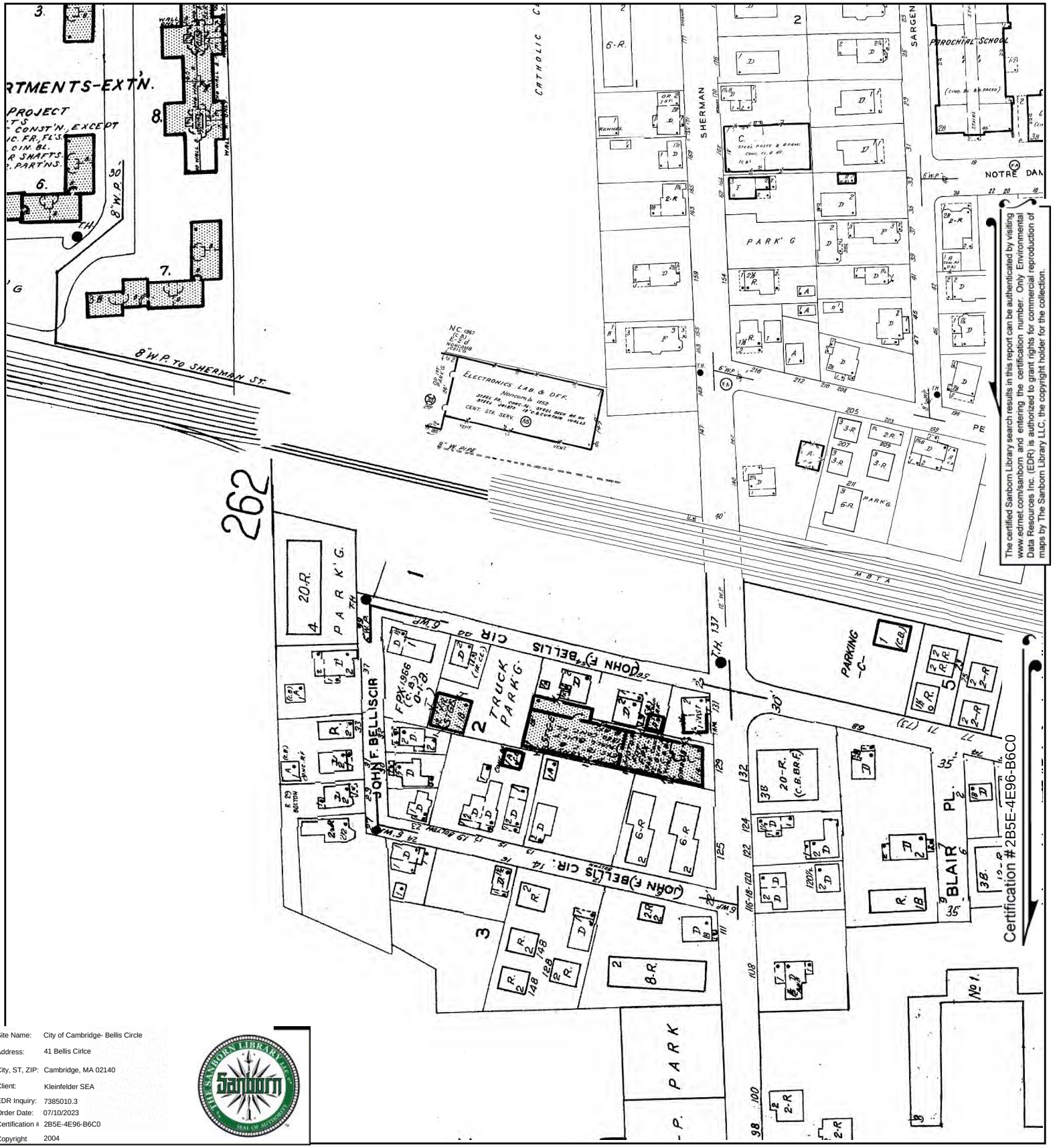

Site Name:	City of Cambridge- Bellis Circle
Address:	41 Bellis Cirlce
City, ST, ZIP:	Cambridge, MA 02140
Client:	Kleinfelder SEA
EDR Inquiry:	7385010.3
Order Date:	07/10/2023
Certification #	2B5E-4E96-B6C0
Copyright	2004

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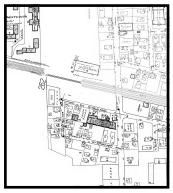

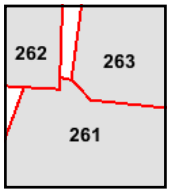

Volume 2, Sheet 262
Volume 2, Sheet 261
Volume 2, Sheet 263

0 Feet 150 300 600

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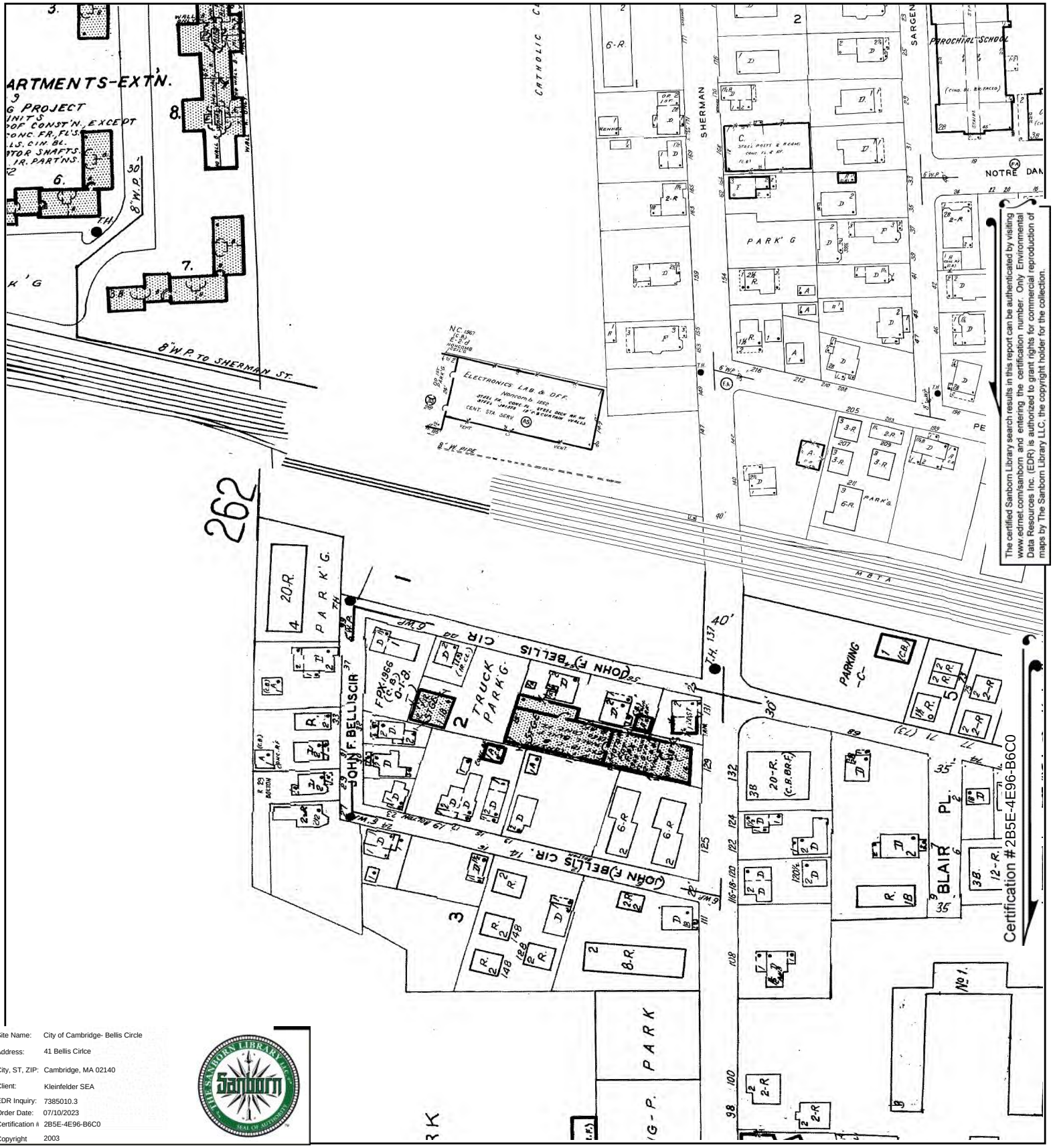

Site Name:	City of Cambridge- Bellis Circle
Address:	41 Bellis Cirlce
City, ST, ZIP:	Cambridge, MA 02140
Client:	Kleinfelder SEA
EDR Inquiry:	7385010.3
Order Date:	07/10/2023
Certification #	2B5E-4E96-B6C0
Copyright	2003

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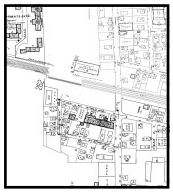
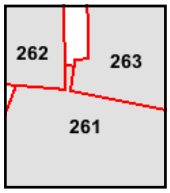
Outlined areas indicate map sheets within the collection.





Volume 2, Sheet 263
Volume 2, Sheet 261
Volume 2, Sheet 262

0 Feet 150 300 600

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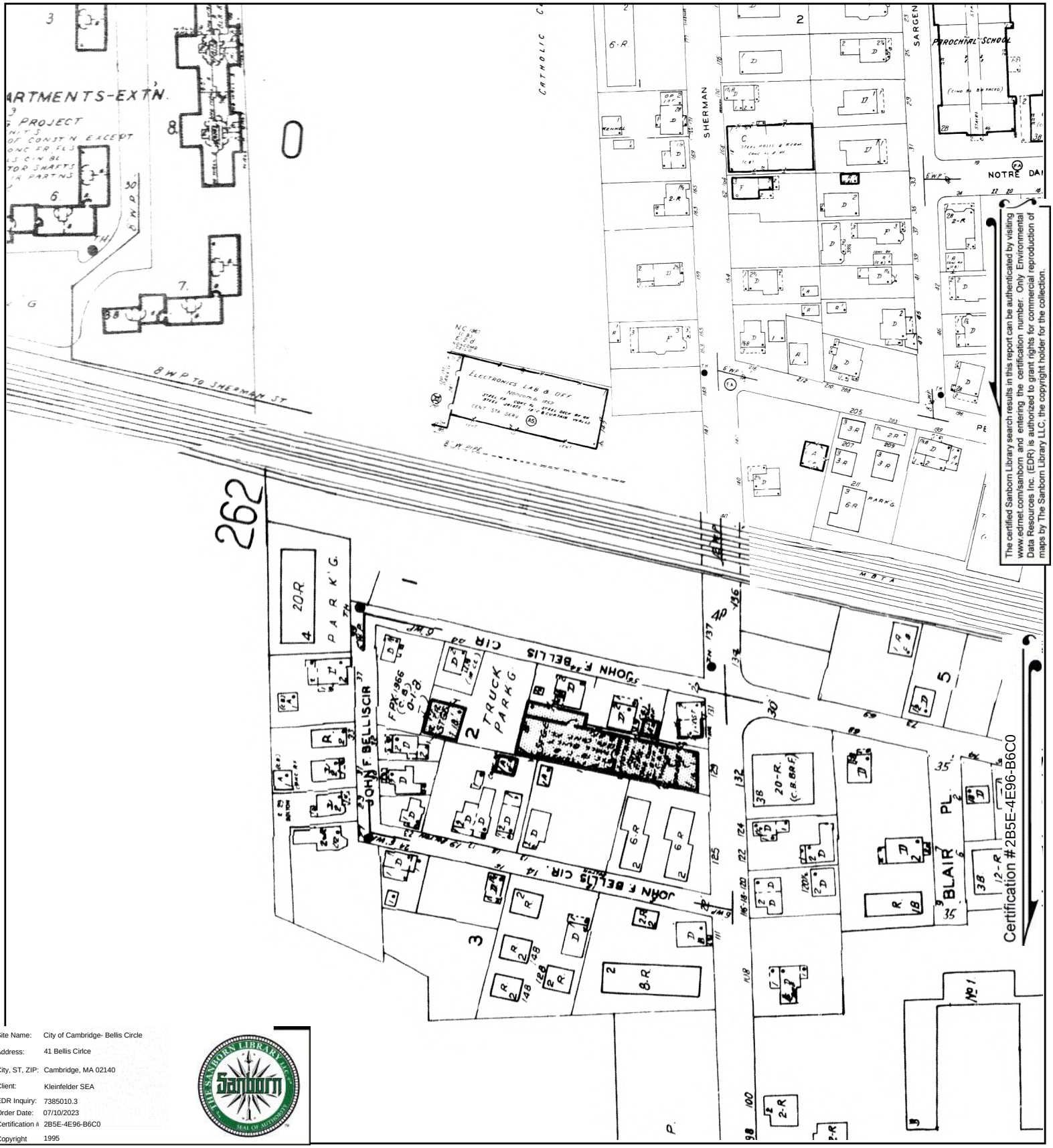

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Address:	41 Bellis Cirlce
City, ST, ZIP:	Cambridge, MA 02140
Client:	Kleinfelder SEA
EDR Inquiry:	7385010.3
Order Date:	07/10/2023
Certification #	2B5E-4E96-B6C0
Copyright	1995

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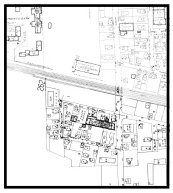

Volume 2, Sheet 262
Volume 2, Sheet 261
Volume 2, Sheet 263

0 Feet 150 300 600

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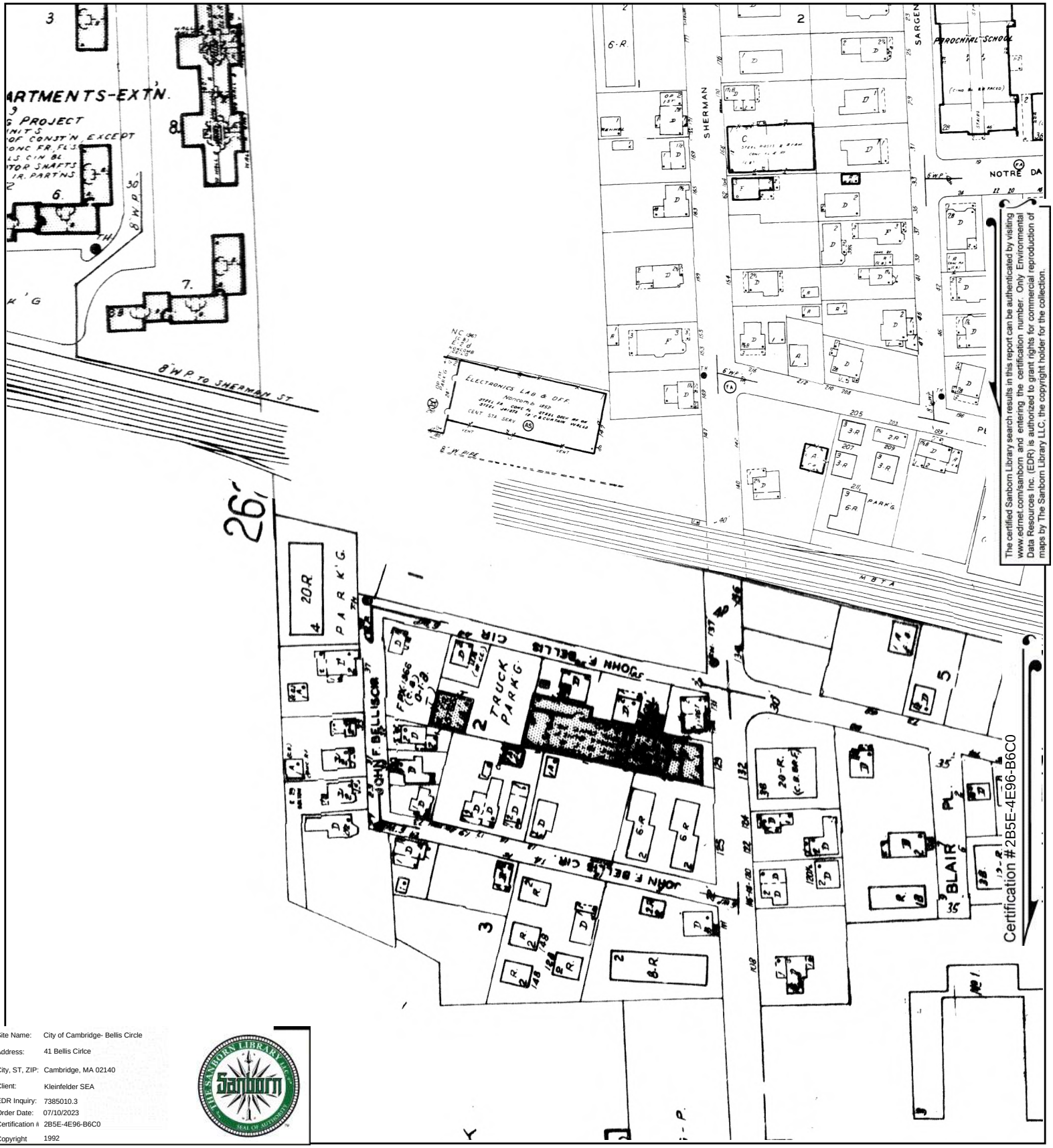

Site Name:	City of Cambridge- Bellis Circle
Address:	41 Bellis Cirlce
City, ST, ZIP:	Cambridge, MA 02140
Client:	Kleinfelder SEA
EDR Inquiry:	7385010.3
Order Date:	07/10/2023
Certification #	2B5E-4E96-B6C0
Copyright	1992

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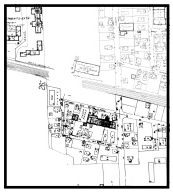

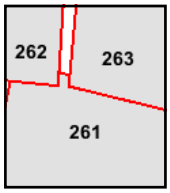

Volume 2, Sheet 261
Volume 2, Sheet 263
Volume 2, Sheet 262

0 Feet 150 300 600

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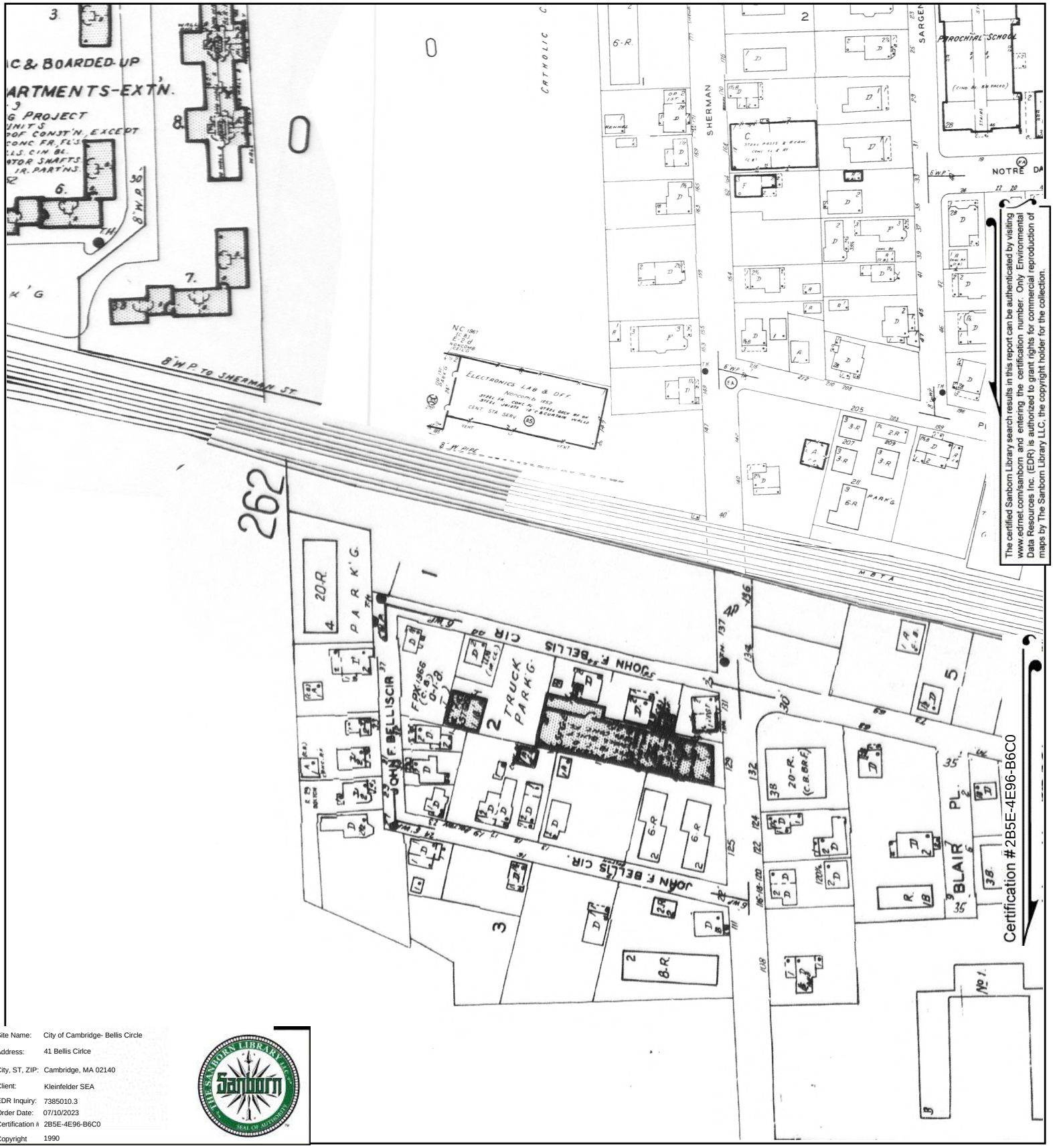


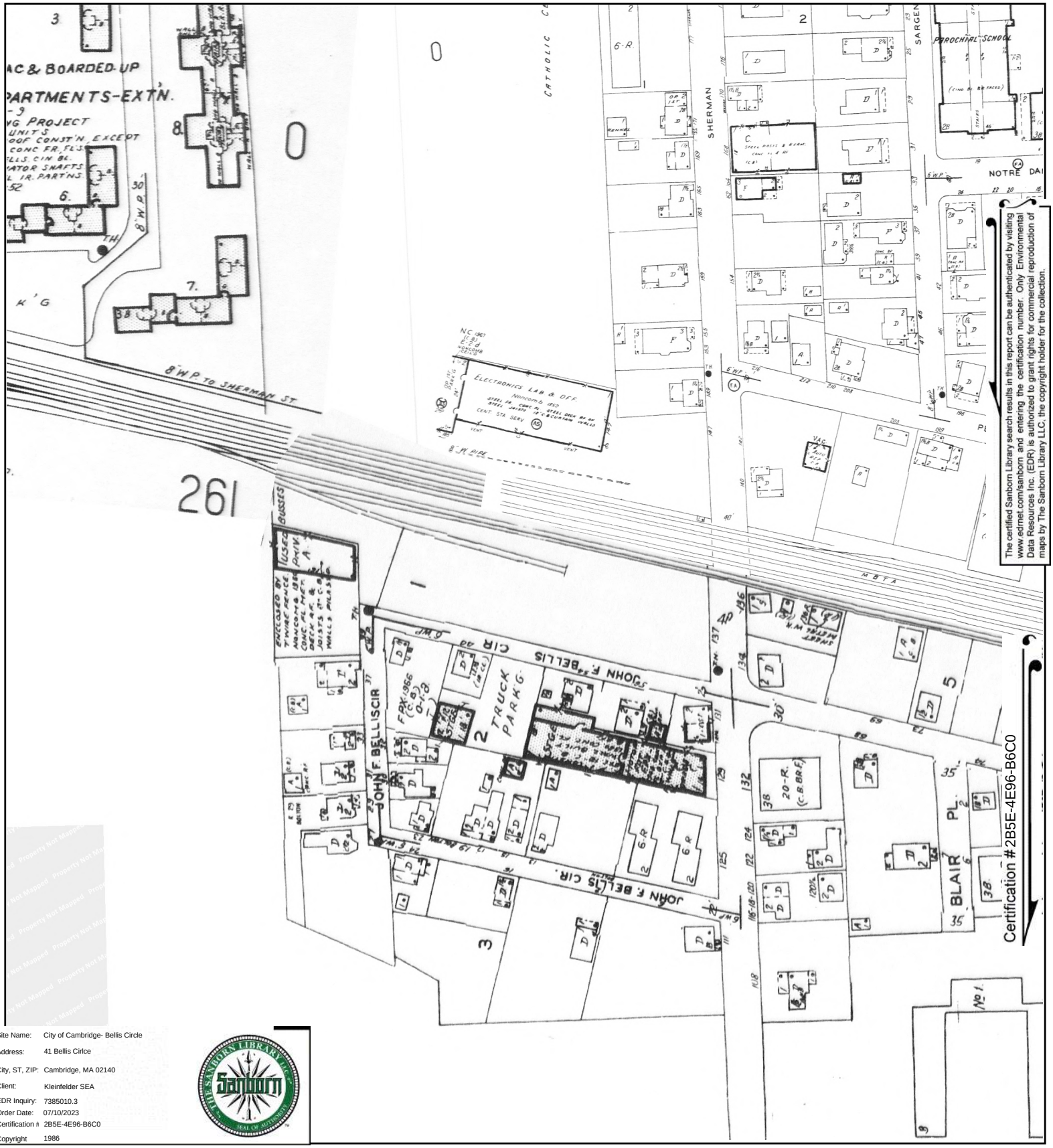
Site Name:	City of Cambridge- Bellis Circle
Address:	41 Bellis Cirlce
City, ST, ZIP:	Cambridge, MA 02140
Client:	Kleinfelder SEA
EDR Inquiry:	7385010.3
Order Date:	07/10/2023
Certification #	2B5E-4E96-B6C0
Copyright	1990

This Certified Sanborn Map combines the following sheets.
Outlined areas indicate map sheets within the collection.

Volume 2, Sheet 262
Volume 2, Sheet 263
Volume 2, Sheet 261

0 Feet 150 300 600

N



Site Name:	City of Cambridge- Bellis Circle
Address:	41 Bellis Cirlce
City, ST, ZIP:	Cambridge, MA 02140
Client:	Kleinfelder SEA
EDR Inquiry:	7385010.3
Order Date:	07/10/2023
Certification #	2B5E-4E96-B6C0
Copyright	1986

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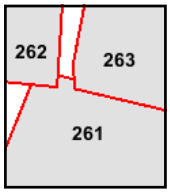
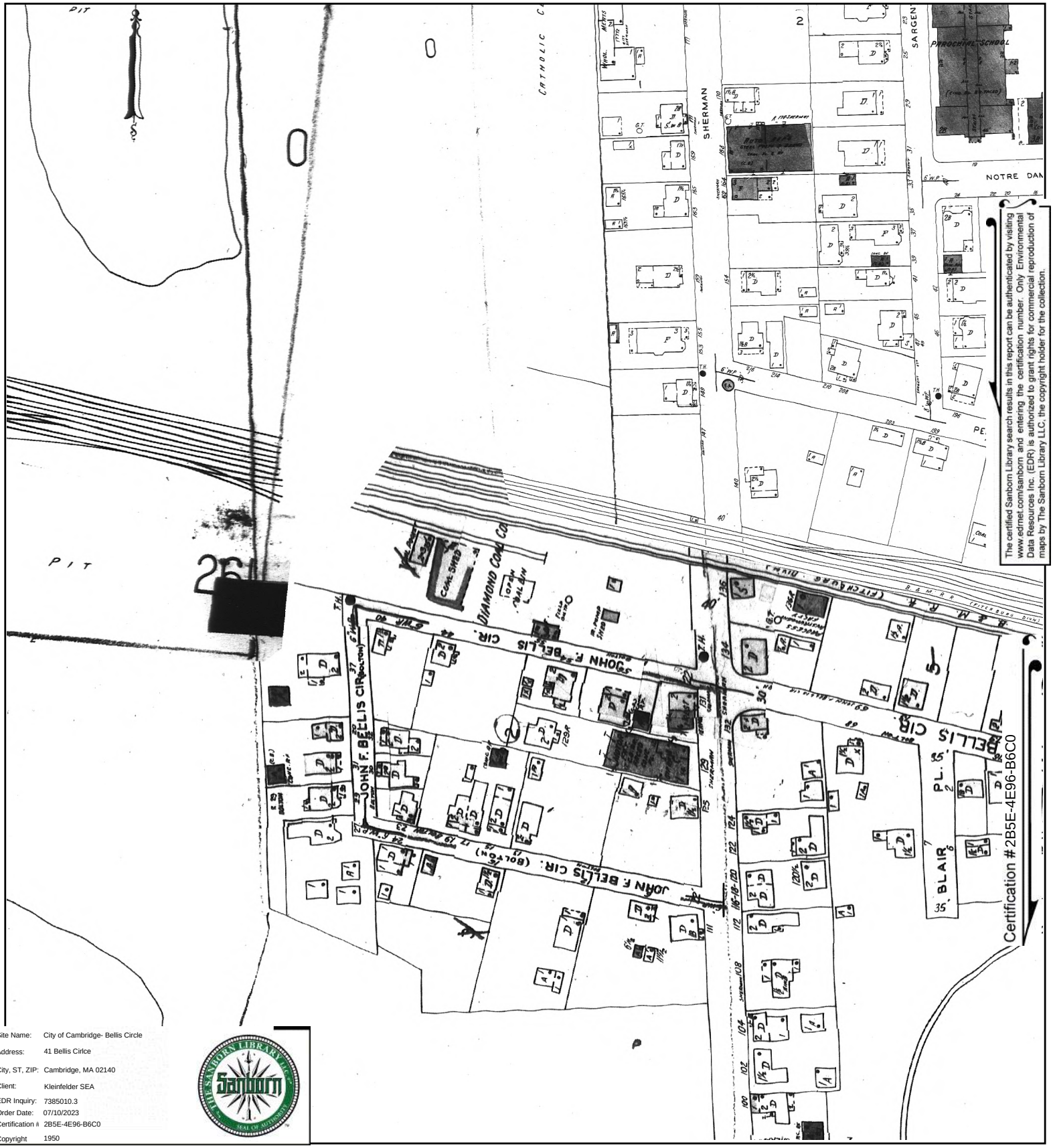


Volume 2, Sheet 261
Volume 2, Sheet 263
Volume 2, Sheet 262

0 Feet 150 300 600



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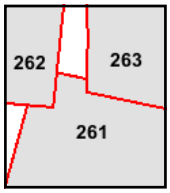
Address:	41 Bellis Cirlce
City, ST, ZIP:	Cambridge, MA 02140
Client:	Kleinfelder SEA
EDR Inquiry:	7385010.3
Order Date:	07/10/2023
Certification #	2B5E-4E96-B6C0
Copyright	1950

This Certified Sanborn Map combines the following sheets.
Outlined areas indicate map sheets within the collection.



Volume 2, Sheet 262
Volume 2, Sheet 263
Volume 2, Sheet 261

0 Feet 150 300 600

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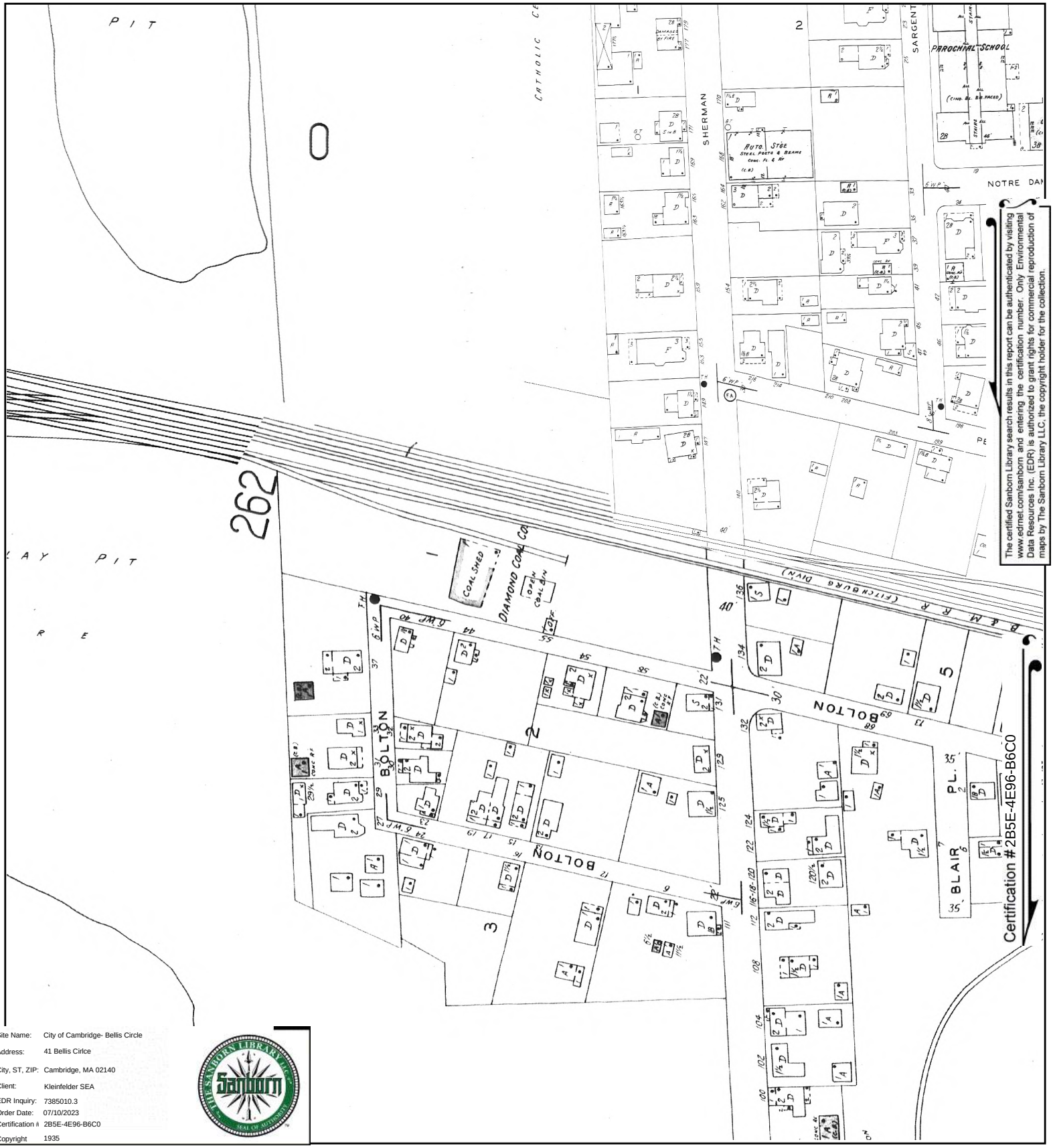
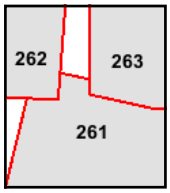


Site Name:	City of Cambridge- Bellis Circle
Address:	41 Bellis Cirlce
City, ST, ZIP:	Cambridge, MA 02140
Client:	Kleinfelder SEA
EDR Inquiry:	7385010.3
Order Date:	07/10/2023
Certification #	2B5E-4E96-B6C0
Copyright	1935

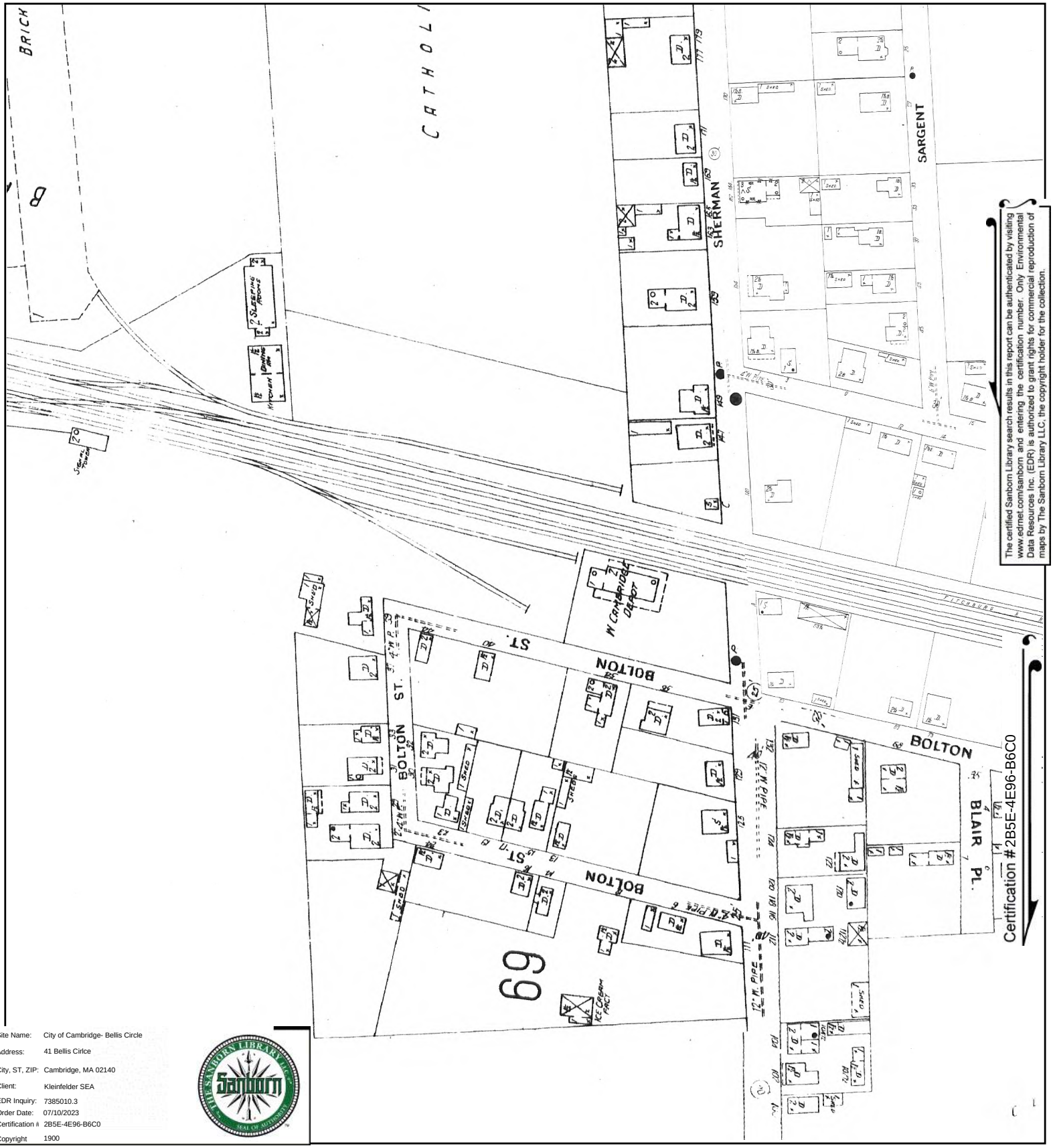
This Certified Sanborn Map combines the following sheets.
Outlined areas indicate map sheets within the collection.



Volume 2, Sheet 261
Volume 2, Sheet 263
Volume 2, Sheet 262

0 Feet 150 300 600

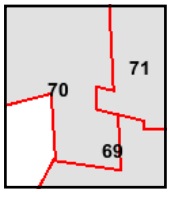
N



Certification #2B5E-4E96-B6C0

Site Name:	City of Cambridge- Bellis Circle
Address:	41 Bellis Cirlce
City, ST, ZIP:	Cambridge, MA 02140
Client:	Kleinfelder SEA
EDR Inquiry:	7385010.3
Order Date:	07/10/2023
Certification #:	2B5E-4E96-B6C0
Copyright	1900

This Certified Sanborn Map combines the following sheets.
Outlined areas indicate map sheets within the collection.



Volume 2, Sheet 69
Volume 2, Sheet 71
Volume 2, Sheet 70

0 Feet 150 300 600

N

City of Cambridge- Bellis Circle

41 Bellis Cirlce

Cambridge, MA 02140

Inquiry Number: 7385010.8

July 11, 2023

The EDR Aerial Photo Decade Package

6 Armstrong Road, 4th floor
Shelton, CT 06484
Toll Free: 800.352.0050
www.edrnet.com

EDR Aerial Photo Decade Package

07/11/23

Site Name:

City of Cambridge- Bellis Circle
41 Bellis Cirlce
Cambridge, MA 02140
EDR Inquiry # 7385010.8

Client Name:

Kleinfelder SEA
One Beacon Street, Suite 8100
BOSTON, MA 02108
Contact: Patrick Monahan

Environmental Data Resources, Inc. (EDR) Aerial Photo Decade Package is a screening tool designed to assist environmental professionals in evaluating potential liability on a target property resulting from past activities. EDR's professional researchers provide digitally reproduced historical aerial photographs, and when available, provide one photo per decade.

Search Results:

Year	Scale	Details	Source
2018	1"=500'	Flight Year: 2018	USDA/NAIP
2014	1"=500'	Flight Year: 2014	USDA/NAIP
2010	1"=500'	Flight Year: 2010	USDA/NAIP
2006	1"=500'	Flight Year: 2006	USDA/NAIP
1995	1"=500'	Acquisition Date: January 01, 1995	USGS/DOQQ
1987	1"=500'	Flight Date: April 27, 1987	NHAP
1980	1"=500'	Flight Date: October 10, 1980	USDA
1978	1"=500'	Flight Date: April 23, 1978	USGS
1970	1"=500'	Flight Date: October 29, 1970	USDA
1969	1"=500'	Flight Date: April 09, 1969	USGS
1955	1"=500'	Flight Date: December 01, 1955	USGS
1952	1"=500'	Flight Date: August 24, 1952	USDA
1938	1"=500'	Flight Date: December 15, 1938	USGS

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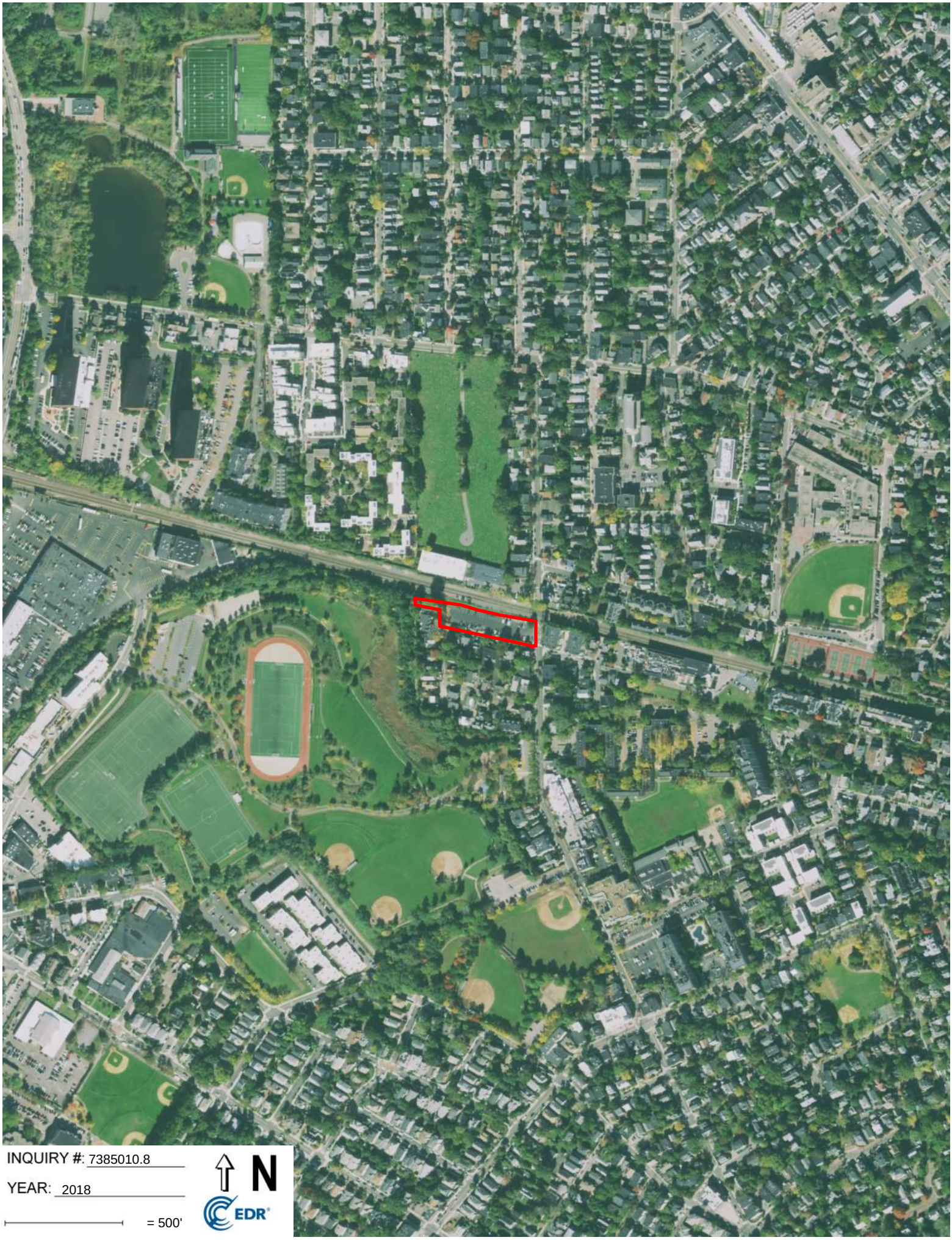
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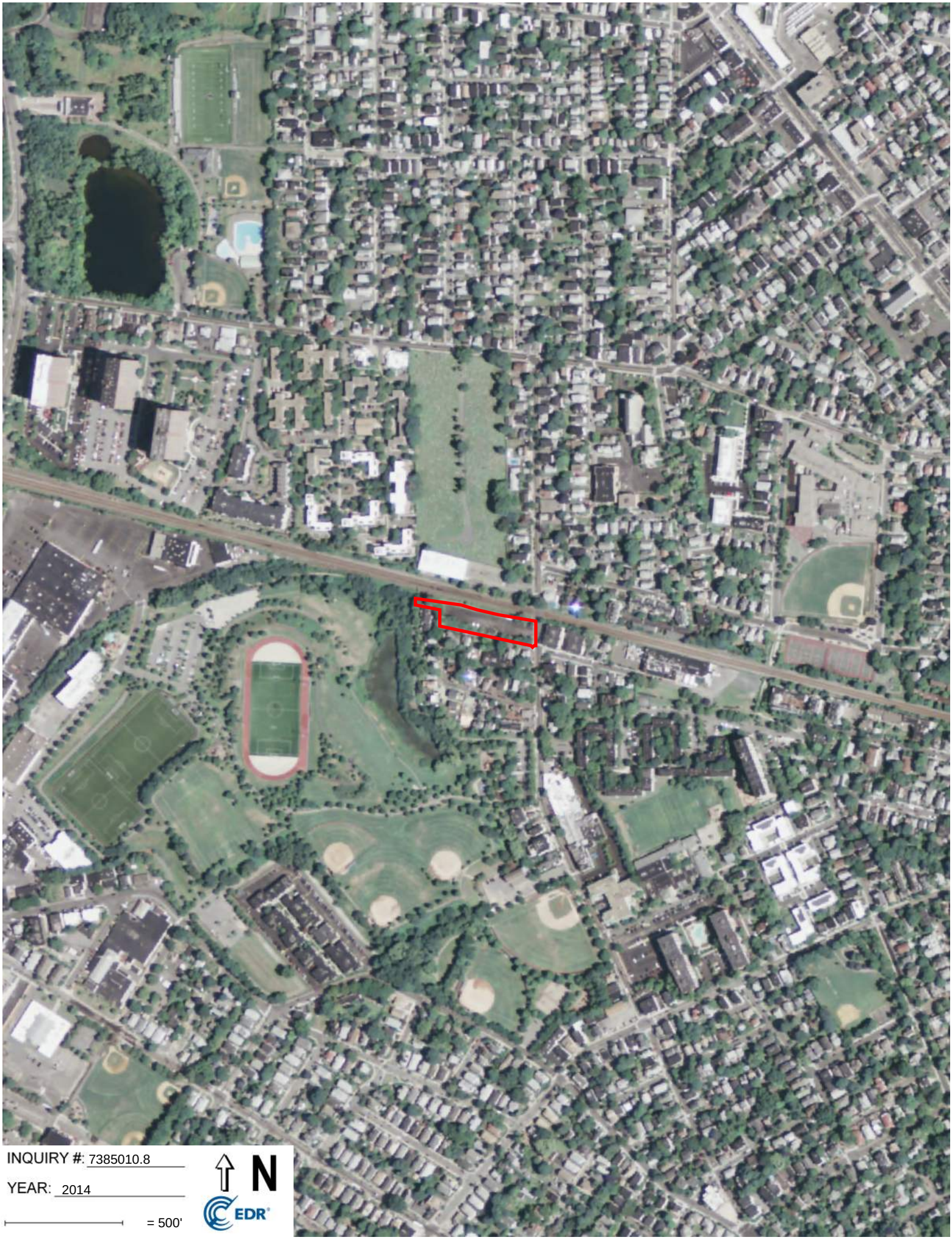
YEAR: 2018
= 500'
N
EDR


INQUIRY #: 7385010.8
YEAR: 2014
= 500'
N
EDR


INQUIRY #: 7385010.8
YEAR: 2010
= 500'
N
EDR


INQUIRY #: 7385010.8
YEAR: 2006
= 500'
N
EDR


INQUIRY #: 7385010.8
YEAR: 1995
= 500'
N
EDR


INQUIRY #: 7385010.8
YEAR: 1987
= 500'
N
EDR


INQUIRY #: 7385010.8
YEAR: 1980
= 500'
N
EDR


INQUIRY #: 7385010.8
YEAR: 1978
= 500'
N
EDR


INQUIRY #: 7385010.8
YEAR: 1970
= 500'
N
EDR


INQUIRY #: 7385010.8
YEAR: 1969
= 500'
N
EDR


INQUIRY #: 7385010.8
YEAR: 1955
= 500'
N
EDR

INQUIRY #: 7385010.8

YEAR: 1952

= 500'

N

EDR

INQUIRY #: 7385010.8

YEAR: 1938

= 500'

N

EDR

City of Cambridge- Bellis Circle

41 Bellis Cirlce

Cambridge, MA 02140

Inquiry Number: 7385010.4

July 10, 2023

EDR Historical Topo Map Report

with QuadMatch™

6 Armstrong Road, 4th floor
Shelton, CT 06484
Toll Free: 800.352.0050
www.edrnet.com

EDR Historical Topo Map Report

07/10/23

Site Name:

City of Cambridge- Bellis Circle
41 Bellis Cirlce
Cambridge, MA 02140
EDR Inquiry # 7385010.4

Client Name:

Kleinfelder SEA
One Beacon Street, Suite 8100
BOSTON, MA 02108
Contact: Patrick Monahan

EDR Topographic Map Library has been searched by EDR and maps covering the target property location as provided by Kleinfelder SEA were identified for the years listed below. EDR's Historical Topo Map Report is designed to assist professionals in evaluating potential liability on a target property resulting from past activities. EDRs Historical Topo Map Report includes a search of a collection of public and private color historical topographic maps, dating back to the late 1800s.

Search Results:

P.O.# NA
Project: 20231168.002A

Coordinates:

Latitude:	42.390593 42° 23' 26" North
Longitude:	-71.133542 -71° 8' 1" West
UTM Zone:	Zone 19 North
UTM X Meters:	324386.04
UTM Y Meters:	4695349.70
Elevation:	12.87' above sea level

Maps Provided:

2018	1949
2015	1946, 1947
2012	1943, 1944
1985, 1987	1903
1979	1893
1977	
1970, 1971	
1956	

Topo Sheet Key

This EDR Topo Map Report is based upon the following USGS topographic map sheets.

2018 Source Sheets

Lexington
2018
7.5-minute, 24000

Boston North
2018
7.5-minute, 24000

Newton
2018
7.5-minute, 24000

Boston South
2018
7.5-minute, 24000

2015 Source Sheets

Lexington
2015
7.5-minute, 24000

Boston North
2015
7.5-minute, 24000

Newton
2015
7.5-minute, 24000

Boston South
2015
7.5-minute, 24000

2012 Source Sheets

Lexington
2012
7.5-minute, 24000

Boston North
2012
7.5-minute, 24000

Newton
2012
7.5-minute, 24000

Boston South
2012
7.5-minute, 24000

1985, 1987 Source Sheets

Boston North
1985
7.5-minute, 25000
Aerial Photo Revised 1978

Boston South
1987
7.5-minute, 25000
Aerial Photo Revised 1978

Topo Sheet Key

This EDR Topo Map Report is based upon the following USGS topographic map sheets.

1979 Source Sheets

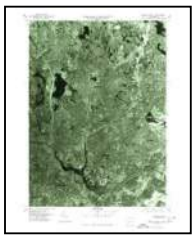
Boston North
1979
7.5-minute, 25000
Aerial Photo Revised 1977

Boston South
1979
7.5-minute, 25000
Aerial Photo Revised 1975

1977 Source Sheets

Newton
1977
7.5-minute, 25000
Aerial Photo Revised 1977

Lexington
1977
7.5-minute, 25000
Aerial Photo Revised 1977



Boston North
1977
7.5-minute, 25000
Aerial Photo Revised 1977

Boston South
1977
7.5-minute, 25000
Aerial Photo Revised 1977

1970, 1971 Source Sheets

Boston South
1970
7.5-minute, 24000
Aerial Photo Revised 1969

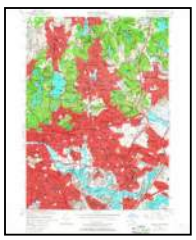
Newton
1970
7.5-minute, 24000
Aerial Photo Revised 1969

Boston North
1971
7.5-minute, 24000
Aerial Photo Revised 1969

Lexington
1971
7.5-minute, 24000
Aerial Photo Revised 1969

1956 Source Sheets

Boston South
1956
7.5-minute, 24000



Boston North
1956
7.5-minute, 24000

Lexington
1956
7.5-minute, 24000
Aerial Photo Revised 1955

Newton
1956
7.5-minute, 24000

Topo Sheet Key

This EDR Topo Map Report is based upon the following USGS topographic map sheets.

1949 Source Sheets

Boston North
1949
7.5-minute, 31680

Newton
1949
7.5-minute, 31680

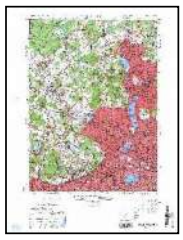
Boston South
1949
7.5-minute, 31680

1946, 1947 Source Sheets

BOSTON SOUTH
1946
7.5-minute, 25000

NEWTON
1946
7.5-minute, 25000

BOSTON NORTH
1947
7.5-minute, 25000



LEXINGTON
1947
7.5-minute, 25000

1943, 1944 Source Sheets

Boston North
1943
7.5-minute, 24000

Boston South
1944
7.5-minute, 24000

Lexington
1944
7.5-minute, 24000

Newton
1944
7.5-minute, 24000

1903 Source Sheets

Boston
1903
15-minute, 62500

Topo Sheet Key

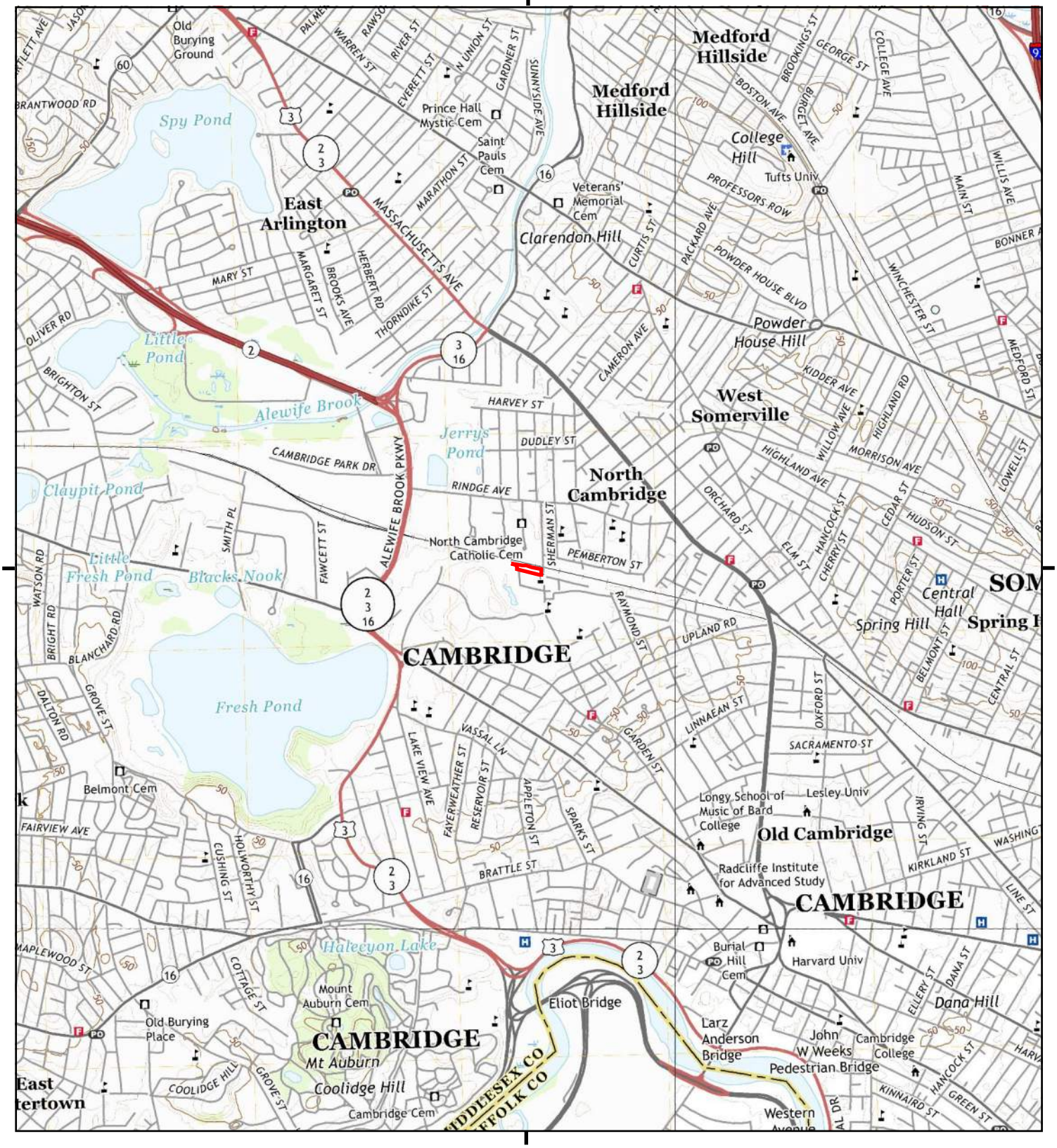
This EDR Topo Map Report is based upon the following USGS topographic map sheets.

1893 Source Sheets

Boston
1893
15-minute, 62500

Historical Topo Map

2018



This report includes information from the following map sheet(s).

0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

TP, Lexington, 2018, 7.5-minute
NE, Boston North, 2018, 7.5-minute
SE, Boston South, 2018, 7.5-minute
SW, Newton, 2018, 7.5-minute

SITE NAME: City of Cambridge- Bellis Circle
ADDRESS: 41 Bellis Cirlce
Cambridge, MA 02140
CLIENT: Kleinfelder SEA

N

Historical Topo Map

2015

This report includes information from the following map sheet(s).

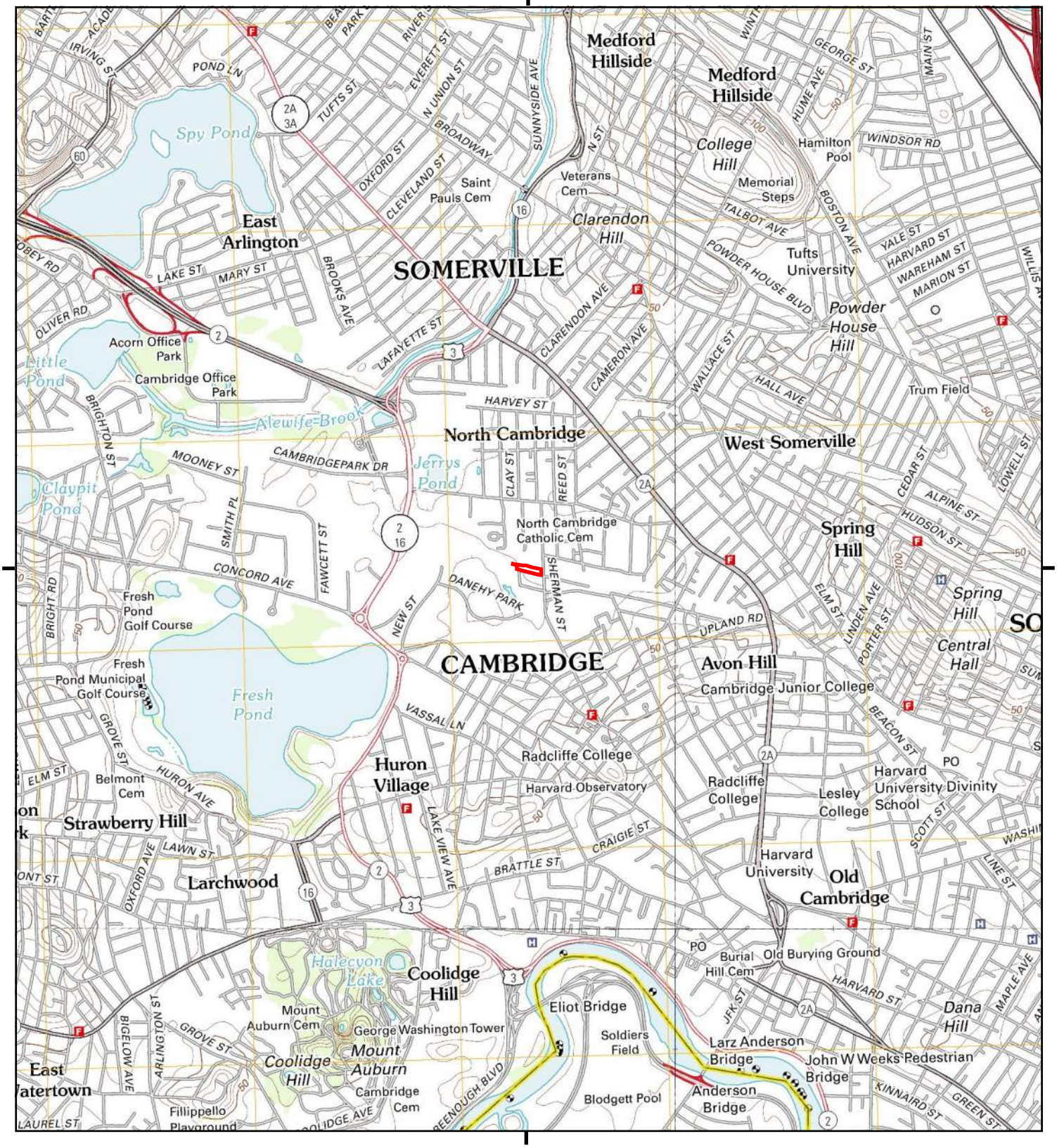
0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

TP, Lexington, 2015, 7.5-minute
NE, Boston North, 2015, 7.5-minute
SE, Boston South, 2015, 7.5-minute
SW, Newton, 2015, 7.5-minute

SITE NAME: City of Cambridge- Bellis Circle
ADDRESS: 41 Bellis Cirlce
Cambridge, MA 02140
CLIENT: Kleinfelder SEA

N



This report includes information from the following map sheet(s).

0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

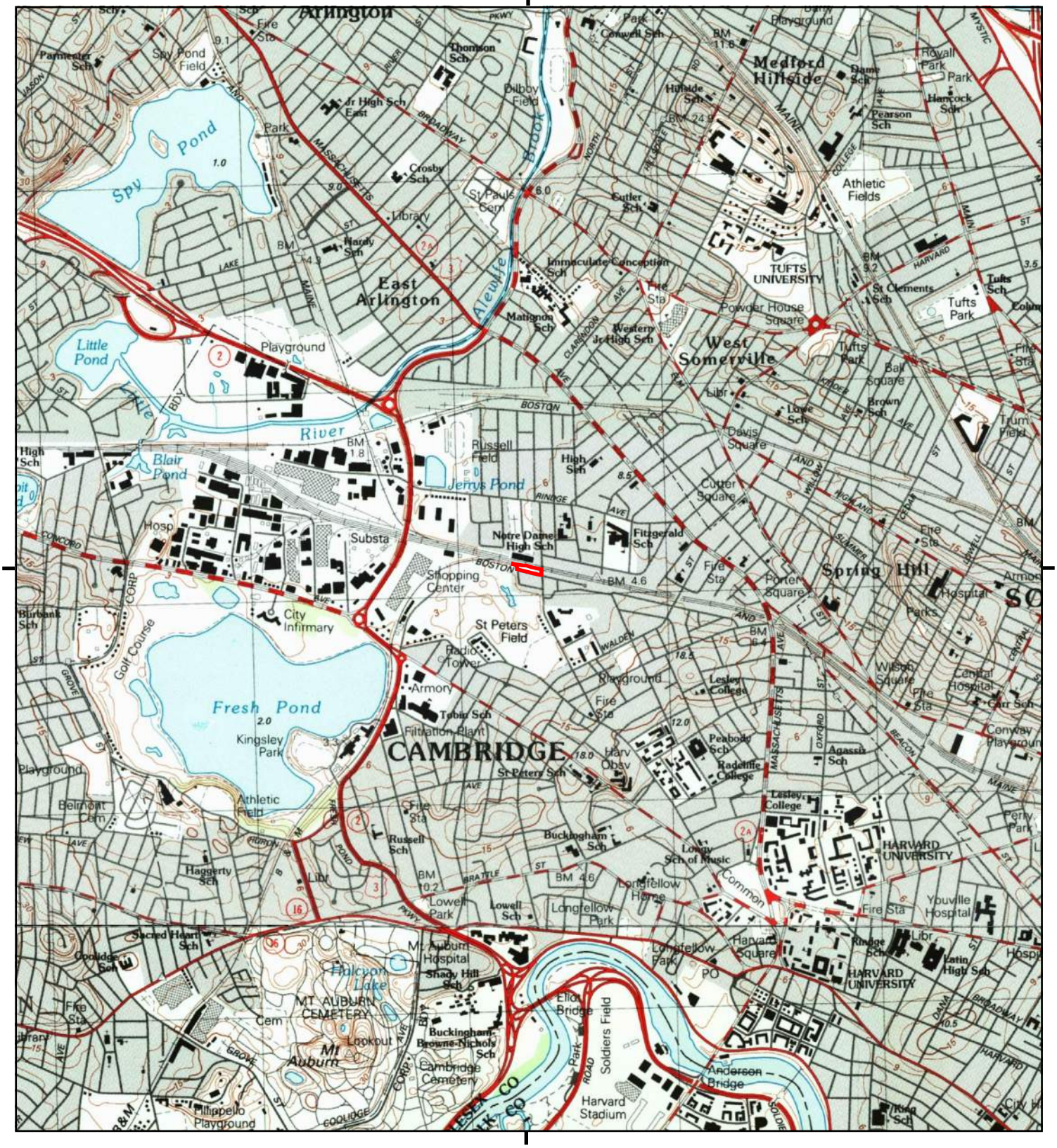
TP, Lexington, 2012, 7.5-minute
NE, Boston North, 2012, 7.5-minute
SE, Boston South, 2012, 7.5-minute
SW, Newton, 2012, 7.5-minute

SITE NAME: City of Cambridge- Bellis Circle
ADDRESS: 41 Bellis Cirlce
Cambridge, MA 02140
CLIENT: Kleinfelder SEA

N

Historical Topo Map

1985, 1987



This report includes information from the following map sheet(s).

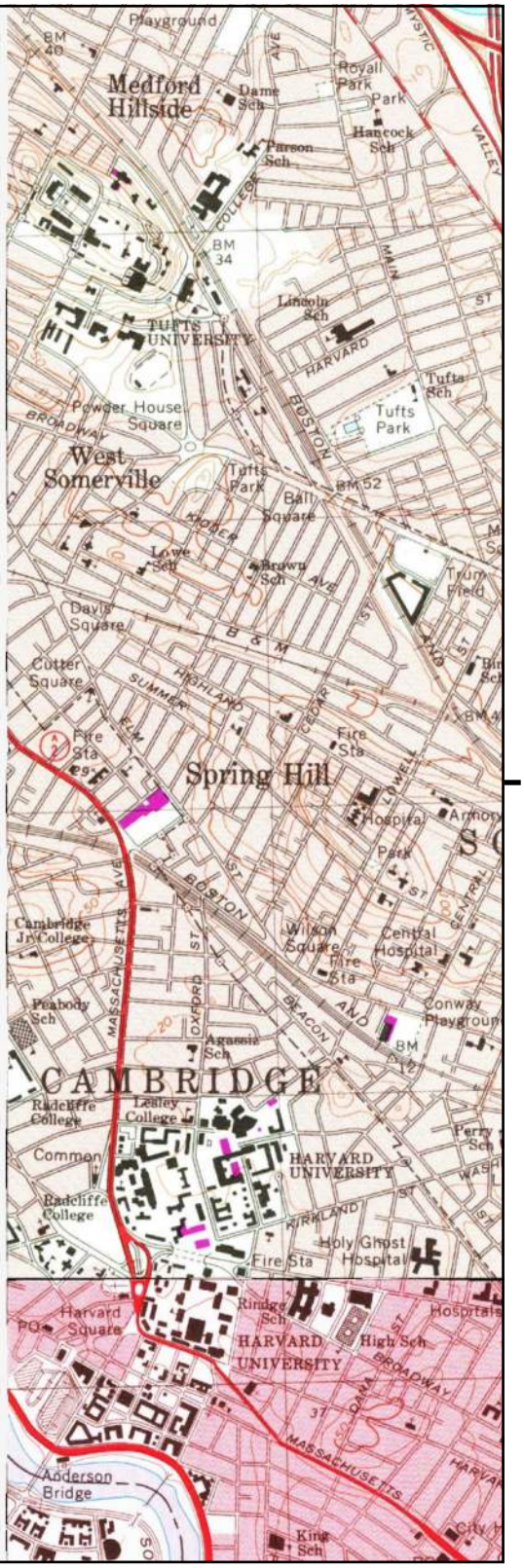
0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

TP, Boston North, 1985, 7.5-minute
S, Boston South, 1987, 7.5-minute

SITE NAME: City of Cambridge- Bellis Circle
ADDRESS: 41 Bellis Cirlce
Cambridge, MA 02140
CLIENT: Kleinfelder SEA

N



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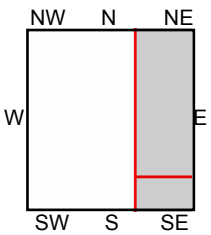
0 Miles 0.25 0.5 1 1.5



NE, Boston North, 1979, 7.5-minute
SE, Boston South, 1979, 7.5-minute

SITE NAME: City of Cambridge- Bellis Circle
ADDRESS: 41 Bellis Cirlce
Cambridge, MA 02140
CLIENT: Kleinfelder SEA

N

This report includes information from the following map sheet(s).

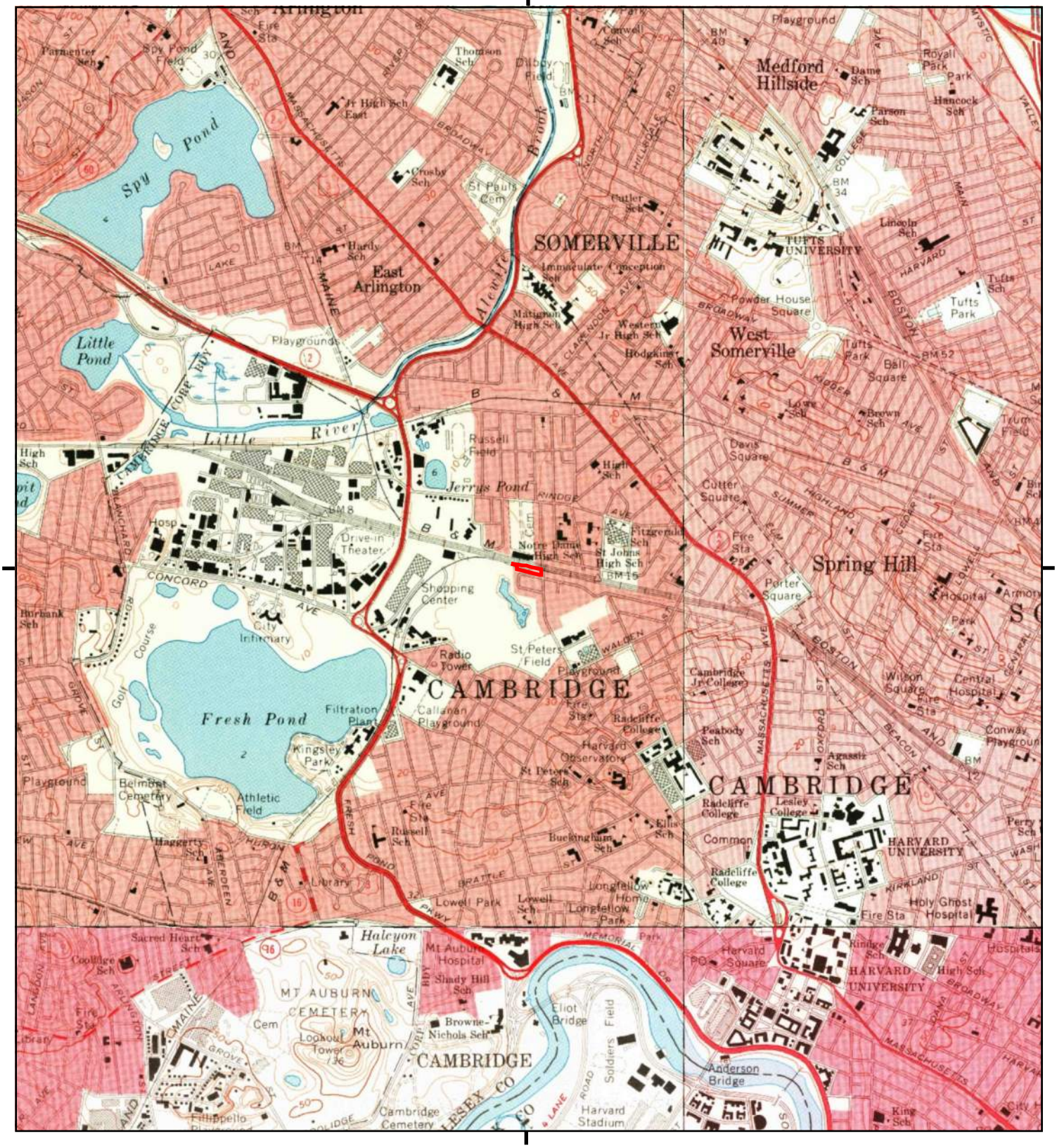
0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

TP, Lexington, 1977, 7.5-minute
NE, Boston North, 1977, 7.5-minute
SE, Boston South, 1977, 7.5-minute
SW, Newton, 1977, 7.5-minute

SITE NAME: City of Cambridge- Bellis Circle
ADDRESS: 41 Bellis Cirlce
Cambridge, MA 02140
CLIENT: Kleinfelder SEA

N



This report includes information from the following map sheet(s).

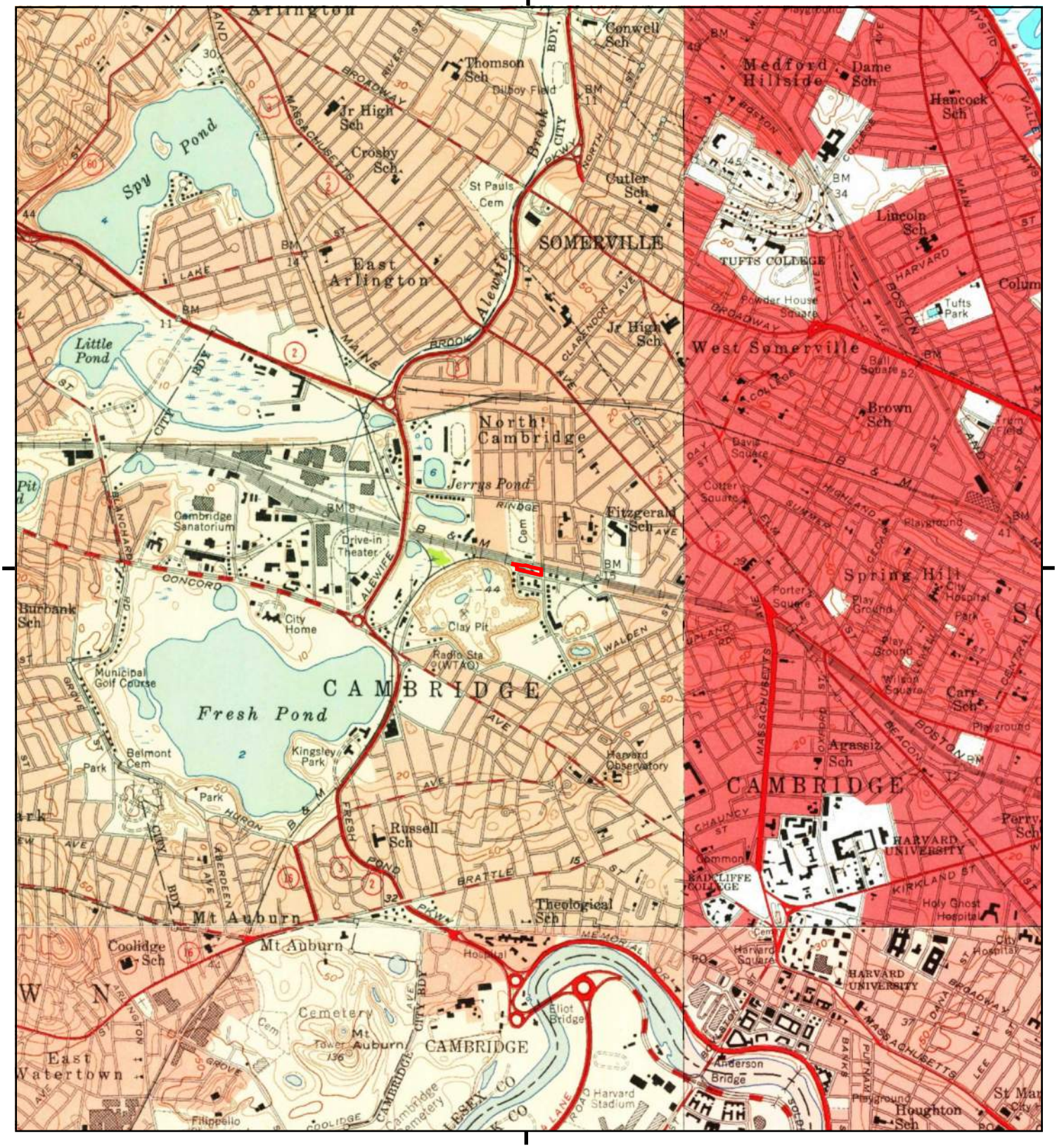
0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

TP, Lexington, 1971, 7.5-minute
NE, Boston North, 1971, 7.5-minute
SE, Boston South, 1970, 7.5-minute
SW, Newton, 1970, 7.5-minute

SITE NAME: City of Cambridge- Bellis Circle
ADDRESS: 41 Bellis Cirlce
Cambridge, MA 02140
CLIENT: Kleinfelder SEA

N



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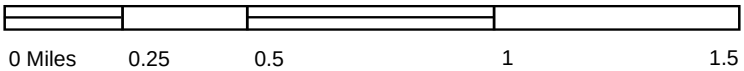
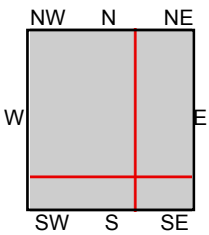
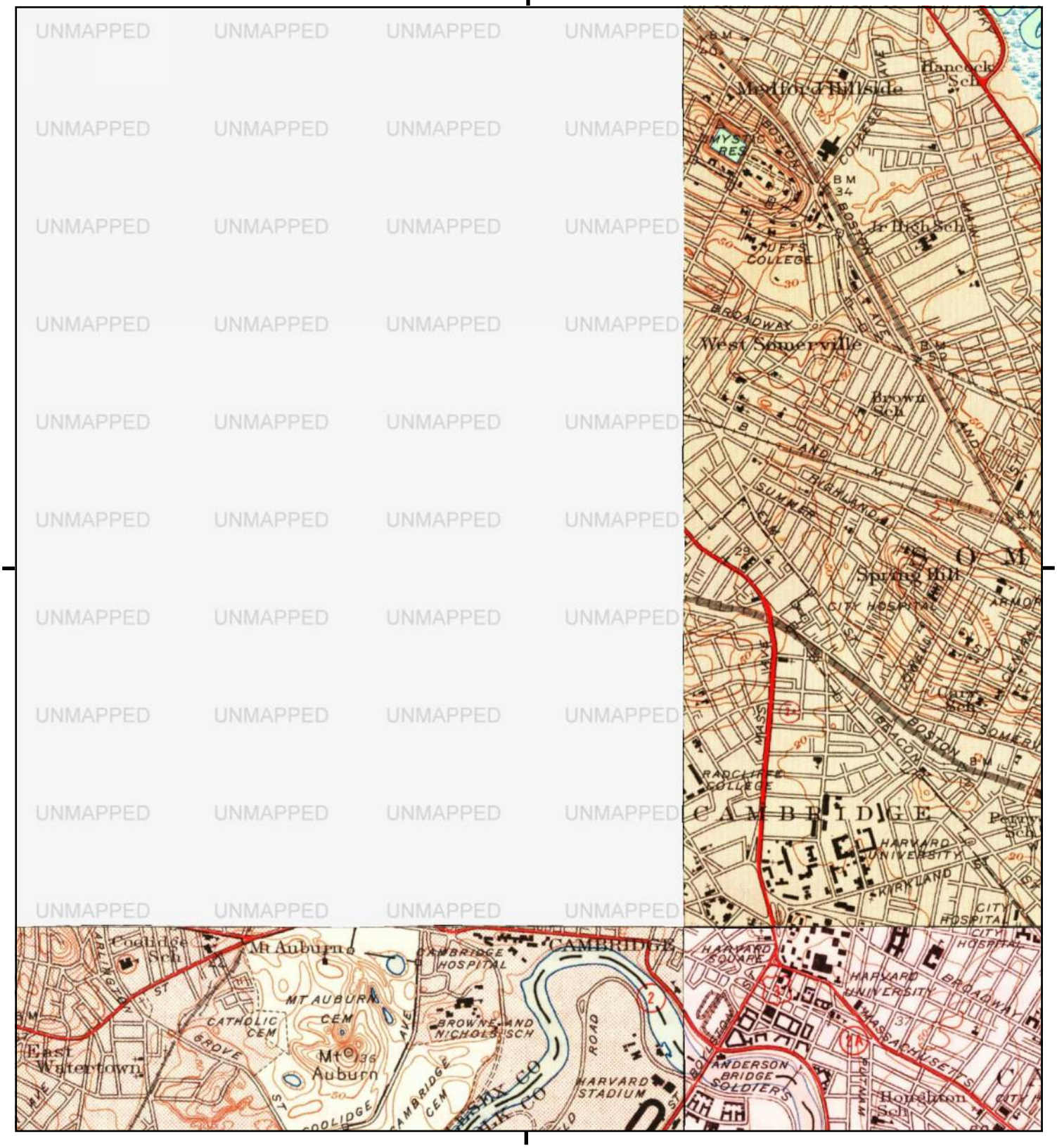




TP, Lexington, 1956, 7.5-minute
NE, Boston North, 1956, 7.5-minute
SE, Boston South, 1956, 7.5-minute
SW, Newton, 1956, 7.5-minute

SITE NAME: City of Cambridge- Bellis Circle
ADDRESS: 41 Bellis Cirlce
Cambridge, MA 02140
CLIENT: Kleinfelder SEA



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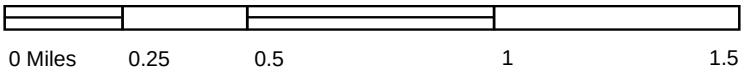
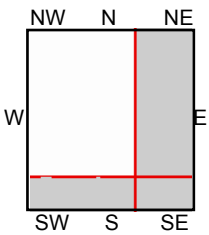
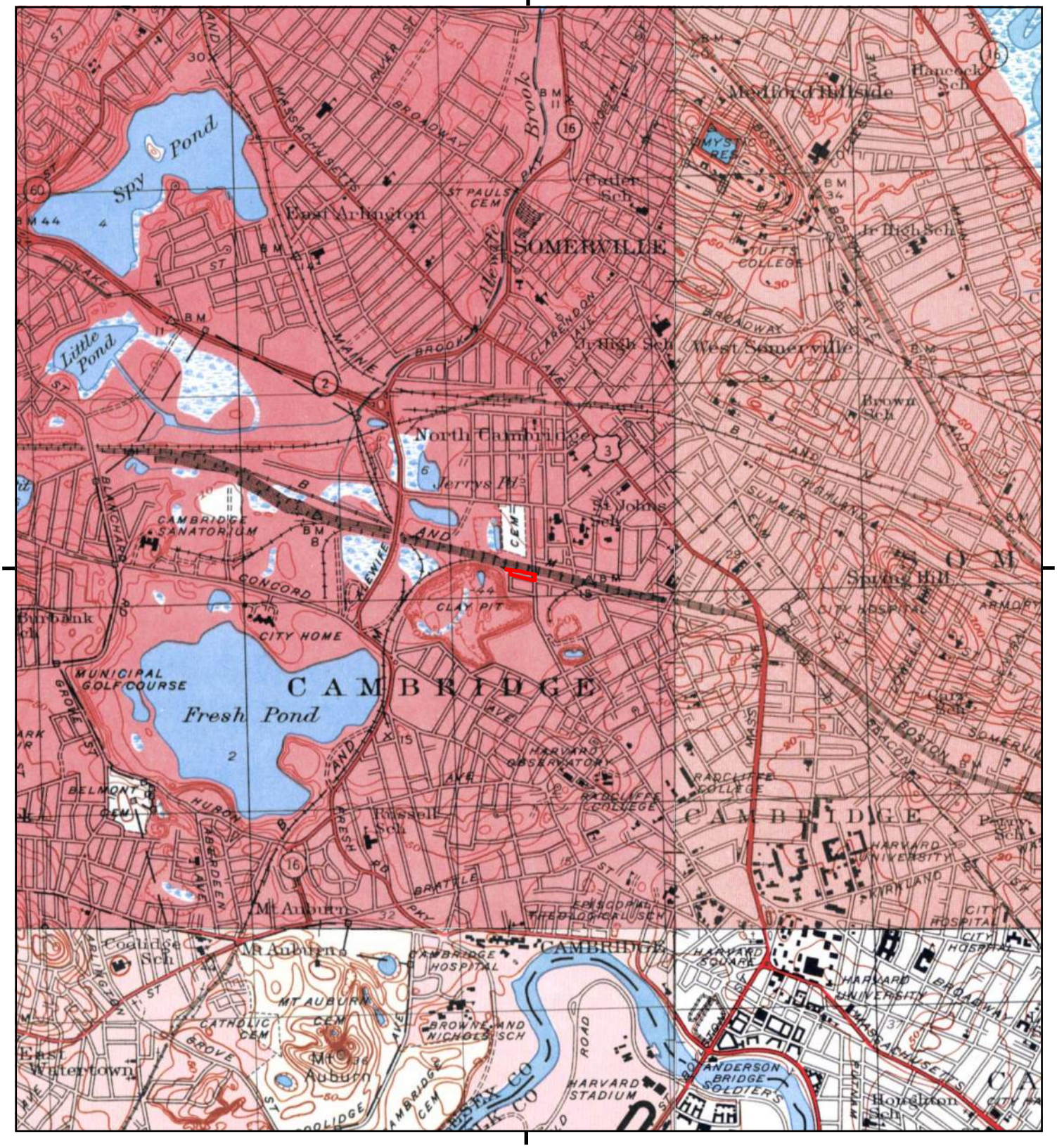




NE, Boston North, 1949, 7.5-minute
SE, Boston South, 1949, 7.5-minute
SW, Newton, 1949, 7.5-minute

SITE NAME: City of Cambridge- Bellis Circle
ADDRESS: 41 Bellis Cirlce
Cambridge, MA 02140
CLIENT: Kleinfelder SEA



This report includes information from the following map sheet(s).

0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

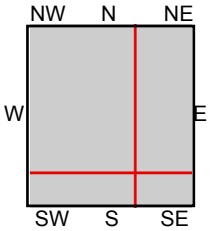
TP, LEXINGTON, 1947, 7.5-minute
NE, BOSTON NORTH, 1947, 7.5-minute
SE, BOSTON SOUTH, 1946, 7.5-minute
SW, NEWTON, 1946, 7.5-minute

SITE NAME: City of Cambridge- Bellis Circle
ADDRESS: 41 Bellis Cirlce
Cambridge, MA 02140
CLIENT: Kleinfelder SEA

N

This report includes information from the following map sheet(s).

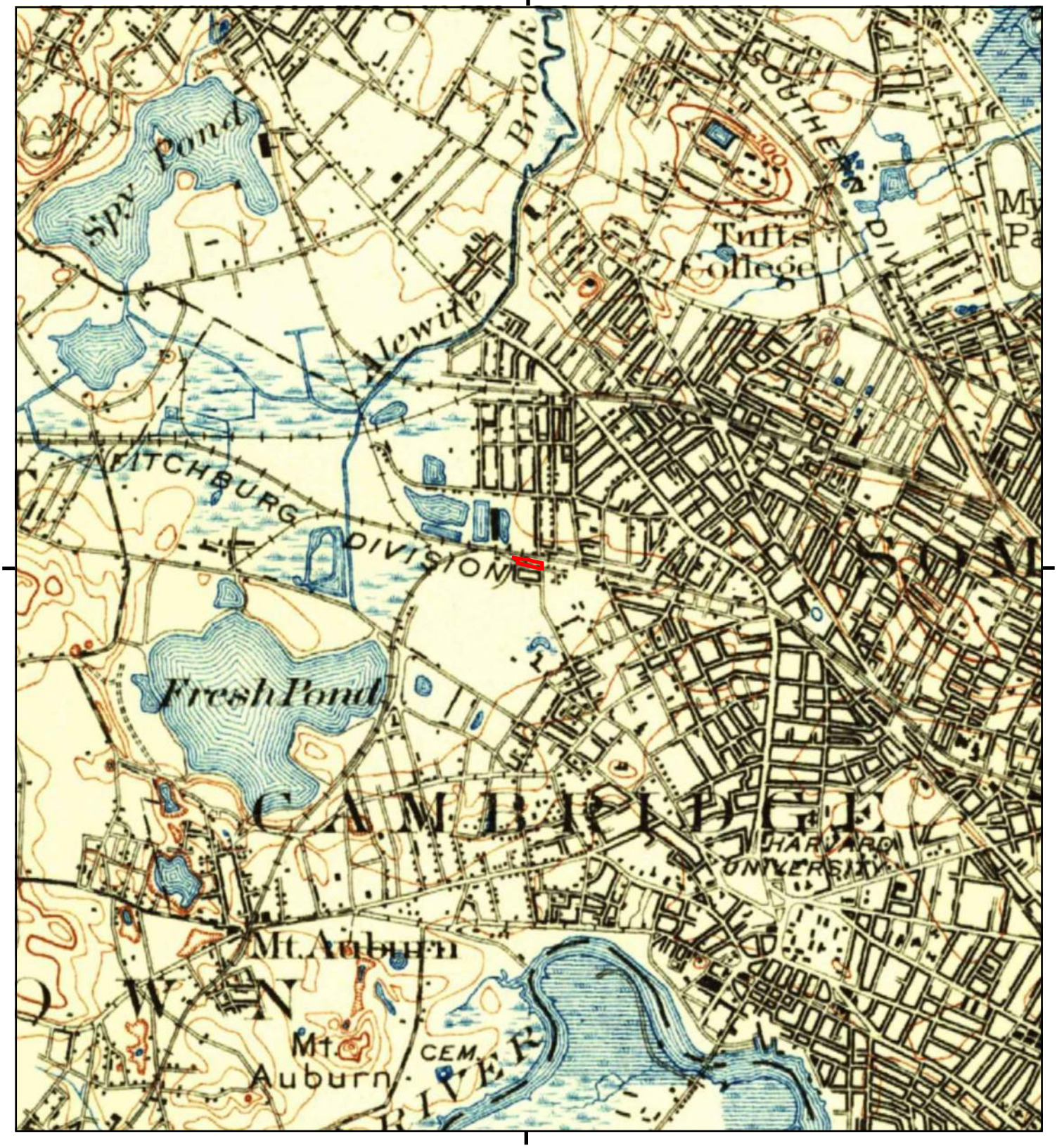
0 Miles 0.25 0.5 1 1.5



TP, Lexington, 1944, 7.5-minute
NE, Boston North, 1943, 7.5-minute
SE, Boston South, 1944, 7.5-minute
SW, Newton, 1944, 7.5-minute

SITE NAME: City of Cambridge- Bellis Circle
ADDRESS: 41 Bellis Cirlce
Cambridge, MA 02140
CLIENT: Kleinfelder SEA

N



This report includes information from the following map sheet(s).

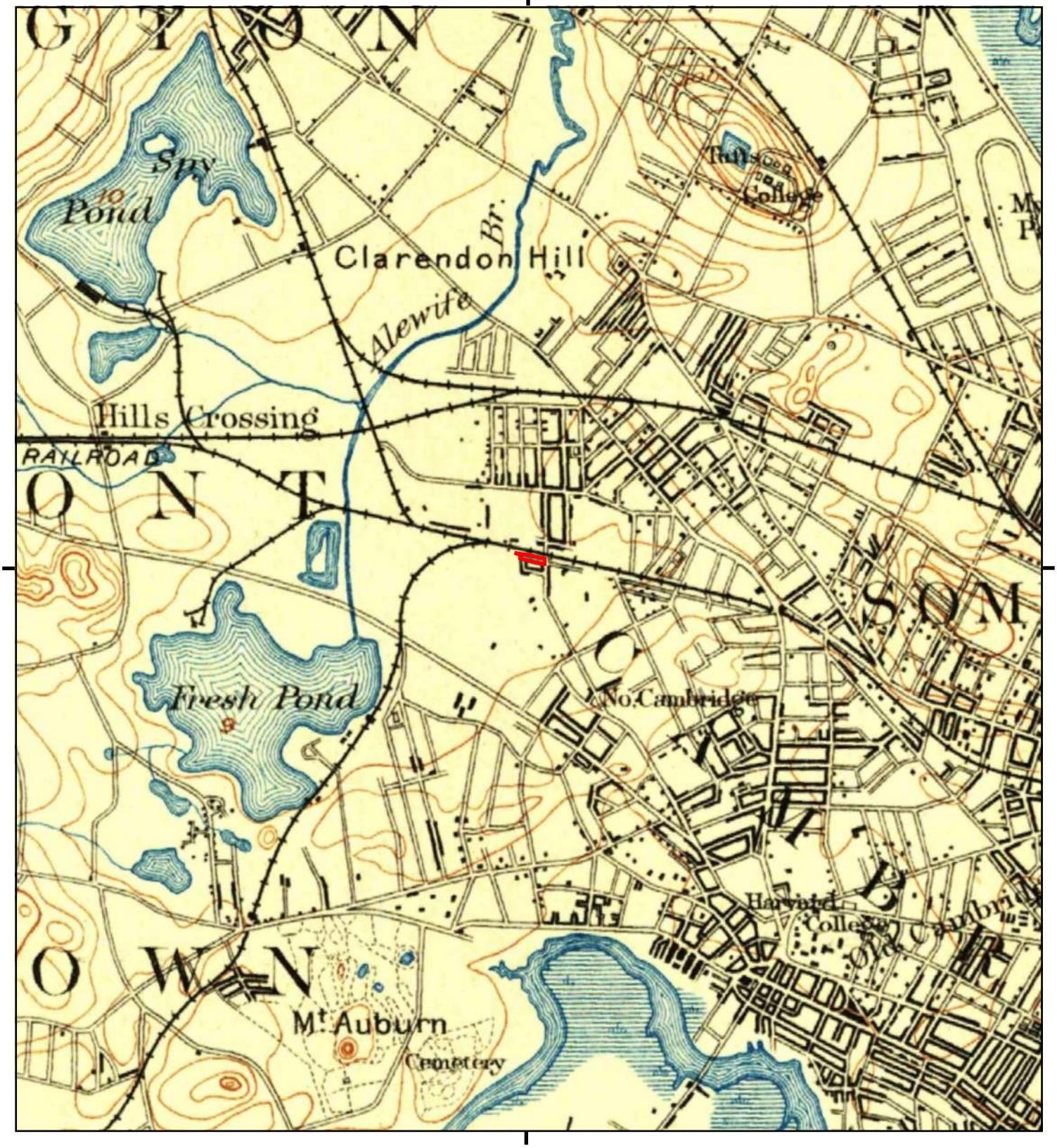
0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

TP, Boston, 1903, 15-minute

SITE NAME: City of Cambridge- Bellis Circle
ADDRESS: 41 Bellis Cirlce
Cambridge, MA 02140
CLIENT: Kleinfelder SEA

N



This report includes information from the following map sheet(s).

0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

TP, Boston, 1893, 15-minute

SITE NAME: City of Cambridge- Bellis Circle
ADDRESS: 41 Bellis Cirlce
Cambridge, MA 02140
CLIENT: Kleinfelder SEA

N

City of Cambridge- Bellis Circle
41 Bellis Cirlce
Cambridge, MA 02140

Inquiry Number: 7385010.5
July 11, 2023

The EDR-City Directory Image Report

Environmental Data Resources Inc

6 Armstrong Road
Shelton, CT 06484
800.352.0050
www.edrnet.com

TABLE OF CONTENTS

SECTION

Thank you for your business.
Please contact EDR at 1-800-352-0050
with any questions or comments.

EXECUTIVE SUMMARY

DESCRIPTION

Environmental Data Resources, Inc.'s (EDR) City Directory Report is a screening tool designed to assist environmental professionals in evaluating potential liability on a target property resulting from past activities. EDR's City Directory Report includes a search of available business directory data at approximately five year intervals.

RECORD SOURCES

The EDR City Directory Report accesses a variety of business directory sources, including Haines, InfoUSA, Polk, Cole, Bresser, and Stewart. Listings marked as EDR Digital Archive access Cole and InfoUSA records. The various directory sources enhance and complement each other to provide a more thorough and accurate report.

EDR is licensed to reproduce certain City Directory works by the copyright holders of those works. The purchaser of this EDR City Directory Report may include it in report(s) delivered to a customer.

RESEARCH SUMMARY

The following research sources were consulted in the preparation of this report. A check mark indicates where information was identified in the source and provided in this report.

Year	*Target Street*	*Cross Street*	*Source*
2017	☑	☐	Cole Information
2014	☑	☐	Cole Information
2010	☑	☐	Cole Information
2005	☑	☐	Cole Information
2000	☑	☐	Cole Information
1995	☑	☐	Cole Information
1992	☑	☐	Cole Information
1989	☑	☐	Cole Criss-Cross Directory
1984	☑	☐	Cole Criss-Cross Directory
1975	☑	☐	Cole Criss-Cross Directory
1970	☑	☐	Cole Criss-Cross Directory
1965	☑	☐	Price & Lee's City Directory
1960	☑	☐	Price & Lee's City Directory
1954	☑	☐	Manning's City Directory
1944	☑	☐	Manning's City Directory
1910	☑	☐	Manning's City Directory
1906	☑	☐	Manning's City Directory
1901	☑	☐	Manning's City Directory
1896	☑	☐	Manning's City Directory

FINDINGS

TARGET PROPERTY STREET

41 Bellis Cirlce
Cambridge, MA 02140

Year	*CD Image*	*Source*
BELLIS CIR		
2017	pg A1	Cole Information
2014	pg A2	Cole Information
2010	pg A4	Cole Information
2005	pg A5	Cole Information
2000	pg A6	Cole Information
1995	pg A7	Cole Information
1992	pg A8	Cole Information
1989	pg A9	Cole Criss-Cross Directory
1984	pg A10	Cole Criss-Cross Directory
1975	pg A11	Cole Criss-Cross Directory
1970	pg A12	Cole Criss-Cross Directory
1965	pg A13	Price & Lee's City Directory
1960	pg A14	Price & Lee's City Directory
1954	pg A15	Manning's City Directory
1944	pg A16	Manning's City Directory
1910	pg A17	Manning's City Directory
1906	pg A18	Manning's City Directory
1901	pg A19	Manning's City Directory
1896	pg A20	Manning's City Directory

FINDINGS

CROSS STREETS

No Cross Streets Identified

City Directory Images

Target Street	Cross Street	Source
✓	-	Cole Information

BELLIS CIR 2017

11 AMANDA CURTIN LICSW
CENTER FOR CHANGE
RICHARD CURTIN PSYCHOLGST

18 CUI, TIANGANG

Target Street	Cross Street	Source
✓	-	Cole Information

BELLIS CIR 2014

5	LAW, MARIE
6	MITCHELL, ANN W
9	ADAMS, DANIEL S
	CANE, RACHEL B
	JANDER, GEORGE A
	LEEDS, MATTHEW G
	WHITE, GEORGE R
11	CARPENTER, CATHERINE L
	CENTER FOR CHANGE
	CURTIN AMANDA LICSW
	CURTIN RICHARD PSYCHOLGST
	CURTIN, RICHARD R
	DELORENZO, MICHAEL L
12	FALK, AARON D
13	NAKAYAMA, TOMOKO
	SMITH, SAMUEL E
14	KING, DOUGLAS R
	OCCUPANT UNKNOWN,
	THOMAS, BARBARA A
	TITCOMB, TIM P
	WALL, TIMOTHY R
15	BROWN, CYNTHIA M
16	LEONARDI, PETER
17	DINARDO, KIMARIE
	TAGGART, CHRISTOPHER P
19	VISE, DAVID C
23	OCCUPANT UNKNOWN,
25	OCCUPANT UNKNOWN,
26	CULOTTA, THOMAS A
27	KERR, ADAM F
29	LEODAS, KATINA B
30	FILOSO, DORINA M
31	GORDON, JESSE A
32	MURPHY, BARRY E
33	SIEGELL, MICHAEL M
35	BERRY, ROGER S
37	GREENBLATT, JOSHUA M
39	FOLEY, KEITH P
	GOTZ, JAMES D
	HUA, SHUXIAN
	MUELLER, FREDERICK W
	OCCUPANT UNKNOWN,
	OLKEN, DEBORAH J
	ROTHENBERG-SIMMONS, JANE A
	SLOPNICK, JYL A
40	LORING, ELLEN G
44	OCCUPANT UNKNOWN,
54	SQUIRES, DIANE
91	OCCUPANT UNKNOWN,
92	OCCUPANT UNKNOWN,

Target Street	Cross Street	Source
✓	-	Cole Information

BELLIS CIR 2014 (Cont'd)

93 LORING, ELLEN
95 OCCUPANT UNKNOWN,

Target Street	Cross Street	Source
✓	-	Cole Information

BELLIS CIR 2010

4	EZELL-WEITZMAN, C
6	MITCHELL, JAMES L
9	ADAMS, DANIEL S
	BACH, JOAN
	CANE, RACHEL B
	FISHMAN, HOWARD
	LEEDS, MATTHEW G
	STEVENS, KAREN A
11	CENTER FOR CHANGE
	CURTIN RICHARD
	CURTIN, RICHARD R
	FRANCESCHINI, JORDAN M
	SMITH, SAMUEL
12	FALK, AARON D
13	CARPENTER, CATHERINE L
	NAKAYAMA, TOMOKO
	WEISS, JAMES R
14	SWARTZ, MICHAEL W
	THOMAS, BARBARA A
	TITCOMB, TIM P
	WALL, TIMOTHY R
15	CHECK, GREGORY J
16	LEONARDI, PAT
17	TAGGART, CHRISTOPHER P
19	VISE, DAVE
23	BROWN, DOUGLAS P
25	BROWN, DAVID D
26	CULOTTA, THOMAS A
27	CUNNINGHAM, LEAH A
29	LEODAS, KATINA B
30	FILOSO, DORINA M
31	GORDON, ELJAY
32	MURPHY, BARRY E
33	SIEGELL, MICHAEL M
35	BERRY, ROGER S
37	BERRY, ROGER S
39	HAIYAN, HUA
	HUA, HAIYAN Y
	LANGE, ROBERT V
	MUELLER, FREDERICK W
	OLKEN, DEBORAH J
	RUDD, CHRISTOPHER E
	SIMMONS, JANE A
	WYMAN, DUDLEY
40	LORING, ELLEN G
44	HSU, SHARON S
54	LICHTENBERG, WILLIAM M
91	KEEFE, ANTHONY

Target Street	Cross Street	Source
✓	-	Cole Information

BELLIS CIR 2005

3	MITTELL, PETER R
4	EZELL-WEITZMAN, C
6	MITCHELL, JAMES L
9	FISHMAN, HOWARD
	HARRIS, MATTHEW P
	LEBACH, JOAN C
	LEEDS, MATTHEW G
	MURA, EDUARDO
	SMITH, RUPERT M
	STEVENS, KAREN A
11	CURTIN, RICHARD R
	DEVE, B
	NAKAYAMA, TOMOKO
12	GIERAS, GREGOR J
13	FRANCESCHINI, JORDAN M
	NAKAYAMA, TOMOKO
14	KING, RYAN B
	SWARTZ, MICHAEL W
	TITCOMB, TIM P
	WALL, TIMOTHY R
16	LEONARDI, PAT
17	IKEDA, TATSU
	RUSSELL, ADAM L
	VISE, DAVID
19	VISE, DAVE
23	CORDOZA, ANTONE
24	DAGOSTINO, C L
27	DAGOSTINO, CAMELLA L
29	LEODAS, KATINA B
30	FILOSO, DORINA M
31	GORDON, ELJAY
32	MURPHY, BARRY E
33	SIEGELL, MICHAEL M
35	GREENBLATT, STEPHEN J
37	GREENBLATT, STEPHEN
39	HUA, HAIYAN Y
	MUELLER, FREDERICK W
	OLKEN, DEBORAH J
	RUDD, CHRISTOPHER E
	SIMMONS, JANE A
	SOLYMAR, LUCY
	WYMAN, DUDLEY
40	HUNT, JUDITH E
44	KILLOREN, MARK W
54	LICHTENBERG, WILLIAM W
91	KEEFE, ANTHONY

Target Street	Cross Street	Source
✓	-	Cole Information

BELLIS CIR 2000

1	MAYNARD, GEORGET
3	WEINREB, MAXINE
6	MITCHELL, JAMES L
9	BOBRONNIKOV, SERGEI
	HARRIS, MATT
	LEWIN, A
	MAZZA, M
	REISHUS, SHARON
	SMITH, RUPERT
	TOBIN, E
12	RAINS, WILSON H
	WILSON RAINS & ASSOCIATES
14	BEAULE, RONALD
	BROGAN, BRIAN K
	KING, BERT H
	SHAFFER, KITT
	SWARTZ, MICHAEL
	TITCOMB, TIM
	TRAN, SHARI
	WONG, ALBERT
15	BLACK, WALTER J
16	LEONARDI, PAT
17	WARRES, MICHAEL
19	VISE CONSTRUCTION INCORPORATED
27	ALICANDRO, RALPH
	DAGOSTINO, LAWR
29	KISTIAKOWSKY, VERA
31	WILTON, LISA J
32	GATTRINGER, C
33	SIEGELL, MICHAEL
35	GREENBLATT, STEPHEN J
37	GREENBLATT, STEPHEN
	TARGOFF, RAMIE
39	BAHAMDAN, G
	HUA, HAIYAN
	LANGAAS, MARTIN
	LAROCCA, LOUIS J
	MURPHY-SPICER, NANCY
	OLKEN, DEBORAH J
	RUDD, C
40	HUNT, JUDITH E
44	KILLOREN, THERESA M
54	LICHTENBERG, WILLIAM W
56	LAHTI, ABBOTT W
	POWER SYSTEMS INCORPORATED

Target Street	Cross Street	Source
✓	-	Cole Information

BELLIS CIR 1995

3	WEINREB, MAXINE
6	SUNG, STELLA M
	SYNN, CHARLIE
9	BOBRONNIKOV, SERGEI
	BULMER, MARK
	EYGES, K
	HARRIS, MATT
	SHAW, SONIA
12	HAINES, L
13	RONZIO, CHAS ALLEN
14	DOO, CURTIS
	KING, BERT H
	LAURENCE, HENRY & SARAH
	SHAFFER, K
	TITCOMB, TIM
15	BLACK, WALTER J
16	LEONARDI, PAT
17	NESBITT, F T NICK
	OSORNO, CARLOS
23	CORDOZA, ANTONE
24	ALICANDRO, MARGARIDA
27	ALICANDRO, RALPH
	D'AGOSTINO, LAWRENCE
29	KISTIAKOWSKY, V
31	WILTON, ELJAY
33	SIEGELL, MICHAEL
37	SCHWARTZ, HARRY
	SHEEHY, DIANE
	TICKTIN, ESTELLE
39	BAHAMON, GUILLERMO
	EDDY-SPICER, DAVID
	HUA, HAIYAN
	KIPNIS, HARVEY & THERESA
	LANGAAS, MARTIN & TERRI
	MURPHY-SPICER, NANCY
	RUDD, CHRISTOPHER
	SPICER, NANCY & DAVID
40	HUNT, JUDITH E
52	HF PAINTERS
	S & H CONSTRUCTION
54	LICHTENBERG, WM W
56	FROLING, THEA
	LAHTI, A W
	POWER SYSTEMS INC

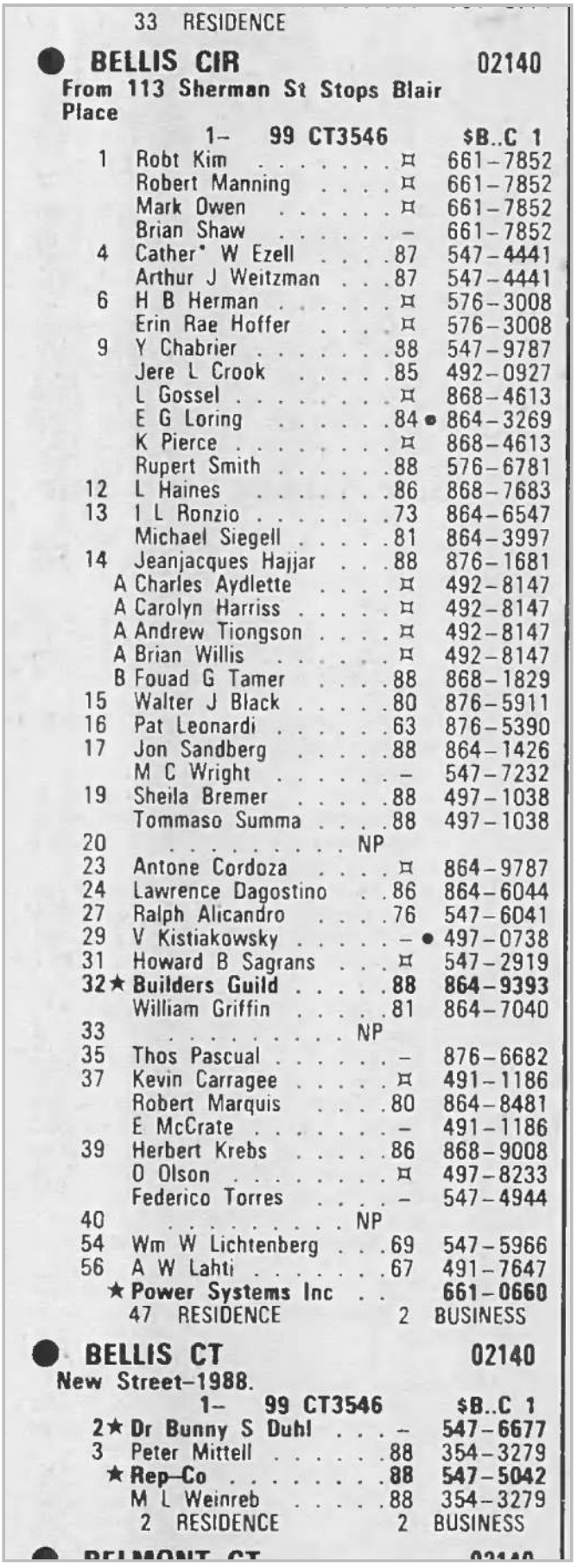
Target Street	Cross Street	Source
✓	-	Cole Information

BELLIS CIR 1992

1	JOHNSON, FRED
3	WEINREB, MAXINE
6	BARAHONA, BYRON
	MC GRAIL, LOREN
9	CHABRIER, Y
	CROOK, JERE L
	LORING, E G
	SUTHERLAND, IAN
12	HAINES, L
13	RONZIO, I L
	SIEGELL, MICHAEL
14	BRENNAN, JAMES
	KING, BERT H
	ROBERTS, BRAD D
	SHAFFER, K
	TITCOMB, TIM
15	BLACK, WALTER J
16	LEONARDI, PAT
17	BREMER, SHEILA
	JACOBSON, ERIK
	SUMMA, TOMASSO
	SUZUKI, SHIRLEY
19	GLADFELTER, DWIGHT L
	SMITH, JEANNE E
	SMITH, MIRIAN D
23	CORDOZA, ANTONE
24	D'AGOSTINO, LAWRENCE
27	ALICANDRO, RALPH
29	KISTIAKOWSKY, V
31	SCHWARTZ, LISA JANE
	WILTON, LISA JAYNE
	WILTON, TIMOTHY
37	MARQUIS, ROBT
	SCHWARTZ, HARRY
39	BAHAMON, GUILLERMO
	KIPNIS, HARVEY & THERESA
	PATIN, WAYNE & LISA
	SEELMAN, ELIZABETH DIANNE
	WILEY, M
52	ASSOCIATED ENGINEERS & CONSTRUCTORS
	HF PAINTERS
	S & H CONSTRUCTION
54	LICHTENBERG, WM W
56	LAHTI, A W
	POWER SYSTEMS INC

Target Street	Cross Street	Source
✓	-	Cole Criss-Cross Directory

BELLIS CIR 1989



33 RESIDENCE

BELLIS CIR 02140

From 113 Sherman St Stops Blair Place

	1– 99 CT3546		$B..C 1
1	Robt Kim	¤	661–7852
	Robert Manning	¤	661–7852
	Mark Owen	¤	661–7852
	Brian Shaw	–	661–7852
4	Cather* W Ezell	87	547–4441
	Arthur J Weitzman	87	547–4441
6	H B Herman	¤	576–3008
	Erin Rae Hoffer	¤	576–3008
9	Y Chabrier	88	547–9787
	Jere L Crook	85	492–0927
	L Gossel	¤	868–4613
	E G Loring	84 •	864–3269
	K Pierce	¤	868–4613
	Rupert Smith	88	576–6781
12	L Haines	86	868–7683
13	I L Ronzio	73	864–6547
	Michael Siegell	81	864–3997
14	Jeanjacques Hajjar	88	876–1681
A	Charles Aydlette	¤	492–8147
A	Carolyn Harriss	¤	492–8147
A	Andrew Tiongson	¤	492–8147
A	Brian Willis	¤	492–8147
B	Fouad G Tamer	88	868–1829
15	Walter J Black	80	876–5911
16	Pat Leonardi	63	876–5390
17	Jon Sandberg	88	864–1426
	M C Wright	–	547–7232
19	Sheila Bremer	88	497–1038
	Tommaso Summa	88	497–1038
20		NP	
23	Antone Cordoza	¤	864–9787
24	Lawrence Dagostino	86	864–6044
27	Ralph Alicandro	76	547–6041
29	V Kistiakowsky	– •	497–0738
31	Howard B Sagrans	¤	547–2919
32★	**Builders Guild**	**88**	**864–9393**
	William Griffin	81	864–7040
33		NP	
35	Thos Pascual	–	876–6682
37	Kevin Carragee	¤	491–1186
	Robert Marquis	80	864–8481
	E McCrate	–	491–1186
39	Herbert Krebs	86	868–9008
	O Olson	¤	497–8233
	Federico Torres	–	547–4944
40		NP	
54	Wm W Lichtenberg	69	547–5966
56	A W Lahti	67	491–7647
	★ Power Systems Inc		**661–0660**
	47 RESIDENCE	2	BUSINESS

BELLIS CT 02140

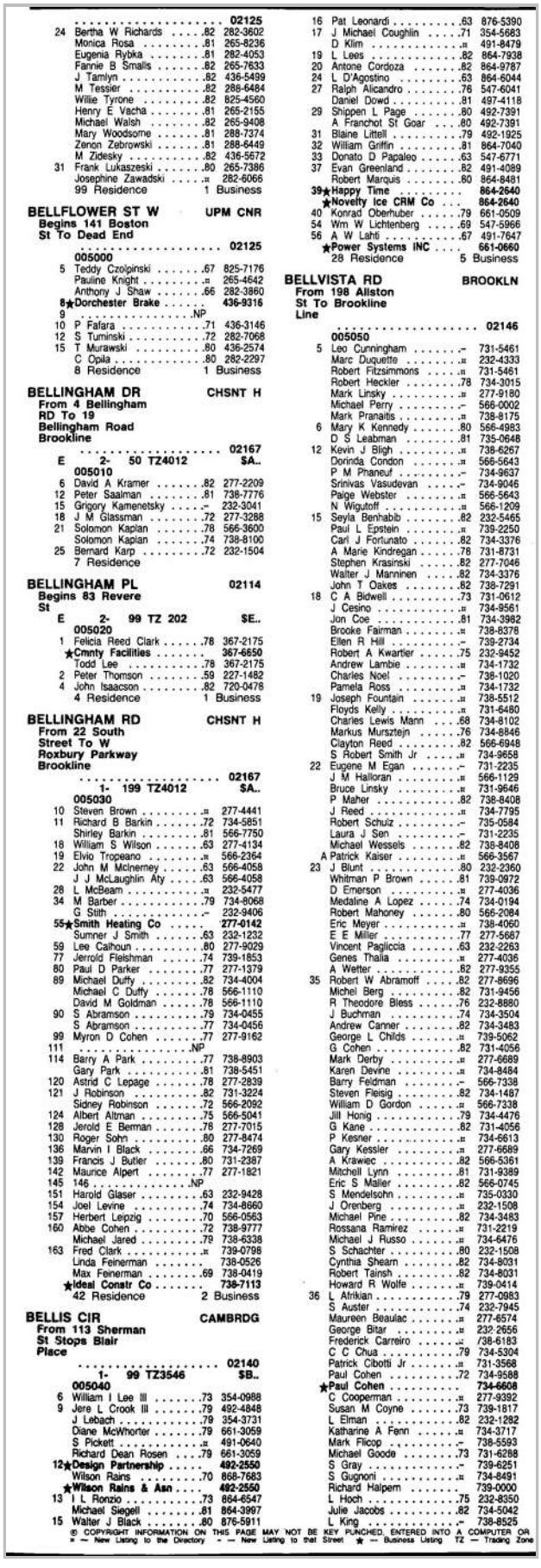
New Street–1988.

	1– 99 CT3546		$B..C 1
2★	**Dr Bunny S Duhl**	–	**547–6677**
3	Peter Mittell	88	354–3279
	★ Rep–Co	**88**	**547–5042**
	M L Weinreb	88	354–3279
	2 RESIDENCE	2	BUSINESS

BELMONT CT 02140

Target Street	Cross Street	Source
✓	-	Cole Criss-Cross Directory

BELLIS CIR 1984



. 02125
24 Bertha W Richards 82 282-3602
Monica Rosa 81 265-8236
Eugenia Rybka 81 282-4053
Fannie B Smalls 82 265-7633
J Tamlyn 82 436-5499
M Tessier 82 288-6484
Willie Tyrone 82 825-4560
Henry E Vacha 81 265-2155
Michael Walsh 82 265-9408
Mary Woodsome 81 288-7374
Zenon Zeborowski 81 288-6449
M Zidesky 82 436-5672
31 Frank Lukaszeski 80 265-7386
Josephine Zawadski . . . . .= 282-6066
99 Residence 1 Business

BELLFLOWER ST W UPM CNR
Begins 141 Boston St To Dead End
. 02125
005000
5 Teddy Czolpinski 67 825-7176
Pauline Knight . . . . . .= 265-4642
Anthony J Shaw 66 282-3860
8★**Dorchester Brake** **436-9316**
9 . . . . . .NP
10 P Fafara 71 436-3146
12 S Tuminski 72 282-7068
15 T Murawski 80 436-2574
C Opila 80 282-2297
8 Residence 1 Business

BELLINGHAM DR CHSNT H
From 4 Bellingham RD To 19 Bellingham Road Brookline
. 02167
E 2- 50 TZ4012 $A..
005010
6 David A Kramer 82 277-2209
12 Peter Saalman 81 738-7776
15 Grigory Kamenetsky . . . .- 232-3041
18 J M Glassman 72 277-3288
21 Solomon Kaplan 78 566-3600
Solomon Kaplan 74 738-8100
25 Bernard Karp 72 232-1504
7 Residence

BELLINGHAM PL 02114
Begins 83 Revere St
E 2- 99 TZ 202 $E..
005020
1 Felicia Reed Clark 78 367-2175
★**Cmnty Facilities** **367-6650**
Todd Lee 78 367-2175
2 Peter Thomson 59 227-1482
4 John Isaacson 82 720-0478
4 Residence 1 Business

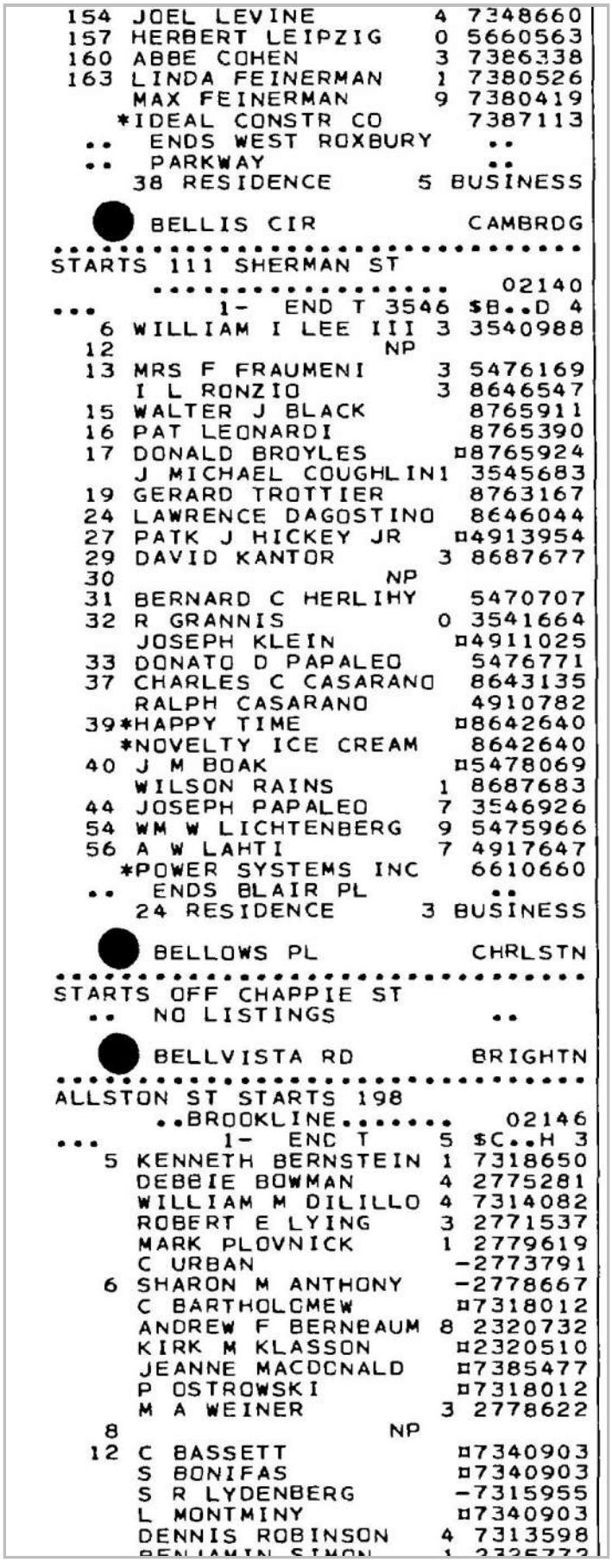
BELLINGHAM RD CHSNT H
From 22 South Street To W Roxbury Parkway Brookline
. 02167
1- 199 TZ4012 $A..
005030
10 Steven Brown . . . . . .= 277-4441
11 Richard B Barkin 72 734-5851
Shirley Barkin 81 566-7750
18 William S Wilson 63 277-4134
19 Elvio Tropeano . . . . . .= 566-2364
22 John M McInerney 63 566-4058
J J McLaughlin Aty 63 566-4058
28 L McBeam . . . . . .= 232-5477
34 M Barber 79 734-8068
G Stith . . . . . .- 232-9406
55★**Smith Heating Co** **277-0142**
Sumner J Smith 63 232-1232
59 Lee Calhoun 80 277-9029
77 Jerrold Fleishman 74 739-1853
80 Paul D Parker 77 277-1379
89 Michael Duffy 82 734-4004
Michael C Duffy 78 566-1110
David M Goldman 78 566-1110
90 S Abramson 79 734-0455
S Abramson 77 734-0456
99 Myron D Cohen 77 277-9162
111 . . . . . .NP
114 Barry A Park 77 738-8903
Gary Park 81 738-5451
120 Astrid C Lepage 78 277-2839
121 J Robinson 82 731-3224
Sidney Robinson 72 566-2092
124 Albert Altman 75 566-5041
128 Jerold E Berman 78 277-7015
130 Roger Sohn 80 277-8474
136 Marvin I Black 66 734-7269
139 Francis J Butler 80 731-2387
142 Maurice Alpert 77 277-1821
145 146 . . . . . .NP
151 Harold Glaser 63 232-9428
154 Joel Levine 74 734-8660
157 Herbert Leipzig 70 566-0563
160 Abbe Cohen 72 738-9777
Michael Jared 79 738-6338
163 Fred Clark . . . . . .= 739-0798
Linda Feinerman 738-0526
Max Feinerman 69 738-0419
★**Ideal Constr Co** **738-7113**
42 Residence 2 Business

BELLIS CIR CAMBRDG
From 113 Sherman St Stops Blair Place
. 02140
1- 99 TZ3546 $B..
005040
6 William I Lee III 73 354-0988
9 Jere L Crook III 79 492-4848
J Lebach 79 354-3731
Diane McWhorter 79 661-3059
S Pickett . . . . . .= 491-0640
Richard Dean Rosen 79 661-3059
12★**Design Partnership** **492-2550**
Wilson Rains 70 868-7683
★**Wilson Rains & Assn** **492-2550**
13 I L Ronzio 73 864-6547
Michael Siegell 81 864-3997
15 Walter J Black 80 876-5911
16 Pat Leonardi 63 876-5390
17 J Michael Coughlin 71 354-5683
D Klim . . . . . .= 491-8479
19 L Lees 82 864-7938
20 Antone Cordoza 82 864-9787
24 L D'Agostino 63 864-6044
27 Ralph Alicandro 76 547-6041
Daniel Dowd 81 497-4118
29 Shippen L Page 80 492-7391
A Franchot St Goar 80 492-7391
31 Blaine Littell 79 492-1925
32 William Griffin 81 864-7040
33 Donato D Papaleo 63 547-6771
37 Evan Greenland 82 491-4089
Robert Marquis 80 864-8481
39★**Happy Time** **864-2640**
★**Novelty Ice CRM Co** . . . **864-2640**
40 Konrad Oberhuber 79 661-0509
54 Wm W Lichtenberg 69 547-5966
56 A W Lahti 67 491-7647
★**Power Systems INC** **661-0660**
28 Residence 5 Business

BELLVISTA RD BROOKLN
From 198 Allston St To Brookline Line
. 02146
005050
5 Leo Cunningham . . . . . .- 731-5461
Marc Duquette . . . . . .= 232-4333
Robert Fitzsimmons . . . . .= 731-5461
Robert Heckler 78 734-3015
Mark Linsky . . . . . .= 277-9180
Michael Perry . . . . . .- 566-0002
Mark Pranaitis . . . . . .= 738-8175
6 Mary K Kennedy 80 566-4983
D S Leabman 81 735-0648
12 Kevin J Bligh . . . . . .= 738-6267
Dorinda Condon . . . . . .= 566-5643
P M Phaneuf . . . . . .- 734-9637
Srinivas Vasudevan . . . . .- 734-9046
Paige Webster . . . . . .= 566-5643
N Wigutoff . . . . . .= 566-1209
15 Seyla Benhabib 82 232-5465
Paul L Epstein . . . . . .= 739-2250
Carl J Fortunato 82 734-3376
A Marie Kindregan 78 731-8731
Stephen Krasinski 82 277-7046
Walter J Manninen 82 734-3376
John T Oakes 82 738-7291
18 C A Bidwell 73 731-0612
J Cesino . . . . . .= 734-9561
Jon Coe 81 734-3982
Brooke Fairman . . . . . .= 738-8378
Ellen R Hill . . . . . .- 739-2734
Robert A Kwartler 75 232-9452
Andrew Lambie . . . . . .= 734-1732
Charles Noel . . . . . .- 738-1020
Pamela Ross . . . . . .= 734-1732
19 Joseph Fountain . . . . . .= 738-5512
Floyds Kelly . . . . . .= 731-6480
Charles Lewis Mann 68 734-8102
Markus Mursztejn 76 734-8846
Clayton Reed 82 566-6948
S Robert Smith Jr . . . . .= 734-9658
22 Eugene M Egan . . . . . .- 731-2235
J M Halloran . . . . . .= 566-1129
Bruce Linsky . . . . . .= 731-9646
P Maher 82 738-8408
J Reed . . . . . .= 734-7795
Robert Schulz . . . . . .- 735-0584
Laura J Sen . . . . . .- 731-2235
Michael Wessels 82 738-8408
A Patrick Kaiser . . . . . .= 566-3567
23 J Blunt 80 232-2360
Whitman P Brown 81 739-0972
D Emerson . . . . . .= 277-4036
Medaline A Lopez 74 734-0194
Robert Mahoney 80 566-2084
Eric Meyer . . . . . .= 738-4060
E E Miller 77 277-5687
Vincent Pagliccia 63 232-2263
Genes Thalia . . . . . .= 277-4036
A Wetter 82 277-9355
35 Robert W Abramoff 82 277-8696
Michel Berg 82 731-9456
R Theodore Bless 76 232-8880
J Buchman 74 734-3504
Andrew Canner 82 734-3483
George L Childs . . . . . .= 739-5062
G Cohen 82 731-4056
Mark Derby . . . . . .= 277-6689
Karen Devine . . . . . .= 734-8484
Barry Feldman . . . . . .- 566-7338
Steven Fleisig 82 734-1487
William D Gordon . . . . . .= 566-7338
Jill Honig 79 734-4476
G Kane 82 731-4056
P Kesner . . . . . .= 734-6613
Gary Kessler . . . . . .= 277-6689
A Krawiec 82 566-5361
Mitchell Lynn 81 731-9389
Eric S Maller 82 566-0745
S Mendelsohn . . . . . .= 735-0330
J Orenberg . . . . . .= 232-1508
Michael Pine 82 734-3483
Rossana Ramirez . . . . . .= 731-2219
Michael J Russo . . . . . .= 734-6476
S Schachter 80 232-1508
Cynthia Shearn 82 734-8031
Robert Tainsh 82 734-8031
Howard R Wolfe . . . . . .= 739-0414
36 L Afrikian 79 277-0983
S Auster 74 232-7945
Maureen Beaulac . . . . . .= 277-6574
George Bitar . . . . . .= 232-2656
Frederick Carreiro . . . . .= 738-6183
C C Chua 79 734-5304
Patrick Cibotti Jr . . . . .= 731-3568
Paul Cohen 72 734-9588
★**Paul Cohen** **734-6608**
C Cooperman . . . . . .= 277-9392
Susan M Coyne 73 739-1817
L Elman 82 232-1282
Katharine A Fenn . . . . . .= 734-3717
Mark Flicop . . . . . .- 738-5593
Michael Goode 73 731-6288
S Gray . . . . . .- 739-6251
S Gugnoni . . . . . .= 734-8491
Richard Halpern 739-0000
L Hoch 75 232-8350
Julie Jacobs 82 734-5042
L King . . . . . .- 738-8525

Target Street	Cross Street	Source
✓	-	Cole Criss-Cross Directory

BELLIS CIR 1975



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 154 JOEL LEVINE              4 7348660
 157 HERBERT LEIPZIG          0 5660563
 160 ABBE COHEN               3 7386338
 163 LINDA FEINERMAN          1 7380526
     MAX FEINERMAN            9 7380419
    *IDEAL CONSTR CO            7387113
  ..  ENDS WEST ROXBURY         ..
  ..  PARKWAY                   ..
     38 RESIDENCE           5 BUSINESS

     BELLIS CIR                CAMBRDG
.....................................
STARTS 111 SHERMAN ST
       ..................       02140
...          1-  END T 3546 $B..D 4
   6 WILLIAM I LEE III      3 3540988
  12                     NP
  13 MRS F FRAUMENI         3 5476169
     I L RONZIO             3 8646547
  15 WALTER J BLACK            8765911
  16 PAT LEONARDI              8765390
  17 DONALD BROYLES           ¤8765924
     J MICHAEL COUGHLIN1      3545683
  19 GERARD TROTTIER           8763167
  24 LAWRENCE DAGOSTINO        8646044
  27 PATK J HICKEY JR         ¤4913954
  29 DAVID KANTOR           3 8687677
  30                     NP
  31 BERNARD C HERLIHY         5470707
  32 R GRANNIS              0 3541664
     JOSEPH KLEIN            ¤4911025
  33 DONATO D PAPALEO          5476771
  37 CHARLES C CASARANO        8643135
     RALPH CASARANO            4910782
  39*HAPPY TIME               ¤8642640
    *NOVELTY ICE CREAM          8642640
  40 J M BOAK                 ¤5478069
     WILSON RAINS           1 8687683
  44 JOSEPH PAPALEO         7 3546926
  54 WM W LICHTENBERG       9 5475966
  56 A W LAHTI              7 4917647
    *POWER SYSTEMS INC          6610660
  ..  ENDS BLAIR PL             ..
     24 RESIDENCE           3 BUSINESS

     BELLOWS PL                CHRLSTN
.....................................
STARTS OFF CHAPPIE ST
  ..  NO LISTINGS               ..

     BELLVISTA RD              BRIGHTN
.....................................
ALLSTON ST STARTS 198
       ..BROOKLINE.......       02146
...          1-  ENC T       5 $C..H 3
   5 KENNETH BERNSTEIN      1 7318650
     DEBBIE BOWMAN          4 2775281
     WILLIAM M DILILLO      4 7314082
     ROBERT E LYING         3 2771537
     MARK PLOVNICK          1 2779619
     C URBAN                 -2773791
   6 SHARON M ANTHONY        -2778667
     C BARTHOLOMEW           ¤7318012
     ANDREW F BERNBAUM      8 2320732
     KIRK M KLASSON          ¤2320510
     JEANNE MACDONALD        ¤7385477
     P OSTROWSKI             ¤7318012
     M A WEINER             3 2778622
   8                     NP
  12 C BASSETT               ¤7340903
     S BONIFAS               ¤7340903
     S R LYDENBERG           -7315955
     L MONTMINY              ¤7340903
     DENNIS ROBINSON        4 7313598
     BENJAMIN SIMON         1 2325772
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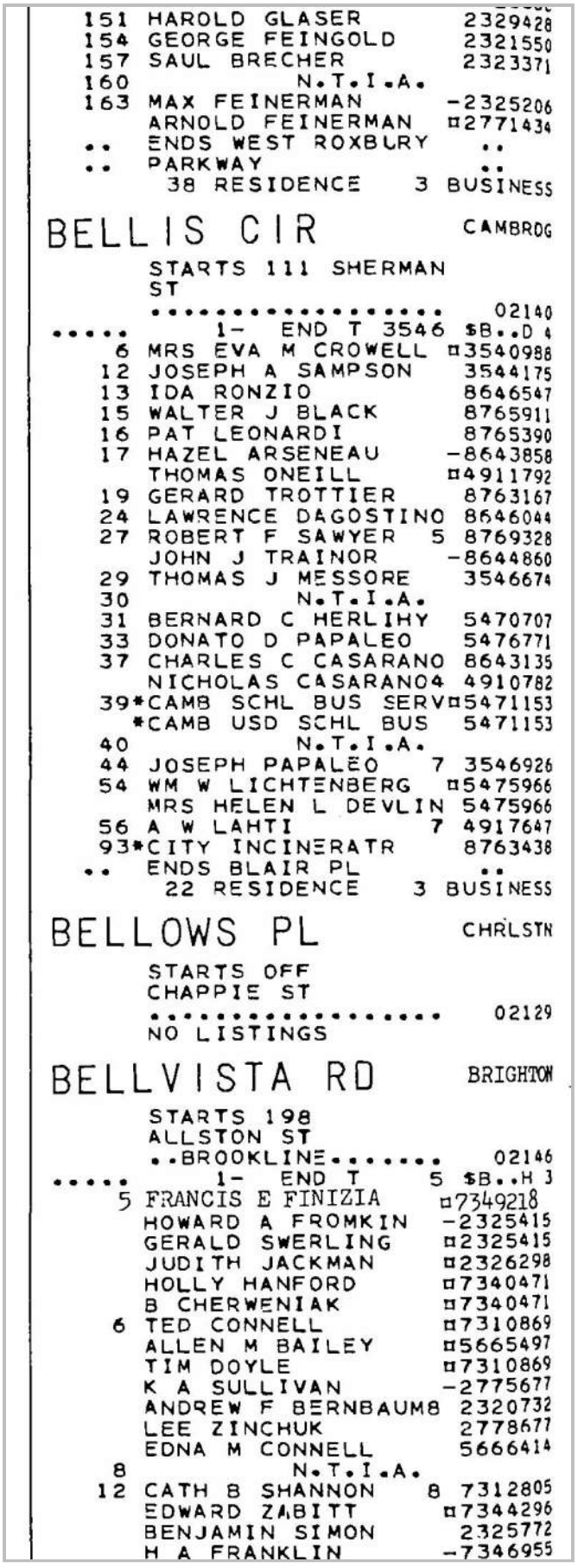
Target Street	Cross Street	Source
✓	-	Cole Criss-Cross Directory

BELLIS CIR 1970



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  151 HAROLD GLASER              2329428
  154 GEORGE FEINGOLD            2321550
  157 SAUL BRECHER               2323371
  160          N.T.I.A.
  163 MAX FEINERMAN             -2325206
      ARNOLD FEINERMAN          ¤2771434
   ..ENDS WEST ROXBURY            ..
   ..PARKWAY                      ..
      38 RESIDENCE    3 BUSINESS

BELLIS CIR                       CAMBRDG
      STARTS 111 SHERMAN
      ST
      ..................         02140
.....      1-  END T 3546 $B..D 4
    6 MRS EVA M CROWELL         ¤3540988
   12 JOSEPH A SAMPSON            3544175
   13 IDA RONZIO                  8646547
   15 WALTER J BLACK              8765911
   16 PAT LEONARDI                8765390
   17 HAZEL ARSENEAU             -8643858
      THOMAS ONEILL              ¤4911792
   19 GERARD TROTTIER             8763167
   24 LAWRENCE DAGOSTINO          8646044
   27 ROBERT F SAWYER   5         8769328
      JOHN J TRAINOR             -8644860
   29 THOMAS J MESSORE            3546674
   30          N.T.I.A.
   31 BERNARD C HERLIHY           5470707
   33 DONATO D PAPALEO            5476771
   37 CHARLES C CASARANO          8643135
      NICHOLAS CASARANO4          4910782
   39*CAMB SCHL BUS SERV¤5471153
     *CAMB USD SCHL BUS            5471153
   40          N.T.I.A.
   44 JOSEPH PAPALEO    7         3546926
   54 WM W LICHTENBERG           ¤5475966
      MRS HELEN L DEVLIN          5475966
   56 A W LAHTI         7         4917647
   93*CITY INCINERATR             8763438
   ..ENDS BLAIR PL                ..
      22 RESIDENCE    3 BUSINESS

BELLOWS PL                       CHRLSTN
      STARTS OFF
      CHAPPIE ST
      ..................         02129
      NO LISTINGS

BELLVISTA RD                     BRIGHTON
      STARTS 198
      ALLSTON ST
      ..BROOKLINE.......         02146
.....      1-  END T    5 $B..H 3
    5 FRANCIS E FINIZIA          ¤7349218
      HOWARD A FROMKIN           -2325415
      GERALD SWERLING            ¤2325415
      JUDITH JACKMAN             ¤2326298
      HOLLY HANFORD              ¤7340471
      B CHERWENIAK               ¤7340471
    6 TED CONNELL                ¤7310869
      ALLEN M BAILEY             ¤5665497
      TIM DOYLE                  ¤7310869
      K A SULLIVAN               -2775677
      ANDREW F BERNBAUM8          2320732
      LEE ZINCHUK                 2778677
      EDNA M CONNELL              5666414
    8          N.T.I.A.
   12 CATH B SHANNON    8         7312805
      EDWARD ZABITT              ¤7344296
      BENJAMIN SIMON              2325772
      H A FRANKLIN               -7346955
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Target Street	Cross Street	Source
✓	-	Price & Lee's City Directory

BELLIS CIR 1965

41 AVON HILL crosses
45 Gould Forest L TR6-5990
48 Welsh John H KI 7-4793

BELLIS CIR
Fr 117 Sherman W N and E in a semi-circle to 133 do (Irregularly numbered)

6 Crowell Robert EL4-0988
12© Sampson Joseph A EL4-4175
13© Ronzio Ida Mrs UN4-6547
Stottman Wallace S TR6-3542
15© Black Walter J TR6-5911
16© Leonardi Pasquale TR6-5390
17© Maguire Francis E KI 7-5617
19© Trottier Gerard TR6-3167
23© Cardoza Antone D
24© D'Agostino Lawrence J UN4-6044
27 Pitcher Frederick E 876-7021
© Sawyer Robert F TR6-9328
29© Messore Antonio EL4-6674
30© Filoso Marie Mrs UN4-9097
31 Herlihy Mary A Mrs KI 7-0707
32© Mosca Florence Mrs 876-5481
Burns Charles
33© Papaleo Antoinette Mrs KI 7-6771
37© Casarano Charles C UN4-3135
39 Cambridge Used School Bus Exchange KI 7-1153
40© Baia Rachel K Mrs
44© Papaleo Mary Mrs
54© Devlin Helen L Mrs KI 7-5966
56 Grayson Aram 864-2779

BELMONT
Fr 711 MtAuburn W to Watertown City line (Right odd)
— PATRICK F FEROLETO SQ

1 Griffin's Package Store liquor KI 7-8025
11 Chick's Barber Shop
13 Guido's Florida Cafe Inc
19 Honor Products Co visual education 864-6700
25 Electrolux Corp household appliance mfrs KI 7-8720
29 CUSHING ST begins
33 MtAuburn Pharmacy Inc KI 7-8878
American Cleaners cleaners and dyers
35 Crocetta Shoe Repair
37 Vacant
41 McCoy Christine M Mrs 547-2088
Malloy J F & Sons plumbers

Target Street	Cross Street	Source
✓	-	Price & Lee's City Directory

BELLIS CIR 1960

23 Anderson Karl B KI 7-3382
30 Kessler Frederick UN4-3228
32 Halpin Lee S EL4-2193
41 AVON HILL crosses
45 Gould Forest L TR6-5990
48 Welsh John H KI 7-4793

BELLIS CIR
Fr 117 Sherman W N and E in a semi-circle to 133 do (Irregularly numbered)

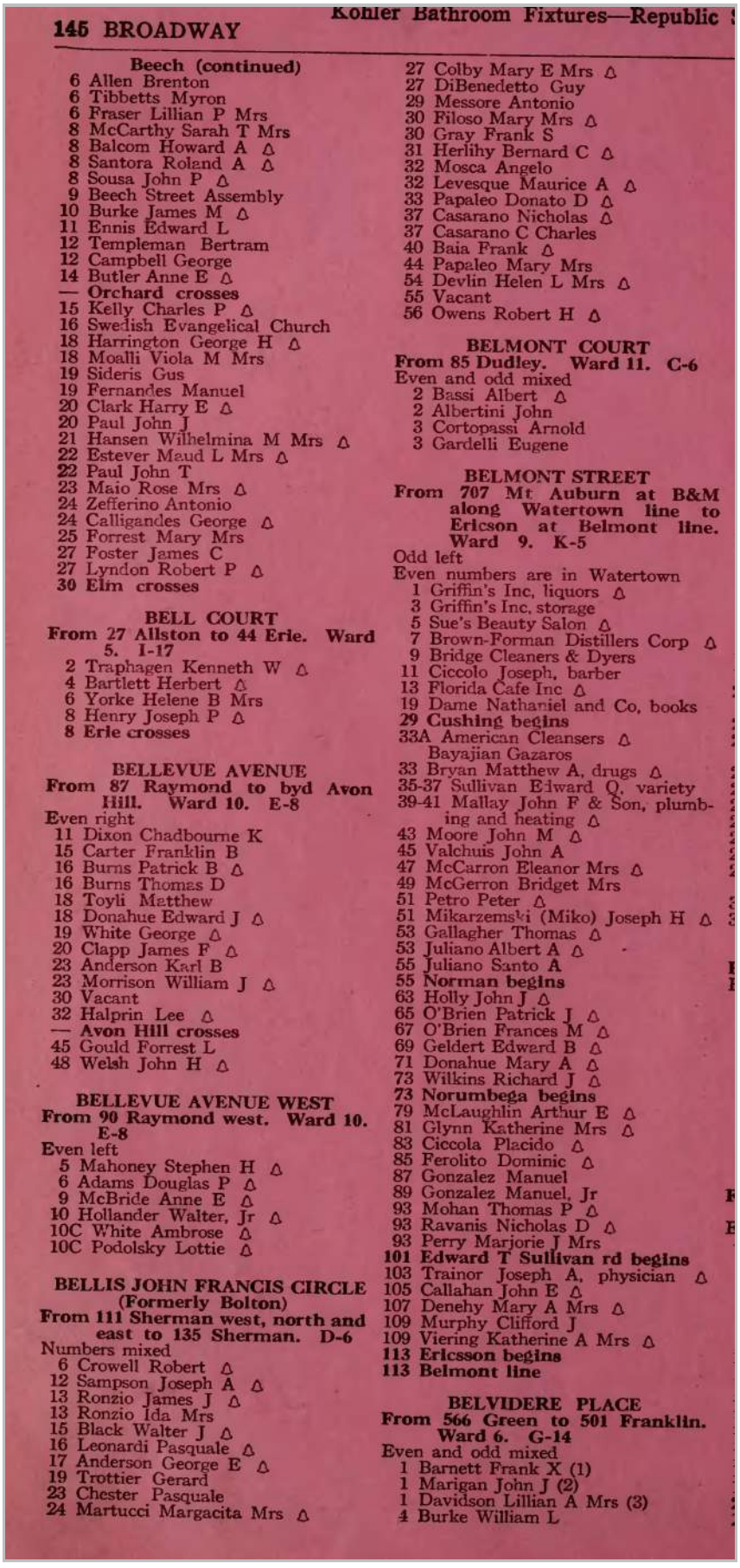
6©Kalimoski Anthony G EL4-0988
12©Sampson Joseph A EL4-4175
13©Ronzio Ida Mrs UN4-6547
Lundberg Carl E KI 7-4714
15©Black Walter J TR6-5911
16©Leonardi Pasquale TR6-5390
17©Maguire Francis E KI 7-5617
19©Trottier Gerard TR6-3167
23©Cardoza Antone D
24©D'Agostino Lawrence J UN4-6044
27 Mosher Wendall E EL4-1851
©Sawyer Robert F TR6-9328
29©Messore Antonio EL4-6674
30©Filoso Marie Mrs UN4-9097
31 Herlihy Bernard C KI 7-0707
32 Mosca Florence TR6-6859
Burns Charles
33©Papaleo Antoinette Mrs KI 7-6771
37©Casarano Nicholas KI 7-1144
Casarano Charles C UN4-3135
Cambridge Used School Bus Exchange KI 7-1153
40©Baia Rachel K Mrs
44©Papaleo Mary Mrs
54©Devlin Helen L Mrs KI 7-5966
56©Ward William M TR6-0914

BELMONT
Fr 711 MtAuburn W to Watertown City line (Right odd)

1 Griffin's Package Store liquor KI 7-8025
11 Chick's Barber Shop
13 Guido's Florida Cafe Inc
19 Vacant
25 Electrolux Corp household appliance mfrs KI 7-8720
29 CUSHING ST begins
33 MtAuburn Pharmacy Inc

Target Street	Cross Street	Source
✓	-	Manning's City Directory

BELLIS CIR 1954



Beech (continued)
6 Allen Brenton
6 Tibbetts Myron
6 Fraser Lillian P Mrs
8 McCarthy Sarah T Mrs
8 Balcom Howard A △
8 Santora Roland A △
8 Sousa John P △
9 Beech Street Assembly
10 Burke James M △
11 Ennis Edward L
12 Templeman Bertram
12 Campbell George
14 Butler Anne E △
— **Orchard crosses**
15 Kelly Charles P △
16 Swedish Evangelical Church
18 Harrington George H △
18 Moalli Viola M Mrs
19 Sideris Gus
19 Fernandes Manuel
20 Clark Harry E △
20 Paul John J
21 Hansen Wilhelmina M Mrs △
22 Estever Maud L Mrs △
22 Paul John T
23 Maio Rose Mrs △
24 Zefferino Antonio
24 Calligandes George △
25 Forrest Mary Mrs
27 Foster James C
27 Lyndon Robert P △
30 Elm crosses

BELL COURT
From 27 Allston to 44 Erie. Ward 5. I-17
2 Traphagen Kenneth W △
4 Bartlett Herbert △
6 Yorke Helene B Mrs
8 Henry Joseph P △
8 Erie crosses

BELLEVUE AVENUE
From 87 Raymond to byd Avon Hill. Ward 10. E-8
Even right
11 Dixon Chadbourne K
15 Carter Franklin B
16 Burns Patrick B △
16 Burns Thomas D
18 Toyli Matthew
18 Donahue Edward J △
19 White George △
20 Clapp James F △
23 Anderson Karl B
23 Morrison William J △
30 Vacant
32 Halprin Lee △
— **Avon Hill crosses**
45 Gould Forrest L
48 Welsh John H △

BELLEVUE AVENUE WEST
From 90 Raymond west. Ward 10. E-8
Even left
5 Mahoney Stephen H △
6 Adams Douglas P △
9 McBride Anne E △
10 Hollander Walter, Jr △
10C White Ambrose △
10C Podolsky Lottie △

BELLIS JOHN FRANCIS CIRCLE
(Formerly Bolton)
From 111 Sherman west, north and east to 135 Sherman. D-6
Numbers mixed
6 Crowell Robert △
12 Sampson Joseph A △
13 Ronzio James J △
13 Ronzio Ida Mrs
15 Black Walter J △
16 Leonardi Pasquale △
17 Anderson George E △
19 Trottier Gerard
23 Chester Pasquale
24 Martucci Margacita Mrs △
27 Colby Mary E Mrs △
27 DiBenedetto Guy
29 Messore Antonio
30 Filoso Mary Mrs △
30 Gray Frank S
31 Herlihy Bernard C △
32 Mosca Angelo
32 Levesque Maurice A △
33 Papaleo Donato D △
37 Casarano Nicholas △
37 Casarano C Charles
40 Baia Frank △
44 Papaleo Mary Mrs
54 Devlin Helen L Mrs △
55 Vacant
56 Owens Robert H △

BELMONT COURT
From 85 Dudley. Ward 11. C-6
Even and odd mixed
2 Bassi Albert △
2 Albertini John
3 Cortopassi Arnold
3 Gardelli Eugene

BELMONT STREET
From 707 Mt Auburn at B&M along Watertown line to Ericson at Belmont line. Ward 9. K-5
Odd left
Even numbers are in Watertown
1 Griffin's Inc, liquors △
3 Griffin's Inc, storage
5 Sue's Beauty Salon △
7 Brown-Forman Distillers Corp △
9 Bridge Cleaners & Dyers
11 Ciccolo Joseph, barber
13 Florida Cafe Inc △
19 Dame Nathaniel and Co, books
29 Cushing begins
33A American Cleansers △
Bayajian Gazaros
33 Bryan Matthew A, drugs △
35-37 Sullivan Edward Q, variety
39-41 Mallay John F & Son, plumbing and heating △
43 Moore John M △
45 Valchuis John A
47 McCarron Eleanor Mrs △
49 McGerron Bridget Mrs
51 Petro Peter △
51 Mikarzemski (Miko) Joseph H △
53 Gallagher Thomas △
53 Juliano Albert A △
55 Juliano Santo A
55 Norman begins
63 Holly John J △
65 O'Brien Patrick J △
67 O'Brien Frances M △
69 Geldert Edward B △
71 Donahue Mary A △
73 Wilkins Richard J △
73 Norumbega begins
79 McLaughlin Arthur E △
81 Glynn Katherine Mrs △
83 Ciccola Placido △
85 Ferolito Dominic △
87 Gonzalez Manuel
89 Gonzalez Manuel, Jr
93 Mohan Thomas P △
93 Ravanis Nicholas D △
93 Perry Marjorie J Mrs
101 Edward T Sullivan rd begins
103 Trainor Joseph A, physician △
105 Callahan John E △
107 Denehy Mary A Mrs △
109 Murphy Clifford J
109 Viering Katherine A Mrs △
113 Ericsson begins
113 Belmont line

BELVIDERE PLACE
From 566 Green to 501 Franklin. Ward 6. G-14
Even and odd mixed
1 Barnett Frank X (1)
1 Marigan John J (2)
1 Davidson Lillian A Mrs (3)
4 Burke William L

Target Street	Cross Street	Source
✓	-	Manning's City Directory

BELLIS CIR 1944

Blanche (continued)
6 Arigo Grace Mrs
10 Gallant John M
10A Myottie Vernie Mrs
10B Curtis William J
21 Ober Simeon B
23 Belord Louis J, Jr
23 Green crosses
36 Smith Mabel E
38 Collett William B
40 Robinson Charles C
46 Brown Harold W
46 Walcott Cleveland
46 rear Neblett Martha A Mrs
51 Dick's Radiator Shop
52 Cox Samuel W
52 Thomas Willie J
53 Adams Asphalt Co Δ
55 Stathopoulos Peter
55 Sullivan Daniel F
56 Wheeler Curtis E
57 Souhlaris Jennie Mrs
58 Miller Allen C Δ
68 Franklin crosses
68 Rigby George W, Jr
68 Miller George A
75 General Boiler & Iron Works Δ
77 New England Carbide Tool Co, drop forge plant
80 Auburn crosses

BOARDMAN PLACE
From 9 Boardman east. Ward 2
1 Donovan Dennis
2 Bevis Walter E
3 Sarkisian Paul
4 Lecher Milton

BOARDMAN STREET
From 183 Harvard to 254 Bway. Ward 2
Even left
9 Lucey Jeremiah J, Jr
9 Griggs Edwin M
9 Carbone Anthony J
9 Boardman pl begins
11 Cammarata Joseph
11 Gedzium Michael J
10-12 Squirrel Brand Co, confs Δ
15 Kavolis Clinde
15 Hamilton Harold F
17 Carlo Daniel
17 Adams Adeline
23 Grimcel Felix
23 Bway crosses

BOLTON STREET
From 111 Sherman westf north and east across Sherman at 135. Ward 10
Even left
6 Bacon Arthur
12 Sampson Joseph A
13 Nolette Edward J
13 Ronzio Vincent J Δ
15 White Harold T
16 Doiron Alderic P
17 Leone Antonio
17 Beaudoin Joseph W
19 Longo Antonio
23 Chester Pasquale
24 Martucci George Δ
27 Colby Charles E Δ
27 Bellis Frank C
29 Messore Antonio
29 DePrimo Domenica Mrs
30 Filoso Andrew
31 Papaleo Antonio
32 Mosca Angelo
32 Levesque Maurice A Δ
33 Papaleo Donato Δ
37 Casarano Nicholas
37 Casarano Anthony
40 Vacant
44 Papaleo Mary Mrs
54 Devlin John J Δ
55 Diamond Coal Co Δ
56 Owens Sarah B Mrs Δ
— Sherman crosses
68 Cobuzzi Concetta Mrs Δ
68 Blair pl begins
69 DeLeo Joseph Δ
73 Slowey Bridget A Δ
74 Dunn Richard
76 LaChance Ernest L Δ
78 Heffernan Christopher T
79 Kelley Martin J
80 Hanson Arthur F
93 Cambridge Incinerator

BOND STREET
From 47 Concord av to 58 Garden. Wards 8-10
Even left
2 Newhauser Edward Δ
4 Ridderwold James T Δ
Sanger Richard Mrs
46 Kershaw Justine F Mrs Δ

BOW STREET
From 1222 Mass av to 59 Mt Auburn. Ward 7
Even left
2 Reynolds Thomas L Δ
3 Bicycle Exchange Inc The Δ
8 Prouty Daniel G Δ
9 Vacant
Landgraf John L (1) Δ
12 Kelley DeWitt (2) Δ
12 Drew Virginia (3) Δ
12 Burr Anna M (4) Δ
12 Arrow ends
13 Cogan James V Δ
13 Westermorly Court, dorm Δ
14 St Paul R C Church
30 Tutin William L, second hand books
39 Adams House Δ
— Plympton crosses
40 Harvard Advocate Δ
44 Harvard Lampoon Δ
45 Randolph Hall, H U Δ
45 McConnell Archie C
— Mt Auburn crosses

BOWDOIN STREET
From 9 Hudson to 22 Linnaean. Ward 8
Even right
10 Dubuc Delmar R Mrs Δ
10 Griffin Donald R Δ
10 Smith Edna G
10 Gilman F Albert
10 Tierney George F
10 Vacant
14 Kelty Henry M
16 Johnston Jeanie Mrs
18 Squires S Lincoln
19 Graustein William A Δ
21 Boring Edwin G Δ
— Martin crosses
24 Gaffey Edith Mrs
29 Bishop Axel A
29 Harmel Richard P Δ
30 Reid Robert
31 Winslow Edwards F
32 Starck Taylor Δ
33 Buddington Robert A
33 Eppes James D
35 Norcross Josiah C Δ
36 Zaploski Frank H Δ
38 Munsell Florence A Mrs Δ
40 Howes Edwin A
41 Bowdoin Court Apts
Joy DeLoss C (1) Δ
Markovsky Peter (1A)
Littlefield Henry C Mrs (2)
Hurley Alice (3)
Stephenson E (4)
Gillis Mary (5) Δ
Harlow Frank E, Jr (6) Δ
Boyd Constance D (7)
Rogers Elinor R (8)
Hoeffel Kenneth (21)

Target Street	Cross Street	Source
✓	-	Manning's City Directory

BELLIS CIR 1910

BLAIR PL OPP 73 BOLTON
2 John S Lane
2 Bridget A Dempsey
6 Ed F McGuinness
7 Peter J Lane

BLAKE 2033 MASS AV
1 Mrs Catherine M Bell
1 Charles F Hayden
5 George E Muzzey
7 Francis H Miles
15 Lewis E Merrill
21 O Elliot Smith
22 Benjamin B Carley
27 Frederick S Brine
28 Noel A Carter
29 James F Pennell
32 Mrs Annie C Dodge

BLANCHE 334 MASS AV
2 John Marshall
2 Daniel McDougall
4 John Synnott
4 Sidney Conder
4 Joseph Mullen
5 Francis A Donovan
6 John J Kinniery
8 William P Tivnan
10 Walter H Chapman
10 John D Clements
12 Louis Reynolds Jr
12 Lewis Young
13 Carl E Ericson
14 Donald W Allison
16 Latruber Garner
16 Sidney Rogers
16r Aubrey E Rose
18 Wm M Harris
18r Wm H Kenney
20 Albert K Dismanke
22 Jacob White
24 Joseph Banks
24 Joseph S Coutee
24½ Wm Anderson
55 John R Bonner
55 John H Drummond

BOARDMAN 256 BROADWAY
9 Walter Rue
9 Thos M Gill
9 Alfred Gustafson
11 Lena Christenson
17 Elizabeth Sullivan
17 John J Sullivan
23 George A Parmenter

BOARDMAN PL 17 BOARDMAN
1 Charles F Doyle
2 Catherine Hewes
3 Archibald H Gay
4 Adelbert McCurda

BOLTON 111 SHERMAN
6 Francis Roper
12 Jos T Vocell
13 Henry Leger
15 Jos L Goodwin
16 Edwin Vallieve
17 Mrs S Keenan
19 James Keefe
23 Bruno Durant
23 Patrick Gaudet
27 Charles E Colby
27 John F Tracy
29 F L Campbell
29 A J Boudreau
29r Mrs Margaret Mulqueeny
30 Stephen Torre
31 Thomas F Doyle
32 Ernest T Vocell
33 Thomas Nadeau
37 Cornelius Mahoney
39 Frederick J Kelly
40 Mary Phelan
44 Jeremiah M Long
54 Mrs Annie Devlin
54 Mrs Patrick Finneran
56 Misses Hayes
56 John J Sullivan
63 Joseph Frappier
68 George H Othote
69 Misses Collins
73 Mrs Ann Slowey
78 Mrs A Munyon
79 Misses Mead
80 Charles P Monahan

BOND 47 CONCORD AV
2 Margaret A Flatley
6 F S Kershaw

BOW 1222 MASS AV
25 John Richards
25 Frederick R Foster
39 Abram P Andrew
45 John J Ferguson
45 Wm L Wilshire

BOWDOIN HUDSON
14 Zebah Hayden
16 Michael S Decker
18 J Watson Hayden
19 William A Graustein
21 Mrs Hannah E Tracy
24 James W Emery
30 Edw H Downing
31 Chas F Green
32 Mrs Susan E Bowker
35 Austin B Tobey
36 Edwin S Crandon
38 Eva H Norcross
41 George L Winlock
42 Mrs Edith L Wilson
44 Fred W Paine

BOYLSTON 1300 MASS AV
40 Joseph Grovestein
50a Samuel J Clifford
50a Charles E Arkell
50a Mrs Hanah Barry
50a Patrick J Morgan
52 Albert S Benson
52 John Wright
54 Alex Quigley
54 Andrew G Smith
54 Henry Young
56 D F Corcoran
56 Theodore B Lewis
56 Bertha Kaatz
56 W A Critchell
56 Mrs Mary Splaine
56 Mrs M H Doyle
59 James Bracken

Target Street	Cross Street	Source
✓	-	Manning's City Directory

BELLIS CIR 1906

Blanche—con
14 Donald W Allison shipper
13 Mrs Rebecca McKenzie
12 Mrs Martha De Grove
12 Mrs Cora A Reynolds
10r Edward Bourdeau lab
10r Oscar O Mortonson mach
10 W H Chapman
8 Isaac W Morse
7 Benj MacIntosh lab
6 Eugene F Gilbert lab
5 Fredk L Donavan driver
4 Alfred E Goldsmith bkpr
4 L E Johns
4 Sidney Conder

BOARDMAN 183 HARVARD
23 Geo A Parmenter inventor
17 John J Sullivan police
17 Cornelius F Sullivan electrician
13 Andrew A Olsen carp
11 Mrs Lena Christenson
9 Hans Slade life saver
9 Geo B Hewes rubber cutter
9 Mrs Elizabeth G Mason

BOARDMAN PLACE 9 and 13 BOARDMAN
4 Adelbert McCurda box fitter
3 Arch H Gay sail mkr
2 Thomas B Jordan brass finisher
1 Charles F Doyle carp

BOLTON 111 SHERMAN
80 Mrs Annie Munyon
79 Misses Mead candy pkrs
78 Edwd Kelley brass fin
73 Mrs Ann Slowley
69 Ellen Collins
68 Geo H Othote motorman
63 Chas E Bellehmer lab
56 John J Sullivan towerman
56 Misses Hayes
54 Mrs Annie Devlin variety
45 Arthur Fournier lab
44 Arthur W Cary clerk
40 Jere J Phelan switchman
39 William Byrnes coffee roaster
37 Corn Mahoney painter
33 Mrs Minnie Pickett
32 Ernest T Vocell student
31 Thos F Doyle city teamster
30 Fred T S Simpson mach
29r Mrs Mary Mulqueeny
29 Wm King painter
27 Chas E Colby clerk
23 Chas Monahan driver
19 James Keefe lab
17 Louis G Cote express
16 Thos Daniels lab
15 Wm Brenner car inspec
13 Henry Leger mason
12 Jos T Vocell ice cream
6 Francis Roper rope mkr

BOND. 41 CONCORD AV
6 Francis S Kershaw teacher
2 Margaret Flatley

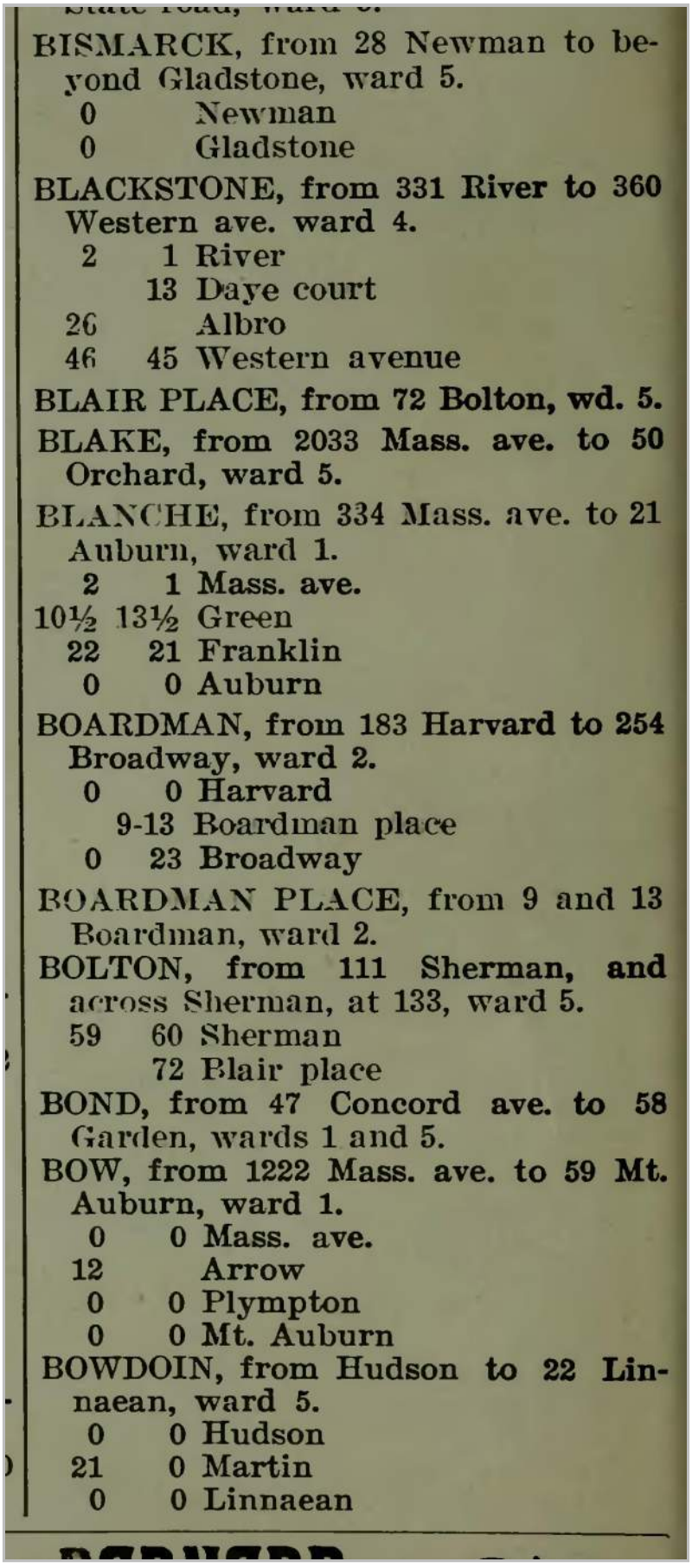
BOW 1222 MASS AV
45 William Wilshere jan
39 James Burns janitor
25 Edwin Skinner janitor
12 Charles Gaskin barber
12 John J Ferguson painter
9 Julia M Mullen lodgings
7 Maurice P Toohy shoemaker

BOWDOIN HUDSON
44 Fred W Paine
42 Chas H Shute
41 Geo L Winlock freight agent
38 Mrs Zelpha H Norcross
36 Edwin S Crandon Boston Transcript
35 Austin B Tobey
62 Arthur L Bowker auditor
30 Edw H Downing
29 Leslie D Pusher brushes
29 Mrs Milora A Sackrider
24 Dr Edwin C Hixon
21 Mich F Tracy
19 Wm A Granstein milk
18 Horatio W Dresser author
16 Michl S Decker carp
14 Zebah Hayden carp

BOYLSTON 1390 MASS AV
79r Alfred Gunn
79r James Brackett lab
68 Robert Archibald eng
66 Mich J Hanlon action maker
63 Julia Galvin boarders
60 Wm H Daly boiler mkr
59 Mrs Esther McLean
59 Catharine Bannon
56 Mrs Mary Splaine
56 Warren W Scott elec
56 Mrs Emily S Row
56 Alfred L Cutler steward
56 Tim Corcoran police
56 David F Corcoran undertaker
54 Mrs Nellie Tippett lunch
54 Andrew G Smith printer
54 Alexander Quigley jan
54 Mrs Hannah Barry
52 John Wright fireman
52 Michael Whalen mason
52 Albert S Benson driver C F D
50a Mrs A M Tubbs employment office
50a Samuel J Clifford sales

Target Street	Cross Street	Source
✓	-	Manning's City Directory

BELLIS CIR 1901



BISMARCK, from 28 Newman to beyond Gladstone, ward 5.
0 Newman
0 Gladstone

BLACKSTONE, from 331 River to 360 Western ave. ward 4.
2 1 River
13 Daye court
26 Albro
46 45 Western avenue

BLAIR PLACE, from 72 Bolton, wd. 5.

BLAKE, from 2033 Mass. ave. to 50 Orchard, ward 5.

BLANCHE, from 334 Mass. ave. to 21 Auburn, ward 1.
2 1 Mass. ave.
10½ 13½ Green
22 21 Franklin
0 0 Auburn

BOARDMAN, from 183 Harvard to 254 Broadway, ward 2.
0 0 Harvard
9-13 Boardman place
0 23 Broadway

BOARDMAN PLACE, from 9 and 13 Boardman, ward 2.

BOLTON, from 111 Sherman, and across Sherman, at 133, ward 5.
59 60 Sherman
72 Blair place

BOND, from 47 Concord ave. to 58 Garden, wards 1 and 5.

BOW, from 1222 Mass. ave. to 59 Mt. Auburn, ward 1.
0 0 Mass. ave.
12 Arrow
0 0 Plympton
0 0 Mt. Auburn

BOWDOIN, from Hudson to 22 Linnaean, ward 5.
0 0 Hudson
21 0 Martin
0 0 Linnaean

10 11 Green
22 21 Franklin
0 0 Auburn

BLIGHT COURT, from Washington, near Clark

BOARDMAN, from 183 Harvard to 254 Broadway, ward 2

0 0 Harvard
13 Boardman place
24 23 Broadway

BOARDMAN PLACE, from 13 Boardman, ward 2

BOLTON, from 111 Dublin, and across Dublin at 131, to the railroad. ward 5

BOND, from 47 Concord ave. to 58 Garden, ward 1

BOW, from 1222 Mass. avenue to 59 Mt. Auburn, ward 1

0 0 Mass. avenue
12 Arrow
0 0 Plympton
0 0 Mt. Auburn

BOWDOIN from Hudson to 22

APPENDIX B
SOIL BORING LOGS

DRILLING METHOD/SAMPLER TYPE GRAPHICS

STANDARD PENETRATION SPLIT SPOON SAMPLER (2 in. (50.8 mm.) outer diameter and 1-3/8 in. (34.9 mm.) inner diameter)

VacTruck

GROUND WATER GRAPHICS

- WATER LEVEL (level where first observed)
- WATER LEVEL (level after stabilizing period)
- WATER LEVEL (additional levels after exploration)
- OBSERVED SEEPAGE

NOTES

- The report and graphics key are an integral part of these logs. All data and interpretations in this log are subject to the explanations and limitations stated in the report.
- Solid lines separating strata on the logs represent approximate boundaries only, dashed lines are inferred or extrapolated boundaries. Actual transitions may be gradual or differ from those represented.
- No warranty is provided as to the continuity of soil or rock conditions between individual sample locations.
- Logs represent general soil or rock conditions observed at the point of exploration on the date indicated.
- In general, Unified Soil Classification System (ASTM D2488/D2487) designations presented on the logs were based on visual classification in the field and were modified where appropriate based on gradation and index property testing.
- Fine grained soils that plot within the hatched area on the Plasticity Chart, and coarse grained soils with between 5% and 12% passing the No. 200 sieve require dual USCS symbols, ie., CL-ML, GW-GM, GP-GM, GW-GC, GP-GC, GC-GM, SW-SM, SP-SM, SW-SC, SP-SC, SC-SM.
- If sampler is not able to be driven at least 6 inches then 50/X indicates number of blows required to drive the identified sampler X inches with a 140 pound hammer falling 30 inches.

ABBREVIATIONS

WOH - Weight of Hammer
WOR - Weight of Rod

REFERENCES

1. American Society for Testing and Materials (ASTM), 2011, ASTM D2487: Classification of Soils for Engineering Purposes (Unified Soil Classification System).

UNIFIED SOIL CLASSIFICATION SYSTEM[1]

COARSE GRAINED SOILS (More than 50% retained on No. 200 Sieve)	**GRAVELS** (More than 50% of coarse fraction retained on No. 4 Sieve)	CLEAN GRAVEL WITH <5% FINES	**GW**	WELL-GRADED GRAVEL, WELL-GRADED GRAVEL WITH SAND
			GP	POORLY GRADED GRAVEL, POORLY GRADED GRAVEL WITH SAND
		GRAVELS WITH 5% TO 12% FINES	**GW-GM**	WELL-GRADED GRAVEL WITH SILT, WELL-GRADED GRAVEL WITH SILT AND SAND
			GW-GC	WELL-GRADED GRAVEL WITH CLAY (OR SILTY CLAY), WELL-GRADED GRAVEL WITH CLAY AND SAND (OR SILT CLAY AND SAND)
			GP-GM	POORLY GRADED GRAVEL WITH SILT, POORLY GRADED GRAVEL WITH SILT AND SAND
			GP-GC	POORLY GRADED GRAVEL WITH CLAY (OR SILTY CLAY), POORLY GRADED GRAVEL WITH CLAY AND (OR SILTY CLAY AND SAND)
		GRAVELS WITH > 12% FINES	**GM**	SILTY GRAVEL, SILTY GRAVEL WITH SAND
			GC	CLAYEY GRAVEL, CLAYEY GRAVEL WITH SAND
			GC-GM	SILTY, CLAYEY GRAVEL SILTY, CLAYEY GRAVEL WITH SAND
	SANDS (50% or more of coarse fraction passes the No. 4 Sieve)	CLEAN SANDS WITH <5% FINES	**SW**	WELL-GRADED SAND, WELL-GRADED SAND WITH GRAVEL
			SP	POORLY GRADED SAND, POORLY GRADED SAND WITH GRAVEL
		SANDS WITH 5% TO 12% FINES	**SW-SM**	WELL-GRADED SAND WITH SILT, WELL-GRADED SAND WITH SILT AND GRAVEL
			SW-SC	WELL-GRADED SAND WITH CLAY (OR SILTY CLAY), WELL-GRADED SAND WITH CLAY AND GRAVEL (OR SILTY CLAY AND GRAVEL)
			SP-SM	POORLY GRADED SAND WITH SILT, POORLY GRADED SAND WITH SILT AND GRAVEL
			SP-SC	POORLY GRADED SAND WITH CLAY, POORLY GRADED SAND WITH CLAY AND GRAVEL (OR SILTY CLAY AND GRAVEL)
		SANDS WITH > 12% FINES	**SM**	SILTY SAND, SILTY SAND WITH GRAVEL
			SC	CLAYEY SAND, CLAYEY SAND WITH GRAVEL
			SC-SM	SILTY, CLAYEY SAND, SILTY, CLAYEY SAND WITH GRAVEL
FINE GRAINED SOILS (50% or more passes the No. #200 sieve)	SILTS AND CLAYS (Liquid Limit less than 50)		**ML**	SILT, SILT WITH SAND, SILT WITH GRAVEL
			CL	LEAN CLAY, LEAN CLAY WITH SAND, LEAN CLAY WITH GRAVEL
			CL-ML	SILTY CLAY, SILTY CLAY WITH SAND, SILTY CLAY WITH GRAVEL
			OL	ORGANIC CLAY, ORGANIC CLAY WITH SAND, ORGANIC CLAY WITH GRAVEL, ORGANIC SILT, ORGANIC SILT WITH SAND, ORGANIC SILT WITH GRAVEL
	SILTS AND CLAYS (Liquid Limit 50 or greater)		**MH**	ELASTIC SILT. ELASTIC SILT WITH SAND, ELASTIC SILT WITH GRAVEL
			CH	FAT CLAY, FAT CLAY WITH SAND, FAT CLAY WITH GRAVEL
			OH	ORGANIC CLAY, ORGANIC CLAY WITH SAND, ORGANIC CLAY WITH GRAVEL, ORGANIC SILT, ORGANIC SILT WITH SAND, ORGANIC SILT WITH GRAVEL

NOTE: USE MATERIAL DESCRIPTION ON THE LOG TO DEFINE A GRAPHIC THAT MAY NOT BE PROVIDED ON THIS LEGEND.

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PROJECT NO.: 20231168.006A
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GRAPHICS KEY

Concept Design Phase - DPW Facility/Tank
41 Bellis Circle
Cambridge, MA

GRAIN SIZE[1]

DESCRIPTION		SIEVE SIZE	GRAIN SIZE
Boulders		>12 in.	>12 in. (304.8 mm.)
Cobbles		3 - 12 in.	3 - 12 in. (76.2 - 304.8 mm.)
Gravel	coarse	3/4 -3 in.	3/4 -3 in. (19 - 76.2 mm.)
	fine	#4 - 3/4 in.	0.19 - 0.75 in. (4.8 - 19 mm.)
Sand	coarse	#10 - #4	0.079 - 0.19 in. (2 - 4.9 mm.)
	medium	#40 - #10	0.017 - 0.079 in. (0.43 - 2 mm.)
	fine	#200 - #40	0.0029 - 0.017 in. (0.07 - 0.43 mm.)
Fines		Passing #200	<0.0029 in. (<0.07 mm.)

SECONDARY CONSTITUENT[1]

Term of Use	AMOUNT	
	Secondary Constituent is Fine Grained	Secondary Constituent is Coarse Grained
Trace	<5%	<15%
With	≥5 to <15%	≥15 to <30%
Modifier	≥15%	≥30%

PLASTICITY[1]

DESCRIPTION	CRITERIA
Non-Plastic	A 1/8 in. (3 mm) thread cannot be rolled at any water content.
Low	The thread can barely be rolled and the lump cannot be formed when drier than the plastic limit.
Medium	The thread is easy to roll and not much time is required to reach the plastic limit. The thread cannot be rerolled after reaching the plastic limit. The lump crumbles when drier than the plastic limit.
High	It takes considerable time rolling and kneading to reach the plastic limit. The thread can be rerolled several times after reaching the plastic limit. The lump can be formed without crumbling when drier than the plastic limit.

MOISTURE CONTENT[1]

DESCRIPTION	FIELD TEST
Dry	Absence of moisture, dusty, dry to the touch
Moist	Damp but no visible water
Wet	Visible free water, usually soil is below water table

CONSISTENCY - FINE-GRAINED SOIL[2, 3]

CONSISTENCY	SPT - N (# blows / ft)	Pocket Pen (tsf)	UNCONFINED COMPRESSIVE STRENGTH (Q_u)(psf)	VISUAL / MANUAL CRITERIA
Very Soft	<2	PP < 0.25	<500	Easily penetrated several inches by fist
Soft	2 - 4	0.25 ≤ PP <0.5	500 - 1,000	Easily penetrated several inches by thumb
Medium Stiff	4 - 8	0.5 ≤ PP <1	1,000 - 2,000	Can be penetrated several inches by thumb with moderate effort
Stiff	8 - 15	1 ≤ PP <2	2,000 - 4,000	Readily indented by thumb but penetrated only with great effort
Very Stiff	15 - 30	2 ≤ PP <4	4,000 - 8,000	Readily indented by thumbnail
Hard	>30	4 ≤ PP	>8,000	Indented by thumbnail with difficulty

APPARENT DENSITY - COARSE-GRAINED SOIL[2]

APPARENT DENSITY	SPT-N (# blows / ft)
Very Loose	<4
Loose	4 - 10
Medium Dense	10 - 30
Dense	30 - 50
Very Dense	>50

STRUCTURE[1]

DESCRIPTION	CRITERIA
Stratified	Alternating layers of varying material or color with layers at least 1/4-in. (6mm) thick, note thickness.
Laminated	Alternating layers of varying material or color with the layers less than 1/4-in. (6 mm) thick, note thickness.
Fissured	Breaks along definite planes of fracture with little resistance to fracturing.
Slickensided	Fracture planes appear polished or glossy, sometimes striated.
Blocky	Cohesive soil that can be broken down into small angular lumps which resist further breakdown.
Lensed	Inclusion of small pockets of different soils, such as small lenses of sand scattered through a mass of clay; note thickness.
Homogeneous	Same color and appearance throughout

ANGULARITY[1]

DESCRIPTION	CRITERIA
Angular	Particles have sharp edges and relatively plane sides with unpolished surfaces.
Subangular	Particles are similar to angular description but have rounded edges.
Subrounded	Particles have nearly plane sides but have well-rounded corners and edges.
Rounded	Particles have smoothly curved sides and no edges.

REACTION WITH HYDROCHLORIC ACID[1]

DESCRIPTION	FIELD TEST
None	No visible reaction
Weak	Some reaction, with bubbles forming slowly
Strong	Violent reaction, with bubbles forming immediately

CEMENTATION[1]

DESCRIPTION	FIELD TEST
Weakly	Crumbles or breaks with handling or little finger pressure
Moderately	Crumbles or breaks with considerable finger pressure
Strongly	Will not crumble or break with finger pressure

REFERENCES

1. American Society for Materials and Testing (ASTM), 2017, ASTM D2488: Standard Practice for Description and Identification of Soils (Visual Manual Procedures).
2. Terzaghi, K and Peck, R., 1948, Soil Mechanics in Engineering Practice, John Wiley & Sons, New York.
3. United States Department of the Interior Bureau of Reclamation (USBR), 1998, Earth Manual, Part I.

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SOIL DESCRIPTION KEY
(For additional tables, see ASTM D2488)

Concept Design Phase - DPW Facility/Tank
41 Bellis Circle
Cambridge, MA

BORING LOG KLF-1

Date Begin - End:	4/07/2025 - 4/08/2025	**Drilling Company:**	Soil X Corp.		
Logged By:	A. Darajat	**Drill Crew:**	C. Targ		
Hor.-Vert. Datum:	NAD83 - NGVD29	**Drilling Equipment:**	B29 Mobile	**Hammer Type - Drop:**	140 lb. Auto - 30 in.
Plunge:	-90 degrees	**Drilling Method:**	HSA and Drive and Wash		
Weather:	Rainy 30-40s	**Exploration Diameter:**	4 and 3 in. I.D.		

Latitude: 42.39073°
Longitude: -71.13404°
Ground Surface Elevation (ft.): 13.00
Surface Condition: Asphalt

Elevation (feet) / Depth (feet)	Graphical Log	Lithologic Description	Sample Number	Sample Type	Blow Counts(BC)= Uncorr. Blows/6 in. / Pocket Pen(PP)= tsf / Torvane(TV)= tsf	Recovery (NR=No Recovery)	USCS Symbol	Water Content (%)	Dry Unit Wt. (pcf)	Passing #4 (%)	Passing #200 (%)	Liquid Limit	Plasticity Index (NP=NonPlastic)	Additional Tests/ Remarks
13.0 / 0		Asphalt 2.5 Inches	G-1				SP-SM							PID 0.0
12.8 / 0.2		**FILL**												
12.0 / 1		**Poorly Graded SAND with Silt and Gravel (SP-SM)**: fine to coarse sand, brown, moist	G-2				SP							PID: 0.1
11.0 / 2		**Poorly Graded SAND (SP)**: fine to coarse sand, black, moist, trace bricks and roots	G-3				SM							PID: 0.1
10		**Silty SAND (SM)**: fine to medium sand, light brown, moist	G-4											PID: 0.1
			G-5											PID: 0.1
5		becomes wet	G-6											PID: 0.1
7.0 / 6		**SILT with Sand (ML)**: light brown, wet, stiff	S-1		BC=5 6 9 10	16"	ML			100	77			PID: 0.0
5			S-2		BC=10 7 7 9	22"								PID: 0.0
10														
3.0 / 10		**Lean CLAY (CL)**: gray, wet, stiff	S-3		BC=8 7 6 6 PP=1.25	24"	CL	26.4				34	14	PID: 0.0
0														
-1.0 / 14		**Sandy CLAY (CL)**: gray, wet, medium stiff	S-4		BC=10 4 2 4 PP=0.5	18"	CL							PID: 0.1
15														
-5														
			S-5		BC=3 3 3 3 PP=0.5	22"								PID: 0.3
20														
-10														
-11.0 / 24		**Lean CLAY (CL)**: gray, wet, medium stiff	S-6		BC=3 3	24"								PID: 0.0

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BORING LOG KLF-1

Concept Design Phase - DPW Facility/Tank
41 Bellis Circle
Cambridge, MA

BORING LOG KLF-1

Date Begin - End:	4/07/2025 - 4/08/2025	**Drilling Company:**	Soil X Corp.		
Logged By:	A. Darajat	**Drill Crew:**	C. Targ		
Hor.-Vert. Datum:	NAD83 - NGVD29	**Drilling Equipment:**	B29 Mobile	**Hammer Type - Drop:**	140 lb. Auto - 30 in.
Plunge:	-90 degrees	**Drilling Method:**	HSA and Drive and Wash		
Weather:	Rainy 30-40s	**Exploration Diameter:**	4 and 3 in. I.D.		

FIELD EXPLORATION

Latitude: 42.39073°
Longitude: -71.13404°
Ground Surface Elevation (ft.): 13.00
Surface Condition: Asphalt

Elevation (feet)	Depth (feet)	Graphical Log	Lithologic Description	Sample Number	Sample Type	Blow Counts(BC)= Uncorr. Blows/6 in. Pocket Pen(PP)= tsf Torvane(TV)= tsf	Recovery (NR=No Recovery)
				S-6 (cont.)		4 3 PP=0.5	24" (cont.)
-15							
	30			S-7		BC=2 2 3 4 PP=0.25	24"
-20							
	35		becomes soft	S-8		BC=4 2 2 3 TV=1	24"
-25							
	40		becomes very soft	S-9		BC=WOH WOH WOH WOH TV=0.5	24"
-30							
	45			S-10		BC=WOR WOR WOR WOR	10"
-35							
				S-11		BC=WOR WOR	16"

LABORATORY RESULTS

USCS Symbol	Water Content (%)	Dry Unit Wt. (pcf)	Passing #4 (%)	Passing #200 (%)	Liquid Limit	Plasticity Index (NP=NonPlastic)	Additional Tests/ Remarks
							PID: 0.1
							PID: 0.0
							PID: 0.0
							PID: 0.1
							PID: 0.2

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BORING LOG KLF-1

Concept Design Phase - DPW Facility/Tank
41 Bellis Circle
Cambridge, MA

BORING LOG KLF-1

Date Begin - End:	4/07/2025 - 4/08/2025	**Drilling Company:**	Soil X Corp.		
Logged By:	A. Darajat	**Drill Crew:**	C. Targ		
Hor.-Vert. Datum:	NAD83 - NGVD29	**Drilling Equipment:**	B29 Mobile	**Hammer Type - Drop:**	140 lb. Auto - 30 in.
Plunge:	-90 degrees	**Drilling Method:**	HSA and Drive and Wash		
Weather:	Rainy 30-40s	**Exploration Diameter:**	4 and 3 in. I.D.		

Elevation (feet)	Depth (feet)	Graphical Log	FIELD EXPLORATION: Latitude: 42.39073° Longitude: -71.13404° Ground Surface Elevation (ft.): 13.00 Surface Condition: Asphalt / Lithologic Description	Sample Number	Sample Type	Blow Counts(BC)= Uncorr. Blows/6 in. Pocket Pen(PP)= tsf Torvane(TV)= tsf	Recovery (NR=No Recovery)	USCS Symbol	Water Content (%)	Dry Unit Wt. (pcf)	Passing #4 (%)	Passing #200 (%)	Liquid Limit	Plasticity Index (NP=NonPlastic)	Additional Tests/ Remarks
				S-11 *(cont.)*		WOR WOR	16" *(cont.)*								
	-38.0		The boring was terminated at approximately 51 ft. below ground surface. The boring was backfilled with auger cuttings and patched at surface on April 08, 2025.												
-40															
	55														
-45															
	60														
-50															
	65														
-55															
	70														
-60															

GROUNDWATER LEVEL INFORMATION:

▽ Perched groundwater was observed at approximately 5.5 ft. below ground surface during drilling.

▼ Groundwater was observed at approximately 10 ft. below ground surface at the end of drilling.

GENERAL NOTES:

1. Ground Surface Elevation based on drawing titled "Bellis Circle/Sherman St Drainage Improvements" prepared by SEA Consultants Inc., dated April 17, 2002.
2. When strata breaks are not observed in the split spoon, strata breaks are inferred based on rig behavior (bouncing, chattering, penetration resistance, drilling water color, etc.).
3. A Photo Ionization Detector (PID in ppm) was used for environmental field screening.
4. A composite sample with equal aliquots from grab samples G-3 to G-5 was submitted for environmental analysis.
5. The top 6 feet was pre-cleared using vacuum excavation.
6. Hollow Stem Auger with 4" ID was used from ground surface to depth of 10 feet bgs then switched to Drive and Wash with 3" ID casing to termination depth.
7. The exploration location and elevation are approximate and were estimated by Kleinfelder.

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BORING LOG KLF-1

Concept Design Phase - DPW Facility/Tank
41 Bellis Circle
Cambridge, MA

BORING LOG KLF-2

Date Begin - End:	4/07/2025 - 4/11/2025	**Drilling Company:**	Soil X Corp.		
Logged By:	A. Darajat	**Drill Crew:**	C. Targ		
Hor.-Vert. Datum:	NAD83 - NGVD29	**Drilling Equipment:**	B29 Mobile	**Hammer Type - Drop:**	140 lb. Auto - 30 in.
Plunge:	-90 degrees	**Drilling Method:**	HSA and Drive and Wash		
Weather:	Rainy 30-40s	**Exploration Diameter:**	4 and 3 in. I.D.		

Latitude: 42.39050°
Longitude: -71.13368°
Ground Surface Elevation (ft.): 15.00
Surface Condition: Asphalt

Elevation (feet)	Depth (feet)	Graphical Log	Lithologic Description	Sample Number	Sample Type	Blow Counts(BC)= Uncorr. Blows/6 in. Pocket Pen(PP)= tsf Torvane(TV)= tsf	Recovery (NR=No Recovery)	USCS Symbol	Water Content (%)	Dry Unit Wt. (pcf)	Passing #4 (%)	Passing #200 (%)	Liquid Limit	Plasticity Index (NP=NonPlastic)	Additional Tests/ Remarks
			Asphalt 2.5 Inches	G-1				GP-GM							PID: 0.1
			FILL												
			Poorly Graded GRAVEL with Silt and Sand (GP-GM): fine to coarse gravel, reddish brown, moist	G-2				SP							PID: 0.1
			Poorly Graded SAND (SP): fine to coarse sand, black, moist, with cobbles	G-3				SM							PID: 0.1
			Silty SAND (SM): fine to medium sand, dark brown/yellow, moist, trace roots, brick fragments	G-4											PID: 0.0
			becomes light brown	G-5											PID: 0.0
10	5		**Silty SAND (SM)**: fine to medium sand, light brown/gray, moist	G-6				SM							PID: 0.0
			Sandy SILT (ML): light brown/gray, moist, medium stiff	S-1		BC=2 2 3 6	15"	ML			100	68			PID: 0.0
				S-2A		BC=3 10	12"								PID: 0.0 Soil Mottling Observed
			Lean CLAY (CL): brown, wet	S-2B		BC=6 6	4"	CL							
5	10		becomes light gray	S-3A		BC=3 12	12"								PID: 0.0
			Silty SAND (SM): light gray, wet	S-3B		BC=18 25	12"	SM							
			Sandy CLAY (CL): gray, wet, medium stiff	S-4		BC=WOH 4 3 2 PP=0.5	24"	CL							PID: 0.
0	15														
			Lean CLAY (CL): gray, wet, soft	S-5		BC=WOH WOH 3 2 PP=0.25	24"	CL							PID: 0.0
-5	20														
			becomes very soft	S-6		BC=1 1	24"								PID: 0.0

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BORING LOG KLF-2

Concept Design Phase - DPW Facility/Tank
41 Bellis Circle
Cambridge, MA

BORING LOG KLF-2

Date Begin - End:	4/07/2025 - 4/11/2025	**Drilling Company:**	Soil X Corp.		
Logged By:	A. Darajat	**Drill Crew:**	C. Targ		
Hor.-Vert. Datum:	NAD83 - NGVD29	**Drilling Equipment:**	B29 Mobile	**Hammer Type - Drop:**	140 lb. Auto - 30 in.
Plunge:	-90 degrees	**Drilling Method:**	HSA and Drive and Wash		
Weather:	Rainy 30-40s	**Exploration Diameter:**	4 and 3 in. I.D.		

FIELD EXPLORATION

Latitude: 42.39050°
Longitude: -71.13368°
Ground Surface Elevation (ft.): 15.00
Surface Condition: Asphalt

Elevation (feet)	Depth (feet)	Graphical Log	Lithologic Description	Sample Number	Sample Type	Blow Counts(BC)= Uncorr. Blows/6 in. Pocket Pen(PP)= tsf Torvane(TV)= tsf	Recovery (NR=No Recovery)	USCS Symbol	Water Content (%)	Dry Unit Wt. (pcf)	Passing #4 (%)	Passing #200 (%)	Liquid Limit	Plasticity Index (NP=NonPlastic)	Additional Tests/ Remarks
				S-6 *(cont.)*		1 1 PP=0.25	24" *(cont.)*								
			becomes soft	S-7		BC=1 2 2 4 PP=0.25	16"								PID: 0.0 2" Sand seam at bottom of spoon
-15	30														
			becomes very soft	S-8		BC=WOH WOH WOH 1 TV=0.25	6"								PID: 0.0
-20	35														
				S-9		BC=WOR WOR WOR WOH TV=0.25	24"	ML	39.3				39	13	PID: 0.0
-25	40														
-30	45														
				S-10		BC=WOR WOR	6"								PID: 0.0

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BORING LOG KLF-2

Concept Design Phase - DPW Facility/Tank
41 Bellis Circle
Cambridge, MA

BORING LOG KLF-2

Date Begin - End:	4/07/2025 - 4/11/2025	**Drilling Company:**	Soil X Corp.		
Logged By:	A. Darajat	**Drill Crew:**	C. Targ		
Hor.-Vert. Datum:	NAD83 - NGVD29	**Drilling Equipment:**	B29 Mobile	**Hammer Type - Drop:**	140 lb. Auto - 30 in.
Plunge:	-90 degrees	**Drilling Method:**	HSA and Drive and Wash		
Weather:	Rainy 30-40s	**Exploration Diameter:**	4 and 3 in. I.D.		

FIELD EXPLORATION

Latitude: 42.39050°
Longitude: -71.13368°
Ground Surface Elevation (ft.): 15.00
Surface Condition: Asphalt

Elevation (feet)	Depth (feet)	Graphical Log	Lithologic Description	Sample Number	Sample Type	Blow Counts(BC)= Uncorr. Blows/6 in. Pocket Pen(PP)= tsf Torvane(TV)= tsf	Recovery (NR=No Recovery)	USCS Symbol	Water Content (%)	Dry Unit Wt. (pcf)	Passing #4 (%)	Passing #200 (%)	Liquid Limit	Plasticity Index (NP=NonPlastic)	Additional Tests/ Remarks
				S-10 *(cont.)*		WOR WOR	6" *(cont.)*								
-40	55														
-45	60			S-11		BC=WOH WOH WOH 6	24"								PID: 0.0
			Glacial Till -48.0 **Poorly Graded GRAVEL with Silt (GP-GM)**: fine to coarse gravel, gray, wet, very dense					GP-GM							Drill rig chattered at 63 feet bgs.
-50	65			S-12		BC=42 48 50/3"	12"								PID: 0.0
			-50.25												
-55	70														

The boring was terminated at approximately 65.5 ft. below ground surface. The boring was backfilled with auger cuttings and patched at surface on April 11, 2025.

GROUNDWATER LEVEL INFORMATION:
▽ Perched groundwater was observed at approximately 5 ft. below ground surface during drilling.
▼ Groundwater was observed at approximately 8 ft. below ground surface at the end of drilling.

GENERAL NOTES:
1. Ground Surface Elevation based on drawing titled "Bellis Circle/Sherman St Drainage Improvements" prepared by SEA Consultants Inc., dated April 17, 2002.
2. When strata breaks are not observed in the split spoon, strata breaks are inferred based on rig behavior (bouncing, chattering, penetration resistance, drilling water color, etc.).
3. A Photo Ionization Detector (PID in ppm) was used for environmental field screening.
4. A composite sample with equal aliquots from grab samples G-1 to G-5 was submitted for environmental analysis.
5. The top 6 feet was pre-cleared using vacuum excavation.
6. Hollow Stem Auger with 4" ID was used from ground surface to depth of 10 feet bgs then switched to Drive and Wash with 3" ID casing to termination depth.
7. The exploration location and elevation are approximate and were estimated by Kleinfelder.

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BORING LOG KLF-2

Concept Design Phase - DPW Facility/Tank
41 Bellis Circle
Cambridge, MA

Date Begin - End:	4/07/2025 - 4/10/2025	**Drilling Company:**	Soil X Corp.	**BORING LOG KLF-3**	
Logged By:	A. Darajat	**Drill Crew:**	C. Targ		
Hor.-Vert. Datum:	NAD83 - NGVD29	**Drilling Equipment:**	B29 Mobile	**Hammer Type - Drop:**	140 lb. Auto - 30 in.
Plunge:	-90 degrees	**Drilling Method:**	HSA and Drive and Wash		
Weather:	Sunny-Rainy 30-40s	**Exploration Diameter:**	4 in. I.D.		

Latitude: 42.39058°
Longitude: -71.13318°
Ground Surface Elevation (ft.): 14.00
Surface Condition: Asphalt

Elevation (feet)	Depth (feet)	Lithologic Description	Sample Number	Sample Type	Blow Counts(BC)= Uncorr. Blows/6 in. Pocket Pen(PP)= tsf Torvane(TV)= tsf	Recovery (NR=No Recovery)	USCS Symbol	Water Content (%)	Dry Unit Wt. (pcf)	Passing #4 (%)	Passing #200 (%)	Liquid Limit	Plasticity Index (NP=NonPlastic)	Additional Tests/ Remarks
13.8	0	Asphalt 2.5 Inches	G-1				SP-SM							PID: 0.1
		FILL												
13.0	1	**Poorly Graded SAND with Gravel and Silt (SP-SM)**: fine to coarse sand, brown, moist	G-2											PID: 0.1
		Poorly Graded GRAVEL with Silt and Sand (GP-GM): fine to coarse gravel, brown, moist, trace bricks and rubbles	G-3				GP-GM							PID: 0.0
			G-4											PID: 0.0
10			G-5											PID: 0.0
	5		G-6											PID: 0.0
		becomes dense	S-1		BC=11 19 30 31	16"								PID: 0.1
6.0		**Poorly Graded SAND with Gravel and Silt (SP-SM)**: fine to coarse sand, brown, moist, dense	S-2		BC=28 21 15 11	20"	SP-SM			68	10			PID: 2.3
5														
▽	10	becomes medium dense, wet	S-3		BC=5 6 10 5	6"								PID: 0.0
0		**Sandy CLAY (CL)**: gray, wet, stiff	S-4		BC=5 5 5 5 PP=0.75	24"	CL	29.6				25	8	PID: 0.0
0.0	15													
-2.0		**Lean CLAY (CL)**: gray, wet, stiff	S-5		BC=6 5 4 5 PP=0.75	24"	CL							PID: 0.1
-5			S-6		BC=WOH 4 4 6 PP=1	18"								PID: 0.0
	20													
-10		becomes medium stiff	S-7		BC=2 3	20"								PID: 0.0

KLEINFELDER
Bright People. Right Solutions.

PROJECT NO.:	20231168.006A
DRAWN BY:	RD
CHECKED BY:	MNR
DATE:	4/17/2025

BORING LOG KLF-3

Concept Design Phase - DPW Facility/Tank
41 Bellis Circle
Cambridge, MA

BORING LOG KLF-3

Date Begin - End:	4/07/2025 - 4/10/2025	**Drilling Company:**	Soil X Corp.		
Logged By:	A. Darajat	**Drill Crew:**	C. Targ		
Hor.-Vert. Datum:	NAD83 - NGVD29	**Drilling Equipment:**	B29 Mobile	**Hammer Type - Drop:**	140 lb. Auto - 30 in.
Plunge:	-90 degrees	**Drilling Method:**	HSA and Drive and Wash		
Weather:	Sunny-Rainy 30-40s	**Exploration Diameter:**	4 in. I.D.		

Elevation (feet)	Depth (feet)	Graphical Log	FIELD EXPLORATION: Latitude: 42.39058° Longitude: -71.13318° Ground Surface Elevation (ft.): 14.00 Surface Condition: Asphalt / Lithologic Description	Sample Number	Sample Type	Blow Counts(BC)= Uncorr. Blows/6 in. / Pocket Pen(PP)= tsf / Torvane(TV)= tsf	Recovery (NR=No Recovery)	USCS Symbol	Water Content (%)	Dry Unit Wt. (pcf)	Passing #4 (%)	Passing #200 (%)	Liquid Limit	Plasticity Index (NP=NonPlastic)	Additional Tests/ Remarks
				S-7 *(cont.)*		3 4 PP=0.5	20" *(cont.)*								
-12.0			The boring was terminated at approximately 26 ft. below ground surface. Monitoring Well installed to a depth of 15 feet.												
-15	30														
-20	35														
-25	40														
-30	45														
-35															

GROUNDWATER LEVEL INFORMATION:
▽ Groundwater was observed at approximately 10 ft. below ground surface during drilling.

GENERAL NOTES:
1. Ground Surface Elevation based on drawing titled "Bellis Circle/Sherman St Drainage Improvements" prepared by SEA Consultants Inc., dated April 17, 2002.
2. When strata breaks are not observed in the split spoon, strata breaks are inferred based on rig behavior (bouncing, chattering, penetration resistance, drilling water color, etc.).
3. A Photo Ionization Detector (PID in ppm) was used for environmental field screening.
4. A composite sample with equal aliquots from grab samples G-1 to G-5 and S4 to S-5 were submitted for environmental analysis.
5. The top 6 feet was pre-cleared using vacuum excavation.
6. Hollow Stem Auger with 4" ID was used from ground surface to depth of 10 feet bgs then switched to Drive and Wash with 4" ID casing to termination depth.
7. The exploration location and elevation are approximate and were estimated by Kleinfelder.
A PID (ppmv) was used for environmental field screening.

KLEINFELDER
Bright People. Right Solutions.

PROJECT NO.: 20231168.006A
DRAWN BY: RD
CHECKED BY: MNR
DATE: 4/17/2025

BORING LOG KLF-3

Concept Design Phase - DPW Facility/Tank
41 Bellis Circle
Cambridge, MA

BORING LOG KLF-3

Date Begin - End:	4/07/2025 - 4/10/2025	**Drilling Company:**	Soil X Corp.		
Logged By:	A. Darajat	**Drill Crew:**	C. Targ		
Hor.-Vert. Datum:	NAD83 - NGVD29	**Drilling Equipment:**	B29 Mobile	**Hammer Type - Drop:**	140 lb. Auto - 30 in.
Plunge:	-90 degrees	**Drilling Method:**	See Drilling Method Column		
Weather:	Sunny-Rainy 30-40s	**Exploration Diameter:**	4 in. I.D.		

FIELD EXPLORATION | MONITORING WELL CONSTRUCTION

Latitude: 42.39058°
Longitude: -71.13318°
Ground Surface Elevation (ft.): 14.00
Surface Condition: Asphalt

Completion Method: Roadbox

Elevation (feet)	Depth (feet)	Drilling Method	Sample Type	Sample Number	Recovery (NR=No Recovery)	PID / FID (ppmv)	Graphical Log	Lithologic Description
								Asphalt 2.5 Inches — 13.8
								FILL — 13.0
								Poorly Graded SAND with Gravel and Silt (SP-SM): fine to coarse sand, brown, moist
								Poorly Graded GRAVEL with Silt and Sand (GP-GM): fine to coarse gravel, brown, moist, trace bricks and rubbles
10	5							becomes dense
								6.0
5								**Poorly Graded SAND with Gravel and Silt (SP-SM)**: fine to coarse sand, brown, moist, dense
	10							becomes medium dense, wet
								.0
0								**Sandy CLAY (CL)**: gray, wet, stiff
	15							-2.0
								Lean CLAY (CL): gray, wet, stiff
-5	20							becomes medium stiff
-10								

Concrete
Soil cuttings
2" SCH 40 Solid PVC Riser
Bentonite Chips
2" SCH 40 Slotted 0.010 PVC Screen
Sand

KLEINFELDER
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PROJECT NO.: 20231168.006A
DRAWN BY: RD
CHECKED BY: MNR
DATE: 4/17/2025

BORING LOG KLF-3

Concept Design Phase - DPW Facility/Tank
41 Bellis Circle
Cambridge, MA

Date Begin - End:	4/07/2025 - 4/10/2025	**Drilling Company:**	Soil X Corp.	**BORING LOG KLF-3**	
Logged By:	A. Darajat	**Drill Crew:**	C. Targ		
Hor.-Vert. Datum:	NAD83 - NGVD29	**Drilling Equipment:**	B29 Mobile	**Hammer Type - Drop:**	140 lb. Auto - 30 in.
Plunge:	-90 degrees	**Drilling Method:**	See Drilling Method Column		
Weather:	Sunny-Rainy 30-40s	**Exploration Diameter:**	4 in. I.D.		

Elevation (feet) / Depth (feet)	FIELD EXPLORATION: Drilling Method	Sample Type	Sample Number	Recovery (NR=No Recovery)	PID / FID (ppmv)	Graphical Log	Latitude: 42.39058° Longitude: -71.13318° Ground Surface Elevation (ft.): 14.00 Surface Condition: Asphalt Lithologic Description	MONITORING WELL CONSTRUCTION
								Completion Method: Roadbox
-12.0								

The exploration was terminated at approximately 26 ft. below ground surface.

GROUNDWATER LEVEL INFORMATION:
▽ Groundwater was observed at approximately 10 ft. below ground surface during drilling.

GENERAL NOTES:
1. Ground Surface Elevation based on drawing titled "Bellis Circle/Sherman St Drainage Improvements" prepared by SEA Consultants Inc., dated April 17, 2002.
2. When strata breaks are not observed in the split spoon, strata breaks are inferred based on rig behavior (bouncing, chattering, penetration resistance, drilling water color, etc.).
3. A Photo Ionization Detector (PID in ppm) was used for environmental field screening.
4. A composite sample with equal aliquots from grab samples G-1 to G-5 and S4 to S-5 were submitted for environmental analysis.
5. The top 6 feet was pre-cleared using vacuum excavation.
6. Hollow Stem Auger with 4" ID was used from ground surface to depth of 10 feet bgs then switched to Drive and Wash with 4" ID casing to termination depth.
7. The exploration location and elevation are approximate and were estimated by Kleinfelder.
A PID (ppmv) was used for environmental field screening.
Monitoring Well installed to a depth of 15 feet.

-15 30
-20 35
-25 40
-30 45
-35

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PROJECT NO.:	20231168.006A
DRAWN BY:	RD
CHECKED BY:	MNR
DATE:	4/17/2025

BORING LOG KLF-3

Concept Design Phase - DPW Facility/Tank
41 Bellis Circle
Cambridge, MA

BORING LOG KLF-4

Date Begin - End:	4/07/2025 - 4/10/2025	**Drilling Company:**	Soil X Corp.		
Logged By:	A. Darajat	**Drill Crew:**	C. Targ		
Hor.-Vert. Datum:	NAD83 - NGVD29	**Drilling Equipment:**	B29 Mobile	**Hammer Type - Drop:**	140 lb. Auto - 30 in.
Plunge:	-90 degrees	**Drilling Method:**	HSA and Drive and Wash		
Weather:	Sunny-Rainy 30-40s	**Exploration Diameter:**	4 and 3 in. I.D.		

Latitude: 42.39038°
Longitude: -71.13284°
Ground Surface Elevation (ft.): 14.00
Surface Condition: Asphalt

Elevation (feet) / Depth (feet)	Graphical Log	Lithologic Description	Sample Number	Sample Type	Blow Counts(BC)= Uncorr. Blows/6 in. Pocket Pen(PP)= tsf Torvane(TV)= tsf	Recovery (NR=No Recovery)	USCS Symbol	Water Content (%)	Dry Unit Wt. (pcf)	Passing #4 (%)	Passing #200 (%)	Liquid Limit	Plasticity Index (NP=NonPlastic)	Additional Tests/ Remarks
14 / 0		Asphalt 2.5 Inches	G-1				GP-GM							PID: 0.1
13.8 / 0.2		**FILL**												
13.0 / 1		**Poorly Graded GRAVEL with Silt (GP-GM)**: fine to coarse gravel, reddish brown, moist	G-2				SM			100	39			PID: 0.0
12.0 / 2		**Silty SAND (SM)**: fine to medium sand, black, moist, with bricks	G-3				SM							PID: 0.0 Soil Mottling Observed
		Silty SAND (SM): fine to medium sand, light brown, moist	G-4											PID: 0.0
10 / 4			G-5											PID: 0.0
5 / 9			G-6											PID: 0.0
		becomes medium dense	S-1		BC=2 5 7 11	16"	SM			100	21			PID: 0.0
		becomes brown	S-2		BC=12 10 9 11	16"								PID: 0.0 Soil Mottling Observed In Bottom 4 Inches
5 / 9	▽													
3.83 / 10.17		**Sandy CLAY (CL)**: gray, wet, stiff	S-3		BC=3 4 5 6	24"	CL							PID: 0.1
0 / 14			S-4		BC=3 4 5 5 PP=1	24"								PID: 0.5
-5 / 19		**Lean CLAY (CL)**: gray, wet, medium stiff	S-5		BC=3 3 5 7 PP=0.5	15"	CL							PID: 0.6
-10 / 24		becomes stiff	S-6		BC=1 2	18"								PID: 0.4 2" Sand seam at bottom of

KLEINFELDER
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PROJECT NO.: 20231168.006A
DRAWN BY: RD
CHECKED BY: MNR
DATE: 4/17/2025

BORING LOG KLF-4

Concept Design Phase - DPW Facility/Tank
41 Bellis Circle
Cambridge, MA

BORING LOG KLF-4

Date Begin - End:	4/07/2025 - 4/10/2025	**Drilling Company:**	Soil X Corp.		
Logged By:	A. Darajat	**Drill Crew:**	C. Targ		
Hor.-Vert. Datum:	NAD83 - NGVD29	**Drilling Equipment:**	B29 Mobile	**Hammer Type - Drop:**	140 lb. Auto - 30 in.
Plunge:	-90 degrees	**Drilling Method:**	HSA and Drive and Wash		
Weather:	Sunny-Rainy 30-40s	**Exploration Diameter:**	4 and 3 in. I.D.		

FIELD EXPLORATION

Latitude: 42.39038°
Longitude: -71.13284°
Ground Surface Elevation (ft.): 14.00
Surface Condition: Asphalt

Elevation (feet)	Depth (feet)	Graphical Log	Lithologic Description	Sample Number	Sample Type	Blow Counts(BC)= Uncorr. Blows/6 in. / Pocket Pen(PP)= tsf / Torvane(TV)= tsf	Recovery (NR=No Recovery)	USCS Symbol	Water Content (%)	Dry Unit Wt. (pcf)	Passing #4 (%)	Passing #200 (%)	Liquid Limit	Plasticity Index (NP=NonPlastic)	Additional Tests/ Remarks
				S-6 *(cont.)*		7 4 PP=0.5	18" *(cont.)*								spoon.
-12.0			The boring was terminated at approximately 26 ft. below ground surface. The boring was backfilled with auger cuttings and patched at surface on April 10, 2025.												
-15	30														
-20	35														
-25	40														
-30	45														
-35															

GROUNDWATER LEVEL INFORMATION:
▽ Groundwater was observed at approximately 10 ft. below ground surface during drilling.

GENERAL NOTES:
1. Ground Surface Elevation based on drawing titled "Bellis Circle/Sherman St Drainage Improvements" prepared by SEA Consultants Inc., dated April 17, 2002.
2. When strata breaks are not observed in the split spoon, strata breaks are inferred based on rig behavior (bouncing, chattering, penetration resistance, drilling water color, etc.).
3. A Photo Ionization Detector (PID in ppm) was used for environmental field screening.
4. The top 6 feet was pre-cleared using vacuum excavation.
5. Hollow Stem Auger with 4" ID was used from ground surface to depth of 10 feet bgs then switched to Drive and Wash with 3" ID casing to termination depth.
6. The exploration location and elevation are approximate and were estimated by Kleinfelder.

KLEINFELDER
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PROJECT NO.: 20231168.006A
DRAWN BY: RD
CHECKED BY: MNR
DATE: 4/17/2025

BORING LOG KLF-4

Concept Design Phase - DPW Facility/Tank
41 Bellis Circle
Cambridge, MA

APPENDIX C
LABORATORY ANALYTICAL REPORTS

PHOENIX
Environmental Laboratories, Inc.

Friday, May 09, 2025

Attn: Lisa Stone
Kleinfelder
One Beacon Street Suite 8100
Boston, MA 02108

Project ID: **SHERMAN ST TANK/BELLIS CIRCLE**
SDG ID: **GCT15844**
Sample ID#s: CT15844 - CT15846

This laboratory is in compliance with the NELAC requirements of procedures used except where indicated.

This report contains results for the parameters tested, under the sampling conditions described on the Chain Of Custody, as received by the laboratory. This report is incomplete unless all pages indicated in the pagination at the bottom of the page are included.

A scanned version of the COC form accompanies the analytical report and is an exact duplicate of the original.

The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.

Sincerely yours,

Phyllis Shiller
Laboratory Director

NELAC - #NY11301
CT Lab Registration #PH-0618
MA Lab Registration #M-CT007
ME Lab Registration #CT-007
NH Lab Registration #213693-A,B
NJ Lab Registration #CT-003
NY Lab Registration #11301
PA Lab Registration #68-03530
RI Lab Registration #63
VT Lab Registration #VT11301

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

NY # 11301

SDG Comments

May 09, 2025

SDG I.D.: GCT15844

8260 Analysis:
1,2-Dibromoethane doesn't meet GW-1 criteria, this compound is analyzed by GC/FID to achieve this criteria.

Phoenix reporting levels may exceed those referenced in the CAM protocol. Please refer to criteria sheet for comparisons to requested MCP standards.

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Sample Id Cross Reference

May 09, 2025

SDG I.D.: GCT15844

Project ID: SHERMAN ST TANK/BELLIS CIRCLE

Client Id	Lab Id	Matrix	Col Date
KLF-3	CT15844	GROUND WATER	04/28/25 10:20
MW-102S	CT15845	GROUND WATER	04/28/25 11:50
TRIP BLANK	CT15846	WATER	04/28/25 0:00

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102

Analysis Report

May 09, 2025

FOR: Attn: Lisa Stone
Kleinfelder
One Beacon Street Suite 8100
Boston, MA 02108

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		04/28/25	10:20
Location Code:	KLEINFL-BOSTON	Received by:	SW	04/29/25	16:20
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	20231168.006A				

Laboratory Data

SDG ID: GCT15844
Phoenix ID: CT15844

Project ID: SHERMAN ST TANK/BELLIS CIRCLE
Client ID: KLF-3

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Silver	< 0.001	0.001	mg/L	1	05/02/25	TH	SW6010D
Arsenic	0.005	0.004	mg/L	1	05/02/25	TH	SW6010D
Barium	0.016	0.002	mg/L	1	05/02/25	TH	SW6010D
Beryllium	< 0.001	0.001	mg/L	1	05/02/25	TH	SW6010D
Cadmium	< 0.001	0.001	mg/L	1	05/02/25	TH	SW6010D
Chromium	< 0.001	0.001	mg/L	1	05/02/25	TH	SW6010D
Silver (Dissolved)	< 0.001	0.001	mg/L	1	05/03/25	CPP	SW6010D
Arsenic (Dissolved)	< 0.004	0.004	mg/L	1	05/03/25	CPP	SW6010D
Barium (Dissolved)	0.016	0.002	mg/L	1	05/03/25	CPP	SW6010D
Beryllium (Dissolved)	< 0.001	0.001	mg/L	1	05/03/25	CPP	SW6010D
Cadmium (Dissolved)	< 0.001	0.001	mg/L	1	05/03/25	CPP	SW6010D
Chromium (Dissolved)	< 0.001	0.001	mg/L	1	05/03/25	CPP	SW6010D
Mercury (Dissolved)	< 0.0002	0.0002	mg/L	1	05/06/25	ZT	SW7470A
Nickel (Dissolved)	0.004	0.001	mg/L	1	05/03/25	CPP	SW6010D
Lead (Dissolved)	< 0.002	0.002	mg/L	1	05/03/25	CPP	SW6010D
Antimony (Dissolved)	< 0.005	0.005	mg/L	1	05/03/25	CPP	SW6010D
Selenium (Dissolved)	< 0.011	0.011	mg/L	1	05/03/25	CPP	SW6010D
Thallium (Dissolved)	< 0.0006	0.0006	mg/L	2	05/02/25	JM	SW6020B
Vanadium (Dissolved)	0.013	0.002	mg/L	1	05/03/25	CPP	SW6010D
Zinc (Dissolved)	< 0.002	0.002	mg/L	1	05/03/25	CPP	SW6010D
Mercury	< 0.0002	0.0002	mg/L	1	05/01/25	JM	SW7470A
Nickel	0.003	0.001	mg/L	1	05/02/25	TH	SW6010D
Lead	< 0.001	0.001	mg/L	1	05/02/25	TH	SW6010D
Antimony	< 0.005	0.005	mg/L	1	05/02/25	TH	SW6010D
Selenium	< 0.010	0.010	mg/L	1	05/02/25	TH	SW6010D
Thallium	< 0.0010	0.0010	mg/L	10	05/06/25	JM	SW6020B
Vanadium	0.010	0.002	mg/L	1	05/02/25	TH	SW6010D
Zinc	< 0.004	0.004	mg/L	1	05/02/25	TH	SW6010D

Ver 1

Project ID: SHERMAN ST TANK/BELLIS CIRCLE
Client ID: KLF-3

Phoenix I.D.: CT15844

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference	
Conductivity	462	5.00	umhos/cm	1	04/30/25	KG/KDB	SM2510B-11	
Corrosivity	Negative		Pos/Neg	1	04/30/25	KG	SW846-Corr	
Flash Point	>200	200	Degree F	1	05/01/25	G	SW1010B	
Ignitability	Passed	140	degree F	1	05/01/25	G	SW846-Ignit	
pH	11.6	1.00	pH Units	1	04/30/25 00:03	KG	SM4500-H B-11	
Reactivity Cyanide	< 2.0	2.0	mg/L	2.01	05/07/25	NP/GD	SW846 7.3.3.1/90	7
Reactivity Sulfide	< 5	5	mg/L	1	05/08/25	NP/GD	SW846 CH7	7
Reactivity	Negative		Pos/Neg	1	05/08/25	NP/GD	SW846-React	
Dissolved Mercury Digestion	Completed				05/05/25	GW/GW	SW7470A	
Mercury Digestion	Completed				05/01/25	AK/GW	SW7470A	
PCB Extraction	Completed				04/30/25	A//A/	SW3510C	
Semi-Volatile Extraction	Completed				05/01/25	L/MQ	SW3520C	
Dissolved Metals Preparation	Completed				04/30/25	AG	SW3005A	
Dissolved Metals Preparation (MS)	Completed				04/30/25	AG	SW3005A	
Total Metals Digestion	Completed				05/01/25	AG	SW3010A	
Total Metals Digestion MS	Completed				05/03/25	AG	SW3010A	
Extraction of TPH	Completed				05/05/25	L/MQ	SW3510C/SW3520C	
Polychlorinated Biphenyls								
PCB-1016	ND	0.25	ug/L	1	05/01/25	SC	SW8082A	
PCB-1221	ND	0.25	ug/L	1	05/01/25	SC	SW8082A	
PCB-1232	ND	0.25	ug/L	1	05/01/25	SC	SW8082A	
PCB-1242	ND	0.25	ug/L	1	05/01/25	SC	SW8082A	
PCB-1248	ND	0.25	ug/L	1	05/01/25	SC	SW8082A	
PCB-1254	ND	0.25	ug/L	1	05/01/25	SC	SW8082A	
PCB-1260	ND	0.25	ug/L	1	05/01/25	SC	SW8082A	
PCB-1262	ND	0.25	ug/L	1	05/01/25	SC	SW8082A	
PCB-1268	ND	0.25	ug/L	1	05/01/25	SC	SW8082A	
QA/QC Surrogates								
% DCBP	76		%	1	05/01/25	SC	30 - 150 %	
% DCBP (Confirmation)	72		%	1	05/01/25	SC	30 - 150 %	
% TCMX	61		%	1	05/01/25	SC	30 - 150 %	
% TCMX (Confirmation)	59		%	1	05/01/25	SC	30 - 150 %	
TPH by GC (Extractable Products)								
Aviation Fuel/Kerosene	ND	0.48	mg/L	1	05/06/25	JRB	SW8015D	
Fuel Oil #2/ Diesel Fuel	ND	0.48	mg/L	1	05/06/25	JRB	SW8015D	
Fuel Oil #4	ND	0.48	mg/L	1	05/06/25	JRB	SW8015D	
Fuel Oil #6	ND	0.48	mg/L	1	05/06/25	JRB	SW8015D	
Motor Oil	ND	0.48	mg/L	1	05/06/25	JRB	SW8015D	
Total TPH	ND	0.48	mg/L	1	05/06/25	JRB	SW8015D	
Unidentified	ND	0.48	mg/L	1	05/06/25	JRB	SW8015D	
QA/QC Surrogates								
% Terphenyl (surr)	67		%	1	05/06/25	JRB	50 - 150 %	
Volatiles								
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	05/03/25	HM	SW8260D	
1,1,1-Trichloroethane	ND	1.0	ug/L	1	05/03/25	HM	SW8260D	
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	05/03/25	HM	SW8260D	

Project ID: SHERMAN ST TANK/BELLIS CIRCLE
Client ID: KLF-3

Phoenix I.D.: CT15844

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
1,1,2-Trichloroethane	ND	1.0	ug/L	1	05/03/25	HM	SW8260D
1,1-Dichloroethane	ND	1.0	ug/L	1	05/03/25	HM	SW8260D
1,1-Dichloroethene	ND	1.0	ug/L	1	05/03/25	HM	SW8260D
1,1-Dichloropropene	ND	1.0	ug/L	1	05/03/25	HM	SW8260D
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	05/03/25	HM	SW8260D
1,2,3-Trichloropropane	ND	1.0	ug/L	1	05/03/25	HM	SW8260D
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	05/03/25	HM	SW8260D
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	05/03/25	HM	SW8260D
1,2-Dibromo-3-chloropropane	ND	1.0	ug/L	1	05/03/25	HM	SW8260D
1,2-Dibromoethane	ND	1.0	ug/L	1	05/03/25	HM	SW8260D
1,2-Dichlorobenzene	ND	1.0	ug/L	1	05/03/25	HM	SW8260D
1,2-Dichloroethane	ND	0.60	ug/L	1	05/03/25	HM	SW8260D
1,2-Dichloropropane	ND	1.0	ug/L	1	05/03/25	HM	SW8260D
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	05/03/25	HM	SW8260D
1,3-Dichlorobenzene	ND	1.0	ug/L	1	05/03/25	HM	SW8260D
1,3-Dichloropropane	ND	1.0	ug/L	1	05/03/25	HM	SW8260D
1,4-Dichlorobenzene	ND	1.0	ug/L	1	05/03/25	HM	SW8260D
2,2-Dichloropropane	ND	1.0	ug/L	1	05/03/25	HM	SW8260D
2-Chlorotoluene	ND	1.0	ug/L	1	05/03/25	HM	SW8260D
2-Hexanone	ND	5.0	ug/L	1	05/03/25	HM	SW8260D
2-Isopropyltoluene	ND	1.0	ug/L	1	05/03/25	HM	SW8260D
4-Chlorotoluene	ND	1.0	ug/L	1	05/03/25	HM	SW8260D
4-Methyl-2-pentanone	ND	5.0	ug/L	1	05/03/25	HM	SW8260D
Acetone	ND	25	ug/L	1	05/03/25	HM	SW8260D
Acrylonitrile	ND	1.0	ug/L	1	05/03/25	HM	SW8260D
Benzene	ND	0.70	ug/L	1	05/03/25	HM	SW8260D
Bromobenzene	ND	1.0	ug/L	1	05/03/25	HM	SW8260D
Bromochloromethane	ND	1.0	ug/L	1	05/03/25	HM	SW8260D
Bromodichloromethane	ND	0.50	ug/L	1	05/03/25	HM	SW8260D
Bromoform	ND	1.0	ug/L	1	05/03/25	HM	SW8260D
Bromomethane	ND	1.0	ug/L	1	05/03/25	HM	SW8260D
Carbon Disulfide	ND	5.0	ug/L	1	05/03/25	HM	SW8260D
Carbon tetrachloride	ND	1.0	ug/L	1	05/03/25	HM	SW8260D
Chlorobenzene	ND	1.0	ug/L	1	05/03/25	HM	SW8260D
Chloroethane	ND	1.0	ug/L	1	05/03/25	HM	SW8260D
Chloroform	ND	1.0	ug/L	1	05/03/25	HM	SW8260D
Chloromethane	ND	1.0	ug/L	1	05/03/25	HM	SW8260D
cis-1,2-Dichloroethene	ND	1.0	ug/L	1	05/03/25	HM	SW8260D
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	05/03/25	HM	SW8260D
Dibromochloromethane	ND	0.50	ug/L	1	05/03/25	HM	SW8260D
Dibromomethane	ND	1.0	ug/L	1	05/03/25	HM	SW8260D
Dichlorodifluoromethane	ND	1.0	ug/L	1	05/03/25	HM	SW8260D
Ethylbenzene	ND	1.0	ug/L	1	05/03/25	HM	SW8260D
Hexachlorobutadiene	ND	0.40	ug/L	1	05/03/25	HM	SW8260D
Isopropylbenzene	ND	1.0	ug/L	1	05/03/25	HM	SW8260D
m&p-Xylene	ND	1.0	ug/L	1	05/03/25	HM	SW8260D
Methyl ethyl ketone	ND	5.0	ug/L	1	05/03/25	HM	SW8260D
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	1	05/03/25	HM	SW8260D
Methylene chloride	ND	1.0	ug/L	1	05/03/25	HM	SW8260D

Project ID: SHERMAN ST TANK/BELLIS CIRCLE
Client ID: KLF-3

Phoenix I.D.: CT15844

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Naphthalene	18	1.0	ug/L	1	05/03/25	HM	SW8260D
n-Butylbenzene	ND	1.0	ug/L	1	05/03/25	HM	SW8260D
n-Propylbenzene	ND	1.0	ug/L	1	05/03/25	HM	SW8260D
o-Xylene	ND	1.0	ug/L	1	05/03/25	HM	SW8260D
p-Isopropyltoluene	ND	1.0	ug/L	1	05/03/25	HM	SW8260D
sec-Butylbenzene	ND	1.0	ug/L	1	05/03/25	HM	SW8260D
Styrene	ND	1.0	ug/L	1	05/03/25	HM	SW8260D
tert-Butylbenzene	ND	1.0	ug/L	1	05/03/25	HM	SW8260D
Tetrachloroethene	ND	1.0	ug/L	1	05/03/25	HM	SW8260D
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	05/03/25	HM	SW8260D
Toluene	ND	1.0	ug/L	1	05/03/25	HM	SW8260D
Total Xylenes	ND	1.0	ug/L	1	05/03/25	HM	SW8260D
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	05/03/25	HM	SW8260D
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	05/03/25	HM	SW8260D
trans-1,4-dichloro-2-butene	ND	5.0	ug/L	1	05/03/25	HM	SW8260D
Trichloroethene	ND	1.0	ug/L	1	05/03/25	HM	SW8260D
Trichlorofluoromethane	ND	1.0	ug/L	1	05/03/25	HM	SW8260D
Trichlorotrifluoroethane	ND	1.0	ug/L	1	05/03/25	HM	SW8260D
Vinyl chloride	ND	1.0	ug/L	1	05/03/25	HM	SW8260D
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	99		%	1	05/03/25	HM	70 - 130 %
% Bromofluorobenzene	95		%	1	05/03/25	HM	70 - 130 %
% Dibromofluoromethane	117		%	1	05/03/25	HM	70 - 130 %
% Toluene-d8	102		%	1	05/03/25	HM	70 - 130 %
Oxygenates & Dioxane							
1,4-Dioxane	ND	100	ug/L	1	05/03/25	HM	SW8260D (OXY)
Diethyl ether	ND	1.0	ug/L	1	05/03/25	HM	SW8260D (OXY)
Di-isopropyl ether	ND	1.0	ug/L	1	05/03/25	HM	SW8260D (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	05/03/25	HM	SW8260D (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	05/03/25	HM	SW8260D (OXY)
Semivolatiles							
1,1-Biphenyl	ND	3.4	ug/L	1	05/04/25	MR	SW8270E
1,2,4,5-Tetrachlorobenzene	ND	3.4	ug/L	1	05/04/25	MR	SW8270E
1,2,4-Trichlorobenzene	ND	4.8	ug/L	1	05/04/25	MR	SW8270E
1,2-Dichlorobenzene	ND	2.4	ug/L	1	05/04/25	MR	SW8270E
1,2-Diphenylhydrazine	ND	4.8	ug/L	1	05/04/25	MR	SW8270E
1,3-Dichlorobenzene	ND	2.4	ug/L	1	05/04/25	MR	SW8270E
1,4-Dichlorobenzene	ND	2.4	ug/L	1	05/04/25	MR	SW8270E
2,2'-Oxybis(1-Chloropropane)	ND	4.8	ug/L	1	05/04/25	MR	SW8270E
2,4,5-Trichlorophenol	ND	0.96	ug/L	1	05/04/25	MR	SW8270E
2,4,6-Trichlorophenol	ND	0.96	ug/L	1	05/04/25	MR	SW8270E
2,4-Dichlorophenol	ND	0.96	ug/L	1	05/04/25	MR	SW8270E
2,4-Dimethylphenol	ND	0.96	ug/L	1	05/04/25	MR	SW8270E
2,4-Dinitrophenol	ND	0.96	ug/L	1	05/04/25	MR	SW8270E
2,4-Dinitrotoluene	ND	4.8	ug/L	1	05/04/25	MR	SW8270E
2,6-Dinitrotoluene	ND	4.8	ug/L	1	05/04/25	MR	SW8270E
2-Chloronaphthalene	ND	4.8	ug/L	1	05/04/25	MR	SW8270E
2-Chlorophenol	ND	0.96	ug/L	1	05/04/25	MR	SW8270E

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Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
2-Methylphenol (o-cresol)	ND	0.96	ug/L	1	05/04/25	MR	SW8270E
2-Nitroaniline	ND	4.8	ug/L	1	05/04/25	MR	SW8270E
2-Nitrophenol	ND	0.96	ug/L	1	05/04/25	MR	SW8270E
3&4-Methylphenol (m&p-cresol)	ND	9.6	ug/L	1	05/04/25	MR	SW8270E
3,3'-Dichlorobenzidine	ND	4.8	ug/L	1	05/04/25	MR	SW8270E
3-Nitroaniline	ND	4.8	ug/L	1	05/04/25	MR	SW8270E
4,6-Dinitro-2-methylphenol	ND	0.96	ug/L	1	05/04/25	MR	SW8270E
4-Bromophenyl phenyl ether	ND	4.8	ug/L	1	05/04/25	MR	SW8270E
4-Chloro-3-methylphenol	ND	0.96	ug/L	1	05/04/25	MR	SW8270E
4-Chloroaniline	ND	4.8	ug/L	1	05/04/25	MR	SW8270E
4-Chlorophenyl phenyl ether	ND	0.96	ug/L	1	05/04/25	MR	SW8270E
4-Nitroaniline	ND	4.8	ug/L	1	05/04/25	MR	SW8270E
4-Nitrophenol	ND	0.96	ug/L	1	05/04/25	MR	SW8270E
Acetophenone	ND	4.8	ug/L	1	05/04/25	MR	SW8270E
Aniline	ND	4.8	ug/L	1	05/04/25	MR	SW8270E
Benzidine	ND	4.8	ug/L	1	05/04/25	MR	SW8270E
Benzoic acid	ND	48	ug/L	1	05/04/25	MR	SW8270E
Benzyl butyl phthalate	ND	4.8	ug/L	1	05/04/25	MR	SW8270E
Bis(2-chloroethoxy)methane	ND	4.8	ug/L	1	05/04/25	MR	SW8270E
Bis(2-chloroethyl)ether	ND	0.96	ug/L	1	05/04/25	MR	SW8270E
Bis(2-ethylhexyl)phthalate	ND	0.96	ug/L	1	05/04/25	MR	SW8270E
Carbazole	ND	4.8	ug/L	1	05/04/25	MR	SW8270E
Dibenzofuran	ND	4.8	ug/L	1	05/04/25	MR	SW8270E
Diethyl phthalate	ND	4.8	ug/L	1	05/04/25	MR	SW8270E
Dimethylphthalate	ND	4.8	ug/L	1	05/04/25	MR	SW8270E
Di-n-butylphthalate	ND	4.8	ug/L	1	05/04/25	MR	SW8270E
Di-n-octylphthalate	ND	4.8	ug/L	1	05/04/25	MR	SW8270E
Hexachloroethane	ND	0.96	ug/L	1	05/04/25	MR	SW8270E
Isophorone	6.0	4.8	ug/L	1	05/04/25	MR	SW8270E
N-Nitrosodi-n-propylamine	ND	4.8	ug/L	1	05/04/25	MR	SW8270E
N-Nitrosodiphenylamine	ND	4.8	ug/L	1	05/04/25	MR	SW8270E
Pentachloronitrobenzene	ND	2.4	ug/L	1	05/04/25	MR	SW8270E
Phenol	ND	0.96	ug/L	1	05/04/25	MR	SW8270E
QA/QC Surrogates							
% 2,4,6-Tribromophenol	84		%	1	05/04/25	MR	15 - 110 %
% 2-Fluorobiphenyl	55		%	1	05/04/25	MR	30 - 130 %
% 2-Fluorophenol	45		%	1	05/04/25	MR	15 - 110 %
% Nitrobenzene-d5	57		%	1	05/04/25	MR	30 - 130 %
% Phenol-d5	54		%	1	05/04/25	MR	15 - 110 %
% Terphenyl-d14	67		%	1	05/04/25	MR	30 - 130 %
Semivolatiles (SIM)							
2-Methylnaphthalene	ND	0.48	ug/L	1	05/04/25	MR	SW8270E (SIM)
Acenaphthene	1.6	0.48	ug/L	1	05/04/25	MR	SW8270E (SIM)
Acenaphthylene	0.13	0.10	ug/L	1	05/04/25	MR	SW8270E (SIM)
Anthracene	0.22	0.09	ug/L	1	05/04/25	MR	SW8270E (SIM)
Benz(a)anthracene	ND	0.10	ug/L	1	05/04/25	MR	SW8270E (SIM)
Benzo(a)pyrene	ND	0.19	ug/L	1	05/04/25	MR	SW8270E (SIM)
Benzo(b)fluoranthene	ND	0.10	ug/L	1	05/04/25	MR	SW8270E (SIM)
Benzo(ghi)perylene	0.02	0.02	ug/L	1	05/04/25	MR	SW8270E (SIM)

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Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Benzo(k)fluoranthene	ND	0.10	ug/L	1	05/04/25	MR	SW8270E (SIM)
Chrysene	ND	0.05	ug/L	1	05/04/25	MR	SW8270E (SIM)
Dibenz(a,h)anthracene	ND	0.02	ug/L	1	05/04/25	MR	SW8270E (SIM)
Fluoranthene	ND	0.48	ug/L	1	05/04/25	MR	SW8270E (SIM)
Fluorene	0.50	0.10	ug/L	1	05/04/25	MR	SW8270E (SIM)
Hexachlorobenzene	ND	0.48	ug/L	1	05/04/25	MR	SW8270E (SIM)
Hexachlorobutadiene	ND	0.48	ug/L	1	05/04/25	MR	SW8270E (SIM)
Hexachlorocyclopentadiene	ND	0.48	ug/L	1	05/04/25	MR	SW8270E (SIM)
Indeno(1,2,3-cd)pyrene	ND	0.10	ug/L	1	05/04/25	MR	SW8270E (SIM)
Naphthalene	ND	0.48	ug/L	1	05/04/25	MR	SW8270E (SIM)
Nitrobenzene	ND	0.48	ug/L	1	05/04/25	MR	SW8270E (SIM)
N-Nitrosodimethylamine	ND	0.48	ug/L	1	05/04/25	MR	SW8270E (SIM)
Pentachlorophenol	ND	0.48	ug/L	1	05/04/25	MR	SW8270E (SIM)
Phenanthrene	ND	0.48	ug/L	1	05/04/25	MR	SW8270E (SIM)
Pyrene	0.18	0.07	ug/L	1	05/04/25	MR	SW8270E (SIM)
Pyridine	ND	0.48	ug/L	1	05/04/25	MR	SW8270E (SIM)
QA/QC Surrogates							
% 2,4,6-Tribromophenol	91		%	1	05/04/25	MR	15 - 110 %
% 2-Fluorobiphenyl	56		%	1	05/04/25	MR	30 - 130 %
% 2-Fluorophenol	43		%	1	05/04/25	MR	15 - 110 %
% Nitrobenzene-d5	64		%	1	05/04/25	MR	30 - 130 %
% Phenol-d5	49		%	1	05/04/25	MR	15 - 110 %
% Terphenyl-d14	63		%	1	05/04/25	MR	30 - 130 %

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference

7 = This parameter is not certified by MA for this matrix.

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

Corrosivity is based solely on the pH analysis performed above.

Ignitability is based solely on the results of the closed cup flashpoint analysis performed above. Passed is >140 degree F.

The regulatory hold time for pH is immediately. This pH was performed in the laboratory and may be considered outside of hold-time.

The reactivity, reported above, is based only on the EPA Interim Guidance for Reactive Sulfide. This method is no longer listed in the current version of SW-846.

8260 Analysis:
1,4-Dioxane doesn't meet GW-1 criteria, this compound is analyzed by 8270SIM to achieve this criteria.

Per 1.4.6 of EPA method 8270D, 1,2-Diphenylhydrazine is unstable and readily converts to Azobenzene. Azobenzene is used for the calibration of 1,2-Diphenylhydrazine.

Dissolved analysis requires filtration. Samples submitted from a preserved container are assumed to be field filtered.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.

Phyllis Shiller, Laboratory Director
May 09, 2025
Reviewed and Released by: Ethan Lee, Project Manager

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102

Analysis Report

May 09, 2025

FOR: Attn: Lisa Stone
Kleinfelder
One Beacon Street Suite 8100
Boston, MA 02108

Sample Information		Custody Information		Date	Time
Matrix:	GROUND WATER	Collected by:		04/28/25	11:50
Location Code:	KLEINFL-BOSTON	Received by:	SW	04/29/25	16:20
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	20231168.006A				

Laboratory Data

SDG ID: GCT15844
Phoenix ID: CT15845

Project ID: SHERMAN ST TANK/BELLIS CIRCLE
Client ID: MW-102S

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Silver	< 0.001	0.001	mg/L	1	05/02/25	TH	SW6010D
Arsenic	< 0.004	0.004	mg/L	1	05/02/25	TH	SW6010D
Barium	0.109	0.002	mg/L	1	05/02/25	TH	SW6010D
Beryllium	< 0.001	0.001	mg/L	1	05/02/25	TH	SW6010D
Cadmium	< 0.001	0.001	mg/L	1	05/02/25	TH	SW6010D
Chromium	0.005	0.001	mg/L	1	05/02/25	TH	SW6010D
Silver (Dissolved)	< 0.001	0.001	mg/L	1	05/03/25	CPP	SW6010D
Arsenic (Dissolved)	< 0.004	0.004	mg/L	1	05/03/25	CPP	SW6010D
Barium (Dissolved)	0.088	0.002	mg/L	1	05/03/25	CPP	SW6010D
Beryllium (Dissolved)	< 0.001	0.001	mg/L	1	05/03/25	CPP	SW6010D
Cadmium (Dissolved)	< 0.001	0.001	mg/L	1	05/03/25	CPP	SW6010D
Chromium (Dissolved)	< 0.001	0.001	mg/L	1	05/03/25	CPP	SW6010D
Mercury (Dissolved)	< 0.0002	0.0002	mg/L	1	05/06/25	ZT	SW7470A
Nickel (Dissolved)	0.006	0.001	mg/L	1	05/03/25	CPP	SW6010D
Lead (Dissolved)	< 0.002	0.002	mg/L	1	05/03/25	CPP	SW6010D
Antimony (Dissolved)	< 0.005	0.005	mg/L	1	05/03/25	CPP	SW6010D
Selenium (Dissolved)	< 0.011	0.011	mg/L	1	05/03/25	CPP	SW6010D
Thallium (Dissolved)	< 0.0006	0.0006	mg/L	2	05/02/25	JM	SW6020B
Vanadium (Dissolved)	< 0.002	0.002	mg/L	1	05/03/25	CPP	SW6010D
Zinc (Dissolved)	0.003	0.002	mg/L	1	05/03/25	CPP	SW6010D
Mercury	< 0.0002	0.0002	mg/L	1	05/01/25	JM	SW7470A
Nickel	0.009	0.001	mg/L	1	05/02/25	TH	SW6010D
Lead	0.006	0.001	mg/L	1	05/02/25	TH	SW6010D
Antimony	< 0.005	0.005	mg/L	1	05/02/25	TH	SW6010D
Selenium	< 0.010	0.010	mg/L	1	05/02/25	TH	SW6010D
Thallium	< 0.0010	0.0010	mg/L	10	05/06/25	JM	SW6020B
Vanadium	0.006	0.002	mg/L	1	05/02/25	TH	SW6010D
Zinc	0.014	0.004	mg/L	1	05/02/25	TH	SW6010D

Ver 1

Project ID: SHERMAN ST TANK/BELLIS CIRCLE
Client ID: MW-102S

Phoenix I.D.: CT15845

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference	
Conductivity	2250	5.00	umhos/cm	1	04/30/25	KG/KDB	SM2510B-11	
Corrosivity	Negative		Pos/Neg	1	04/30/25	KG	SW846-Corr	
Flash Point	>200	200	Degree F	1	05/01/25	G	SW1010B	
Ignitability	Passed	140	degree F	1	05/01/25	G	SW846-Ignit	
pH	6.95	1.00	pH Units	1	04/30/25 00:03	KG	SM4500-H B-11	
Reactivity Cyanide	< 2.0	2.0	mg/L	2.01	05/07/25	NP/GD	SW846 7.3.3.1/90	7
Reactivity Sulfide	< 5	5	mg/L	1	05/08/25	NP/GD	SW846 CH7	7
Reactivity	Negative		Pos/Neg	1	05/08/25	NP/GD	SW846-React	
Dissolved Mercury Digestion	Completed				05/05/25	GW/GW	SW7470A	
Mercury Digestion	Completed				05/01/25	AK/GW	SW7470A	
PCB Extraction	Completed				04/30/25	A//A/	SW3510C	
Semi-Volatile Extraction	Completed				05/01/25	L/MQ	SW3520C	
Dissolved Metals Preparation	Completed				04/30/25	AG	SW3005A	
Dissolved Metals Preparation (MS)	Completed				04/30/25	AG	SW3005A	
Total Metals Digestion	Completed				05/01/25	AG	SW3010A	
Total Metals Digestion MS	Completed				05/03/25	AG	SW3010A	
Extraction of TPH	Completed				05/05/25	L/MQ	SW3510C/SW3520C	
Polychlorinated Biphenyls								
PCB-1016	ND	0.25	ug/L	1	05/02/25	SC	SW8082A	
PCB-1221	ND	0.25	ug/L	1	05/02/25	SC	SW8082A	
PCB-1232	ND	0.25	ug/L	1	05/02/25	SC	SW8082A	
PCB-1242	ND	0.25	ug/L	1	05/02/25	SC	SW8082A	
PCB-1248	ND	0.25	ug/L	1	05/02/25	SC	SW8082A	
PCB-1254	ND	0.25	ug/L	1	05/02/25	SC	SW8082A	
PCB-1260	ND	0.25	ug/L	1	05/02/25	SC	SW8082A	
PCB-1262	ND	0.25	ug/L	1	05/02/25	SC	SW8082A	
PCB-1268	ND	0.25	ug/L	1	05/02/25	SC	SW8082A	
QA/QC Surrogates								
% DCBP	82		%	1	05/02/25	SC	30 - 150 %	
% DCBP (Confirmation)	79		%	1	05/02/25	SC	30 - 150 %	
% TCMX	108		%	1	05/02/25	SC	30 - 150 %	
% TCMX (Confirmation)	76		%	1	05/02/25	SC	30 - 150 %	
TPH by GC (Extractable Products)								
Aviation Fuel/Kerosene	ND	0.49	mg/L	1	05/06/25	JRB	SW8015D	
Fuel Oil #2/ Diesel Fuel	ND	0.49	mg/L	1	05/06/25	JRB	SW8015D	
Fuel Oil #4	ND	0.49	mg/L	1	05/06/25	JRB	SW8015D	
Fuel Oil #6	ND	0.49	mg/L	1	05/06/25	JRB	SW8015D	
Motor Oil	ND	0.49	mg/L	1	05/06/25	JRB	SW8015D	
Total TPH	ND	0.49	mg/L	1	05/06/25	JRB	SW8015D	
Unidentified	ND	0.49	mg/L	1	05/06/25	JRB	SW8015D	
QA/QC Surrogates								
% Terphenyl (surr)	50		%	1	05/06/25	JRB	50 - 150 %	
Volatiles								
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	05/04/25	HM	SW8260D	
1,1,1-Trichloroethane	ND	1.0	ug/L	1	05/04/25	HM	SW8260D	
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	05/04/25	HM	SW8260D	

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Client ID: MW-102S

Phoenix I.D.: CT15845

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
1,1,2-Trichloroethane	ND	1.0	ug/L	1	05/04/25	HM	SW8260D
1,1-Dichloroethane	ND	1.0	ug/L	1	05/04/25	HM	SW8260D
1,1-Dichloroethene	ND	1.0	ug/L	1	05/04/25	HM	SW8260D
1,1-Dichloropropene	ND	1.0	ug/L	1	05/04/25	HM	SW8260D
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	05/04/25	HM	SW8260D
1,2,3-Trichloropropane	ND	1.0	ug/L	1	05/04/25	HM	SW8260D
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	05/04/25	HM	SW8260D
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	05/04/25	HM	SW8260D
1,2-Dibromo-3-chloropropane	ND	1.0	ug/L	1	05/04/25	HM	SW8260D
1,2-Dibromoethane	ND	1.0	ug/L	1	05/04/25	HM	SW8260D
1,2-Dichlorobenzene	ND	1.0	ug/L	1	05/04/25	HM	SW8260D
1,2-Dichloroethane	ND	0.60	ug/L	1	05/04/25	HM	SW8260D
1,2-Dichloropropane	ND	1.0	ug/L	1	05/04/25	HM	SW8260D
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	05/04/25	HM	SW8260D
1,3-Dichlorobenzene	ND	1.0	ug/L	1	05/04/25	HM	SW8260D
1,3-Dichloropropane	ND	1.0	ug/L	1	05/04/25	HM	SW8260D
1,4-Dichlorobenzene	ND	1.0	ug/L	1	05/04/25	HM	SW8260D
2,2-Dichloropropane	ND	1.0	ug/L	1	05/04/25	HM	SW8260D
2-Chlorotoluene	ND	1.0	ug/L	1	05/04/25	HM	SW8260D
2-Hexanone	ND	5.0	ug/L	1	05/04/25	HM	SW8260D
2-Isopropyltoluene	ND	1.0	ug/L	1	05/04/25	HM	SW8260D
4-Chlorotoluene	ND	1.0	ug/L	1	05/04/25	HM	SW8260D
4-Methyl-2-pentanone	ND	5.0	ug/L	1	05/04/25	HM	SW8260D
Acetone	ND	25	ug/L	1	05/04/25	HM	SW8260D
Acrylonitrile	ND	1.0	ug/L	1	05/04/25	HM	SW8260D
Benzene	ND	0.70	ug/L	1	05/04/25	HM	SW8260D
Bromobenzene	ND	1.0	ug/L	1	05/04/25	HM	SW8260D
Bromochloromethane	ND	1.0	ug/L	1	05/04/25	HM	SW8260D
Bromodichloromethane	ND	0.50	ug/L	1	05/04/25	HM	SW8260D
Bromoform	ND	1.0	ug/L	1	05/04/25	HM	SW8260D
Bromomethane	ND	1.0	ug/L	1	05/04/25	HM	SW8260D
Carbon Disulfide	ND	5.0	ug/L	1	05/04/25	HM	SW8260D
Carbon tetrachloride	ND	1.0	ug/L	1	05/04/25	HM	SW8260D
Chlorobenzene	ND	1.0	ug/L	1	05/04/25	HM	SW8260D
Chloroethane	ND	1.0	ug/L	1	05/04/25	HM	SW8260D
Chloroform	ND	1.0	ug/L	1	05/04/25	HM	SW8260D
Chloromethane	ND	1.0	ug/L	1	05/04/25	HM	SW8260D
cis-1,2-Dichloroethene	ND	1.0	ug/L	1	05/04/25	HM	SW8260D
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	05/04/25	HM	SW8260D
Dibromochloromethane	ND	0.50	ug/L	1	05/04/25	HM	SW8260D
Dibromomethane	ND	1.0	ug/L	1	05/04/25	HM	SW8260D
Dichlorodifluoromethane	ND	1.0	ug/L	1	05/04/25	HM	SW8260D
Ethylbenzene	ND	1.0	ug/L	1	05/04/25	HM	SW8260D
Hexachlorobutadiene	ND	0.40	ug/L	1	05/04/25	HM	SW8260D
Isopropylbenzene	ND	1.0	ug/L	1	05/04/25	HM	SW8260D
m&p-Xylene	ND	1.0	ug/L	1	05/04/25	HM	SW8260D
Methyl ethyl ketone	ND	5.0	ug/L	1	05/04/25	HM	SW8260D
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	1	05/04/25	HM	SW8260D
Methylene chloride	ND	1.0	ug/L	1	05/04/25	HM	SW8260D

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Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Naphthalene	ND	1.0	ug/L	1	05/04/25	HM	SW8260D
n-Butylbenzene	ND	1.0	ug/L	1	05/04/25	HM	SW8260D
n-Propylbenzene	ND	1.0	ug/L	1	05/04/25	HM	SW8260D
o-Xylene	ND	1.0	ug/L	1	05/04/25	HM	SW8260D
p-Isopropyltoluene	ND	1.0	ug/L	1	05/04/25	HM	SW8260D
sec-Butylbenzene	ND	1.0	ug/L	1	05/04/25	HM	SW8260D
Styrene	ND	1.0	ug/L	1	05/04/25	HM	SW8260D
tert-Butylbenzene	ND	1.0	ug/L	1	05/04/25	HM	SW8260D
Tetrachloroethene	ND	1.0	ug/L	1	05/04/25	HM	SW8260D
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	05/04/25	HM	SW8260D
Toluene	ND	1.0	ug/L	1	05/04/25	HM	SW8260D
Total Xylenes	ND	1.0	ug/L	1	05/04/25	HM	SW8260D
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	05/04/25	HM	SW8260D
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	05/04/25	HM	SW8260D
trans-1,4-dichloro-2-butene	ND	5.0	ug/L	1	05/04/25	HM	SW8260D
Trichloroethene	ND	1.0	ug/L	1	05/04/25	HM	SW8260D
Trichlorofluoromethane	ND	1.0	ug/L	1	05/04/25	HM	SW8260D
Trichlorotrifluoroethane	ND	1.0	ug/L	1	05/04/25	HM	SW8260D
Vinyl chloride	ND	1.0	ug/L	1	05/04/25	HM	SW8260D
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	102		%	1	05/04/25	HM	70 - 130 %
% Bromofluorobenzene	95		%	1	05/04/25	HM	70 - 130 %
% Dibromofluoromethane	123		%	1	05/04/25	HM	70 - 130 %
% Toluene-d8	104		%	1	05/04/25	HM	70 - 130 %
Oxygenates & Dioxane							
1,4-Dioxane	ND	100	ug/L	1	05/04/25	HM	SW8260D (OXY)
Diethyl ether	ND	1.0	ug/L	1	05/04/25	HM	SW8260D (OXY)
Di-isopropyl ether	ND	1.0	ug/L	1	05/04/25	HM	SW8260D (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	05/04/25	HM	SW8260D (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	05/04/25	HM	SW8260D (OXY)
Semivolatiles							
1,1-Biphenyl	ND	3.4	ug/L	1	05/04/25	MR	SW8270E
1,2,4,5-Tetrachlorobenzene	ND	3.4	ug/L	1	05/04/25	MR	SW8270E
1,2,4-Trichlorobenzene	ND	4.9	ug/L	1	05/04/25	MR	SW8270E
1,2-Dichlorobenzene	ND	2.4	ug/L	1	05/04/25	MR	SW8270E
1,2-Diphenylhydrazine	ND	4.9	ug/L	1	05/04/25	MR	SW8270E
1,3-Dichlorobenzene	ND	2.4	ug/L	1	05/04/25	MR	SW8270E
1,4-Dichlorobenzene	ND	2.4	ug/L	1	05/04/25	MR	SW8270E
2,2'-Oxybis(1-Chloropropane)	ND	4.9	ug/L	1	05/04/25	MR	SW8270E
2,4,5-Trichlorophenol	ND	0.97	ug/L	1	05/04/25	MR	SW8270E
2,4,6-Trichlorophenol	ND	0.97	ug/L	1	05/04/25	MR	SW8270E
2,4-Dichlorophenol	ND	0.97	ug/L	1	05/04/25	MR	SW8270E
2,4-Dimethylphenol	ND	0.97	ug/L	1	05/04/25	MR	SW8270E
2,4-Dinitrophenol	ND	0.97	ug/L	1	05/04/25	MR	SW8270E
2,4-Dinitrotoluene	ND	4.9	ug/L	1	05/04/25	MR	SW8270E
2,6-Dinitrotoluene	ND	4.9	ug/L	1	05/04/25	MR	SW8270E
2-Chloronaphthalene	ND	4.9	ug/L	1	05/04/25	MR	SW8270E
2-Chlorophenol	ND	0.97	ug/L	1	05/04/25	MR	SW8270E

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Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
2-Methylphenol (o-cresol)	ND	0.97	ug/L	1	05/04/25	MR	SW8270E
2-Nitroaniline	ND	4.9	ug/L	1	05/04/25	MR	SW8270E
2-Nitrophenol	ND	0.97	ug/L	1	05/04/25	MR	SW8270E
3&4-Methylphenol (m&p-cresol)	ND	9.7	ug/L	1	05/04/25	MR	SW8270E
3,3'-Dichlorobenzidine	ND	4.9	ug/L	1	05/04/25	MR	SW8270E
3-Nitroaniline	ND	4.9	ug/L	1	05/04/25	MR	SW8270E
4,6-Dinitro-2-methylphenol	ND	0.97	ug/L	1	05/04/25	MR	SW8270E
4-Bromophenyl phenyl ether	ND	4.9	ug/L	1	05/04/25	MR	SW8270E
4-Chloro-3-methylphenol	ND	0.97	ug/L	1	05/04/25	MR	SW8270E
4-Chloroaniline	ND	4.9	ug/L	1	05/04/25	MR	SW8270E
4-Chlorophenyl phenyl ether	ND	0.97	ug/L	1	05/04/25	MR	SW8270E
4-Nitroaniline	ND	4.9	ug/L	1	05/04/25	MR	SW8270E
4-Nitrophenol	ND	0.97	ug/L	1	05/04/25	MR	SW8270E
Acetophenone	ND	4.9	ug/L	1	05/04/25	MR	SW8270E
Aniline	ND	4.9	ug/L	1	05/04/25	MR	SW8270E
Benzidine	ND	4.9	ug/L	1	05/04/25	MR	SW8270E
Benzoic acid	ND	49	ug/L	1	05/04/25	MR	SW8270E
Benzyl butyl phthalate	ND	4.9	ug/L	1	05/04/25	MR	SW8270E
Bis(2-chloroethoxy)methane	ND	4.9	ug/L	1	05/04/25	MR	SW8270E
Bis(2-chloroethyl)ether	ND	0.97	ug/L	1	05/04/25	MR	SW8270E
Bis(2-ethylhexyl)phthalate	ND	0.97	ug/L	1	05/04/25	MR	SW8270E
Carbazole	ND	4.9	ug/L	1	05/04/25	MR	SW8270E
Dibenzofuran	ND	4.9	ug/L	1	05/04/25	MR	SW8270E
Diethyl phthalate	ND	4.9	ug/L	1	05/04/25	MR	SW8270E
Dimethylphthalate	ND	4.9	ug/L	1	05/04/25	MR	SW8270E
Di-n-butylphthalate	ND	4.9	ug/L	1	05/04/25	MR	SW8270E
Di-n-octylphthalate	ND	4.9	ug/L	1	05/04/25	MR	SW8270E
Hexachloroethane	ND	0.97	ug/L	1	05/04/25	MR	SW8270E
Isophorone	ND	4.9	ug/L	1	05/04/25	MR	SW8270E
N-Nitrosodi-n-propylamine	ND	4.9	ug/L	1	05/04/25	MR	SW8270E
N-Nitrosodiphenylamine	ND	4.9	ug/L	1	05/04/25	MR	SW8270E
Pentachloronitrobenzene	ND	2.4	ug/L	1	05/04/25	MR	SW8270E
Phenol	ND	0.97	ug/L	1	05/04/25	MR	SW8270E
QA/QC Surrogates							
% 2,4,6-Tribromophenol	73		%	1	05/04/25	MR	15 - 110 %
% 2-Fluorobiphenyl	56		%	1	05/04/25	MR	30 - 130 %
% 2-Fluorophenol	48		%	1	05/04/25	MR	15 - 110 %
% Nitrobenzene-d5	67		%	1	05/04/25	MR	30 - 130 %
% Phenol-d5	53		%	1	05/04/25	MR	15 - 110 %
% Terphenyl-d14	58		%	1	05/04/25	MR	30 - 130 %
Semivolatiles (SIM)							
2-Methylnaphthalene	ND	0.49	ug/L	1	05/04/25	MR	SW8270E (SIM)
Acenaphthene	ND	0.49	ug/L	1	05/04/25	MR	SW8270E (SIM)
Acenaphthylene	ND	0.10	ug/L	1	05/04/25	MR	SW8270E (SIM)
Anthracene	ND	0.09	ug/L	1	05/04/25	MR	SW8270E (SIM)
Benz(a)anthracene	ND	0.10	ug/L	1	05/04/25	MR	SW8270E (SIM)
Benzo(a)pyrene	ND	0.19	ug/L	1	05/04/25	MR	SW8270E (SIM)
Benzo(b)fluoranthene	ND	0.10	ug/L	1	05/04/25	MR	SW8270E (SIM)
Benzo(ghi)perylene	ND	0.02	ug/L	1	05/04/25	MR	SW8270E (SIM)

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Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Benzo(k)fluoranthene	ND	0.10	ug/L	1	05/04/25	MR	SW8270E (SIM)
Chrysene	ND	0.05	ug/L	1	05/04/25	MR	SW8270E (SIM)
Dibenz(a,h)anthracene	ND	0.02	ug/L	1	05/04/25	MR	SW8270E (SIM)
Fluoranthene	ND	0.49	ug/L	1	05/04/25	MR	SW8270E (SIM)
Fluorene	ND	0.10	ug/L	1	05/04/25	MR	SW8270E (SIM)
Hexachlorobenzene	ND	0.49	ug/L	1	05/04/25	MR	SW8270E (SIM)
Hexachlorobutadiene	ND	0.49	ug/L	1	05/04/25	MR	SW8270E (SIM)
Hexachlorocyclopentadiene	ND	0.49	ug/L	1	05/04/25	MR	SW8270E (SIM)
Indeno(1,2,3-cd)pyrene	ND	0.10	ug/L	1	05/04/25	MR	SW8270E (SIM)
Naphthalene	ND	0.49	ug/L	1	05/04/25	MR	SW8270E (SIM)
Nitrobenzene	ND	0.49	ug/L	1	05/04/25	MR	SW8270E (SIM)
N-Nitrosodimethylamine	ND	0.49	ug/L	1	05/04/25	MR	SW8270E (SIM)
Pentachlorophenol	ND	0.49	ug/L	1	05/04/25	MR	SW8270E (SIM)
Phenanthrene	ND	0.49	ug/L	1	05/04/25	MR	SW8270E (SIM)
Pyrene	0.08	0.07	ug/L	1	05/04/25	MR	SW8270E (SIM)
Pyridine	ND	0.49	ug/L	1	05/04/25	MR	SW8270E (SIM)
QA/QC Surrogates							
% 2,4,6-Tribromophenol	90		%	1	05/04/25	MR	15 - 110 %
% 2-Fluorobiphenyl	55		%	1	05/04/25	MR	30 - 130 %
% 2-Fluorophenol	47		%	1	05/04/25	MR	15 - 110 %
% Nitrobenzene-d5	77		%	1	05/04/25	MR	30 - 130 %
% Phenol-d5	56		%	1	05/04/25	MR	15 - 110 %
% Terphenyl-d14	55		%	1	05/04/25	MR	30 - 130 %

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference

7 = This parameter is not certified by MA for this matrix.

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

Ignitability is based solely on the results of the closed cup flashpoint analysis performed above. Passed is >140 degree F.

The regulatory hold time for pH is immediately. This pH was performed in the laboratory and may be considered outside of hold-time.

The reactivity, reported above, is based only on the EPA Interim Guidance for Reactive Sulfide. This method is no longer listed in the current version of SW-846.

8260 Analysis:
1,4-Dioxane doesn't meet GW-1 criteria, this compound is analyzed by 8270SIM to achieve this criteria.

Per 1.4.6 of EPA method 8270D, 1,2-Diphenylhydrazine is unstable and readily converts to Azobenzene. Azobenzene is used for the calibration of 1,2-Diphenylhydrazine.

Corrosivity is based solely on the pH analysis performed above.

Dissolved analysis requires filtration. Samples submitted from a preserved container are assumed to be field filtered.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.

Phyllis Shiller, Laboratory Director
May 09, 2025
Reviewed and Released by: Ethan Lee, Project Manager

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102

Analysis Report

May 09, 2025

FOR: Attn: Lisa Stone
Kleinfelder
One Beacon Street Suite 8100
Boston, MA 02108

Sample Information		Custody Information		Date	Time
Matrix:	WATER	Collected by:		04/28/25	
Location Code:	KLEINFL-BOSTON	Received by:	SW	04/29/25	16:20
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	20231168.006A				

Laboratory Data

SDG ID: GCT15844
Phoenix ID: CT15846

Project ID: SHERMAN ST TANK/BELLIS CIRCLE
Client ID: TRIP BLANK

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Volatiles							
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	05/03/25	HM	SW8260D
1,1,1-Trichloroethane	ND	1.0	ug/L	1	05/03/25	HM	SW8260D
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1	05/03/25	HM	SW8260D
1,1,2-Trichloroethane	ND	1.0	ug/L	1	05/03/25	HM	SW8260D
1,1-Dichloroethane	ND	1.0	ug/L	1	05/03/25	HM	SW8260D
1,1-Dichloroethene	ND	1.0	ug/L	1	05/03/25	HM	SW8260D
1,1-Dichloropropene	ND	1.0	ug/L	1	05/03/25	HM	SW8260D
1,2,3-Trichlorobenzene	ND	1.0	ug/L	1	05/03/25	HM	SW8260D
1,2,3-Trichloropropane	ND	1.0	ug/L	1	05/03/25	HM	SW8260D
1,2,4-Trichlorobenzene	ND	1.0	ug/L	1	05/03/25	HM	SW8260D
1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	05/03/25	HM	SW8260D
1,2-Dibromo-3-chloropropane	ND	1.0	ug/L	1	05/03/25	HM	SW8260D
1,2-Dibromoethane	ND	1.0	ug/L	1	05/03/25	HM	SW8260D
1,2-Dichlorobenzene	ND	1.0	ug/L	1	05/03/25	HM	SW8260D
1,2-Dichloroethane	ND	0.60	ug/L	1	05/03/25	HM	SW8260D
1,2-Dichloropropane	ND	1.0	ug/L	1	05/03/25	HM	SW8260D
1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	05/03/25	HM	SW8260D
1,3-Dichlorobenzene	ND	1.0	ug/L	1	05/03/25	HM	SW8260D
1,3-Dichloropropane	ND	1.0	ug/L	1	05/03/25	HM	SW8260D
1,4-Dichlorobenzene	ND	1.0	ug/L	1	05/03/25	HM	SW8260D
2,2-Dichloropropane	ND	1.0	ug/L	1	05/03/25	HM	SW8260D
2-Chlorotoluene	ND	1.0	ug/L	1	05/03/25	HM	SW8260D
2-Hexanone	ND	5.0	ug/L	1	05/03/25	HM	SW8260D
2-Isopropyltoluene	ND	1.0	ug/L	1	05/03/25	HM	SW8260D
4-Chlorotoluene	ND	1.0	ug/L	1	05/03/25	HM	SW8260D
4-Methyl-2-pentanone	ND	5.0	ug/L	1	05/03/25	HM	SW8260D

Project ID: SHERMAN ST TANK/BELLIS CIRCLE
Client ID: TRIP BLANK

Phoenix I.D.: CT15846

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Acetone	ND	25	ug/L	1	05/03/25	HM	SW8260D
Acrylonitrile	ND	1.0	ug/L	1	05/03/25	HM	SW8260D
Benzene	ND	0.70	ug/L	1	05/03/25	HM	SW8260D
Bromobenzene	ND	1.0	ug/L	1	05/03/25	HM	SW8260D
Bromochloromethane	ND	1.0	ug/L	1	05/03/25	HM	SW8260D
Bromodichloromethane	ND	0.50	ug/L	1	05/03/25	HM	SW8260D
Bromoform	ND	1.0	ug/L	1	05/03/25	HM	SW8260D
Bromomethane	ND	1.0	ug/L	1	05/03/25	HM	SW8260D
Carbon Disulfide	ND	5.0	ug/L	1	05/03/25	HM	SW8260D
Carbon tetrachloride	ND	1.0	ug/L	1	05/03/25	HM	SW8260D
Chlorobenzene	ND	1.0	ug/L	1	05/03/25	HM	SW8260D
Chloroethane	ND	1.0	ug/L	1	05/03/25	HM	SW8260D
Chloroform	ND	1.0	ug/L	1	05/03/25	HM	SW8260D
Chloromethane	ND	1.0	ug/L	1	05/03/25	HM	SW8260D
cis-1,2-Dichloroethene	ND	1.0	ug/L	1	05/03/25	HM	SW8260D
cis-1,3-Dichloropropene	ND	0.40	ug/L	1	05/03/25	HM	SW8260D
Dibromochloromethane	ND	0.50	ug/L	1	05/03/25	HM	SW8260D
Dibromomethane	ND	1.0	ug/L	1	05/03/25	HM	SW8260D
Dichlorodifluoromethane	ND	1.0	ug/L	1	05/03/25	HM	SW8260D
Ethylbenzene	ND	1.0	ug/L	1	05/03/25	HM	SW8260D
Hexachlorobutadiene	ND	0.40	ug/L	1	05/03/25	HM	SW8260D
Isopropylbenzene	ND	1.0	ug/L	1	05/03/25	HM	SW8260D
m&p-Xylene	ND	1.0	ug/L	1	05/03/25	HM	SW8260D
Methyl ethyl ketone	ND	5.0	ug/L	1	05/03/25	HM	SW8260D
Methyl t-butyl ether (MTBE)	ND	1.0	ug/L	1	05/03/25	HM	SW8260D
Methylene chloride	ND	1.0	ug/L	1	05/03/25	HM	SW8260D
Naphthalene	ND	1.0	ug/L	1	05/03/25	HM	SW8260D
n-Butylbenzene	ND	1.0	ug/L	1	05/03/25	HM	SW8260D
n-Propylbenzene	ND	1.0	ug/L	1	05/03/25	HM	SW8260D
o-Xylene	ND	1.0	ug/L	1	05/03/25	HM	SW8260D
p-Isopropyltoluene	ND	1.0	ug/L	1	05/03/25	HM	SW8260D
sec-Butylbenzene	ND	1.0	ug/L	1	05/03/25	HM	SW8260D
Styrene	ND	1.0	ug/L	1	05/03/25	HM	SW8260D
tert-Butylbenzene	ND	1.0	ug/L	1	05/03/25	HM	SW8260D
Tetrachloroethene	ND	1.0	ug/L	1	05/03/25	HM	SW8260D
Tetrahydrofuran (THF)	ND	2.5	ug/L	1	05/03/25	HM	SW8260D
Toluene	ND	1.0	ug/L	1	05/03/25	HM	SW8260D
Total Xylenes	ND	1.0	ug/L	1	05/03/25	HM	SW8260D
trans-1,2-Dichloroethene	ND	1.0	ug/L	1	05/03/25	HM	SW8260D
trans-1,3-Dichloropropene	ND	0.40	ug/L	1	05/03/25	HM	SW8260D
trans-1,4-dichloro-2-butene	ND	5.0	ug/L	1	05/03/25	HM	SW8260D
Trichloroethene	ND	1.0	ug/L	1	05/03/25	HM	SW8260D
Trichlorofluoromethane	ND	1.0	ug/L	1	05/03/25	HM	SW8260D
Trichlorotrifluoroethane	ND	1.0	ug/L	1	05/03/25	HM	SW8260D
Vinyl chloride	ND	1.0	ug/L	1	05/03/25	HM	SW8260D
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	99		%	1	05/03/25	HM	70 - 130 %
% Bromofluorobenzene	97		%	1	05/03/25	HM	70 - 130 %
% Dibromofluoromethane	109		%	1	05/03/25	HM	70 - 130 %

Project ID: SHERMAN ST TANK/BELLIS CIRCLE
Client ID: TRIP BLANK

Phoenix I.D.: CT15846

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
% Toluene-d8	104		%	1	05/03/25	HM	70 - 130 %
Oxygenates & Dioxane							
1,4-Dioxane	ND	100	ug/L	1	05/03/25	HM	SW8260D (OXY)
Diethyl ether	ND	1.0	ug/L	1	05/03/25	HM	SW8260D (OXY)
Di-isopropyl ether	ND	1.0	ug/L	1	05/03/25	HM	SW8260D (OXY)
Ethyl tert-butyl ether	ND	1.0	ug/L	1	05/03/25	HM	SW8260D (OXY)
tert-amyl methyl ether	ND	1.0	ug/L	1	05/03/25	HM	SW8260D (OXY)

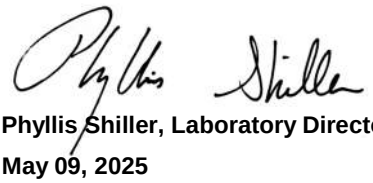
RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

TRIP BLANK INCLUDED.

8260 Analysis:
1,4-Dioxane doesn't meet GW-1 criteria, this compound is analyzed by 8270SIM to achieve this criteria.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



Phyllis Shiller, Laboratory Director
May 09, 2025
Reviewed and Released by: Ethan Lee, Project Manager

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102

QA/QC Report

May 09, 2025

QA/QC Data

SDG I.D.: GCT15844

Parameter	Blank	Blk RL	Sample Result	Dup Result	Dup RPD	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
QA/QC Batch 782694 (mg/L), QC Sample No: CT15510 (CT15844, CT15845)													
Mercury (Dissolved)	BRL	0.0002	<0.0002	<0.0002	NC	114			104			80 - 120	20
Comment: Additional Mercury Criteria: LCS acceptance range is 80-120% for aqueous and for soils the acceptance range is set by vendor limits. MS acceptance range is 75-125% for aqueous and 80-120% for soils.													
QA/QC Batch 782132 (mg/L), QC Sample No: CT15575 (CT15844, CT15845)													
Mercury - Water	BRL	0.0002	<0.0002	<0.0002	NC	97.0			93.7			80 - 120	20
Comment: Additional Mercury Criteria: LCS acceptance range is 80-120% for aqueous and for soils the acceptance range is set by vendor limits. MS acceptance range is 75-125% for aqueous and 80-120% for soils.													
QA/QC Batch 782016 (mg/L), QC Sample No: CT15575 (CT15844, CT15845)													
ICP Metals - Dissolved													
Antimony	BRL	0.005	<0.005	<0.005	NC	90.3	94.2	4.2	93.1			80 - 120	20
Arsenic	BRL	0.004	<0.004	<0.004	NC	90.7	94.4	4.0	94.2			80 - 120	20
Barium	BRL	0.002	0.033	0.033	0	91.2	95.3	4.4	94.3			80 - 120	20
Beryllium	BRL	0.001	<0.001	<0.001	NC	94.8	99.4	4.7	99.4			80 - 120	20
Cadmium	BRL	0.001	<0.001	<0.001	NC	91.9	96.3	4.7	94.7			80 - 120	20
Chromium	BRL	0.001	<0.001	<0.001	NC	94.1	98.5	4.6	97.7			80 - 120	20
Lead	BRL	0.002	<0.002	<0.002	NC	92.5	96.3	4.0	95.3			80 - 120	20
Nickel	BRL	0.001	0.001	0.001	NC	91.0	95.2	4.5	93.9			80 - 120	20
Selenium	BRL	0.011	<0.011	<0.011	NC	86.5	91.4	5.5	89.3			80 - 120	20
Silver	BRL	0.001	<0.001	<0.001	NC	93.2	97.8	4.8	97.3			80 - 120	20
Vanadium	BRL	0.002	<0.002	<0.002	NC	92.9	97.3	4.6	97.1			80 - 120	20
Zinc	BRL	0.002	0.004	0.002	NC	90.8	95.3	4.8	94.4			80 - 120	20
Comment: Additional Criteria: LCS acceptance range is 80-120% for aqueous and for soils the acceptance range is set by vendor limits. MS acceptance range 75-125%.													
QA/QC Batch 782250 (mg/L), QC Sample No: CT15703 (CT15844, CT15845)													
ICP Metals - Aqueous													
Antimony	BRL	0.005	<0.005	<0.005	NC	98.8	101	2.2	99.1			80 - 120	20
Arsenic	BRL	0.004	<0.004	<0.004	NC	97.2	99.7	2.5	96.9			80 - 120	20
Barium	BRL	0.002	0.043	0.043	0	98.8	102	3.2	99.3			80 - 120	20
Beryllium	BRL	0.001	<0.001	<0.001	NC	96.5	99.0	2.6	98.0			80 - 120	20
Cadmium	BRL	0.001	<0.001	<0.001	NC	96.1	98.8	2.8	96.6			80 - 120	20
Chromium	BRL	0.001	<0.001	<0.001	NC	99.3	102	2.7	100			80 - 120	20
Lead	BRL	0.002	0.002	0.003	NC	97.0	101	4.0	98.5			80 - 120	20
Nickel	BRL	0.001	<0.001	<0.001	NC	101	104	2.9	102			80 - 120	20
Selenium	BRL	0.010	<0.010	<0.010	NC	93.5	96.7	3.4	91.8			80 - 120	20
Silver	BRL	0.001	<0.001	<0.001	NC	96.6	99.0	2.5	97.5			80 - 120	20
Vanadium	BRL	0.002	<0.002	<0.002	NC	98.1	101	2.9	99.7			80 - 120	20
Zinc	BRL	0.004	0.004	0.004	NC	95.7	98.2	2.6	96.4			80 - 120	20

QA/QC Data

SDG I.D.: GCT15844

Parameter	Blank	Blk RL	Sample Result	Dup Result	Dup RPD	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
Comment:													
Additional Criteria: LCS acceptance range is 80-120% for aqueous and for soils the acceptance range is set by vendor limits. MS acceptance range 75-125%.													
QA/QC Batch 782064 (mg/L), QC Sample No: CT15517 (CT15844, CT15845)													
ICP Metals MS - Dissolved													
Thallium	BRL	0.0006	<0.0006	<0.0006	NC	86.5	86.0	0.6	88.8			80 - 120	20
Comment:													
Additional: LCS acceptance range is 80-120% MS acceptance range 75-125%.													
QA/QC Batch 782588 (mg/L), QC Sample No: CT15750 (CT15844, CT15845)													
ICP MS Metals - Aqueous													
Thallium	BRL	0.0001	<0.0001	<0.0001	NC	97.4	98.8	1.4	96.6			80 - 120	20
Comment:													
Additional: LCS acceptance range is 80-120% MS acceptance range 75-125%.													

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QA/QC Report

May 09, 2025

QA/QC Data

SDG I.D.: GCT15844

Parameter	Blank	Blk RL	Sample Result	Dup Result	Dup RPD	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
QA/QC Batch 783058 (mg/Kg), QC Sample No: CT14881 (CT15844, CT15845)													
Reactivity Cyanide	BRL	5	<6	<6.0	NC	99.0						80 - 120	30
Reactivity Sulfide	BRL	20	<20	<20	NC	96.0						80 - 120	30
Comment:													
Additional: MS acceptance range is 75-125%.													
QA/QC Batch 781986 (umhos/cm), QC Sample No: CT15679 (CT15844, CT15845)													
Conductivity	BRL	5.00	3650	3670	0.50	97.1						85 - 115	20
Comment:													
Additional: LCS acceptance range is 85-115% MS acceptance range 75-125%.													
QA/QC Batch 781884 (PH), QC Sample No: CT15790 (CT15844, CT15845)													
pH			7.27	7.26	0.10	100						85 - 115	20
Comment:													
Additional: LCS acceptance range is 85-115% MS acceptance range 75-125%.													
QA/QC Batch 782231 (Degree F), QC Sample No: CT15935 (CT15844, CT15845)													
Flash Point			>200	>200	NC	103						75 - 125	30
Comment:													
Additional: LCS acceptance range is 85-115% MS acceptance range 75-125%.													

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QA/QC Report

May 09, 2025

QA/QC Data

SDG I.D.: GCT15844

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits	
QA/QC Batch 782730 (mg/L), QC Sample No: CT14930 (CT15844, CT15845)											
TPH by GC (Extractable Products) - Ground Water											
Total TPH	ND	0.070	74	70	5.6				50 - 150	20	
% Terphenyl (surr)	86	%	99	90	9.5				50 - 150	20	
Comment:											
A LCS and LCS Duplicate were performed instead of a matrix spike and matrix spike duplicate.											
The ETPH/DRO LCS has been normalized based on the alkane calibration.											
QA/QC Batch 782013 (ug/L), QC Sample No: CT10409 (CT15844, CT15845)											
Polychlorinated Biphenyls - Ground Water											
PCB-1016	ND	0.25	88	66	28.6				40 - 140	20	r
PCB-1221	ND	0.25							40 - 140	20	
PCB-1232	ND	0.25							40 - 140	20	
PCB-1242	ND	0.25							40 - 140	20	
PCB-1248	ND	0.25							40 - 140	20	
PCB-1254	ND	0.25							40 - 140	20	
PCB-1260	ND	0.25	107	89	18.4				40 - 140	20	
PCB-1262	ND	0.25							40 - 140	20	
PCB-1268	ND	0.25							40 - 140	20	
% DCBP (Surrogate Rec)	61	%	95	95	0.0				30 - 150	20	
% DCBP (Surrogate Rec) (Confirm	65	%	104	100	3.9				30 - 150	20	
% TCMX (Surrogate Rec)	65	%	86	85	1.2				30 - 150	20	
% TCMX (Surrogate Rec) (Confirm	67	%	89	90	1.1				30 - 150	20	
Comment:											
A LCS and LCS Duplicate were performed instead of a matrix spike and matrix spike duplicate.											
QA/QC Batch 782239 (ug/L), QC Sample No: CT14595 (CT15844, CT15845)											
Semivolatiles - Ground Water											
1,1-Biphenyl	ND	3.5	67	69	2.9				40 - 140	20	
1,2,4,5-Tetrachlorobenzene	ND	3.5	67	68	1.5				40 - 140	20	
1,2,4-Trichlorobenzene	ND	3.5	61	62	1.6				40 - 140	20	
1,2-Dichlorobenzene	ND	1.0	58	65	11.4				40 - 140	20	
1,2-Diphenylhydrazine	ND	1.6	78	82	5.0				40 - 140	20	
1,3-Dichlorobenzene	ND	1.0	55	62	12.0				40 - 140	20	
1,4-Dichlorobenzene	ND	1.0	55	62	12.0				40 - 140	20	
2,2'-Oxybis(1-Chloropropane)	ND	1.0	60	64	6.5				40 - 140	20	
2,4,5-Trichlorophenol	ND	1.0	76	79	3.9				30 - 130	20	
2,4,6-Trichlorophenol	ND	1.0	74	76	2.7				30 - 130	20	
2,4-Dichlorophenol	ND	1.0	71	71	0.0				30 - 130	20	
2,4-Dimethylphenol	ND	1.0	78	76	2.6				30 - 130	20	
2,4-Dinitrophenol	ND	1.0	95	87	8.8				30 - 130	20	
2,4-Dinitrotoluene	ND	3.5	96	100	4.1				40 - 140	20	
2,6-Dinitrotoluene	ND	3.5	92	97	5.3				40 - 140	20	

QA/QC Data

SDG I.D.: GCT15844

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits	
2-Chloronaphthalene	ND	3.5	72	74	2.7				40 - 140	20	
2-Chlorophenol	ND	1.0	62	64	3.2				30 - 130	20	
2-Methylphenol (o-cresol)	ND	1.0	69	73	5.6				30 - 130	20	
2-Nitroaniline	ND	3.5	133	146	9.3				40 - 140	20	l
2-Nitrophenol	ND	1.0	73	67	8.6				30 - 130	20	
3&4-Methylphenol (m&p-cresol)	ND	1.0	78	82	5.0				30 - 130	20	
3,3'-Dichlorobenzidine	ND	5.0	16	29	57.8				40 - 140	20	l,r
3-Nitroaniline	ND	5.0	95	103	8.1				40 - 140	20	
4,6-Dinitro-2-methylphenol	ND	1.0	97	98	1.0				30 - 130	20	
4-Bromophenyl phenyl ether	ND	3.5	79	83	4.9				40 - 140	20	
4-Chloro-3-methylphenol	ND	1.0	87	89	2.3				30 - 130	20	
4-Chloroaniline	ND	3.5	66	74	11.4				40 - 140	20	
4-Chlorophenyl phenyl ether	ND	1.0	79	84	6.1				40 - 140	20	
4-Nitroaniline	ND	5.0	91	95	4.3				40 - 140	20	
4-Nitrophenol	ND	1.0	100	101	1.0				30 - 130	20	
Acetophenone	ND	3.5	70	76	8.2				40 - 140	20	
Aniline	ND	3.5	59	69	15.6				40 - 140	20	
Benzidine	ND	4.5	<10	112	NC				40 - 140	20	l
Benzoic acid	ND	10	84	64	27.0				30 - 130	20	r
Benzyl butyl phthalate	ND	1.5	83	86	3.6				40 - 140	20	
Bis(2-chloroethoxy)methane	ND	3.5	59	73	21.2				40 - 140	20	r
Bis(2-chloroethyl)ether	ND	1.0	66	71	7.3				40 - 140	20	
Bis(2-ethylhexyl)phthalate	ND	1.5	82	86	4.8				40 - 140	20	
Carbazole	ND	5.0	87	92	5.6				40 - 140	20	
Dibenzofuran	ND	3.5	76	80	5.1				40 - 140	20	
Diethyl phthalate	ND	1.5	87	92	5.6				40 - 140	20	
Dimethylphthalate	ND	1.5	81	87	7.1				40 - 140	20	
Di-n-butylphthalate	ND	1.5	90	94	4.3				40 - 140	20	
Di-n-octylphthalate	ND	1.5	89	92	3.3				40 - 140	20	
Hexachloroethane	ND	3.5	58	64	9.8				40 - 140	20	
Isophorone	ND	3.5	71	72	1.4				40 - 140	20	
N-Nitrosodi-n-propylamine	ND	3.5	80	85	6.1				40 - 140	20	
N-Nitrosodiphenylamine	ND	3.5	69	76	9.7				40 - 140	20	
Pentachloronitrobenzene	ND	5.0	81	85	4.8				40 - 140	20	
Phenol	ND	1.0	58	58	0.0				30 - 130	20	
% 2,4,6-Tribromophenol	69	%	78	82	5.0				15 - 110	20	
% 2-Fluorobiphenyl	69	%	65	67	3.0				30 - 130	20	
% 2-Fluorophenol	63	%	46	45	2.2				15 - 110	20	
% Nitrobenzene-d5	76	%	68	73	7.1				30 - 130	20	
% Phenol-d5	65	%	52	52	0.0				15 - 110	20	
% Terphenyl-d14	78	%	83	85	2.4				30 - 130	20	

Comment:

A LCS and LCS Duplicate were performed instead of a matrix spike and matrix spike duplicate.

Additional 8270 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is at least 10%. (Acid surrogates acceptance range for aqueous samples: 10-110%, for soils 30-130%)

QA/QC Batch 782239 (ug/L), QC Sample No: CT14595 (CT15844, CT15845)

Semivolatiles (SIM) - Ground Water

2-Methylnaphthalene	ND	0.50	63	64	1.6				40 - 140	20	
Acenaphthene	ND	0.50	67	70	4.4				40 - 140	20	
Acenaphthylene	ND	0.50	62	65	4.7				40 - 140	20	
Anthracene	ND	0.50	77	80	3.8				40 - 140	20	
Benz(a)anthracene	ND	0.50	83	87	4.7				40 - 140	20	

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits	
Benzo(a)pyrene	ND	0.50	79	84	6.1				40 - 140	20	
Benzo(b)fluoranthene	ND	0.50	86	92	6.7				40 - 140	20	
Benzo(ghi)perylene	ND	0.50	79	84	6.1				40 - 140	20	
Benzo(k)fluoranthene	ND	0.50	86	92	6.7				40 - 140	20	
Chrysene	ND	0.50	77	80	3.8				40 - 140	20	
Dibenz(a,h)anthracene	ND	0.50	86	97	12.0				40 - 140	20	
Fluoranthene	ND	0.50	81	85	4.8				40 - 140	20	
Fluorene	ND	0.50	73	77	5.3				40 - 140	20	
Hexachlorobenzene	ND	0.50	71	76	6.8				40 - 140	20	
Hexachlorobutadiene	ND	0.50	60	60	0.0				40 - 140	20	
Hexachlorocyclopentadiene	ND	0.50	26	26	0.0				40 - 140	20	I
Indeno(1,2,3-cd)pyrene	ND	0.50	76	82	7.6				40 - 140	20	
Naphthalene	ND	0.50	65	66	1.5				40 - 140	20	
Nitrobenzene	ND	0.50	67	68	1.5				40 - 140	20	
N-Nitrosodimethylamine	ND	0.05	56	58	3.5				40 - 140	20	
Pentachlorophenol	ND	0.50	79	86	8.5				40 - 140	20	
Phenanthrene	ND	0.50	69	73	5.6				40 - 140	20	
Pyrene	ND	0.50	82	85	3.6				40 - 140	20	
Pyridine	ND	0.50	40	53	28.0				40 - 140	20	r
% 2,4,6-Tribromophenol	67	%	77	82	6.3				15 - 110	20	
% 2-Fluorobiphenyl	66	%	58	62	6.7				30 - 130	20	
% 2-Fluorophenol	58	%	51	43	17.0				15 - 110	20	
% Nitrobenzene-d5	73	%	61	63	3.2				30 - 130	20	
% Phenol-d5	61	%	54	48	11.8				15 - 110	20	
% Terphenyl-d14	84	%	72	76	5.4				30 - 130	20	

Comment:

A LCS and LCS Duplicate were performed instead of a matrix spike and matrix spike duplicate.

Additional 8270 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is at least 10%. (Acid surrogates acceptance range for aqueous samples: 10-110%, for soils 30-130%)

QA/QC Batch 782681 (ug/L), QC Sample No: CT15216 (CT15844, CT15846)

Volatiles - Ground Water

1,1,1,2-Tetrachloroethane	ND	1.0	110	108	1.8				70 - 130	20	
1,1,1-Trichloroethane	ND	1.0	119	112	6.1				70 - 130	20	
1,1,2,2-Tetrachloroethane	ND	0.50	107	104	2.8				70 - 130	20	
1,1,2-Trichloroethane	ND	1.0	108	107	0.9				70 - 130	20	
1,1-Dichloroethane	ND	1.0	122	114	6.8				70 - 130	20	
1,1-Dichloroethene	ND	1.0	117	110	6.2				70 - 130	20	
1,1-Dichloropropene	ND	1.0	112	107	4.6				70 - 130	20	
1,2,3-Trichlorobenzene	ND	1.0	107	103	3.8				70 - 130	20	
1,2,3-Trichloropropane	ND	1.0	105	100	4.9				70 - 130	20	
1,2,4-Trichlorobenzene	ND	1.0	109	108	0.9				70 - 130	20	
1,2,4-Trimethylbenzene	ND	1.0	118	113	4.3				70 - 130	20	
1,2-Dibromo-3-chloropropane	ND	1.0	102	100	2.0				70 - 130	20	
1,2-Dibromoethane	ND	1.0	109	107	1.9				70 - 130	20	
1,2-Dichlorobenzene	ND	1.0	106	104	1.9				70 - 130	20	
1,2-Dichloroethane	ND	1.0	110	106	3.7				70 - 130	20	
1,2-Dichloropropane	ND	1.0	113	110	2.7				70 - 130	20	
1,3,5-Trimethylbenzene	ND	1.0	117	113	3.5				70 - 130	20	
1,3-Dichlorobenzene	ND	1.0	111	105	5.6				70 - 130	20	
1,3-Dichloropropane	ND	1.0	109	106	2.8				70 - 130	20	
1,4-Dichlorobenzene	ND	1.0	108	105	2.8				70 - 130	20	
1,4-dioxane	ND	100	91	110	18.9				40 - 160	20	

QA/QC Data

SDG I.D.: GCT15844

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
2,2-Dichloropropane	ND	1.0	112	107	4.6				70 - 130	20
2-Chlorotoluene	ND	1.0	112	109	2.7				70 - 130	20
2-Hexanone	ND	5.0	110	106	3.7				40 - 160	20
2-Isopropyltoluene	ND	1.0	116	113	2.6				70 - 130	20
4-Chlorotoluene	ND	1.0	116	110	5.3				70 - 130	20
4-Methyl-2-pentanone	ND	5.0	111	104	6.5				40 - 160	20
Acetone	ND	5.0	101	92	9.3				40 - 160	20
Acrylonitrile	ND	5.0	118	108	8.8				70 - 130	20
Benzene	ND	0.70	114	111	2.7				70 - 130	20
Bromobenzene	ND	1.0	107	105	1.9				70 - 130	20
Bromochloromethane	ND	1.0	111	110	0.9				70 - 130	20
Bromodichloromethane	ND	0.50	113	109	3.6				70 - 130	20
Bromoform	ND	1.0	113	110	2.7				70 - 130	20
Bromomethane	ND	1.0	115	120	4.3				40 - 160	20
Carbon Disulfide	ND	1.0	118	113	4.3				70 - 130	20
Carbon tetrachloride	ND	1.0	115	109	5.4				70 - 130	20
Chlorobenzene	ND	1.0	110	105	4.7				70 - 130	20
Chloroethane	ND	1.0	115	127	9.9				70 - 130	20
Chloroform	ND	1.0	118	113	4.3				70 - 130	20
Chloromethane	ND	1.0	126	118	6.6				40 - 160	20
cis-1,2-Dichloroethene	ND	1.0	123	116	5.9				70 - 130	20
cis-1,3-Dichloropropene	ND	0.40	116	114	1.7				70 - 130	20
Dibromochloromethane	ND	0.50	111	106	4.6				70 - 130	20
Dibromomethane	ND	1.0	112	107	4.6				70 - 130	20
Dichlorodifluoromethane	ND	1.0	146	138	5.6				40 - 160	20
Di-isopropyl ether	ND	1.0	122	114	6.8				70 - 130	20
Ethyl ether	ND	1.0	109	104	4.7				70 - 130	20
Ethyl tert-butyl ether	ND	1.0	126	119	5.7				70 - 130	20
Ethylbenzene	ND	1.0	115	108	6.3				70 - 130	20
Hexachlorobutadiene	ND	0.40	106	102	3.8				70 - 130	20
Isopropylbenzene	ND	1.0	117	114	2.6				70 - 130	20
m&p-Xylene	ND	1.0	118	113	4.3				70 - 130	20
Methyl ethyl ketone	ND	5.0	121	107	12.3				40 - 160	20
Methyl t-butyl ether (MTBE)	ND	1.0	121	114	6.0				70 - 130	20
Methylene chloride	ND	1.0	116	109	6.2				70 - 130	20
Naphthalene	ND	1.0	112	110	1.8				70 - 130	20
n-Butylbenzene	ND	1.0	115	113	1.8				70 - 130	20
n-Propylbenzene	ND	1.0	115	109	5.4				70 - 130	20
o-Xylene	ND	1.0	120	117	2.5				70 - 130	20
p-Isopropyltoluene	ND	1.0	119	115	3.4				70 - 130	20
sec-Butylbenzene	ND	1.0	115	112	2.6				70 - 130	20
Styrene	ND	1.0	122	120	1.7				70 - 130	20
tert-amyl methyl ether	ND	1.0	115	110	4.4				70 - 130	20
tert-Butylbenzene	ND	1.0	115	110	4.4				70 - 130	20
Tetrachloroethene	ND	1.0	109	107	1.9				70 - 130	20
Tetrahydrofuran (THF)	ND	2.5	116	109	6.2				70 - 130	20
Toluene	ND	1.0	113	107	5.5				70 - 130	20
trans-1,2-Dichloroethene	ND	1.0	121	113	6.8				70 - 130	20
trans-1,3-Dichloropropene	ND	0.40	117	114	2.6				70 - 130	20
trans-1,4-dichloro-2-butene	ND	5.0	114	112	1.8				70 - 130	20
Trichloroethene	ND	1.0	112	106	5.5				70 - 130	20
Trichlorofluoromethane	ND	1.0	121	117	3.4				70 - 130	20
Trichlorotrifluoroethane	ND	1.0	121	114	6.0				70 - 130	20

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
Vinyl chloride	ND	1.0	129	124	4.0				70 - 130	20
% 1,2-dichlorobenzene-d4	99	%	99	98	1.0				70 - 130	20
% Bromofluorobenzene	98	%	100	99	1.0				70 - 130	20
% Dibromofluoromethane	110	%	109	108	0.9				70 - 130	20
% Toluene-d8	101	%	101	101	0.0				70 - 130	20

Comment:

A LCS and LCS Duplicate were performed instead of a matrix spike and matrix spike duplicate.

Additional 8260 criteria: 10% of LCS/LCSD compounds can be outside of acceptance criteria as long as recovery is 40-160%.
The RPD criteria for the LCS/LCSD is 20%,
The MS/MSD RPD criteria is listed above.

QA/QC Batch 782711 (ug/L), QC Sample No: CT15764 (CT15845)

Volatiles - Ground Water

1,1,1,2-Tetrachloroethane	ND	1.0	109	108	0.9				70 - 130	20
1,1,1-Trichloroethane	ND	1.0	115	114	0.9				70 - 130	20
1,1,2,2-Tetrachloroethane	ND	0.50	102	106	3.8				70 - 130	20
1,1,2-Trichloroethane	ND	1.0	107	109	1.9				70 - 130	20
1,1-Dichloroethane	ND	1.0	110	114	3.6				70 - 130	20
1,1-Dichloroethene	ND	1.0	108	108	0.0				70 - 130	20
1,1-Dichloropropene	ND	1.0	107	110	2.8				70 - 130	20
1,2,3-Trichlorobenzene	ND	1.0	111	113	1.8				70 - 130	20
1,2,3-Trichloropropane	ND	1.0	98	101	3.0				70 - 130	20
1,2,4-Trichlorobenzene	ND	1.0	111	115	3.5				70 - 130	20
1,2,4-Trimethylbenzene	ND	1.0	111	112	0.9				70 - 130	20
1,2-Dibromo-3-chloropropane	ND	1.0	104	109	4.7				70 - 130	20
1,2-Dibromoethane	ND	1.0	108	110	1.8				70 - 130	20
1,2-Dichlorobenzene	ND	1.0	105	108	2.8				70 - 130	20
1,2-Dichloroethane	ND	1.0	106	104	1.9				70 - 130	20
1,2-Dichloropropane	ND	1.0	106	108	1.9				70 - 130	20
1,3,5-Trimethylbenzene	ND	1.0	112	113	0.9				70 - 130	20
1,3-Dichlorobenzene	ND	1.0	105	105	0.0				70 - 130	20
1,3-Dichloropropane	ND	1.0	105	106	0.9				70 - 130	20
1,4-Dichlorobenzene	ND	1.0	105	106	0.9				70 - 130	20
1,4-dioxane	ND	100	103	104	1.0				40 - 160	20
2,2-Dichloropropane	ND	1.0	107	107	0.0				70 - 130	20
2-Chlorotoluene	ND	1.0	109	109	0.0				70 - 130	20
2-Hexanone	ND	5.0	105	108	2.8				40 - 160	20
2-Isopropyltoluene	ND	1.0	112	115	2.6				70 - 130	20
4-Chlorotoluene	ND	1.0	109	109	0.0				70 - 130	20
4-Methyl-2-pentanone	ND	5.0	105	108	2.8				40 - 160	20
Acetone	ND	5.0	100	99	1.0				40 - 160	20
Acrylonitrile	ND	5.0	107	114	6.3				70 - 130	20
Benzene	ND	0.70	110	110	0.0				70 - 130	20
Bromobenzene	ND	1.0	105	108	2.8				70 - 130	20
Bromochloromethane	ND	1.0	120	119	0.8				70 - 130	20
Bromodichloromethane	ND	0.50	108	111	2.7				70 - 130	20
Bromoform	ND	1.0	112	114	1.8				70 - 130	20
Bromomethane	ND	1.0	112	112	0.0				40 - 160	20
Carbon Disulfide	ND	1.0	111	110	0.9				70 - 130	20
Carbon tetrachloride	ND	1.0	112	112	0.0				70 - 130	20
Chlorobenzene	ND	1.0	104	105	1.0				70 - 130	20
Chloroethane	ND	1.0	106	107	0.9				70 - 130	20
Chloroform	ND	1.0	118	117	0.9				70 - 130	20

QA/QC Data

SDG I.D.: GCT15844

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
Chloromethane	ND	1.0	118	114	3.4				40 - 160	20
cis-1,2-Dichloroethene	ND	1.0	115	115	0.0				70 - 130	20
cis-1,3-Dichloropropene	ND	0.40	112	113	0.9				70 - 130	20
Dibromochloromethane	ND	0.50	108	110	1.8				70 - 130	20
Dibromomethane	ND	1.0	106	110	3.7				70 - 130	20
Dichlorodifluoromethane	ND	1.0	129	124	4.0				40 - 160	20
Di-isopropyl ether	ND	1.0	112	115	2.6				70 - 130	20
Ethyl ether	ND	1.0	105	102	2.9				70 - 130	20
Ethyl tert-butyl ether	ND	1.0	116	119	2.6				70 - 130	20
Ethylbenzene	ND	1.0	109	108	0.9				70 - 130	20
Hexachlorobutadiene	ND	0.40	109	114	4.5				70 - 130	20
Isopropylbenzene	ND	1.0	110	114	3.6				70 - 130	20
m&p-Xylene	ND	1.0	114	116	1.7				70 - 130	20
Methyl ethyl ketone	ND	5.0	120	121	0.8				40 - 160	20
Methyl t-butyl ether (MTBE)	ND	1.0	113	114	0.9				70 - 130	20
Methylene chloride	ND	1.0	108	107	0.9				70 - 130	20
Naphthalene	ND	1.0	120	118	1.7				70 - 130	20
n-Butylbenzene	ND	1.0	109	109	0.0				70 - 130	20
n-Propylbenzene	ND	1.0	104	110	5.6				70 - 130	20
o-Xylene	ND	1.0	115	118	2.6				70 - 130	20
p-Isopropyltoluene	ND	1.0	113	114	0.9				70 - 130	20
sec-Butylbenzene	ND	1.0	107	108	0.9				70 - 130	20
Styrene	ND	1.0	119	120	0.8				70 - 130	20
tert-amyl methyl ether	ND	1.0	114	114	0.0				70 - 130	20
tert-Butylbenzene	ND	1.0	108	112	3.6				70 - 130	20
Tetrachloroethene	ND	1.0	108	109	0.9				70 - 130	20
Tetrahydrofuran (THF)	ND	2.5	119	123	3.3				70 - 130	20
Toluene	ND	1.0	105	105	0.0				70 - 130	20
trans-1,2-Dichloroethene	ND	1.0	111	111	0.0				70 - 130	20
trans-1,3-Dichloropropene	ND	0.40	114	117	2.6				70 - 130	20
trans-1,4-dichloro-2-butene	ND	5.0	107	107	0.0				70 - 130	20
Trichloroethene	ND	1.0	109	110	0.9				70 - 130	20
Trichlorofluoromethane	ND	1.0	108	104	3.8				70 - 130	20
Trichlorotrifluoroethane	ND	1.0	107	106	0.9				70 - 130	20
Vinyl chloride	ND	1.0	112	108	3.6				70 - 130	20
% 1,2-dichlorobenzene-d4	99	%	100	101	1.0				70 - 130	20
% Bromofluorobenzene	97	%	102	102	0.0				70 - 130	20
% Dibromofluoromethane	115	%	118	117	0.9				70 - 130	20
% Toluene-d8	101	%	101	100	1.0				70 - 130	20

Comment:

A LCS and LCS Duplicate were performed instead of a matrix spike and matrix spike duplicate.

Additional 8260 criteria: 10% of LCS/LCSD compounds can be outside of acceptance criteria as long as recovery is 40-160%.
The RPD criteria for the LCS/LCSD is 20%,
The MS/MSD RPD criteria is listed above.

l = This parameter is outside laboratory LCS/LCSD specified recovery limits.
r = This parameter is outside laboratory RPD specified recovery limits.

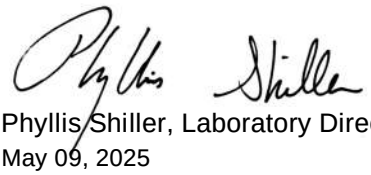
QA/QC Data

SDG I.D.: GCT15844

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits

If there are any questions regarding this data, please call Phoenix Client Services at extension 200.

RPD - Relative Percent Difference
LCS - Laboratory Control Sample
LCSD - Laboratory Control Sample Duplicate
MS - Matrix Spike
MS Dup - Matrix Spike Duplicate
NC - No Criteria
Intf - Interference
(ISO) - Isotope Dilution



Phyllis Shiller, Laboratory Director
May 09, 2025

Friday, May 09, 2025

Sample Criteria Exceedances Report

Criteria: MA: CAM, S1

State: MA

GCT15844 - KLEINFL-BOSTON

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CT15844	$8260GWR	trans-1,4-dichloro-2-butene	MA / CAM Protocol / VOA AQ RL	ND	5.0		2	ug/L
CT15844	$8260GWR	Tetrahydrofuran (THF)	MA / CAM Protocol / VOA AQ RL	ND	2.5		2	ug/L
CT15844	$8260GWR	Carbon Disulfide	MA / CAM Protocol / VOA AQ RL	ND	5.0		2	ug/L
CT15844	$8260GWR	Acetone	MA / CAM Protocol / VOA AQ RL	ND	25		10	ug/L
CT15844	$8270-SIMFSR	Benzoic acid	MA / CAM Protocol / SVOA AQ RL	ND	48		10	ug/L
CT15845	$8260GWR	trans-1,4-dichloro-2-butene	MA / CAM Protocol / VOA AQ RL	ND	5.0		2	ug/L
CT15845	$8260GWR	Tetrahydrofuran (THF)	MA / CAM Protocol / VOA AQ RL	ND	2.5		2	ug/L
CT15845	$8260GWR	Carbon Disulfide	MA / CAM Protocol / VOA AQ RL	ND	5.0		2	ug/L
CT15845	$8260GWR	Acetone	MA / CAM Protocol / VOA AQ RL	ND	25		10	ug/L
CT15845	$8270-SIMFSR	Benzoic acid	MA / CAM Protocol / SVOA AQ RL	ND	49		10	ug/L
CT15846	$8260GWR	trans-1,4-dichloro-2-butene	MA / CAM Protocol / VOA AQ RL	ND	5.0		2	ug/L
CT15846	$8260GWR	Tetrahydrofuran (THF)	MA / CAM Protocol / VOA AQ RL	ND	2.5		2	ug/L
CT15846	$8260GWR	Carbon Disulfide	MA / CAM Protocol / VOA AQ RL	ND	5.0		2	ug/L
CT15846	$8260GWR	Acetone	MA / CAM Protocol / VOA AQ RL	ND	25		10	ug/L

MassDEP Analytical Protocol Certification Form

Laboratory Name: Phoenix Environmental Laboratories, Inc. **Project #:**

Project Location: SHERMAN ST TANK/BELLIS CIRCLE **RTN:**

This Form provides certifications for the following data set: [list Laboratory Sample ID Number(s)]
CT15844, CT15845, CT15846

Matrices: ☑ Groundwater/Surface Water ☐ Soil/Sediment ☐ Drinking Water ☐ Air ☑ Other: WATER

CAM Protocol (check all that apply below)

8260 VOC CAM II A ☑	7470/7471 Hg CAM III B ☑	MassDEP VPH CAM IV A ☐	8081 Pesticides CAM V B ☐	7196 Hex Cr CAM VI B ☐	MassDEP APH CAM IX A ☐
8270 SVOC CAM II B ☑	7010 Metals CAM III C ☐	MassDEP EPH CAM IV B ☐	8151 Herbicides CAM V C ☐	8330 Explosives CAM VIII A ☐	TO-15 VOC CAM IX B ☐
6010 Metals CAM III A ☑	6020 Metals CAM III D ☐	8082 PCB CAM V A ☑	9012 Total Cyanide/PAC CAM V1 A ☐	6860 Perchlorate CAM VIII B ☐	

Affirmative responses to questions A through F are required for "Presumptive Certainty" status

A	Were all samples received in a condition consistent with those described on the Chain-of-Custody, properly preserved (including temperature*) in the field or laboratory, and prepared/analyzed with method holding times? (* see narrative)	☑ Yes ☐ No
B	Were the analytical method(s) and all associated QC requirements specified in the selected CAM protocol(s) followed?	☑ Yes ☐ No
C	Were all required corrective actions and analytical response actions specified in the selected CAM protocol(s) implemented for all identified performance standard non-conformances?	☑ Yes ☐ No
D	Does the laboratory report comply with all the reporting requirements speified in CAM VII A, "Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data"?	☑ Yes ☐ No
E	a. VPH, EPH, and APH Methods only: Was each method conducted without significant modification(s)? (refer to the individual method(s) for a list of significant modifications). b. APH and TO-15 methods only: Was the complete analyte list reported for each method?	☐ Yes ☐ No ☐ Yes ☐ No
F	Were all applicable CAM protocol QC and performance standard non-conformances identified and evaluated in a laboratory narrative (including all "No" responses to Questions A through E)?	☑ Yes ☐ No

Responses to questions G, H and I below is required for "Presumptive Certainty" status

G	Were the reporting limits at or below all CAM reporting limits specified in the selected CAM protocol(s)?	☐ Yes ☑ No

Data User Note: Data that achieve "Presumptive Certainty" status may not necessarily meet the data usability and representativeness requirements described in 310 CMR 40. 1056(2)(k) and WSC-07-350

H	Were all QC performance standards specified in the CAM protocol(s) achieved? See Sections: PCB, SVOA, SVOASIM Narrations .	☐ Yes ☑ No
I	Were results reported for the complete analyte list specified in the selected CAM protocol(s)?	☑ Yes ☐ No

All negative responses must be addressed in an attached laboratory narrative.

I, the undersigned, attest under the pains and penalties of perjury that, based upon my personal inquiry of those responsible for obtaining the information, the material contained in this analytical report is, to the best of my knowledge and belief, accurate and complete.

Authorized Signature: Ethan Lee

Date: Friday, May 09, 2025

Printed Name: Ethan Lee

Position: Project Manager

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

NY # 11301

MCP Certification Report

May 09, 2025

SDG I.D.: GCT15844

SDG Comments

Phoenix reporting levels may exceed those referenced in the CAM protocol. Please refer to criteria sheet for comparisons to requested MCP standards.

Cyanide Narration

Were all QA/QC performance criteria specified in the MADEP document CAM achieved? Yes.

Instrument:

LACHAT 05/07/25-1 Talita Rocha Flausino, Greg Danielewski, Chemist 05/07/25

CT15844 , CT15845

The samples were distilled in accordance with the method.
The initial calibration met criteria.
The calibration check standards (ICV,CCV) met criteria.
The initial and continuing calibration blanks (ICB,CCB) met criteria.

The method blank, laboratory control sample (LCS), and matrix spike (MS) were distilled with the samples.

QC (Batch Specific):

Batch 783058 (CT14881)

CT15844, CT15845

All LCS recoveries were within 80 - 120 with the following exceptions: None.
Additional: MS acceptance range is 75-125%.

I attest under the pains and penalties of perjury that, based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

ETPH Narration

Were all QA/QC performance criteria specified in the MADEP document CAM achieved? Yes.

Instrument:

AU-FID11 05/06/25-1 Jeff Bucko, Chemist 05/06/25

CT15844 (1X), CT15845 (1X)

The initial calibration (ETPH428I) RSD for the compound list was less than 30% except for the following compounds: None.
As per section 7.2.3, a discrimination check standard was run (506A005_1) and contained the following outliers: None.
The continuing calibration %D for the compound list was less than 30% except for the following compounds:None.

QC (Batch Specific):

Batch 782730 (CT14930)

CT15844, CT15845

All LCS recoveries were within 50 - 150 with the following exceptions: None.
All LCSD recoveries were within 50 - 150 with the following exceptions: None.
All LCS/LCSD RPDs were less than 20% with the following exceptions: None.
A LCS and LCS Duplicate were performed instead of a matrix spike and matrix spike duplicate.

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

ACCREDITED IN ACCORDANCE WITH nelac NY # 11301

MCP Certification Report

May 09, 2025

SDG I.D.: GCT15844

ETPH Narration

The ETPH/DRO LCS has been normalized based on the alkane calibration.

I attest under the pains and penalties of perjury that, based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

Mercury Narration

Were all QA/QC performance criteria specified in the analytical method achieved? Yes.

Instrument:

PSA 05/01/25 09:36 John Maslak, Zade-Anne Taylor, Chemist 05/01/25

CT15844, CT15845

The initial calibration met criteria and the linear range is defined daily by the calibration range.
The Low-Level Calibration Verification (LLCV) met criteria.
The following Initial Calibration Verification (ICV) compounds did not meet criteria: None.
The following Initial Calibration Blank (ICB) compounds did not meet criteria: None.
The following Continuing Calibration Verification (CCV) compounds did not meet criteria: None.
The following Continuing Calibration Blank (CCB) compounds did not meet criteria: None.

PSA 05/06/25 06:35 John Maslak, Zade-Anne Taylor, Chemist 05/06/25

CT15844, CT15845

The initial calibration met criteria and the linear range is defined daily by the calibration range.
The Low-Level Calibration Verification (LLCV) met criteria.
The following Initial Calibration Verification (ICV) compounds did not meet criteria: None.
The following Initial Calibration Blank (ICB) compounds did not meet criteria: None.
The following Continuing Calibration Verification (CCV) compounds did not meet criteria: None.
The following Continuing Calibration Blank (CCB) compounds did not meet criteria: None.

QC (Batch Specific):

Batch 782132 (CT15575)

CT15844, CT15845

All LCS recoveries were within 80 - 120 with the following exceptions: None.
Additional Mercury Criteria: LCS acceptance range is 80-120% for aqueous and for soils the acceptance range is set by vendor limits. MS acceptance range is 75-125% for aqueous and 80-120% for soils.

Batch 782694 (CT15510)

CT15844, CT15845

All LCS recoveries were within 80 - 120 with the following exceptions: None.
Additional Mercury Criteria: LCS acceptance range is 80-120% for aqueous and for soils the acceptance range is set by vendor limits. MS acceptance range is 75-125% for aqueous and 80-120% for soils.

ICP Metals Narration

Were all QA/QC performance criteria specified in the analytical method achieved? Yes.

Instrument:

ARCOS-2 05/01/25 10:18 Tina Hall, Chemist 05/01/25

Environmental Laboratories, Inc.
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ACCREDITED IN ACCORDANCE WITH nelac NY # 11301

Certification Report

May 09, 2025

SDG I.D.: GCT15844

ICP Metals Narration

CT15844, CT15845

The initial calibration met criteria and the linear range is defined daily by the calibration range.
The Low-Level Calibration Verification (LLCV) met criteria.
The following Initial Calibration Verification (ICV) compounds did not meet criteria: None.
The following Initial Calibration Blank (ICB) compounds did not meet criteria: None.
The following Spectral Interference Check compounds did not meet criteria: None.
The following Continuing Calibration Verification (CCV) compounds did not meet criteria: None.
The following Continuing Calibration Blank (CCB) compounds did not meet criteria: None.

ARCOS-4 05/02/25 11:50 Cindy Pearce, Chemist 05/02/25

CT15844, CT15845

The initial calibration met criteria and the linear range is defined daily by the calibration range.
The Low-Level Calibration Verification (LLCV) met criteria.
The following Initial Calibration Verification (ICV) compounds did not meet criteria: None.
The following Initial Calibration Blank (ICB) compounds did not meet criteria: None.
The following Spectral Interference Check compounds did not meet criteria: None.
The following Continuing Calibration Verification (CCV) compounds did not meet criteria: None.
The following Continuing Calibration Blank (CCB) compounds did not meet criteria: None.

QC (Batch Specific):

Batch 782016 (CT15575)

CT15844, CT15845

All LCS recoveries were within 80 - 120 with the following exceptions: None.
All LCSD recoveries were within 80 - 120 with the following exceptions: None.
All LCS/LCSD RPDs were less than 20% with the following exceptions: None.
Additional Criteria: LCS acceptance range is 80-120% for aqueous and for soils the acceptance range is set by vendor limits. MS acceptance range 75-125%.

Batch 782250 (CT15703)

CT15844, CT15845

All LCS recoveries were within 80 - 120 with the following exceptions: None.
All LCSD recoveries were within 80 - 120 with the following exceptions: None.
All LCS/LCSD RPDs were less than 20% with the following exceptions: None.
Additional Criteria: LCS acceptance range is 80-120% for aqueous and for soils the acceptance range is set by vendor limits. MS acceptance range 75-125%.

ICPMS Metals Narration

Were all QA/QC performance criteria specified in the analytical method achieved? Yes.

Instrument:

ICPMS 05/02/25 09:51 John Maslak, Chemist 05/02/25

CT15844, CT15845

The initial calibration met criteria and the linear range is defined daily by the calibration range
The Low-Level Calibration Verification (LLCV) met criteria
The following Initial Calibration Verification (ICV) compounds did not meet criteria: None.
The following Initial Calibration Blank (ICB) compounds did not meet criteria: None
The following Spectral Interference Check compounds did not meet criteria: None

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Certification Report

May 09, 2025

SDG I.D.: GCT15844

ICPMS Metals Narration

The following Continuing Calibration Verification (CCV) compounds did not meet criteria: None.
The following Continuing Calibration Blank (CCB) compounds did not meet criteria: None
The following samples did not meet Internal Standard Criteria (IS): None.

ICPMS 05/06/25 13:44 John Maslak, Chemist 05/06/25

CT15844, CT15845

The initial calibration met criteria and the linear range is defined daily by the calibration range
The Low-Level Calibration Verification (LLCV) met criteria
The following Initial Calibration Verification (ICV) compounds did not meet criteria: None.
The following Initial Calibration Blank (ICB) compounds did not meet criteria: None
The following Spectral Interference Check compounds did not meet criteria: None
The following Continuing Calibration Verification (CCV) compounds did not meet criteria: None.
The following Continuing Calibration Blank (CCB) compounds did not meet criteria: None
The following samples did not meet Internal Standard Criteria (IS): None.

QC (Batch Specific):

Batch 782064 (CT15517)

CT15844, CT15845

All LCS recoveries were within 80 - 120 with the following exceptions: None.
All LCSD recoveries were within 80 - 120 with the following exceptions: None.
All LCS/LCSD RPDs were less than 20% with the following exceptions: None.
Additional: LCS acceptance range is 80-120% MS acceptance range 75-125%.

Batch 782588 (CT15750)

CT15844, CT15845

All LCS recoveries were within 80 - 120 with the following exceptions: None.
All LCSD recoveries were within 80 - 120 with the following exceptions: None.
All LCS/LCSD RPDs were less than 20% with the following exceptions: None.
Additional: LCS acceptance range is 80-120% MS acceptance range 75-125%.

PCB Narration

Were all QA/QC performance criteria specified in the MADEP document CAM achieved? No.

QC Batch 782013 (Samples: CT15844, CT15845): -----

The LCS/LCSD RPD exceeds the method criteria for one or more analytes, but these analytes were not reported in the sample(s) so no variability is suspected. (PCB-1016)

Instrument:

AU-ECD7 05/01/25-1 Saadia Chudary, Chemist 05/01/25

CT15844 (1X)

The initial calibration (PC0430AI) RSD for the compound list was less than 20% except for the following compounds: None.
The initial calibration (PC0430BI) RSD for the compound list was less than 20% except for the following compounds: None.
The continuing calibration %D for the compound list was less than 20% except for the following compounds:None.

AU-ECD7 05/02/25-1 Saadia Chudary, Chemist 05/02/25

CT15845 (1X)

Environmental Laboratories, Inc.
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NY # 11301

MCP Certification Report

May 09, 2025

SDG I.D.: GCT15844

PCB Narration

The initial calibration (PC0430AI) RSD for the compound list was less than 20% except for the following compounds: None.
The initial calibration (PC0430BI) RSD for the compound list was less than 20% except for the following compounds: None.
The continuing calibration %D for the compound list was less than 20% except for the following compounds:None.

QC (Batch Specific):

Batch 782013 (CT10409)

CT15844, CT15845

All LCS recoveries were within 40 - 140 with the following exceptions: None.
All LCSD recoveries were within 40 - 140 with the following exceptions: None.
All LCS/LCSD RPDs were less than 20% with the following exceptions: PCB-1016(28.6%)
A LCS and LCS Duplicate were performed instead of a matrix spike and matrix spike duplicate.

I attest under the pains and penalties of perjury that, based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

SVOA Narration

Were all QA/QC performance criteria specified in the MADEP document CAM achieved? No.

QC Batch 782239 (Samples: CT15844, CT15845): -----

One or more analytes is below the method criteria. A low bias for these analytes is possible. (3,3''-Dichlorobenzidine)

The LCS and/or the LCSD recovery is above the upper range for one or more analytes that were not reported in the sample(s), therefore no significant bias is suspected. (2-Nitroaniline)

The LCS and/or the LCSD recovery is below the method criteria. All of the other QC is acceptable, therefore no significant bias is suspected. (Benzidine)

The LCS/LCSD RPD exceeds the method criteria for one or more analytes, but these analytes were not reported in the sample(s) so no variability is suspected. (3,3''-Dichlorobenzidine, Benzoic acid, Bis(2-chloroethoxy)methane)

Instrument:

CHEM07 05/04/25-1 Matt Richard, Chemist 05/04/25

CT15844 (1X), CT15845 (1X)

For 8270 full list, the DDT breakdown and pentachlorophenol & benzidine peak tailing were evaluated in the DFTPP tune and were found to be in control.
For 8270 BN list, benzidine peak tailing was evaluated in the DFTPP tune and was found to be in control.

Initial Calibration Evaluation (CHEM07/7_SVFULL_0501):
100% of target compounds met criteria.
The following compounds had %RSDs >20%: None.
The following compounds did not meet recommended response factors: 2-Nitrophenol 0.053 (0.1)

Continuing Calibration Verification (CHEM07/0504_03-7_SVFULL_0501) (MCP Compliance):
Internal standard areas were within 50 to 200% of the initial calibration with the following exceptions: None.
97% of target compounds met criteria.

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MCP Certification Report

May 09, 2025

SDG I.D.: GCT15844

SVOA Narration

The following compounds did not meet % deviation criteria: 4-Chloroaniline 22%H (20%), Aniline 25%H (20%), N-Nitrosodi-n-propylamine 22%H (20%)
The following compounds did not meet maximum % deviations: None.
The following compounds did not meet recommended response factors: 2-Nitrophenol 0.053 (0.1)

QC (Batch Specific):

Batch 782239 (CT14595)

CT15844, CT15845

All LCS recoveries were within 40 - 140 with the following exceptions: 3,3'-Dichlorobenzidine(16%), Benzidine(<10%)
All LCSD recoveries were within 40 - 140 with the following exceptions: 2-Nitroaniline(146%), 3,3'-Dichlorobenzidine(29%)
All LCS/LCSD RPDs were less than 20% with the following exceptions: 3,3'-Dichlorobenzidine(57.8%), Benzoic acid(27.0%), Bis(2-chloroethoxy)methane(21.2%)
A LCS and LCS Duplicate were performed instead of a matrix spike and matrix spike duplicate.
Additional 8270 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is at least 10%. (Acid surrogates acceptance range for aqueous samples: 10-110%, for soils 30-130%)

I attest under the pains and penalties of perjury that, based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

SVOASIM Narration

Were all QA/QC performance criteria specified in the MADEP document CAM achieved? No.

QC Batch 782239 (Samples: CT15844, CT15845): -----

One or more analytes is below the method criteria. A low bias for these analytes is possible. (Hexachlorocyclopentadiene)

The LCS/LCSD RPD exceeds the method criteria for one or more analytes, but these analytes were not reported in the sample(s) so no variability is suspected. (Pyridine)

Instrument:

CHEM69 05/03/25-2 Matt Richard, Chemist 05/03/25

CT15844 (1X), CT15845 (1X)

Initial Calibration Evaluation (CHEM69/69_SIM18_0503):
100% of target compounds met criteria.
The following compounds had %RSDs >20%: None.
The following compounds did not meet recommended response factors: None.

Continuing Calibration Verification (CHEM69/0503_19-69_SIM18_0503) (MCP Compliance):
Internal standard areas were within 50 to 200% of the initial calibration with the following exceptions: None.
100% of target compounds met criteria.
The following compounds did not meet % deviation criteria: None.
The following compounds did not meet maximum % deviations: None.
The following compounds did not meet recommended response factors: None.

QC (Batch Specific):

Environmental Laboratories, Inc.
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MCP Certification Report

May 09, 2025

SDG I.D.: GCT15844

SVOASIM Narration

Batch 782239 (CT14595)

CT15844, CT15845

All LCS recoveries were within 40 - 140 with the following exceptions: Hexachlorocyclopentadiene(26%)
All LCSD recoveries were within 40 - 140 with the following exceptions: Hexachlorocyclopentadiene(26%)
All LCS/LCSD RPDs were less than 20% with the following exceptions: Pyridine(28.0%)
A LCS and LCS Duplicate were performed instead of a matrix spike and matrix spike duplicate.
Additional 8270 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is at least 10%. (Acid surrogates acceptance range for aqueous samples: 10-110%, for soils 30-130%)

I attest under the pains and penalties of perjury that, based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

VOA Narration

Were all QA/QC performance criteria specified in the MADEP document CAM achieved? Yes.

Instrument:

CHEM15 05/03/25-1 Harry Mullin, Chemist 05/03/25

CT15844 (1X), CT15846 (1X)

Initial Calibration Evaluation (CHEM15/8260-050225):
99% of target compounds met criteria.
The following compounds had %RSDs >20%: p-Isopropyltoluene 21% (20%)
The following compounds did not meet Table 4 recommended minimum response factors: None.

Continuing Calibration Verification (CHEM15/0503_02-8260-050225) (MCP Compliance):
Internal standard areas were within 50 to 200% of the initial calibration with the following exceptions: None.
99% of target compounds met criteria.
The following compounds did not meet % deviation criteria: ethyl tert-butyl ether 21%H (20%)
The following compounds did not meet maximum % deviations: None.
The following compounds did not meet Table 4 recommended minimum response factors: None.

CHEM15 05/04/25-1 Harry Mullin, Chemist 05/04/25

CT15845 (1X)

Initial Calibration Evaluation (CHEM15/8260-050225):
99% of target compounds met criteria.
The following compounds had %RSDs >20%: p-Isopropyltoluene 21% (20%)
The following compounds did not meet Table 4 recommended minimum response factors: None.

Continuing Calibration Verification (CHEM15/0504_03-8260-050225) (MCP Compliance):
Internal standard areas were within 50 to 200% of the initial calibration with the following exceptions: None.
93% of target compounds met criteria.
The following compounds did not meet % deviation criteria: Bromochloromethane 25%H (20%), ethyl tert-butyl ether 22%H (20%), Methyl ethyl ketone 26%H (20%), Methyl t-butyl ether (MTBE) 22%H (20%), Naphthalene 21%H (20%), Tetrahydrofuran (THF) 27%H (20%)
The following compounds did not meet maximum % deviations: None.
The following compounds did not meet Table 4 recommended minimum response factors: None.

QC (Batch Specific):

Environmental Laboratories, Inc.
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Tel. (860) 645-1102 Fax (860) 645-0823

NY # 11301

MCP Certification Report

May 09, 2025

SDG I.D.: GCT15844

VOA Narration

Batch 782681 (CT15216) CHEM15 5/3/2025-1

CT15844(1X), CT15846(1X)

All LCS recoveries were within 70 - 130 with the following exceptions: None.
All LCSD recoveries were within 70 - 130 with the following exceptions: None.
All LCS/LCSD RPDs were less than 20% with the following exceptions: None.
A LCS and LCS Duplicate were performed instead of a matrix spike and matrix spike duplicate.
Additional 8260 criteria: 10% of LCS/LCSD compounds can be outside of acceptance criteria as long as recovery is 40-160%.
The RPD criteria for the LCS/LCSD is 20%,
The MS/MSD RPD criteria is listed above.

Batch 782711 (CT15764) CHEM15 5/4/2025-1

CT15845(1X)

All LCS recoveries were within 70 - 130 with the following exceptions: None.
All LCSD recoveries were within 70 - 130 with the following exceptions: None.
All LCS/LCSD RPDs were less than 20% with the following exceptions: None.
A LCS and LCS Duplicate were performed instead of a matrix spike and matrix spike duplicate.
Additional 8260 criteria: 10% of LCS/LCSD compounds can be outside of acceptance criteria as long as recovery is 40-160%.
The RPD criteria for the LCS/LCSD is 20%,
The MS/MSD RPD criteria is listed above.

We attest under the pains and penalties of perjury that, based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

Cooler: Yes ☑ No ☐
Coolant: IPK ☑ ICE ☐ No ☐

PHOENIX
Environmental Laboratories, Inc.

CT/MA/RI CHAIN OF CUSTODY RECORD

Temp 2.1 °C Pg of

587 East Middle Turnpike, P.O. Box 370, Manchester, CT 06040
Email: makrina@phoenixlabs.com Fax (860) 645-0823
Client Services (860) 645-1102

Data Delivery/Contact Options:
☐ Fax:
☐ Phone:
☒ Email: lstone@kleinfelder.com

Customer: Kleinfelder
Address: One Beacon Street, Suite 8100
Boston, MA 02118
Attn: Lisa Stone

Project: Sherman St Tank/Bellis Circle
Report to: Lisa Stone
Invoice to: AccountspayableUS@Kleinfelder.com
Quote #

Project P.O: 20231168.006A

This section MUST be completed with Bottle Quantities.

Client Sample - Information - Identification
Sampler's Signature _____ Date: _____

Matrix Code:
DW=Drinking Water **GW**=Ground Water **SW**=Surface Water **WW**=Waste Water
RW=Raw Water **SE**=Sediment **SL**=Sludge **S**=Soil **SD**=Solid **W**=Wipe **OIL**=Oil
B=Bulk **L**=Liquid **X** = _____(Other)

PHOENIX USE ONLY SAMPLE #	Customer Sample Identification	Sample Matrix	Date Sampled	Time Sampled	*MS/MSD (May be billable at analysis unit rate)	VOCs by 8260	TPH by 8015D Fingerprint	MCP 14 Metals	SVOCs by 8270	PCBs by 8082	Flashpoint by 1010	Corrosivity/pH by 9045	Reactivity by 9014 and 9030	Conductivity by 2510	Dissolved MCP 14 Metals (Field Filtered)	GL Amber 8 oz. [ ] w/H_3PO_4 [ ] $NAHSO_4$	Soil VOA Vials [ ] methanol [ ] H_2O	GL Soil container ( )oz	GL Soil container ( )oz	40 ml VOA Vial [ ] As is [ ] (HCl)	GL Amber 1000ml [ ] As is [ ] H_2SO_4	PL As is [ ] 250ml [ ] 500ml [ ] H_2SO_4	PL H_2SO_4 [ ] 250ml [ ] 500ml [ ] 1000ml	PL HNO_3 250ml	PL NaOH 250ml	Bacteria Bottle w/thio	Bacteria Bottle as is
15844	KLF-3	GW	4/22/25	1026	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓					3	4	1	2	2				
15845	MW-102S	GW	4/28/25	1150	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓					3	4	1	2	2				
15846	Trip Blank *	TB	4/22/25																								

Relinquished by: Fridge
Accepted by: Fridge
Date: 4/28/25 | 4-29-25
Time: 1400 | 9:08 | 4-29-25 1610:20

Comments, Special Requirements or Regulations:
*TB - Date 4-10-25 (BH)

Turnaround Time:
☐ 1 Day* ☒ Standard
☐ 2 Days* ☐ Other
☐ 3 Days*
☐ 4 Days*
☐ 5 Days*

RI
☐ RES DEC
☐ I/C DEC
☐ GA Leachability
☐ GB Leachability
☐ GA -GW Objectives
☐ GB -GW Objectives
☐ Other

CT
☐ RCP Cert
☐ GWPC
☐ SWPC
☐ GA PMC
☐ GB PMC
☐ SWPC
☐ RES DEC
☐ I/C DEC

MA
☒ MCP Certification
☐ GW-1 ☒ RCS-1 / RCGW-1
☐ GW-2 ☐ RCS-2 / RCGW-2
☐ GW-3
☐ S-1
☐ S-2
☐ S-3
☐ SW Protection

Data Format
☒ Excel
☒ PDF
☐ GIS/Key
☐ EQuIS
☐ Other

Data Package
☐ Tier II Checklist*
☒ Full Data Package*
☐ Phoenix Std
☐ Other

***MS/MSD are considered site samples and will be billed as such in accordance with the prices quoted.**

*** SURCHARGES MAY APPLY**

State where samples were collected: MA

*** SURCHARGE APPLIES**

PHOENIX
Environmental Laboratories, Inc.

Tuesday, April 22, 2025

Attn: Lisa Stone
Kleinfelder
One Beacon Street Suite 8100
Boston, MA 02108

Project ID: SHERMAN ST TANK/BELLIS CIRCLE
SDG ID: GCT00898
Sample ID#s: CT00898 - CT00903

This laboratory is in compliance with the NELAC requirements of procedures used except where indicated.

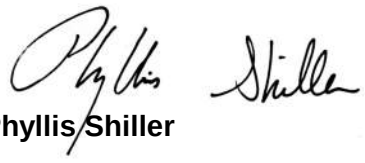
This report contains results for the parameters tested, under the sampling conditions described on the Chain Of Custody, as received by the laboratory. This report is incomplete unless all pages indicated in the pagination at the bottom of the page are included.

All soils, solids and sludges are reported on a dry weight basis unless otherwise noted in the sample comments.

A scanned version of the COC form accompanies the analytical report and is an exact duplicate of the original.

The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.

Sincerely yours,



Phyllis Shiller
Laboratory Director

NELAC - #NY11301
CT Lab Registration #PH-0618
MA Lab Registration #M-CT007
ME Lab Registration #CT-007
NH Lab Registration #213693-A,B
NJ Lab Registration #CT-003
NY Lab Registration #11301
PA Lab Registration #68-03530
RI Lab Registration #63
VT Lab Registration #VT11301

Environmental Laboratories, Inc.
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Tel. (860) 645-1102 Fax (860) 645-0823

ACCREDITED IN ACCORDANCE WITH nelac NY # 11301

SDG Comments

April 22, 2025

SDG I.D.: GCT00898

Phoenix reporting levels may exceed those referenced in the CAM protocol. Please refer to criteria sheet for comparisons to requested MCP standards.

Environmental Laboratories, Inc.
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Tel. (860) 645-1102 Fax (860) 645-0823

Sample Id Cross Reference

April 22, 2025

SDG I.D.: GCT00898

Project ID: SHERMAN ST TANK/BELLIS CIRCLE

Client Id	Lab Id	Matrix	Col Date
KLF-2 (1-2)	CT00898	SOIL	04/07/25 12:15
KLF-2 (0-5)	CT00899	SOIL	04/07/25 12:15
KLF-3 (1-2)	CT00900	SOIL	04/07/25 11:55
KLF-3 (0-5)	CT00901	SOIL	04/07/25 11:55
KLF-1 (2-3)	CT00902	SOIL	04/07/25 12:35
KLF-1 (2-5)	CT00903	SOIL	04/07/25 12:35

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102

Analysis Report

April 22, 2025

FOR: Attn: Lisa Stone
Kleinfelder
One Beacon Street Suite 8100
Boston, MA 02108

Sample Information		Custody Information		Date	Time
Matrix:	SOIL	Collected by:		04/07/25	12:15
Location Code:	KLEINFL-BOSTON	Received by:	SR1	04/08/25	18:25
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	20231168.006A				

Laboratory Data

SDG ID: GCT00898
Phoenix ID: CT00898

Project ID: SHERMAN ST TANK/BELLIS CIRCLE
Client ID: KLF-2 (1-2)

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Field Extraction	Completed				04/07/25		SW5035A
Volatiles							
1,1,1,2-Tetrachloroethane	ND	4.6	ug/Kg	1	04/09/25	JLI	SW8260D
1,1,1-Trichloroethane	ND	4.6	ug/Kg	1	04/09/25	JLI	SW8260D
1,1,2,2-Tetrachloroethane	ND	2.7	ug/Kg	1	04/09/25	JLI	SW8260D
1,1,2-Trichloroethane	ND	4.6	ug/Kg	1	04/09/25	JLI	SW8260D
1,1-Dichloroethane	ND	4.6	ug/Kg	1	04/09/25	JLI	SW8260D
1,1-Dichloroethene	ND	4.6	ug/Kg	1	04/09/25	JLI	SW8260D
1,1-Dichloropropene	ND	4.6	ug/Kg	1	04/09/25	JLI	SW8260D
1,2,3-Trichlorobenzene	ND	230	ug/Kg	50	04/09/25	JLI	SW8260D
1,2,3-Trichloropropane	ND	230	ug/Kg	50	04/09/25	JLI	SW8260D
1,2,4-Trichlorobenzene	ND	230	ug/Kg	50	04/09/25	JLI	SW8260D
1,2,4-Trimethylbenzene	ND	230	ug/Kg	50	04/09/25	JLI	SW8260D
1,2-Dibromo-3-chloropropane	ND	230	ug/Kg	50	04/09/25	JLI	SW8260D
1,2-Dibromoethane	ND	0.46	ug/Kg	1	04/09/25	JLI	SW8260D
1,2-Dichlorobenzene	ND	230	ug/Kg	50	04/09/25	JLI	SW8260D
1,2-Dichloroethane	ND	4.6	ug/Kg	1	04/09/25	JLI	SW8260D
1,2-Dichloropropane	ND	4.6	ug/Kg	1	04/09/25	JLI	SW8260D
1,3,5-Trimethylbenzene	ND	230	ug/Kg	50	04/09/25	JLI	SW8260D
1,3-Dichlorobenzene	ND	230	ug/Kg	50	04/09/25	JLI	SW8260D
1,3-Dichloropropane	ND	4.6	ug/Kg	1	04/09/25	JLI	SW8260D
1,4-Dichlorobenzene	ND	230	ug/Kg	50	04/09/25	JLI	SW8260D
2,2-Dichloropropane	ND	4.6	ug/Kg	1	04/09/25	JLI	SW8260D
2-Chlorotoluene	ND	230	ug/Kg	50	04/09/25	JLI	SW8260D
2-Hexanone	ND	23	ug/Kg	1	04/09/25	JLI	SW8260D
2-Isopropyltoluene	ND	230	ug/Kg	50	04/09/25	JLI	SW8260D

Project ID: SHERMAN ST TANK/BELLIS CIRCLE
Client ID: KLF-2 (1-2)

Phoenix I.D.: CT00898

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
4-Chlorotoluene	ND	230	ug/Kg	50	04/09/25	JLI	SW8260D
4-Methyl-2-pentanone	ND	23	ug/Kg	1	04/09/25	JLI	SW8260D
Acetone	ND	230	ug/Kg	1	04/09/25	JLI	SW8260D
Acrylonitrile	ND	4.6	ug/Kg	1	04/09/25	JLI	SW8260D
Benzene	ND	4.6	ug/Kg	1	04/09/25	JLI	SW8260D
Bromobenzene	ND	230	ug/Kg	50	04/09/25	JLI	SW8260D
Bromochloromethane	ND	4.6	ug/Kg	1	04/09/25	JLI	SW8260D
Bromodichloromethane	ND	4.6	ug/Kg	1	04/09/25	JLI	SW8260D
Bromoform	ND	4.6	ug/Kg	1	04/09/25	JLI	SW8260D
Bromomethane	ND	4.6	ug/Kg	1	04/09/25	JLI	SW8260D
Carbon Disulfide	ND	4.6	ug/Kg	1	04/09/25	JLI	SW8260D
Carbon tetrachloride	ND	4.6	ug/Kg	1	04/09/25	JLI	SW8260D
Chlorobenzene	ND	4.6	ug/Kg	1	04/09/25	JLI	SW8260D
Chloroethane	ND	4.6	ug/Kg	1	04/09/25	JLI	SW8260D
Chloroform	ND	4.6	ug/Kg	1	04/09/25	JLI	SW8260D
Chloromethane	ND	4.6	ug/Kg	1	04/09/25	JLI	SW8260D
cis-1,2-Dichloroethene	ND	4.6	ug/Kg	1	04/09/25	JLI	SW8260D
cis-1,3-Dichloropropene	ND	4.6	ug/Kg	1	04/09/25	JLI	SW8260D
Dibromochloromethane	ND	2.7	ug/Kg	1	04/09/25	JLI	SW8260D
Dibromomethane	ND	4.6	ug/Kg	1	04/09/25	JLI	SW8260D
Dichlorodifluoromethane	ND	4.6	ug/Kg	1	04/09/25	JLI	SW8260D
Ethylbenzene	ND	4.6	ug/Kg	1	04/09/25	JLI	SW8260D
Hexachlorobutadiene	ND	230	ug/Kg	50	04/09/25	JLI	SW8260D
Isopropylbenzene	ND	230	ug/Kg	50	04/09/25	JLI	SW8260D
m&p-Xylene	ND	4.6	ug/Kg	1	04/09/25	JLI	SW8260D
Methyl Ethyl Ketone	ND	27	ug/Kg	1	04/09/25	JLI	SW8260D
Methyl t-butyl ether (MTBE)	ND	9.1	ug/Kg	1	04/09/25	JLI	SW8260D
Methylene chloride	ND	9.1	ug/Kg	1	04/09/25	JLI	SW8260D
Naphthalene	ND	230	ug/Kg	50	04/09/25	JLI	SW8260D
n-Butylbenzene	ND	230	ug/Kg	50	04/09/25	JLI	SW8260D
n-Propylbenzene	ND	230	ug/Kg	50	04/09/25	JLI	SW8260D
o-Xylene	ND	4.6	ug/Kg	1	04/09/25	JLI	SW8260D
p-Isopropyltoluene	ND	230	ug/Kg	50	04/09/25	JLI	SW8260D
sec-Butylbenzene	ND	230	ug/Kg	50	04/09/25	JLI	SW8260D
Styrene	ND	4.6	ug/Kg	1	04/09/25	JLI	SW8260D
tert-Butylbenzene	ND	230	ug/Kg	50	04/09/25	JLI	SW8260D
Tetrachloroethene	ND	4.6	ug/Kg	1	04/09/25	JLI	SW8260D
Tetrahydrofuran (THF)	ND	9.1	ug/Kg	1	04/09/25	JLI	SW8260D
Toluene	ND	4.6	ug/Kg	1	04/09/25	JLI	SW8260D
Total Xylenes	ND	4.6	ug/Kg	1	04/09/25	JLI	SW8260D
trans-1,2-Dichloroethene	ND	4.6	ug/Kg	1	04/09/25	JLI	SW8260D
trans-1,3-Dichloropropene	ND	4.6	ug/Kg	1	04/09/25	JLI	SW8260D
trans-1,4-dichloro-2-butene	ND	460	ug/Kg	50	04/09/25	JLI	SW8260D
Trichloroethene	ND	4.6	ug/Kg	1	04/09/25	JLI	SW8260D
Trichlorofluoromethane	ND	4.6	ug/Kg	1	04/09/25	JLI	SW8260D
Trichlorotrifluoroethane	ND	9.1	ug/Kg	1	04/09/25	JLI	SW8260D
Vinyl chloride	ND	4.6	ug/Kg	1	04/09/25	JLI	SW8260D
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	105		%	1	04/09/25	JLI	70 - 130 %

Ver 1

Project ID: SHERMAN ST TANK/BELLIS CIRCLE
Client ID: KLF-2 (1-2)

Phoenix I.D.: CT00898

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
% Bromofluorobenzene	81		%	1	04/09/25	JLI	70 - 130 %
% Dibromofluoromethane	105		%	1	04/09/25	JLI	70 - 130 %
% Toluene-d8	98		%	1	04/09/25	JLI	70 - 130 %
% 1,2-dichlorobenzene-d4 (50x)	100		%	50	04/09/25	JLI	70 - 130 %
% Bromofluorobenzene (50x)	98		%	50	04/09/25	JLI	70 - 130 %
% Dibromofluoromethane (50x)	94		%	50	04/09/25	JLI	70 - 130 %
% Toluene-d8 (50x)	102		%	50	04/09/25	JLI	70 - 130 %
Oxygenates & Dioxane							
1,4-Dioxane	ND	91	ug/Kg	1	04/09/25	JLI	SW8260D (OXY)
Diethyl ether	ND	4.6	ug/Kg	1	04/09/25	JLI	SW8260D (OXY)
Di-isopropyl ether	ND	4.6	ug/Kg	1	04/09/25	JLI	SW8260D (OXY)
Ethyl tert-butyl ether	ND	4.6	ug/Kg	1	04/09/25	JLI	SW8260D (OXY)
tert-amyl methyl ether	ND	4.6	ug/Kg	1	04/09/25	JLI	SW8260D (OXY)

Massachusetts does not offer certification for Soil/Solid matrices.

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

Results are reported on an ``as received`` basis, and are not corrected for dry weight.

Volatile Comment:
There was a suppression of the last internal standard in the low level analysis, all affected compounds are reported from the methanol preserved high level analysis which did not exhibit this interference.

All soils, solids and sludges are reported on a dry weight basis unless otherwise noted in the sample comments.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.

Phyllis Shiller, Laboratory Director
April 22, 2025
Reviewed and Released by: Ethan Lee, Project Manager

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102

Analysis Report

April 22, 2025

FOR: Attn: Lisa Stone
Kleinfelder
One Beacon Street Suite 8100
Boston, MA 02108

Sample Information		Custody Information		Date	Time
Matrix:	SOIL	Collected by:		04/07/25	12:15
Location Code:	KLEINFL-BOSTON	Received by:	SR1	04/08/25	18:25
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	20231168.006A				

Laboratory Data

SDG ID: GCT00898
Phoenix ID: CT00899

Project ID: SHERMAN ST TANK/BELLIS CIRCLE
Client ID: KLF-2 (0-5)

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Silver	< 0.37	0.37	mg/Kg	1	04/11/25	TH	SW6010D
Arsenic	3.84	0.75	mg/Kg	1	04/11/25	TH	SW6010D
Barium	47.1	0.37	mg/Kg	1	04/11/25	TH	SW6010D
Beryllium	0.40	0.30	mg/Kg	1	04/11/25	TH	SW6010D
Cadmium	1.67	0.37	mg/Kg	1	04/11/25	TH	SW6010D
Chromium	11.1	0.37	mg/Kg	1	04/11/25	TH	SW6010D
Mercury	0.09	0.03	mg/Kg	2	04/09/25	JM	SW7471B
Nickel	8.16	0.37	mg/Kg	1	04/11/25	TH	SW6010D
Lead	51.3	0.37	mg/Kg	1	04/11/25	TH	SW6010D
Antimony	< 3.7	3.7	mg/Kg	1	04/11/25	TH	SW6010D
Selenium	< 1.5	1.5	mg/Kg	1	04/11/25	TH	SW6010D
Thallium	< 3.4	3.4	mg/Kg	1	04/11/25	TH	SW6010D
Vanadium	19.2	0.37	mg/Kg	1	04/11/25	TH	SW6010D
Zinc	77.1	0.7	mg/Kg	1	04/11/25	TH	SW6010D
Percent Solid	87		%		04/08/25	CV	SW846-%Solid
Conductivity - Soil Matrix	43	5	umhos/cm	1	04/09/25	AF	SW9050A
Corrosivity	Negative		Pos/Neg	1	04/08/25	KG	SW846-Corr
Flash Point	>200	200	Degree F	1	04/10/25	G	SW1010B
Ignitability	Passed	140	degree F	1	04/10/25	G	SW846-Ignit
pH at 22C - Soil	7.02	1.00	pH Units	1	04/08/25 23:51	KG	SW846 9045D
Reactivity Cyanide	< 5	5	mg/Kg	1	04/14/25	E/N/G	SW846 7.3.3.1/90
Reactivity Sulfide	< 20	20	mg/Kg	1	04/16/25	NP/GD	SW846 CH7
Reactivity	Negative		Pos/Neg	1	04/17/25	NP/GD	SW846-React
Mercury Digestion	Completed				04/09/25	AC1/AC1	SW7471B
Extraction of ETPH	Completed				04/17/25	RB/SD/SD	SW3546
Soil Extraction for PCB	Completed				04/17/25	H/U	SW3546
Soil Extraction for SVOA	Completed				04/17/25	AC1/SD/U	SW3546

Ver 1

Project ID: SHERMAN ST TANK/BELLIS CIRCLE
Client ID: KLF-2 (0-5)

Phoenix I.D.: CT00899

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Total Metals Digest	Completed				04/10/25	N/AG	SW3050B
Polychlorinated Biphenyls							
PCB-1016	ND	75	ug/Kg	2	04/18/25	SC	SW8082A
PCB-1221	ND	75	ug/Kg	2	04/18/25	SC	SW8082A
PCB-1232	ND	75	ug/Kg	2	04/18/25	SC	SW8082A
PCB-1242	ND	75	ug/Kg	2	04/18/25	SC	SW8082A
PCB-1248	ND	75	ug/Kg	2	04/18/25	SC	SW8082A
PCB-1254	ND	75	ug/Kg	2	04/18/25	SC	SW8082A
PCB-1260	ND	75	ug/Kg	2	04/18/25	SC	SW8082A
PCB-1262	ND	75	ug/Kg	2	04/18/25	SC	SW8082A
PCB-1268	ND	75	ug/Kg	2	04/18/25	SC	SW8082A
QA/QC Surrogates							
% DCBP	54		%	2	04/18/25	SC	30 - 150 %
% DCBP (Confirmation)	61		%	2	04/18/25	SC	30 - 150 %
% TCMX	58		%	2	04/18/25	SC	30 - 150 %
% TCMX (Confirmation)	60		%	2	04/18/25	SC	30 - 150 %
TPH by GC (Extractable (C9-C36))							
Fuel Oil #2 / Diesel Fuel	ND	290	mg/kg	5	04/17/25	JRB	SW8015D
Fuel Oil #4	ND	290	mg/kg	5	04/17/25	JRB	SW8015D
Fuel Oil #6	ND	290	mg/kg	5	04/17/25	JRB	SW8015D
Kerosene	ND	290	mg/kg	5	04/17/25	JRB	SW8015D
Motor Oil	ND	290	mg/kg	5	04/17/25	JRB	SW8015D
Total TPH	ND	290	mg/kg	5	04/17/25	JRB	SW8015D
Unidentified	ND	290	mg/kg	5	04/17/25	JRB	SW8015D
QA/QC Surrogates							
% COD (surr)	52		%	5	04/17/25	JRB	50 - 150 %
% Terphenyl (surr)	72		%	5	04/17/25	JRB	50 - 150 %
Semivolatiles							
1,1-Biphenyl	ND	50	ug/Kg	1	04/18/25	MR	SW8270E
1,2,4,5-Tetrachlorobenzene	ND	260	ug/Kg	1	04/18/25	MR	SW8270E
1,2,4-Trichlorobenzene	ND	260	ug/Kg	1	04/18/25	MR	SW8270E
1,2-Dichlorobenzene	ND	260	ug/Kg	1	04/18/25	MR	SW8270E
1,2-Diphenylhydrazine	ND	370	ug/Kg	1	04/18/25	MR	SW8270E
1,3-Dichlorobenzene	ND	260	ug/Kg	1	04/18/25	MR	SW8270E
1,4-Dichlorobenzene	ND	260	ug/Kg	1	04/18/25	MR	SW8270E
2,2'-Oxybis(1-Chloropropane)	ND	260	ug/Kg	1	04/18/25	MR	SW8270E
2,4,5-Trichlorophenol	ND	260	ug/Kg	1	04/18/25	MR	SW8270E
2,4,6-Trichlorophenol	ND	260	ug/Kg	1	04/18/25	MR	SW8270E
2,4-Dichlorophenol	ND	260	ug/Kg	1	04/18/25	MR	SW8270E
2,4-Dimethylphenol	ND	260	ug/Kg	1	04/18/25	MR	SW8270E
2,4-Dinitrophenol	ND	370	ug/Kg	1	04/18/25	MR	SW8270E
2,4-Dinitrotoluene	ND	260	ug/Kg	1	04/18/25	MR	SW8270E
2,6-Dinitrotoluene	ND	260	ug/Kg	1	04/18/25	MR	SW8270E
2-Chloronaphthalene	ND	260	ug/Kg	1	04/18/25	MR	SW8270E
2-Chlorophenol	ND	260	ug/Kg	1	04/18/25	MR	SW8270E
2-Methylnaphthalene	ND	260	ug/Kg	1	04/18/25	MR	SW8270E
2-Methylphenol (o-cresol)	ND	260	ug/Kg	1	04/18/25	MR	SW8270E

Project ID: SHERMAN ST TANK/BELLIS CIRCLE
Client ID: KLF-2 (0-5)

Phoenix I.D.: CT00899

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
2-Nitroaniline	ND	370	ug/Kg	1	04/18/25	MR	SW8270E
2-Nitrophenol	ND	260	ug/Kg	1	04/18/25	MR	SW8270E
3&4-Methylphenol (m&p-cresol)	ND	370	ug/Kg	1	04/18/25	MR	SW8270E
3,3'-Dichlorobenzidine	ND	260	ug/Kg	1	04/18/25	MR	SW8270E
3-Nitroaniline	ND	370	ug/Kg	1	04/18/25	MR	SW8270E
4,6-Dinitro-2-methylphenol	ND	370	ug/Kg	1	04/18/25	MR	SW8270E
4-Bromophenyl phenyl ether	ND	370	ug/Kg	1	04/18/25	MR	SW8270E
4-Chloro-3-methylphenol	ND	260	ug/Kg	1	04/18/25	MR	SW8270E
4-Chloroaniline	ND	260	ug/Kg	1	04/18/25	MR	SW8270E
4-Chlorophenyl phenyl ether	ND	260	ug/Kg	1	04/18/25	MR	SW8270E
4-Nitroaniline	ND	600	ug/Kg	1	04/18/25	MR	SW8270E
4-Nitrophenol	ND	260	ug/Kg	1	04/18/25	MR	SW8270E
Acenaphthene	ND	260	ug/Kg	1	04/18/25	MR	SW8270E
Acenaphthylene	ND	260	ug/Kg	1	04/18/25	MR	SW8270E
Acetophenone	ND	260	ug/Kg	1	04/18/25	MR	SW8270E
Aniline	ND	370	ug/Kg	1	04/18/25	MR	SW8270E
Anthracene	ND	260	ug/Kg	1	04/18/25	MR	SW8270E
Benz(a)anthracene	ND	260	ug/Kg	1	04/18/25	MR	SW8270E
Benzidine	ND	260	ug/Kg	1	04/18/25	MR	SW8270E
Benzo(a)pyrene	ND	260	ug/Kg	1	04/18/25	MR	SW8270E
Benzo(b)fluoranthene	330	260	ug/Kg	1	04/18/25	MR	SW8270E
Benzo(ghi)perylene	ND	260	ug/Kg	1	04/18/25	MR	SW8270E
Benzo(k)fluoranthene	ND	260	ug/Kg	1	04/18/25	MR	SW8270E
Benzoic acid	ND	750	ug/Kg	1	04/18/25	MR	SW8270E
Benzyl butyl phthalate	ND	260	ug/Kg	1	04/18/25	MR	SW8270E
Bis(2-chloroethoxy)methane	ND	260	ug/Kg	1	04/18/25	MR	SW8270E
Bis(2-chloroethyl)ether	ND	370	ug/Kg	1	04/18/25	MR	SW8270E
Bis(2-ethylhexyl)phthalate	ND	370	ug/Kg	1	04/18/25	MR	SW8270E
Carbazole	ND	370	ug/Kg	1	04/18/25	MR	SW8270E
Chrysene	ND	260	ug/Kg	1	04/18/25	MR	SW8270E
Dibenz(a,h)anthracene	ND	260	ug/Kg	1	04/18/25	MR	SW8270E
Dibenzofuran	ND	260	ug/Kg	1	04/18/25	MR	SW8270E
Diethyl phthalate	ND	260	ug/Kg	1	04/18/25	MR	SW8270E
Dimethylphthalate	ND	260	ug/Kg	1	04/18/25	MR	SW8270E
Di-n-butylphthalate	ND	370	ug/Kg	1	04/18/25	MR	SW8270E
Di-n-octylphthalate	ND	260	ug/Kg	1	04/18/25	MR	SW8270E
Fluoranthene	350	260	ug/Kg	1	04/18/25	MR	SW8270E
Fluorene	ND	260	ug/Kg	1	04/18/25	MR	SW8270E
Hexachlorobenzene	ND	260	ug/Kg	1	04/18/25	MR	SW8270E
Hexachlorobutadiene	ND	260	ug/Kg	1	04/18/25	MR	SW8270E
Hexachlorocyclopentadiene	ND	260	ug/Kg	1	04/18/25	MR	SW8270E
Hexachloroethane	ND	260	ug/Kg	1	04/18/25	MR	SW8270E
Indeno(1,2,3-cd)pyrene	ND	260	ug/Kg	1	04/18/25	MR	SW8270E
Isophorone	ND	260	ug/Kg	1	04/18/25	MR	SW8270E
Naphthalene	ND	260	ug/Kg	1	04/18/25	MR	SW8270E
Nitrobenzene	ND	260	ug/Kg	1	04/18/25	MR	SW8270E
N-Nitrosodimethylamine	ND	370	ug/Kg	1	04/18/25	MR	SW8270E
N-Nitrosodi-n-propylamine	ND	260	ug/Kg	1	04/18/25	MR	SW8270E
N-Nitrosodiphenylamine	ND	370	ug/Kg	1	04/18/25	MR	SW8270E

Project ID: SHERMAN ST TANK/BELLIS CIRCLE
Client ID: KLF-2 (0-5)

Phoenix I.D.: CT00899

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Pentachloronitrobenzene	ND	370	ug/Kg	1	04/18/25	MR	SW8270E
Pentachlorophenol	ND	370	ug/Kg	1	04/18/25	MR	SW8270E
Phenanthrene	ND	260	ug/Kg	1	04/18/25	MR	SW8270E
Phenol	ND	260	ug/Kg	1	04/18/25	MR	SW8270E
Pyrene	320	260	ug/Kg	1	04/18/25	MR	SW8270E
Pyridine	ND	370	ug/Kg	1	04/18/25	MR	SW8270E
QA/QC Surrogates							
% 2,4,6-Tribromophenol	63		%	1	04/18/25	MR	30 - 130 %
% 2-Fluorobiphenyl	58		%	1	04/18/25	MR	30 - 130 %
% 2-Fluorophenol	51		%	1	04/18/25	MR	30 - 130 %
% Nitrobenzene-d5	57		%	1	04/18/25	MR	30 - 130 %
% Phenol-d5	51		%	1	04/18/25	MR	30 - 130 %
% Terphenyl-d14	60		%	1	04/18/25	MR	30 - 130 %

Massachusetts does not offer certification for Soil/Solid matrices.

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

Per 1.4.6 of EPA method 8270D, 1,2-Diphenylhydrazine is unstable and readily converts to Azobenzene. Azobenzene is used for the calibration of 1,2-Diphenylhydrazine.

Corrosivity is based solely on the pH analysis performed above.

Ignitability is based solely on the results of the closed cup flashpoint analysis performed above. Passed is >140 degree F.

The regulatory hold time for pH is immediately. This pH was performed in the laboratory and may be considered outside of hold-time.

The reactivity, reported above, is based only on the EPA Interim Guidance for Reactive Cyanide. This method is no longer listed in the current version of SW-846.

The reactivity, reported above, is based only on the EPA Interim Guidance for Reactive Sulfide. This method is no longer listed in the current version of SW-846.

All soils, solids and sludges are reported on a dry weight basis unless otherwise noted in the sample comments.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.

Phyllis Shiller, Laboratory Director

April 22, 2025

Reviewed and Released by: Ethan Lee, Project Manager

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102

Analysis Report

April 22, 2025

FOR: Attn: Lisa Stone
Kleinfelder
One Beacon Street Suite 8100
Boston, MA 02108

Sample Information		Custody Information		Date	Time
Matrix:	SOIL	Collected by:		04/07/25	11:55
Location Code:	KLEINFL-BOSTON	Received by:	SR1	04/08/25	18:25
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	20231168.006A				

Laboratory Data

SDG ID: GCT00898
Phoenix ID: CT00900

Project ID: SHERMAN ST TANK/BELLIS CIRCLE
Client ID: KLF-3 (1-2)

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Field Extraction	Completed				04/07/25		SW5035A
Volatiles							
1,1,1,2-Tetrachloroethane	ND	5.7	ug/Kg	1	04/09/25	JLI	SW8260D
1,1,1-Trichloroethane	ND	5.7	ug/Kg	1	04/09/25	JLI	SW8260D
1,1,2,2-Tetrachloroethane	ND	3.4	ug/Kg	1	04/09/25	JLI	SW8260D
1,1,2-Trichloroethane	ND	5.7	ug/Kg	1	04/09/25	JLI	SW8260D
1,1-Dichloroethane	ND	5.7	ug/Kg	1	04/09/25	JLI	SW8260D
1,1-Dichloroethene	ND	5.7	ug/Kg	1	04/09/25	JLI	SW8260D
1,1-Dichloropropene	ND	5.7	ug/Kg	1	04/09/25	JLI	SW8260D
1,2,3-Trichlorobenzene	ND	5.7	ug/Kg	1	04/09/25	JLI	SW8260D
1,2,3-Trichloropropane	ND	5.7	ug/Kg	1	04/09/25	JLI	SW8260D
1,2,4-Trichlorobenzene	ND	5.7	ug/Kg	1	04/09/25	JLI	SW8260D
1,2,4-Trimethylbenzene	ND	5.7	ug/Kg	1	04/09/25	JLI	SW8260D
1,2-Dibromo-3-chloropropane	ND	5.7	ug/Kg	1	04/09/25	JLI	SW8260D
1,2-Dibromoethane	ND	0.57	ug/Kg	1	04/09/25	JLI	SW8260D
1,2-Dichlorobenzene	ND	5.7	ug/Kg	1	04/09/25	JLI	SW8260D
1,2-Dichloroethane	ND	5.7	ug/Kg	1	04/09/25	JLI	SW8260D
1,2-Dichloropropane	ND	5.7	ug/Kg	1	04/09/25	JLI	SW8260D
1,3,5-Trimethylbenzene	ND	5.7	ug/Kg	1	04/09/25	JLI	SW8260D
1,3-Dichlorobenzene	ND	5.7	ug/Kg	1	04/09/25	JLI	SW8260D
1,3-Dichloropropane	ND	5.7	ug/Kg	1	04/09/25	JLI	SW8260D
1,4-Dichlorobenzene	ND	5.7	ug/Kg	1	04/09/25	JLI	SW8260D
2,2-Dichloropropane	ND	5.7	ug/Kg	1	04/09/25	JLI	SW8260D
2-Chlorotoluene	ND	5.7	ug/Kg	1	04/09/25	JLI	SW8260D
2-Hexanone	ND	29	ug/Kg	1	04/09/25	JLI	SW8260D
2-Isopropyltoluene	ND	5.7	ug/Kg	1	04/09/25	JLI	SW8260D

Project ID: SHERMAN ST TANK/BELLIS CIRCLE
Client ID: KLF-3 (1-2)

Phoenix I.D.: CT00900

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
4-Chlorotoluene	ND	5.7	ug/Kg	1	04/09/25	JLI	SW8260D
4-Methyl-2-pentanone	ND	29	ug/Kg	1	04/09/25	JLI	SW8260D
Acetone	ND	290	ug/Kg	1	04/09/25	JLI	SW8260D
Acrylonitrile	ND	5.7	ug/Kg	1	04/09/25	JLI	SW8260D
Benzene	ND	5.7	ug/Kg	1	04/09/25	JLI	SW8260D
Bromobenzene	ND	5.7	ug/Kg	1	04/09/25	JLI	SW8260D
Bromochloromethane	ND	5.7	ug/Kg	1	04/09/25	JLI	SW8260D
Bromodichloromethane	ND	5.7	ug/Kg	1	04/09/25	JLI	SW8260D
Bromoform	ND	5.7	ug/Kg	1	04/09/25	JLI	SW8260D
Bromomethane	ND	5.7	ug/Kg	1	04/09/25	JLI	SW8260D
Carbon Disulfide	ND	5.7	ug/Kg	1	04/09/25	JLI	SW8260D
Carbon tetrachloride	ND	5.7	ug/Kg	1	04/09/25	JLI	SW8260D
Chlorobenzene	ND	5.7	ug/Kg	1	04/09/25	JLI	SW8260D
Chloroethane	ND	5.7	ug/Kg	1	04/09/25	JLI	SW8260D
Chloroform	ND	5.7	ug/Kg	1	04/09/25	JLI	SW8260D
Chloromethane	ND	5.7	ug/Kg	1	04/09/25	JLI	SW8260D
cis-1,2-Dichloroethene	ND	5.7	ug/Kg	1	04/09/25	JLI	SW8260D
cis-1,3-Dichloropropene	ND	5.7	ug/Kg	1	04/09/25	JLI	SW8260D
Dibromochloromethane	ND	3.4	ug/Kg	1	04/09/25	JLI	SW8260D
Dibromomethane	ND	5.7	ug/Kg	1	04/09/25	JLI	SW8260D
Dichlorodifluoromethane	ND	5.7	ug/Kg	1	04/09/25	JLI	SW8260D
Ethylbenzene	ND	5.7	ug/Kg	1	04/09/25	JLI	SW8260D
Hexachlorobutadiene	ND	5.7	ug/Kg	1	04/09/25	JLI	SW8260D
Isopropylbenzene	ND	5.7	ug/Kg	1	04/09/25	JLI	SW8260D
m&p-Xylene	ND	5.7	ug/Kg	1	04/09/25	JLI	SW8260D
Methyl Ethyl Ketone	ND	34	ug/Kg	1	04/09/25	JLI	SW8260D
Methyl t-butyl ether (MTBE)	ND	11	ug/Kg	1	04/09/25	JLI	SW8260D
Methylene chloride	ND	11	ug/Kg	1	04/09/25	JLI	SW8260D
Naphthalene	ND	5.7	ug/Kg	1	04/09/25	JLI	SW8260D
n-Butylbenzene	ND	5.7	ug/Kg	1	04/09/25	JLI	SW8260D
n-Propylbenzene	ND	5.7	ug/Kg	1	04/09/25	JLI	SW8260D
o-Xylene	ND	5.7	ug/Kg	1	04/09/25	JLI	SW8260D
p-Isopropyltoluene	ND	5.7	ug/Kg	1	04/09/25	JLI	SW8260D
sec-Butylbenzene	ND	5.7	ug/Kg	1	04/09/25	JLI	SW8260D
Styrene	ND	5.7	ug/Kg	1	04/09/25	JLI	SW8260D
tert-Butylbenzene	ND	5.7	ug/Kg	1	04/09/25	JLI	SW8260D
Tetrachloroethene	ND	5.7	ug/Kg	1	04/09/25	JLI	SW8260D
Tetrahydrofuran (THF)	ND	11	ug/Kg	1	04/09/25	JLI	SW8260D
Toluene	ND	5.7	ug/Kg	1	04/09/25	JLI	SW8260D
Total Xylenes	ND	5.7	ug/Kg	1	04/09/25	JLI	SW8260D
trans-1,2-Dichloroethene	ND	5.7	ug/Kg	1	04/09/25	JLI	SW8260D
trans-1,3-Dichloropropene	ND	5.7	ug/Kg	1	04/09/25	JLI	SW8260D
trans-1,4-dichloro-2-butene	ND	11	ug/Kg	1	04/09/25	JLI	SW8260D
Trichloroethene	ND	5.7	ug/Kg	1	04/09/25	JLI	SW8260D
Trichlorofluoromethane	ND	5.7	ug/Kg	1	04/09/25	JLI	SW8260D
Trichlorotrifluoroethane	ND	11	ug/Kg	1	04/09/25	JLI	SW8260D
Vinyl chloride	ND	5.7	ug/Kg	1	04/09/25	JLI	SW8260D
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	99		%	1	04/09/25	JLI	70 - 130 %

Project ID: SHERMAN ST TANK/BELLIS CIRCLE
Client ID: KLF-3 (1-2)

Phoenix I.D.: CT00900

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
% Bromofluorobenzene	95		%	1	04/09/25	JLI	70 - 130 %
% Dibromofluoromethane	77		%	1	04/09/25	JLI	70 - 130 %
% Toluene-d8	100		%	1	04/09/25	JLI	70 - 130 %

Oxygenates & Dioxane

1,4-Dioxane	ND	110	ug/Kg	1	04/09/25	JLI	SW8260D (OXY)
Diethyl ether	ND	5.7	ug/Kg	1	04/09/25	JLI	SW8260D (OXY)
Di-isopropyl ether	ND	5.7	ug/Kg	1	04/09/25	JLI	SW8260D (OXY)
Ethyl tert-butyl ether	ND	5.7	ug/Kg	1	04/09/25	JLI	SW8260D (OXY)
tert-amyl methyl ether	ND	5.7	ug/Kg	1	04/09/25	JLI	SW8260D (OXY)

Massachusetts does not offer certification for Soil/Solid matrices.

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

Results are reported on an ``as received`` basis, and are not corrected for dry weight.

All soils, solids and sludges are reported on a dry weight basis unless otherwise noted in the sample comments.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.

Phyllis Shiller, Laboratory Director

April 22, 2025

Reviewed and Released by: Ethan Lee, Project Manager

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102

Analysis Report

April 22, 2025

FOR: Attn: Lisa Stone
Kleinfelder
One Beacon Street Suite 8100
Boston, MA 02108

Sample Information		Custody Information		Date	Time
Matrix:	SOIL	Collected by:		04/07/25	11:55
Location Code:	KLEINFL-BOSTON	Received by:	SR1	04/08/25	18:25
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	20231168.006A				

Laboratory Data

SDG ID: GCT00898
Phoenix ID: CT00901

Project ID: SHERMAN ST TANK/BELLIS CIRCLE
Client ID: KLF-3 (0-5)

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Silver	< 0.37	0.37	mg/Kg	1	04/11/25	TH	SW6010D
Arsenic	4.13	0.73	mg/Kg	1	04/11/25	TH	SW6010D
Barium	70.1	0.37	mg/Kg	1	04/11/25	TH	SW6010D
Beryllium	0.34	0.29	mg/Kg	1	04/11/25	TH	SW6010D
Cadmium	< 0.37	0.37	mg/Kg	1	04/11/25	TH	SW6010D
Chromium	25.5	0.37	mg/Kg	1	04/11/25	TH	SW6010D
Mercury	< 0.03	0.03	mg/Kg	2	04/09/25	JM	SW7471B
Nickel	16.3	0.37	mg/Kg	1	04/11/25	TH	SW6010D
Lead	22.5	0.37	mg/Kg	1	04/11/25	TH	SW6010D
Antimony	< 3.7	3.7	mg/Kg	1	04/11/25	TH	SW6010D
Selenium	< 1.5	1.5	mg/Kg	1	04/11/25	TH	SW6010D
Thallium	< 3.3	3.3	mg/Kg	1	04/11/25	TH	SW6010D
Vanadium	32.9	0.37	mg/Kg	1	04/11/25	TH	SW6010D
Zinc	60.0	0.7	mg/Kg	1	04/11/25	TH	SW6010D
Percent Solid	91		%		04/08/25	CV	SW846-%Solid
Conductivity - Soil Matrix	891	5	umhos/cm	1	04/09/25	AF	SW9050A
Corrosivity	Negative		Pos/Neg	1	04/08/25	KG	SW846-Corr
Flash Point	>200	200	Degree F	1	04/10/25	G	SW1010B
Ignitability	Passed	140	degree F	1	04/10/25	G	SW846-Ignit
pH at 22C - Soil	11.5	1.00	pH Units	1	04/08/25 23:51	KG	SW846 9045D
Reactivity Cyanide	< 5	5	mg/Kg	1	04/14/25	E/N/G	SW846 7.3.3.1/90
Reactivity Sulfide	< 20	20	mg/Kg	1	04/16/25	NP/GD	SW846 CH7
Reactivity	Negative		Pos/Neg	1	04/17/25	NP/GD	SW846-React
Mercury Digestion	Completed				04/09/25	AC1/AC1	SW7471B
Extraction of ETPH	Completed				04/17/25	RB/SD/SD	SW3546
Soil Extraction for PCB	Completed				04/17/25	H/U	SW3546
Soil Extraction for SVOA	Completed				04/17/25	AC1/SD/U	SW3546

Ver 1

Project ID: SHERMAN ST TANK/BELLIS CIRCLE
Client ID: KLF-3 (0-5)

Phoenix I.D.: CT00901

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Total Metals Digest	Completed				04/10/25	N/AG	SW3050B
Polychlorinated Biphenyls							
PCB-1016	ND	73	ug/Kg	2	04/21/25	SC	SW8082A
PCB-1221	ND	73	ug/Kg	2	04/21/25	SC	SW8082A
PCB-1232	ND	73	ug/Kg	2	04/21/25	SC	SW8082A
PCB-1242	ND	73	ug/Kg	2	04/21/25	SC	SW8082A
PCB-1248	410	73	ug/Kg	2	04/21/25	SC	SW8082A
PCB-1254	ND	73	ug/Kg	2	04/21/25	SC	SW8082A
PCB-1260	ND	73	ug/Kg	2	04/21/25	SC	SW8082A
PCB-1262	ND	73	ug/Kg	2	04/21/25	SC	SW8082A
PCB-1268	ND	73	ug/Kg	2	04/21/25	SC	SW8082A
QA/QC Surrogates							
% DCBP	63		%	2	04/21/25	SC	30 - 150 %
% DCBP (Confirmation)	64		%	2	04/21/25	SC	30 - 150 %
% TCMX	54		%	2	04/21/25	SC	30 - 150 %
% TCMX (Confirmation)	55		%	2	04/21/25	SC	30 - 150 %
TPH by GC (Extractable (C9-C36))							
Fuel Oil #2 / Diesel Fuel	ND	270	mg/kg	5	04/17/25	JRB	SW8015D
Fuel Oil #4	ND	270	mg/kg	5	04/17/25	JRB	SW8015D
Fuel Oil #6	ND	270	mg/kg	5	04/17/25	JRB	SW8015D
Kerosene	ND	270	mg/kg	5	04/17/25	JRB	SW8015D
Motor Oil	ND	270	mg/kg	5	04/17/25	JRB	SW8015D
Total TPH	ND	270	mg/kg	5	04/17/25	JRB	SW8015D
Unidentified	ND	270	mg/kg	5	04/17/25	JRB	SW8015D
QA/QC Surrogates							
% COD (surr)	50		%	5	04/17/25	JRB	50 - 150 %
% Terphenyl (surr)	66		%	5	04/17/25	JRB	50 - 150 %
Semivolatiles							
1,1-Biphenyl	ND	50	ug/Kg	1	04/18/25	MR	SW8270E
1,2,4,5-Tetrachlorobenzene	ND	250	ug/Kg	1	04/18/25	MR	SW8270E
1,2,4-Trichlorobenzene	ND	250	ug/Kg	1	04/18/25	MR	SW8270E
1,2-Dichlorobenzene	ND	250	ug/Kg	1	04/18/25	MR	SW8270E
1,2-Diphenylhydrazine	ND	360	ug/Kg	1	04/18/25	MR	SW8270E
1,3-Dichlorobenzene	ND	250	ug/Kg	1	04/18/25	MR	SW8270E
1,4-Dichlorobenzene	ND	250	ug/Kg	1	04/18/25	MR	SW8270E
2,2'-Oxybis(1-Chloropropane)	ND	250	ug/Kg	1	04/18/25	MR	SW8270E
2,4,5-Trichlorophenol	ND	250	ug/Kg	1	04/18/25	MR	SW8270E
2,4,6-Trichlorophenol	ND	250	ug/Kg	1	04/18/25	MR	SW8270E
2,4-Dichlorophenol	ND	250	ug/Kg	1	04/18/25	MR	SW8270E
2,4-Dimethylphenol	ND	250	ug/Kg	1	04/18/25	MR	SW8270E
2,4-Dinitrophenol	ND	360	ug/Kg	1	04/18/25	MR	SW8270E
2,4-Dinitrotoluene	ND	250	ug/Kg	1	04/18/25	MR	SW8270E
2,6-Dinitrotoluene	ND	250	ug/Kg	1	04/18/25	MR	SW8270E
2-Chloronaphthalene	ND	250	ug/Kg	1	04/18/25	MR	SW8270E
2-Chlorophenol	ND	250	ug/Kg	1	04/18/25	MR	SW8270E
2-Methylnaphthalene	ND	250	ug/Kg	1	04/18/25	MR	SW8270E
2-Methylphenol (o-cresol)	ND	250	ug/Kg	1	04/18/25	MR	SW8270E

Project ID: SHERMAN ST TANK/BELLIS CIRCLE
Phoenix I.D.: CT00901
Client ID: KLF-3 (0-5)

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
2-Nitroaniline	ND	360	ug/Kg	1	04/18/25	MR	SW8270E
2-Nitrophenol	ND	250	ug/Kg	1	04/18/25	MR	SW8270E
3&4-Methylphenol (m&p-cresol)	ND	360	ug/Kg	1	04/18/25	MR	SW8270E
3,3'-Dichlorobenzidine	ND	250	ug/Kg	1	04/18/25	MR	SW8270E
3-Nitroaniline	ND	360	ug/Kg	1	04/18/25	MR	SW8270E
4,6-Dinitro-2-methylphenol	ND	360	ug/Kg	1	04/18/25	MR	SW8270E
4-Bromophenyl phenyl ether	ND	360	ug/Kg	1	04/18/25	MR	SW8270E
4-Chloro-3-methylphenol	ND	250	ug/Kg	1	04/18/25	MR	SW8270E
4-Chloroaniline	ND	250	ug/Kg	1	04/18/25	MR	SW8270E
4-Chlorophenyl phenyl ether	ND	250	ug/Kg	1	04/18/25	MR	SW8270E
4-Nitroaniline	ND	570	ug/Kg	1	04/18/25	MR	SW8270E
4-Nitrophenol	ND	250	ug/Kg	1	04/18/25	MR	SW8270E
Acenaphthene	ND	250	ug/Kg	1	04/18/25	MR	SW8270E
Acenaphthylene	ND	250	ug/Kg	1	04/18/25	MR	SW8270E
Acetophenone	ND	250	ug/Kg	1	04/18/25	MR	SW8270E
Aniline	ND	360	ug/Kg	1	04/18/25	MR	SW8270E
Anthracene	ND	250	ug/Kg	1	04/18/25	MR	SW8270E
Benz(a)anthracene	ND	250	ug/Kg	1	04/18/25	MR	SW8270E
Benzidine	ND	250	ug/Kg	1	04/18/25	MR	SW8270E
Benzo(a)pyrene	ND	250	ug/Kg	1	04/18/25	MR	SW8270E
Benzo(b)fluoranthene	280	250	ug/Kg	1	04/18/25	MR	SW8270E
Benzo(ghi)perylene	ND	250	ug/Kg	1	04/18/25	MR	SW8270E
Benzo(k)fluoranthene	ND	250	ug/Kg	1	04/18/25	MR	SW8270E
Benzoic acid	ND	720	ug/Kg	1	04/18/25	MR	SW8270E
Benzyl butyl phthalate	ND	250	ug/Kg	1	04/18/25	MR	SW8270E
Bis(2-chloroethoxy)methane	ND	250	ug/Kg	1	04/18/25	MR	SW8270E
Bis(2-chloroethyl)ether	ND	360	ug/Kg	1	04/18/25	MR	SW8270E
Bis(2-ethylhexyl)phthalate	ND	360	ug/Kg	1	04/18/25	MR	SW8270E
Carbazole	ND	360	ug/Kg	1	04/18/25	MR	SW8270E
Chrysene	ND	250	ug/Kg	1	04/18/25	MR	SW8270E
Dibenz(a,h)anthracene	ND	250	ug/Kg	1	04/18/25	MR	SW8270E
Dibenzofuran	ND	250	ug/Kg	1	04/18/25	MR	SW8270E
Diethyl phthalate	ND	250	ug/Kg	1	04/18/25	MR	SW8270E
Dimethylphthalate	ND	250	ug/Kg	1	04/18/25	MR	SW8270E
Di-n-butylphthalate	ND	360	ug/Kg	1	04/18/25	MR	SW8270E
Di-n-octylphthalate	ND	250	ug/Kg	1	04/18/25	MR	SW8270E
Fluoranthene	480	250	ug/Kg	1	04/18/25	MR	SW8270E
Fluorene	ND	250	ug/Kg	1	04/18/25	MR	SW8270E
Hexachlorobenzene	ND	250	ug/Kg	1	04/18/25	MR	SW8270E
Hexachlorobutadiene	ND	250	ug/Kg	1	04/18/25	MR	SW8270E
Hexachlorocyclopentadiene	ND	250	ug/Kg	1	04/18/25	MR	SW8270E
Hexachloroethane	ND	250	ug/Kg	1	04/18/25	MR	SW8270E
Indeno(1,2,3-cd)pyrene	ND	250	ug/Kg	1	04/18/25	MR	SW8270E
Isophorone	ND	250	ug/Kg	1	04/18/25	MR	SW8270E
Naphthalene	ND	250	ug/Kg	1	04/18/25	MR	SW8270E
Nitrobenzene	ND	250	ug/Kg	1	04/18/25	MR	SW8270E
N-Nitrosodimethylamine	ND	360	ug/Kg	1	04/18/25	MR	SW8270E
N-Nitrosodi-n-propylamine	ND	250	ug/Kg	1	04/18/25	MR	SW8270E
N-Nitrosodiphenylamine	ND	360	ug/Kg	1	04/18/25	MR	SW8270E

Project ID: SHERMAN ST TANK/BELLIS CIRCLE
Client ID: KLF-3 (0-5)

Phoenix I.D.: CT00901

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Pentachloronitrobenzene	ND	360	ug/Kg	1	04/18/25	MR	SW8270E
Pentachlorophenol	ND	360	ug/Kg	1	04/18/25	MR	SW8270E
Phenanthrene	ND	250	ug/Kg	1	04/18/25	MR	SW8270E
Phenol	ND	250	ug/Kg	1	04/18/25	MR	SW8270E
Pyrene	420	250	ug/Kg	1	04/18/25	MR	SW8270E
Pyridine	ND	360	ug/Kg	1	04/18/25	MR	SW8270E
QA/QC Surrogates							
% 2,4,6-Tribromophenol	31		%	1	04/18/25	MR	30 - 130 %
% 2-Fluorobiphenyl	61		%	1	04/18/25	MR	30 - 130 %
% 2-Fluorophenol	38		%	1	04/18/25	MR	30 - 130 %
% Nitrobenzene-d5	58		%	1	04/18/25	MR	30 - 130 %
% Phenol-d5	53		%	1	04/18/25	MR	30 - 130 %
% Terphenyl-d14	61		%	1	04/18/25	MR	30 - 130 %

Massachusetts does not offer certification for Soil/Solid matrices.

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

Per 1.4.6 of EPA method 8270D, 1,2-Diphenylhydrazine is unstable and readily converts to Azobenzene. Azobenzene is used for the calibration of 1,2-Diphenylhydrazine.

Corrosivity is based solely on the pH analysis performed above.

Ignitability is based solely on the results of the closed cup flashpoint analysis performed above. Passed is >140 degree F.

The regulatory hold time for pH is immediately. This pH was performed in the laboratory and may be considered outside of hold-time.

The reactivity, reported above, is based only on the EPA Interim Guidance for Reactive Cyanide. This method is no longer listed in the current version of SW-846.

The reactivity, reported above, is based only on the EPA Interim Guidance for Reactive Sulfide. This method is no longer listed in the current version of SW-846.

All soils, solids and sludges are reported on a dry weight basis unless otherwise noted in the sample comments.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.

Phyllis Shiller, Laboratory Director

April 22, 2025

Reviewed and Released by: Ethan Lee, Project Manager

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102

Analysis Report

April 22, 2025

FOR: Attn: Lisa Stone
Kleinfelder
One Beacon Street Suite 8100
Boston, MA 02108

Sample Information		Custody Information		Date	Time
Matrix:	SOIL	Collected by:		04/07/25	12:35
Location Code:	KLEINFL-BOSTON	Received by:	SR1	04/08/25	18:25
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	20231168.006A				

Laboratory Data

SDG ID: GCT00898
Phoenix ID: CT00902

Project ID: SHERMAN ST TANK/BELLIS CIRCLE
Client ID: KLF-1 (2-3)

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Field Extraction	Completed				04/07/25		SW5035A
Volatiles							
1,1,1,2-Tetrachloroethane	ND	4.9	ug/Kg	1	04/09/25	JLI	SW8260D
1,1,1-Trichloroethane	ND	4.9	ug/Kg	1	04/09/25	JLI	SW8260D
1,1,2,2-Tetrachloroethane	ND	2.9	ug/Kg	1	04/09/25	JLI	SW8260D
1,1,2-Trichloroethane	ND	4.9	ug/Kg	1	04/09/25	JLI	SW8260D
1,1-Dichloroethane	ND	4.9	ug/Kg	1	04/09/25	JLI	SW8260D
1,1-Dichloroethene	ND	4.9	ug/Kg	1	04/09/25	JLI	SW8260D
1,1-Dichloropropene	ND	4.9	ug/Kg	1	04/09/25	JLI	SW8260D
1,2,3-Trichlorobenzene	ND	4.9	ug/Kg	1	04/09/25	JLI	SW8260D
1,2,3-Trichloropropane	ND	4.9	ug/Kg	1	04/09/25	JLI	SW8260D
1,2,4-Trichlorobenzene	ND	4.9	ug/Kg	1	04/09/25	JLI	SW8260D
1,2,4-Trimethylbenzene	ND	4.9	ug/Kg	1	04/09/25	JLI	SW8260D
1,2-Dibromo-3-chloropropane	ND	4.9	ug/Kg	1	04/09/25	JLI	SW8260D
1,2-Dibromoethane	ND	0.49	ug/Kg	1	04/09/25	JLI	SW8260D
1,2-Dichlorobenzene	ND	4.9	ug/Kg	1	04/09/25	JLI	SW8260D
1,2-Dichloroethane	ND	4.9	ug/Kg	1	04/09/25	JLI	SW8260D
1,2-Dichloropropane	ND	4.9	ug/Kg	1	04/09/25	JLI	SW8260D
1,3,5-Trimethylbenzene	ND	4.9	ug/Kg	1	04/09/25	JLI	SW8260D
1,3-Dichlorobenzene	ND	4.9	ug/Kg	1	04/09/25	JLI	SW8260D
1,3-Dichloropropane	ND	4.9	ug/Kg	1	04/09/25	JLI	SW8260D
1,4-Dichlorobenzene	ND	4.9	ug/Kg	1	04/09/25	JLI	SW8260D
2,2-Dichloropropane	ND	4.9	ug/Kg	1	04/09/25	JLI	SW8260D
2-Chlorotoluene	ND	4.9	ug/Kg	1	04/09/25	JLI	SW8260D
2-Hexanone	ND	24	ug/Kg	1	04/09/25	JLI	SW8260D
2-Isopropyltoluene	ND	4.9	ug/Kg	1	04/09/25	JLI	SW8260D

Project ID: SHERMAN ST TANK/BELLIS CIRCLE
Phoenix I.D.: CT00902
Client ID: KLF-1 (2-3)

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
4-Chlorotoluene	ND	4.9	ug/Kg	1	04/09/25	JLI	SW8260D
4-Methyl-2-pentanone	ND	24	ug/Kg	1	04/09/25	JLI	SW8260D
Acetone	ND	240	ug/Kg	1	04/09/25	JLI	SW8260D
Acrylonitrile	ND	4.9	ug/Kg	1	04/09/25	JLI	SW8260D
Benzene	ND	4.9	ug/Kg	1	04/09/25	JLI	SW8260D
Bromobenzene	ND	4.9	ug/Kg	1	04/09/25	JLI	SW8260D
Bromochloromethane	ND	4.9	ug/Kg	1	04/09/25	JLI	SW8260D
Bromodichloromethane	ND	4.9	ug/Kg	1	04/09/25	JLI	SW8260D
Bromoform	ND	4.9	ug/Kg	1	04/09/25	JLI	SW8260D
Bromomethane	ND	4.9	ug/Kg	1	04/09/25	JLI	SW8260D
Carbon Disulfide	ND	4.9	ug/Kg	1	04/09/25	JLI	SW8260D
Carbon tetrachloride	ND	4.9	ug/Kg	1	04/09/25	JLI	SW8260D
Chlorobenzene	ND	4.9	ug/Kg	1	04/09/25	JLI	SW8260D
Chloroethane	ND	4.9	ug/Kg	1	04/09/25	JLI	SW8260D
Chloroform	ND	4.9	ug/Kg	1	04/09/25	JLI	SW8260D
Chloromethane	ND	4.9	ug/Kg	1	04/09/25	JLI	SW8260D
cis-1,2-Dichloroethene	ND	4.9	ug/Kg	1	04/09/25	JLI	SW8260D
cis-1,3-Dichloropropene	ND	4.9	ug/Kg	1	04/09/25	JLI	SW8260D
Dibromochloromethane	ND	2.9	ug/Kg	1	04/09/25	JLI	SW8260D
Dibromomethane	ND	4.9	ug/Kg	1	04/09/25	JLI	SW8260D
Dichlorodifluoromethane	ND	4.9	ug/Kg	1	04/09/25	JLI	SW8260D
Ethylbenzene	ND	4.9	ug/Kg	1	04/09/25	JLI	SW8260D
Hexachlorobutadiene	ND	4.9	ug/Kg	1	04/09/25	JLI	SW8260D
Isopropylbenzene	ND	4.9	ug/Kg	1	04/09/25	JLI	SW8260D
m&p-Xylene	ND	4.9	ug/Kg	1	04/09/25	JLI	SW8260D
Methyl Ethyl Ketone	ND	29	ug/Kg	1	04/09/25	JLI	SW8260D
Methyl t-butyl ether (MTBE)	ND	9.7	ug/Kg	1	04/09/25	JLI	SW8260D
Methylene chloride	ND	9.7	ug/Kg	1	04/09/25	JLI	SW8260D
Naphthalene	ND	4.9	ug/Kg	1	04/09/25	JLI	SW8260D
n-Butylbenzene	ND	4.9	ug/Kg	1	04/09/25	JLI	SW8260D
n-Propylbenzene	ND	4.9	ug/Kg	1	04/09/25	JLI	SW8260D
o-Xylene	ND	4.9	ug/Kg	1	04/09/25	JLI	SW8260D
p-Isopropyltoluene	ND	4.9	ug/Kg	1	04/09/25	JLI	SW8260D
sec-Butylbenzene	ND	4.9	ug/Kg	1	04/09/25	JLI	SW8260D
Styrene	ND	4.9	ug/Kg	1	04/09/25	JLI	SW8260D
tert-Butylbenzene	ND	4.9	ug/Kg	1	04/09/25	JLI	SW8260D
Tetrachloroethene	ND	4.9	ug/Kg	1	04/09/25	JLI	SW8260D
Tetrahydrofuran (THF)	ND	9.7	ug/Kg	1	04/09/25	JLI	SW8260D
Toluene	ND	4.9	ug/Kg	1	04/09/25	JLI	SW8260D
Total Xylenes	ND	4.9	ug/Kg	1	04/09/25	JLI	SW8260D
trans-1,2-Dichloroethene	ND	4.9	ug/Kg	1	04/09/25	JLI	SW8260D
trans-1,3-Dichloropropene	ND	4.9	ug/Kg	1	04/09/25	JLI	SW8260D
trans-1,4-dichloro-2-butene	ND	9.7	ug/Kg	1	04/09/25	JLI	SW8260D
Trichloroethene	ND	4.9	ug/Kg	1	04/09/25	JLI	SW8260D
Trichlorofluoromethane	ND	4.9	ug/Kg	1	04/09/25	JLI	SW8260D
Trichlorotrifluoroethane	ND	9.7	ug/Kg	1	04/09/25	JLI	SW8260D
Vinyl chloride	ND	4.9	ug/Kg	1	04/09/25	JLI	SW8260D
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	100		%	1	04/09/25	JLI	70 - 130 %

Project ID: SHERMAN ST TANK/BELLIS CIRCLE
Client ID: KLF-1 (2-3)

Phoenix I.D.: CT00902

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
% Bromofluorobenzene	91		%	1	04/09/25	JLI	70 - 130 %
% Dibromofluoromethane	100		%	1	04/09/25	JLI	70 - 130 %
% Toluene-d8	100		%	1	04/09/25	JLI	70 - 130 %

Oxygenates & Dioxane

1,4-Dioxane	ND	97	ug/Kg	1	04/09/25	JLI	SW8260D (OXY)
Diethyl ether	ND	4.9	ug/Kg	1	04/09/25	JLI	SW8260D (OXY)
Di-isopropyl ether	ND	4.9	ug/Kg	1	04/09/25	JLI	SW8260D (OXY)
Ethyl tert-butyl ether	ND	4.9	ug/Kg	1	04/09/25	JLI	SW8260D (OXY)
tert-amyl methyl ether	ND	4.9	ug/Kg	1	04/09/25	JLI	SW8260D (OXY)

Massachusetts does not offer certification for Soil/Solid matrices.

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

Results are reported on an ``as received`` basis, and are not corrected for dry weight.

All soils, solids and sludges are reported on a dry weight basis unless otherwise noted in the sample comments.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
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Phyllis Shiller, Laboratory Director

April 22, 2025

Reviewed and Released by: Ethan Lee, Project Manager

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102

Analysis Report

April 22, 2025

FOR: Attn: Lisa Stone
Kleinfelder
One Beacon Street Suite 8100
Boston, MA 02108

Sample Information		Custody Information		Date	Time
Matrix:	SOIL	Collected by:		04/07/25	12:35
Location Code:	KLEINFL-BOSTON	Received by:	SR1	04/08/25	18:25
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	20231168.006A				

Laboratory Data

SDG ID: GCT00898
Phoenix ID: CT00903

Project ID: SHERMAN ST TANK/BELLIS CIRCLE
Client ID: KLF-1 (2-5)

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Silver	< 0.43	0.43	mg/Kg	1	04/11/25	TH	SW6010D
Arsenic	2.27	0.87	mg/Kg	1	04/11/25	TH	SW6010D
Barium	19.2	0.43	mg/Kg	1	04/11/25	TH	SW6010D
Beryllium	< 0.35	0.35	mg/Kg	1	04/11/25	TH	SW6010D
Cadmium	< 0.43	0.43	mg/Kg	1	04/11/25	TH	SW6010D
Chromium	12.9	0.43	mg/Kg	1	04/11/25	TH	SW6010D
Mercury	< 0.03	0.03	mg/Kg	2	04/09/25	JM	SW7471B
Nickel	9.62	0.43	mg/Kg	1	04/11/25	TH	SW6010D
Lead	6.24	0.43	mg/Kg	1	04/11/25	TH	SW6010D
Antimony	< 4.3	4.3	mg/Kg	1	04/11/25	TH	SW6010D
Selenium	< 1.7	1.7	mg/Kg	1	04/11/25	TH	SW6010D
Thallium	< 3.9	3.9	mg/Kg	1	04/11/25	TH	SW6010D
Vanadium	21.4	0.43	mg/Kg	1	04/11/25	TH	SW6010D
Zinc	25.2	0.9	mg/Kg	1	04/11/25	TH	SW6010D
Percent Solid	81		%		04/08/25	CV	SW846-%Solid
Conductivity - Soil Matrix	15	5	umhos/cm	1	04/09/25	AF	SW9050A
Corrosivity	Negative		Pos/Neg	1	04/08/25	KG	SW846-Corr
Flash Point	>200	200	Degree F	1	04/10/25	G	SW1010B
Ignitability	Passed	140	degree F	1	04/10/25	G	SW846-Ignit
pH at 22C - Soil	6.19	1.00	pH Units	1	04/08/25 23:51	KG	SW846 9045D
Reactivity Cyanide	< 6	6	mg/Kg	1	04/14/25	E/N/G	SW846 7.3.3.1/90
Reactivity Sulfide	< 20	20	mg/Kg	1	04/16/25	NP/GD	SW846 CH7
Reactivity	Negative		Pos/Neg	1	04/17/25	NP/GD	SW846-React
Mercury Digestion	Completed				04/09/25	AC1/AC1	SW7471B
Extraction of ETPH	Completed				04/17/25	RB/SD/SD	SW3546
Soil Extraction for PCB	Completed				04/17/25	H/U	SW3546
Soil Extraction for SVOA	Completed				04/17/25	AC1/SD/U	SW3546

Ver 1

Project ID: SHERMAN ST TANK/BELLIS CIRCLE
Client ID: KLF-1 (2-5)

Phoenix I.D.: CT00903

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Total Metals Digest	Completed				04/10/25	N/AG	SW3050B
Polychlorinated Biphenyls							
PCB-1016	ND	81	ug/Kg	2	04/18/25	SC	SW8082A
PCB-1221	ND	81	ug/Kg	2	04/18/25	SC	SW8082A
PCB-1232	ND	81	ug/Kg	2	04/18/25	SC	SW8082A
PCB-1242	ND	81	ug/Kg	2	04/18/25	SC	SW8082A
PCB-1248	ND	81	ug/Kg	2	04/18/25	SC	SW8082A
PCB-1254	ND	81	ug/Kg	2	04/18/25	SC	SW8082A
PCB-1260	ND	81	ug/Kg	2	04/18/25	SC	SW8082A
PCB-1262	ND	81	ug/Kg	2	04/18/25	SC	SW8082A
PCB-1268	ND	81	ug/Kg	2	04/18/25	SC	SW8082A
QA/QC Surrogates							
% DCBP	63		%	2	04/18/25	SC	30 - 150 %
% DCBP (Confirmation)	70		%	2	04/18/25	SC	30 - 150 %
% TCMX	66		%	2	04/18/25	SC	30 - 150 %
% TCMX (Confirmation)	67		%	2	04/18/25	SC	30 - 150 %
TPH by GC (Extractable (C9-C36))							
Fuel Oil #2 / Diesel Fuel	ND	61	mg/kg	1	04/18/25	JRB	SW8015D
Fuel Oil #4	ND	61	mg/kg	1	04/18/25	JRB	SW8015D
Fuel Oil #6	ND	61	mg/kg	1	04/18/25	JRB	SW8015D
Kerosene	ND	61	mg/kg	1	04/18/25	JRB	SW8015D
Motor Oil	ND	61	mg/kg	1	04/18/25	JRB	SW8015D
Total TPH	ND	61	mg/kg	1	04/18/25	JRB	SW8015D
Unidentified	ND	61	mg/kg	1	04/18/25	JRB	SW8015D
QA/QC Surrogates							
% COD (surr)	68		%	1	04/18/25	JRB	50 - 150 %
% Terphenyl (surr)	69		%	1	04/18/25	JRB	50 - 150 %
Semivolatiles							
1,1-Biphenyl	ND	50	ug/Kg	1	04/18/25	MR	SW8270E
1,2,4,5-Tetrachlorobenzene	ND	280	ug/Kg	1	04/18/25	MR	SW8270E
1,2,4-Trichlorobenzene	ND	280	ug/Kg	1	04/18/25	MR	SW8270E
1,2-Dichlorobenzene	ND	280	ug/Kg	1	04/18/25	MR	SW8270E
1,2-Diphenylhydrazine	ND	400	ug/Kg	1	04/18/25	MR	SW8270E
1,3-Dichlorobenzene	ND	280	ug/Kg	1	04/18/25	MR	SW8270E
1,4-Dichlorobenzene	ND	280	ug/Kg	1	04/18/25	MR	SW8270E
2,2'-Oxybis(1-Chloropropane)	ND	280	ug/Kg	1	04/18/25	MR	SW8270E
2,4,5-Trichlorophenol	ND	280	ug/Kg	1	04/18/25	MR	SW8270E
2,4,6-Trichlorophenol	ND	280	ug/Kg	1	04/18/25	MR	SW8270E
2,4-Dichlorophenol	ND	280	ug/Kg	1	04/18/25	MR	SW8270E
2,4-Dimethylphenol	ND	280	ug/Kg	1	04/18/25	MR	SW8270E
2,4-Dinitrophenol	ND	400	ug/Kg	1	04/18/25	MR	SW8270E
2,4-Dinitrotoluene	ND	280	ug/Kg	1	04/18/25	MR	SW8270E
2,6-Dinitrotoluene	ND	280	ug/Kg	1	04/18/25	MR	SW8270E
2-Chloronaphthalene	ND	280	ug/Kg	1	04/18/25	MR	SW8270E
2-Chlorophenol	ND	280	ug/Kg	1	04/18/25	MR	SW8270E
2-Methylnaphthalene	ND	280	ug/Kg	1	04/18/25	MR	SW8270E
2-Methylphenol (o-cresol)	ND	280	ug/Kg	1	04/18/25	MR	SW8270E

Project ID: SHERMAN ST TANK/BELLIS CIRCLE
Client ID: KLF-1 (2-5)

Phoenix I.D.: CT00903

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
2-Nitroaniline	ND	400	ug/Kg	1	04/18/25	MR	SW8270E
2-Nitrophenol	ND	280	ug/Kg	1	04/18/25	MR	SW8270E
3&4-Methylphenol (m&p-cresol)	ND	400	ug/Kg	1	04/18/25	MR	SW8270E
3,3'-Dichlorobenzidine	ND	280	ug/Kg	1	04/18/25	MR	SW8270E
3-Nitroaniline	ND	400	ug/Kg	1	04/18/25	MR	SW8270E
4,6-Dinitro-2-methylphenol	ND	400	ug/Kg	1	04/18/25	MR	SW8270E
4-Bromophenyl phenyl ether	ND	400	ug/Kg	1	04/18/25	MR	SW8270E
4-Chloro-3-methylphenol	ND	280	ug/Kg	1	04/18/25	MR	SW8270E
4-Chloroaniline	ND	280	ug/Kg	1	04/18/25	MR	SW8270E
4-Chlorophenyl phenyl ether	ND	280	ug/Kg	1	04/18/25	MR	SW8270E
4-Nitroaniline	ND	640	ug/Kg	1	04/18/25	MR	SW8270E
4-Nitrophenol	ND	280	ug/Kg	1	04/18/25	MR	SW8270E
Acenaphthene	ND	280	ug/Kg	1	04/18/25	MR	SW8270E
Acenaphthylene	ND	280	ug/Kg	1	04/18/25	MR	SW8270E
Acetophenone	ND	280	ug/Kg	1	04/18/25	MR	SW8270E
Aniline	ND	400	ug/Kg	1	04/18/25	MR	SW8270E
Anthracene	ND	280	ug/Kg	1	04/18/25	MR	SW8270E
Benz(a)anthracene	ND	280	ug/Kg	1	04/18/25	MR	SW8270E
Benzidine	ND	280	ug/Kg	1	04/18/25	MR	SW8270E
Benzo(a)pyrene	ND	280	ug/Kg	1	04/18/25	MR	SW8270E
Benzo(b)fluoranthene	ND	280	ug/Kg	1	04/18/25	MR	SW8270E
Benzo(ghi)perylene	ND	280	ug/Kg	1	04/18/25	MR	SW8270E
Benzo(k)fluoranthene	ND	280	ug/Kg	1	04/18/25	MR	SW8270E
Benzoic acid	ND	800	ug/Kg	1	04/18/25	MR	SW8270E
Benzyl butyl phthalate	ND	280	ug/Kg	1	04/18/25	MR	SW8270E
Bis(2-chloroethoxy)methane	ND	280	ug/Kg	1	04/18/25	MR	SW8270E
Bis(2-chloroethyl)ether	ND	400	ug/Kg	1	04/18/25	MR	SW8270E
Bis(2-ethylhexyl)phthalate	ND	400	ug/Kg	1	04/18/25	MR	SW8270E
Carbazole	ND	400	ug/Kg	1	04/18/25	MR	SW8270E
Chrysene	ND	280	ug/Kg	1	04/18/25	MR	SW8270E
Dibenz(a,h)anthracene	ND	280	ug/Kg	1	04/18/25	MR	SW8270E
Dibenzofuran	ND	280	ug/Kg	1	04/18/25	MR	SW8270E
Diethyl phthalate	ND	280	ug/Kg	1	04/18/25	MR	SW8270E
Dimethylphthalate	ND	280	ug/Kg	1	04/18/25	MR	SW8270E
Di-n-butylphthalate	ND	400	ug/Kg	1	04/18/25	MR	SW8270E
Di-n-octylphthalate	ND	280	ug/Kg	1	04/18/25	MR	SW8270E
Fluoranthene	ND	280	ug/Kg	1	04/18/25	MR	SW8270E
Fluorene	ND	280	ug/Kg	1	04/18/25	MR	SW8270E
Hexachlorobenzene	ND	280	ug/Kg	1	04/18/25	MR	SW8270E
Hexachlorobutadiene	ND	280	ug/Kg	1	04/18/25	MR	SW8270E
Hexachlorocyclopentadiene	ND	280	ug/Kg	1	04/18/25	MR	SW8270E
Hexachloroethane	ND	280	ug/Kg	1	04/18/25	MR	SW8270E
Indeno(1,2,3-cd)pyrene	ND	280	ug/Kg	1	04/18/25	MR	SW8270E
Isophorone	ND	280	ug/Kg	1	04/18/25	MR	SW8270E
Naphthalene	ND	280	ug/Kg	1	04/18/25	MR	SW8270E
Nitrobenzene	ND	280	ug/Kg	1	04/18/25	MR	SW8270E
N-Nitrosodimethylamine	ND	400	ug/Kg	1	04/18/25	MR	SW8270E
N-Nitrosodi-n-propylamine	ND	280	ug/Kg	1	04/18/25	MR	SW8270E
N-Nitrosodiphenylamine	ND	400	ug/Kg	1	04/18/25	MR	SW8270E

Project ID: SHERMAN ST TANK/BELLIS CIRCLE
Client ID: KLF-1 (2-5)

Phoenix I.D.: CT00903

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Pentachloronitrobenzene	ND	400	ug/Kg	1	04/18/25	MR	SW8270E
Pentachlorophenol	ND	400	ug/Kg	1	04/18/25	MR	SW8270E
Phenanthrene	ND	280	ug/Kg	1	04/18/25	MR	SW8270E
Phenol	ND	280	ug/Kg	1	04/18/25	MR	SW8270E
Pyrene	ND	280	ug/Kg	1	04/18/25	MR	SW8270E
Pyridine	ND	400	ug/Kg	1	04/18/25	MR	SW8270E
QA/QC Surrogates							
% 2,4,6-Tribromophenol	73		%	1	04/18/25	MR	30 - 130 %
% 2-Fluorobiphenyl	63		%	1	04/18/25	MR	30 - 130 %
% 2-Fluorophenol	56		%	1	04/18/25	MR	30 - 130 %
% Nitrobenzene-d5	60		%	1	04/18/25	MR	30 - 130 %
% Phenol-d5	56		%	1	04/18/25	MR	30 - 130 %
% Terphenyl-d14	71		%	1	04/18/25	MR	30 - 130 %

Massachusetts does not offer certification for Soil/Solid matrices.

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

Per 1.4.6 of EPA method 8270D, 1,2-Diphenylhydrazine is unstable and readily converts to Azobenzene. Azobenzene is used for the calibration of 1,2-Diphenylhydrazine.

Corrosivity is based solely on the pH analysis performed above.

Ignitability is based solely on the results of the closed cup flashpoint analysis performed above. Passed is >140 degree F.

The regulatory hold time for pH is immediately. This pH was performed in the laboratory and may be considered outside of hold-time.

The reactivity, reported above, is based only on the EPA Interim Guidance for Reactive Cyanide. This method is no longer listed in the current version of SW-846.

The reactivity, reported above, is based only on the EPA Interim Guidance for Reactive Sulfide. This method is no longer listed in the current version of SW-846.

All soils, solids and sludges are reported on a dry weight basis unless otherwise noted in the sample comments.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.

Phyllis Shiller, Laboratory Director

April 22, 2025

Reviewed and Released by: Ethan Lee, Project Manager

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102

QA/QC Report

April 22, 2025

QA/QC Data

SDG I.D.: GCT00898

Parameter	Blank	Blk RL	Sample Result	Dup Result	Dup RPD	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
QA/QC Batch 778452 (mg/kg), QC Sample No: CT00871 2X (CT00899, CT00901, CT00903)													
Mercury - Soil	BRL	0.02	<0.03	<0.03	NC	93.9	96.3	2.5	90.7	90.9	0.2	75 - 125	30
Comment:													
Additional Mercury Criteria: LCS acceptance range is 80-120% for aqueous and for soils the acceptance range is set by vendor limits. MS acceptance range is 75-125% for aqueous and 80-120% for soils.													
QA/QC Batch 778880 (mg/kg), QC Sample No: CT00879 (CT00899, CT00901, CT00903)													
ICP Metals - Soil													
Antimony	BRL	3.3	<3.4	<3.3	NC	77.8	83.7	7.3	86.2			75 - 125	30
Arsenic	BRL	0.67	<0.68	<0.66	NC	89.6	88.4	1.3	89.5			75 - 125	30
Barium	BRL	0.33	9.45	8.93	5.70	89.2	92.3	3.4	104			75 - 125	30
Beryllium	BRL	0.27	<0.27	<0.26	NC	91.2	95.7	4.8	98.0			75 - 125	30
Cadmium	BRL	0.33	<0.34	<0.33	NC	89.9	96.1	6.7	95.0			75 - 125	30
Chromium	BRL	0.33	5.43	5.21	4.10	94.5	98.0	3.6	97.7			75 - 125	30
Lead	BRL	0.33	4.51	4.17	7.80	93.4	91.6	1.9	97.6			75 - 125	30
Nickel	BRL	0.33	8.57	8.41	1.90	91.7	96.1	4.7	94.9			75 - 125	30
Selenium	BRL	1.3	<1.4	<1.3	NC	78.4	78.0	0.5	77.6			75 - 125	30
Silver	BRL	0.33	<0.34	<0.33	NC	96.2	94.2	2.1	96.1			75 - 125	30
Thallium	BRL	3.0	<3.1	<3.0	NC	93.9	96.7	2.9	95.4			75 - 125	30
Vanadium	BRL	0.33	6.08	5.87	3.50	98.5	99.2	0.7	100			75 - 125	30
Zinc	BRL	0.67	21.6	21.1	2.30	94.5	95.8	1.4	92.0			75 - 125	30
Comment:													
Additional Criteria: LCS acceptance range is 80-120% for aqueous and for soils the acceptance range is set by vendor limits. MS acceptance range 75-125%.													

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QA/QC Report

April 22, 2025

QA/QC Data

SDG I.D.: GCT00898

Parameter	Blank	Blk RL	Sample Result	Dup Result	Dup RPD	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
QA/QC Batch 779263 (mg/Kg), QC Sample No: CS99214 5X (CT00899, CT00901, CT00903)													
Reactivity Cyanide	BRL	5	<6	<5.7	NC	98.2						80 - 120	30
Reactivity Sulfide	BRL	20	<20	<20	NC	92.0						80 - 120	30
Comment:													
Additional: MS acceptance range is 75-125%.													
QA/QC Batch 778723 (umhos/cm), QC Sample No: CS99208 (CT00899, CT00901)													
Conductivity - Soil Matrix	BRL	5	68	68	0	103						75 - 125	30
Comment:													
Additional: LCS acceptance range is 85-115% MS acceptance range 75-125%.													
QA/QC Batch 778856 (Degree F), QC Sample No: CT00013 (CT00899, CT00901, CT00903)													
Flash Point			>200	>200	NC	103						75 - 125	30
Comment:													
Additional: LCS acceptance range is 85-115% MS acceptance range 75-125%.													
QA/QC Batch 778404 (PH), QC Sample No: CT00841 (CT00899)													
pH			7.74	7.67	0.90	100						85 - 115	20
Comment:													
Additional: LCS acceptance range is 85-115% MS acceptance range 75-125%.													
QA/QC Batch 778421 (PH), QC Sample No: CT00901 (CT00901, CT00903)													
pH			11.5	11.5	0	100						85 - 115	20
Comment:													
Additional: LCS acceptance range is 85-115% MS acceptance range 75-125%.													
QA/QC Batch 778724 (umhos/cm), QC Sample No: CT00903 (CT00903)													
Conductivity - Soil Matrix	BRL	5	15	15	NC	103						75 - 125	30
Comment:													
Additional: LCS acceptance range is 85-115% MS acceptance range 75-125%.													

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QA/QC Report

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QA/QC Data

SDG I.D.: GCT00898

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits	
QA/QC Batch 779909 (mg/Kg), QC Sample No: CT07464 (CT00899, CT00901, CT00903)											
TPH by GC (Extractable Products) - Soil											
Total TPH	ND	50	65	80	20.7	72	85	16.6	50 - 150	30	
% COD (surr)	58	%	76	90	16.9	85	99	15.2	50 - 150	30	
% Terphenyl (surr)	60	%	66	73	10.1	67	86	24.8	50 - 150	30	
Comment:											
The ETPH/DRO LCS has been normalized based on the alkane calibration.											
QA/QC Batch 779955 (ug/Kg), QC Sample No: CT00013 2X (CT00899, CT00901, CT00903)											
Polychlorinated Biphenyls - Soil											
PCB-1016	ND	33	62	64	3.2	65	60	8.0	40 - 140	30	
PCB-1221	ND	33							40 - 140	30	
PCB-1232	ND	33							40 - 140	30	
PCB-1242	ND	33							40 - 140	30	
PCB-1248	ND	33							40 - 140	30	
PCB-1254	ND	33							40 - 140	30	
PCB-1260	ND	33	70	64	9.0	64	60	6.5	40 - 140	30	
PCB-1262	ND	33							40 - 140	30	
PCB-1268	ND	33							40 - 140	30	
% DCBP (Surrogate Rec)	50	%	63	71	11.9	73	67	8.6	30 - 150	30	
% DCBP (Surrogate Rec) (Confirm	53	%	69	72	4.3	74	69	7.0	30 - 150	30	
% TCMX (Surrogate Rec)	52	%	60	63	4.9	65	59	9.7	30 - 150	30	
% TCMX (Surrogate Rec) (Confirm	53	%	63	70	10.5	73	67	8.6	30 - 150	30	
QA/QC Batch 779917 (ug/kg), QC Sample No: CS99853 (CT00899, CT00901, CT00903)											
Semivolatiles - Soil											
1,1-Biphenyl	ND	230	62	72	14.9	59	56	5.2	40 - 140	30	
1,2,4,5-Tetrachlorobenzene	ND	230	58	63	8.3	49	50	2.0	40 - 140	30	
1,2,4-Trichlorobenzene	ND	230	56	62	10.2	54	52	3.8	40 - 140	30	
1,2-Dichlorobenzene	ND	180	58	64	9.8	59	61	3.3	40 - 140	30	
1,2-Diphenylhydrazine	ND	230	66	77	15.4	69	61	12.3	40 - 140	30	
1,3-Dichlorobenzene	ND	230	59	63	6.6	58	58	0.0	40 - 140	30	
1,4-Dichlorobenzene	ND	230	59	62	5.0	58	60	3.4	40 - 140	30	
2,2'-Oxybis(1-Chloropropane)	ND	230	45	48	6.5	45	44	2.2	40 - 140	30	
2,4,5-Trichlorophenol	ND	230	68	80	16.2	55	56	1.8	30 - 130	30	
2,4,6-Trichlorophenol	ND	130	67	76	12.6	70	63	10.5	30 - 130	30	
2,4-Dichlorophenol	ND	130	63	69	9.1	61	60	1.7	30 - 130	30	
2,4-Dimethylphenol	ND	230	63	71	11.9	76	73	4.0	30 - 130	30	
2,4-Dinitrophenol	ND	230	79	90	13.0	<10	<10	NC	30 - 130	30	m
2,4-Dinitrotoluene	ND	130	70	80	13.3	61	57	6.8	40 - 140	30	
2,6-Dinitrotoluene	ND	130	73	86	16.4	87	98	11.9	40 - 140	30	
2-Chloronaphthalene	ND	230	65	73	11.6	60	58	3.4	40 - 140	30	
2-Chlorophenol	ND	230	62	68	9.2	64	65	1.6	30 - 130	30	
2-Methylnaphthalene	ND	230	60	66	9.5	54	56	3.6	40 - 140	30	

QA/QC Data

SDG I.D.: GCT00898

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits	
2-Methylphenol (o-cresol)	ND	230	70	77	9.5	75	72	4.1	30 - 130	30	
2-Nitroaniline	ND	330	167	198	17.0	>200	162	NC	40 - 140	30	l,m
2-Nitrophenol	ND	230	73	79	7.9	>200	>200	NC	30 - 130	30	m
3&4-Methylphenol (m&p-cresol)	ND	230	71	77	8.1	78	75	3.9	30 - 130	30	
3,3'-Dichlorobenzidine	ND	130	60	80	28.6	<10	<10	NC	40 - 140	30	m
3-Nitroaniline	ND	330	79	92	15.2	79	72	9.3	40 - 140	30	
4,6-Dinitro-2-methylphenol	ND	230	82	90	9.3	13	11	16.7	30 - 130	30	m
4-Bromophenyl phenyl ether	ND	230	65	73	11.6	69	66	4.4	40 - 140	30	
4-Chloro-3-methylphenol	ND	230	67	77	13.9	66	59	11.2	30 - 130	30	
4-Chloroaniline	ND	230	51	62	19.5	47	42	11.2	40 - 140	30	
4-Chlorophenyl phenyl ether	ND	230	66	76	14.1	73	71	2.8	40 - 140	30	
4-Nitroaniline	ND	230	70	81	14.6	79	80	1.3	40 - 140	30	
4-Nitrophenol	ND	230	63	80	23.8	<10	96	NC	30 - 130	30	m
Acenaphthene	ND	230	65	74	12.9	67	64	4.6	40 - 140	30	
Acenaphthylene	ND	130	59	67	12.7	55	52	5.6	40 - 140	30	
Acetophenone	ND	230	62	67	7.8	64	66	3.1	40 - 140	30	
Aniline	ND	330	51	62	19.5	23	28	19.6	40 - 140	30	m
Anthracene	ND	230	65	74	12.9	63	70	10.5	40 - 140	30	
Benz(a)anthracene	ND	230	66	77	15.4	67	64	4.6	40 - 140	30	
Benzidine	ND	330	73	82	11.6	<10	<10	NC	40 - 140	30	m
Benzo(a)pyrene	ND	130	68	78	13.7	63	63	0.0	40 - 140	30	
Benzo(b)fluoranthene	ND	160	68	78	13.7	64	63	1.6	40 - 140	30	
Benzo(ghi)perylene	ND	230	71	81	13.2	61	61	0.0	40 - 140	30	
Benzo(k)fluoranthene	ND	230	65	76	15.6	63	61	3.2	40 - 140	30	
Benzoic Acid	ND	670	79	94	17.3	61	63	3.2	30 - 130	30	
Benzyl butyl phthalate	ND	230	75	89	17.1	77	73	5.3	40 - 140	30	
Bis(2-chloroethoxy)methane	ND	230	54	62	13.8	56	53	5.5	40 - 140	30	
Bis(2-chloroethyl)ether	ND	130	54	58	7.1	55	56	1.8	40 - 140	30	
Bis(2-ethylhexyl)phthalate	ND	230	73	85	15.2	84	82	2.4	40 - 140	30	
Carbazole	ND	230	65	74	12.9	70	69	1.4	40 - 140	30	
Chrysene	ND	230	66	75	12.8	64	61	4.8	40 - 140	30	
Dibenz(a,h)anthracene	ND	130	71	83	15.6	63	62	1.6	40 - 140	30	
Dibenzofuran	ND	230	68	77	12.4	68	68	0.0	40 - 140	30	
Diethyl phthalate	ND	230	72	85	16.6	79	73	7.9	40 - 140	30	
Dimethylphthalate	ND	230	69	80	14.8	71	67	5.8	40 - 140	30	
Di-n-butylphthalate	ND	670	80	93	15.0	73	73	0.0	40 - 140	30	
Di-n-octylphthalate	ND	230	79	92	15.2	89	85	4.6	40 - 140	30	
Fluoranthene	ND	230	68	78	13.7	55	53	3.7	40 - 140	30	
Fluorene	ND	230	68	79	15.0	74	71	4.1	40 - 140	30	
Hexachlorobenzene	ND	130	74	80	7.8	91	77	16.7	40 - 140	30	
Hexachlorobutadiene	ND	230	59	66	11.2	59	59	0.0	40 - 140	30	
Hexachlorocyclopentadiene	ND	230	45	50	10.5	<10	<10	NC	40 - 140	30	m
Hexachloroethane	ND	130	61	65	6.3	79	73	7.9	40 - 140	30	
Indeno(1,2,3-cd)pyrene	ND	230	68	81	17.4	61	60	1.7	40 - 140	30	
Isophorone	ND	130	56	63	11.8	62	56	10.2	40 - 140	30	
Naphthalene	ND	230	64	70	9.0	83	80	3.7	40 - 140	30	
Nitrobenzene	ND	130	62	69	10.7	66	66	0.0	40 - 140	30	
N-Nitrosodimethylamine	ND	230	51	55	7.5	45	44	2.2	40 - 140	30	
N-Nitrosodi-n-propylamine	ND	130	60	67	11.0	70	68	2.9	40 - 140	30	
N-Nitrosodiphenylamine	ND	130	66	75	12.8	141	144	2.1	40 - 140	30	m
Pentachloronitrobenzene	ND	230	81	87	7.1	75	<10	NC	40 - 140	30	m
Pentachlorophenol	ND	230	56	67	17.9	106	90	16.3	30 - 130	30	
Phenanthrene	ND	130	66	74	11.4	71	71	0.0	40 - 140	30	

QA/QC Data

SDG I.D.: GCT00898

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits	
Phenol	ND	230	66	74	11.4	67	67	0.0	30 - 130	30	
Pyrene	ND	230	67	76	12.6	58	56	3.5	40 - 140	30	
Pyridine	ND	230	41	44	7.1	35	34	2.9	40 - 140	30	m
% 2,4,6-Tribromophenol	63	%	71	78	9.4	79	78	1.3	30 - 130	30	
% 2-Fluorobiphenyl	59	%	60	68	12.5	54	51	5.7	30 - 130	30	
% 2-Fluorophenol	51	%	55	58	5.3	55	52	5.6	30 - 130	30	
% Nitrobenzene-d5	57	%	56	63	11.8	61	61	0.0	30 - 130	30	
% Phenol-d5	51	%	54	61	12.2	56	54	3.6	30 - 130	30	
% Terphenyl-d14	58	%	60	69	14.0	55	54	1.8	30 - 130	30	

Comment:

Additional 8270 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is at least 10%. (Acid surrogates acceptance range for aqueous samples: 10-110%, for soils 30-130%)

QA/QC Batch 778539 (ug/kg), QC Sample No: CT00199 (CT00898, CT00902)

Volatiles - Soil (Low Level)

1,1,1,2-Tetrachloroethane	ND	5.0	113	112	0.9	100	109	8.6	70 - 130	20
1,1,1-Trichloroethane	ND	5.0	108	105	2.8	100	106	5.8	70 - 130	20
1,1,2,2-Tetrachloroethane	ND	3.0	106	106	0.0	108	107	0.9	70 - 130	20
1,1,2-Trichloroethane	ND	5.0	110	109	0.9	107	105	1.9	70 - 130	20
1,1-Dichloroethane	ND	5.0	101	100	1.0	97	101	4.0	70 - 130	20
1,1-Dichloroethene	ND	5.0	102	100	2.0	99	104	4.9	70 - 130	20
1,1-Dichloropropene	ND	5.0	106	103	2.9	100	107	6.8	70 - 130	20
1,2,3-Trichlorobenzene	ND	5.0	105	106	0.9	87	88	1.1	70 - 130	20
1,2,3-Trichloropropane	ND	5.0	107	106	0.9	109	108	0.9	70 - 130	20
1,2,4-Trichlorobenzene	ND	5.0	104	104	0.0	87	89	2.3	70 - 130	20
1,2,4-Trimethylbenzene	ND	1.0	106	105	0.9	100	107	6.8	70 - 130	20
1,2-Dibromo-3-chloropropane	ND	5.0	116	120	3.4	105	105	0.0	70 - 130	20
1,2-Dibromoethane	ND	5.0	109	109	0.0	108	106	1.9	70 - 130	20
1,2-Dichlorobenzene	ND	5.0	103	103	0.0	96	102	6.1	70 - 130	20
1,2-Dichloroethane	ND	5.0	103	102	1.0	99	100	1.0	70 - 130	20
1,2-Dichloropropane	ND	5.0	106	104	1.9	99	102	3.0	70 - 130	20
1,3,5-Trimethylbenzene	ND	1.0	107	104	2.8	101	108	6.7	70 - 130	20
1,3-Dichlorobenzene	ND	5.0	106	105	0.9	99	104	4.9	70 - 130	20
1,3-Dichloropropane	ND	5.0	106	106	0.0	103	103	0.0	70 - 130	20
1,4-Dichlorobenzene	ND	5.0	102	101	1.0	97	100	3.0	70 - 130	20
1,4-dioxane	ND	100	113	109	3.6	108	110	1.8	40 - 160	20
2,2-Dichloropropane	ND	5.0	110	108	1.8	93	99	6.3	70 - 130	20
2-Chlorotoluene	ND	5.0	107	105	1.9	101	107	5.8	70 - 130	20
2-Hexanone	ND	25	99	101	2.0	97	93	4.2	40 - 160	20
2-Isopropyltoluene	ND	5.0	110	107	2.8	99	107	7.8	70 - 130	20
4-Chlorotoluene	ND	5.0	106	104	1.9	101	107	5.8	70 - 130	20
4-Methyl-2-pentanone	ND	25	105	105	0.0	109	103	5.7	40 - 160	20
Acetone	ND	10	85	87	2.3	99	90	9.5	40 - 160	20
Acrylonitrile	ND	5.0	99	98	1.0	103	92	11.3	70 - 130	20
Benzene	ND	1.0	105	102	2.9	99	104	4.9	70 - 130	20
Bromobenzene	ND	5.0	106	106	0.0	102	107	4.8	70 - 130	20
Bromochloromethane	ND	5.0	105	106	0.9	104	103	1.0	70 - 130	20
Bromodichloromethane	ND	5.0	110	108	1.8	99	103	4.0	70 - 130	20
Bromoform	ND	5.0	121	121	0.0	106	111	4.6	70 - 130	20
Bromomethane	ND	5.0	93	95	2.1	99	96	3.1	40 - 160	20
Carbon Disulfide	ND	5.0	105	102	2.9	99	106	6.8	70 - 130	20
Carbon tetrachloride	ND	5.0	110	107	2.8	96	105	9.0	70 - 130	20
Chlorobenzene	ND	5.0	106	104	1.9	99	105	5.9	70 - 130	20

QA/QC Data

SDG I.D.: GCT00898

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
Chloroethane	ND	5.0	103	101	2.0	104	103	1.0	70 - 130	20
Chloroform	ND	5.0	105	103	1.9	100	103	3.0	70 - 130	20
Chloromethane	ND	5.0	104	101	2.9	99	101	2.0	40 - 160	20
cis-1,2-Dichloroethene	ND	5.0	105	105	0.0	101	104	2.9	70 - 130	20
cis-1,3-Dichloropropene	ND	5.0	114	112	1.8	101	105	3.9	70 - 130	20
Dibromochloromethane	ND	3.0	115	115	0.0	102	107	4.8	70 - 130	20
Dibromomethane	ND	5.0	105	105	0.0	100	102	2.0	70 - 130	20
Dichlorodifluoromethane	ND	5.0	103	99	4.0	106	114	7.3	40 - 160	20
Diethyl ether	ND	5.0	99	99	0.0	100	97	3.0	70 - 130	20
Di-isopropyl ether	ND	5.0	102	101	1.0	99	99	0.0	70 - 130	20
Ethyl tert-butyl ether	ND	5.0	104	105	1.0	101	101	0.0	70 - 130	20
Ethylbenzene	ND	1.0	107	104	2.8	100	107	6.8	70 - 130	20
Hexachlorobutadiene	ND	5.0	114	111	2.7	85	97	13.2	70 - 130	20
Isopropylbenzene	ND	1.0	108	106	1.9	101	112	10.3	70 - 130	20
m&p-Xylene	ND	2.0	107	105	1.9	100	106	5.8	70 - 130	20
Methyl ethyl ketone	ND	5.0	100	102	2.0	100	90	10.5	40 - 160	20
Methyl t-butyl ether (MTBE)	ND	1.0	101	102	1.0	102	98	4.0	70 - 130	20
Methylene chloride	ND	5.0	99	97	2.0	96	97	1.0	70 - 130	20
Naphthalene	ND	5.0	111	112	0.9	98	97	1.0	70 - 130	20
n-Butylbenzene	ND	1.0	108	105	2.8	98	107	8.8	70 - 130	20
n-Propylbenzene	ND	1.0	107	105	1.9	102	112	9.3	70 - 130	20
o-Xylene	ND	2.0	108	107	0.9	100	106	5.8	70 - 130	20
p-Isopropyltoluene	ND	1.0	106	105	0.9	97	106	8.9	70 - 130	20
sec-Butylbenzene	ND	1.0	108	106	1.9	101	110	8.5	70 - 130	20
Styrene	ND	5.0	109	108	0.9	100	105	4.9	70 - 130	20
tert-amyl methyl ether	ND	5.0	105	105	0.0	102	102	0.0	70 - 130	20
tert-Butylbenzene	ND	1.0	108	106	1.9	101	111	9.4	70 - 130	20
Tetrachloroethene	ND	5.0	113	110	2.7	106	114	7.3	70 - 130	20
Tetrahydrofuran (THF)	ND	5.0	98	100	2.0	104	94	10.1	70 - 130	20
Toluene	ND	1.0	107	106	0.9	101	107	5.8	70 - 130	20
trans-1,2-Dichloroethene	ND	5.0	102	100	2.0	97	101	4.0	70 - 130	20
trans-1,3-Dichloropropene	ND	5.0	117	116	0.9	104	106	1.9	70 - 130	20
trans-1,4-dichloro-2-butene	ND	5.0	123	123	0.0	108	110	1.8	70 - 130	20
Trichloroethene	ND	5.0	109	106	2.8	100	107	6.8	70 - 130	20
Trichlorofluoromethane	ND	5.0	106	102	3.8	101	106	4.8	70 - 130	20
Trichlorotrifluoroethane	ND	5.0	107	105	1.9	104	111	6.5	70 - 130	20
Vinyl chloride	ND	5.0	104	100	3.9	98	106	7.8	70 - 130	20
% 1,2-dichlorobenzene-d4	98	%	99	100	1.0	98	101	3.0	70 - 130	20
% Bromofluorobenzene	99	%	99	100	1.0	99	97	2.0	70 - 130	20
% Dibromofluoromethane	99	%	100	102	2.0	102	99	3.0	70 - 130	20
% Toluene-d8	101	%	101	100	1.0	101	100	1.0	70 - 130	20

Comment:

Additional 8260 criteria: 10% of LCS/LCSD compounds can be outside of acceptance criteria as long as recovery is 40-160%.
The RPD criteria for the LCS/LCSD is 20%,
The MS/MSD RPD criteria is listed above.

QA/QC Batch 778861 (ug/kg), QC Sample No: CT00923 (CT00900)

Volatiles - Soil (Low Level)

1,1,1,2-Tetrachloroethane	ND	5.0	109	109	0.0	103	104	1.0	70 - 130	20
1,1,1-Trichloroethane	ND	5.0	105	104	1.0	100	99	1.0	70 - 130	20
1,1,2,2-Tetrachloroethane	ND	3.0	101	105	3.9	110	108	1.8	70 - 130	20
1,1,2-Trichloroethane	ND	5.0	108	109	0.9	105	103	1.9	70 - 130	20
1,1-Dichloroethane	ND	5.0	101	100	1.0	95	93	2.1	70 - 130	20

QA/QC Data

SDG I.D.: GCT00898

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits	
1,1-Dichloroethene	ND	5.0	103	102	1.0	97	95	2.1	70 - 130	20	
1,1-Dichloropropene	ND	5.0	104	103	1.0	102	99	3.0	70 - 130	20	
1,2,3-Trichlorobenzene	ND	5.0	106	108	1.9	75	71	5.5	70 - 130	20	
1,2,3-Trichloropropane	ND	5.0	102	107	4.8	108	107	0.9	70 - 130	20	
1,2,4-Trichlorobenzene	ND	5.0	106	106	0.0	81	76	6.4	70 - 130	20	
1,2,4-Trimethylbenzene	ND	1.0	106	106	0.0	106	104	1.9	70 - 130	20	
1,2-Dibromo-3-chloropropane	ND	5.0	109	114	4.5	110	110	0.0	70 - 130	20	
1,2-Dibromoethane	ND	5.0	104	107	2.8	106	104	1.9	70 - 130	20	
1,2-Dichlorobenzene	ND	5.0	105	105	0.0	96	95	1.0	70 - 130	20	
1,2-Dichloroethane	ND	5.0	100	100	0.0	97	94	3.1	70 - 130	20	
1,2-Dichloropropane	ND	5.0	103	103	0.0	103	100	3.0	70 - 130	20	
1,3,5-Trimethylbenzene	ND	1.0	104	105	1.0	105	104	1.0	70 - 130	20	
1,3-Dichlorobenzene	ND	5.0	105	106	0.9	101	99	2.0	70 - 130	20	
1,3-Dichloropropane	ND	5.0	100	102	2.0	102	101	1.0	70 - 130	20	
1,4-Dichlorobenzene	ND	5.0	102	102	0.0	97	94	3.1	70 - 130	20	
1,4-dioxane	ND	100	102	109	6.6	104	106	1.9	40 - 160	20	
2,2-Dichloropropane	ND	5.0	101	101	0.0	96	91	5.3	70 - 130	20	
2-Chlorotoluene	ND	5.0	105	106	0.9	106	106	0.0	70 - 130	20	
2-Hexanone	ND	25	94	100	6.2	84	78	7.4	40 - 160	20	
2-Isopropyltoluene	ND	5.0	105	107	1.9	102	101	1.0	70 - 130	20	
4-Chlorotoluene	ND	5.0	105	105	0.0	104	102	1.9	70 - 130	20	
4-Methyl-2-pentanone	ND	25	103	107	3.8	100	95	5.1	40 - 160	20	
Acetone	ND	10	80	83	3.7	70	70	0.0	40 - 160	20	
Acrylonitrile	ND	5.0	94	96	2.1	85	81	4.8	70 - 130	20	
Benzene	ND	1.0	104	104	0.0	103	100	3.0	70 - 130	20	
Bromobenzene	ND	5.0	105	106	0.9	106	105	0.9	70 - 130	20	
Bromochloromethane	ND	5.0	106	105	0.9	101	102	1.0	70 - 130	20	
Bromodichloromethane	ND	5.0	106	106	0.0	100	100	0.0	70 - 130	20	
Bromoform	ND	5.0	113	116	2.6	104	104	0.0	70 - 130	20	
Bromomethane	ND	5.0	100	101	1.0	89	86	3.4	40 - 160	20	
Carbon Disulfide	ND	5.0	103	103	0.0	94	93	1.1	70 - 130	20	
Carbon tetrachloride	ND	5.0	106	105	0.9	100	101	1.0	70 - 130	20	
Chlorobenzene	ND	5.0	104	103	1.0	101	97	4.0	70 - 130	20	
Chloroethane	ND	5.0	102	101	1.0	94	92	2.2	70 - 130	20	
Chloroform	ND	5.0	102	101	1.0	99	99	0.0	70 - 130	20	
Chloromethane	ND	5.0	102	102	0.0	98	94	4.2	40 - 160	20	
cis-1,2-Dichloroethene	ND	5.0	104	101	2.9	101	100	1.0	70 - 130	20	
cis-1,3-Dichloropropene	ND	5.0	110	110	0.0	103	101	2.0	70 - 130	20	
Dibromochloromethane	ND	3.0	110	110	0.0	105	104	1.0	70 - 130	20	
Dibromomethane	ND	5.0	101	104	2.9	101	99	2.0	70 - 130	20	
Dichlorodifluoromethane	ND	5.0	108	107	0.9	99	97	2.0	40 - 160	20	
Diethyl ether	ND	5.0	99	99	0.0	93	91	2.2	70 - 130	20	
Di-isopropyl ether	ND	5.0	100	100	0.0	95	94	1.1	70 - 130	20	
Ethyl tert-butyl ether	ND	5.0	102	101	1.0	95	98	3.1	70 - 130	20	
Ethylbenzene	ND	1.0	105	104	1.0	104	102	1.9	70 - 130	20	
Hexachlorobutadiene	ND	5.0	111	112	0.9	71	68	4.3	70 - 130	20	m
Isopropylbenzene	ND	1.0	107	106	0.9	109	110	0.9	70 - 130	20	
m&p-Xylene	ND	2.0	104	104	0.0	103	101	2.0	70 - 130	20	
Methyl ethyl ketone	ND	5.0	97	96	1.0	89	87	2.3	40 - 160	20	
Methyl t-butyl ether (MTBE)	ND	1.0	100	102	2.0	97	95	2.1	70 - 130	20	
Methylene chloride	ND	5.0	98	97	1.0	94	91	3.2	70 - 130	20	
Naphthalene	ND	5.0	106	112	5.5	86	84	2.4	70 - 130	20	
n-Butylbenzene	ND	1.0	108	106	1.9	96	93	3.2	70 - 130	20	

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
n-Propylbenzene	ND	1.0	105	105	0.0	108	107	0.9	70 - 130	20
o-Xylene	ND	2.0	106	105	0.9	105	103	1.9	70 - 130	20
p-Isopropyltoluene	ND	1.0	104	105	1.0	100	97	3.0	70 - 130	20
sec-Butylbenzene	ND	1.0	106	107	0.9	102	101	1.0	70 - 130	20
Styrene	ND	5.0	108	107	0.9	101	99	2.0	70 - 130	20
tert-amyl methyl ether	ND	5.0	105	106	0.9	104	101	2.9	70 - 130	20
tert-Butylbenzene	ND	1.0	106	106	0.0	105	105	0.0	70 - 130	20
Tetrachloroethene	ND	5.0	112	110	1.8	107	104	2.8	70 - 130	20
Tetrahydrofuran (THF)	ND	5.0	95	99	4.1	98	96	2.1	70 - 130	20
Toluene	ND	1.0	107	106	0.9	104	102	1.9	70 - 130	20
trans-1,2-Dichloroethene	ND	5.0	101	101	0.0	95	93	2.1	70 - 130	20
trans-1,3-Dichloropropene	ND	5.0	113	113	0.0	104	101	2.9	70 - 130	20
trans-1,4-dichloro-2-butene	ND	5.0	114	120	5.1	112	111	0.9	70 - 130	20
Trichloroethene	ND	5.0	108	108	0.0	104	101	2.9	70 - 130	20
Trichlorofluoromethane	ND	5.0	105	103	1.9	97	95	2.1	70 - 130	20
Trichlorotrifluoroethane	ND	5.0	107	104	2.8	99	98	1.0	70 - 130	20
Vinyl chloride	ND	5.0	104	103	1.0	98	96	2.1	70 - 130	20
% 1,2-dichlorobenzene-d4	100	%	102	102	0.0	99	100	1.0	70 - 130	20
% Bromofluorobenzene	99	%	99	99	0.0	98	97	1.0	70 - 130	20
% Dibromofluoromethane	99	%	103	101	2.0	101	102	1.0	70 - 130	20
% Toluene-d8	101	%	102	101	1.0	101	99	2.0	70 - 130	20

Comment:

Additional 8260 criteria: 10% of LCS/LCSD compounds can be outside of acceptance criteria as long as recovery is 40-160%.
The RPD criteria for the LCS/LCSD is 20%,
The MS/MSD RPD criteria is listed above.

QA/QC Batch 778861H (ug/kg), QC Sample No: CT00923 50X (CT00898 (50X))

Volatiles - Soil (High Level)

1,2,3-Trichlorobenzene	ND	250	116	117	0.9	108	114	5.4	70 - 130	20
1,2,3-Trichloropropane	ND	250	98	99	1.0	91	96	5.3	70 - 130	20
1,2,4-Trichlorobenzene	ND	250	118	119	0.8	111	119	7.0	70 - 130	20
1,2,4-Trimethylbenzene	ND	250	113	111	1.8	105	108	2.8	70 - 130	20
1,2-Dibromo-3-chloropropane	ND	250	116	113	2.6	98	105	6.9	70 - 130	20
1,2-Dichlorobenzene	ND	250	109	109	0.0	103	105	1.9	70 - 130	20
1,3,5-Trimethylbenzene	ND	250	112	110	1.8	105	108	2.8	70 - 130	20
1,3-Dichlorobenzene	ND	250	113	112	0.9	105	109	3.7	70 - 130	20
1,4-Dichlorobenzene	ND	250	111	110	0.9	103	106	2.9	70 - 130	20
2-Chlorotoluene	ND	250	110	108	1.8	105	107	1.9	70 - 130	20
2-Isopropyltoluene	ND	250	111	110	0.9	104	107	2.8	70 - 130	20
4-Chlorotoluene	ND	250	110	110	0.0	103	106	2.9	70 - 130	20
Bromobenzene	ND	250	106	105	0.9	102	106	3.8	70 - 130	20
Hexachlorobutadiene	ND	250	122	120	1.7	116	116	0.0	70 - 130	20
Isopropylbenzene	ND	250	113	112	0.9	107	110	2.8	70 - 130	20
Naphthalene	ND	250	113	114	0.9	108	114	5.4	70 - 130	20
n-Butylbenzene	ND	250	119	117	1.7	109	113	3.6	70 - 130	20
n-Propylbenzene	ND	250	115	111	3.5	108	111	2.7	70 - 130	20
p-Isopropyltoluene	ND	250	113	111	1.8	105	109	3.7	70 - 130	20
sec-Butylbenzene	ND	250	114	112	1.8	108	110	1.8	70 - 130	20
tert-Butylbenzene	ND	250	111	111	0.0	105	108	2.8	70 - 130	20
trans-1,4-dichloro-2-butene	ND	250	113	110	2.7	93	101	8.2	70 - 130	20
% 1,2-dichlorobenzene-d4	99	%	101	102	1.0	101	99	2.0	70 - 130	20
% Bromofluorobenzene	96	%	97	97	0.0	98	97	1.0	70 - 130	20
% Dibromofluoromethane	95	%	97	99	2.0	97	97	0.0	70 - 130	20

QA/QC Data

SDG I.D.: GCT00898

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
% Toluene-d8	101	%	101	101	0.0	100	101	1.0	70 - 130	20

Comment:

Additional 8260 criteria: 10% of LCS/LCSD compounds can be outside of acceptance criteria as long as recovery is 40-160%.
The RPD criteria for the LCS/LCSD is 20%,
The MS/MSD RPD criteria is listed above.

l = This parameter is outside laboratory LCS/LCSD specified recovery limits.
m = This parameter is outside laboratory MS/MSD specified recovery limits.

If there are any questions regarding this data, please call Phoenix Client Services at extension 200.

RPD - Relative Percent Difference
LCS - Laboratory Control Sample
LCSD - Laboratory Control Sample Duplicate
MS - Matrix Spike
MS Dup - Matrix Spike Duplicate
NC - No Criteria
Intf - Interference
(ISO) - Isotope Dilution

Phyllis Shiller, Laboratory Director
April 22, 2025

Tuesday, April 22, 2025

Criteria: MA: CAM, S1

State: MA

Sample Criteria Exceedances Report

GCT00898 - KLEINFL-BOSTON

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units

*** No Data to Display ***

Phoenix Laboratories does not assume responsibility for the data contained in this exceedance report. It is provided as an additional tool to identify requested criteria exceedences. All efforts are made to ensure the accuracy of the data (obtained from appropriate agencies). A lack of exceedence information does not necessarily suggest conformance to the criteria. It is ultimately the site professional's responsibility to determine appropriate compliance.

MassDEP Analytical Protocol Certification Form

Laboratory Name: Phoenix Environmental Laboratories, Inc. **Project #:**

Project Location: SHERMAN ST TANK/BELLIS CIRCLE **RTN:**

This Form provides certifications for the following data set: [list Laboratory Sample ID Number(s)]
CT00898, CT00899, CT00900, CT00901, CT00902, CT00903

Matrices: ☐ Groundwater/Surface Water ☑ Soil/Sediment ☐ Drinking Water ☐ Air ☐ Other:

CAM Protocol (check all that apply below)

8260 VOC CAM II A ☑	7470/7471 Hg CAM III B ☑	MassDEP VPH CAM IV A ☐	8081 Pesticides CAM V B ☐	7196 Hex Cr CAM VI B ☐	MassDEP APH CAM IX A ☐
8270 SVOC CAM II B ☑	7010 Metals CAM III C ☐	MassDEP EPH CAM IV B ☐	8151 Herbicides CAM V C ☐	8330 Explosives CAM VIII A ☐	TO-15 VOC CAM IX B ☐
6010 Metals CAM III A ☑	6020 Metals CAM III D ☐	8082 PCB CAM V A ☑	9012 Total Cyanide/PAC CAM V1 A ☐	6860 Perchlorate CAM VIII B ☐	

Affirmative responses to questions A through F are required for "Presumptive Certainty" status

A	Were all samples received in a condition consistent with those described on the Chain-of-Custody, properly preserved (including temperature*) in the field or laboratory, and prepared/analyzed with method holding times? (* see narrative)	☑ Yes ☐ No
B	Were the analytical method(s) and all associated QC requirements specified in the selected CAM protocol(s) followed?	☑ Yes ☐ No
C	Were all required corrective actions and analytical response actions specified in the selected CAM protocol(s) implemented for all identified performance standard non-conformances?	☑ Yes ☐ No
D	Does the laboratory report comply with all the reporting requirements speified in CAM VII A, "Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data"?	☑ Yes ☐ No
E	a. VPH, EPH, and APH Methods only: Was each method conducted without significant modification(s)? (refer to the individual method(s) for a list of significant modifications). b. APH and TO-15 methods only: Was the complete analyte list reported for each method?	☐ Yes ☐ No ☐ Yes ☐ No
F	Were all applicable CAM protocol QC and performance standard non-conformances identified and evaluated in a laboratory narrative (including all "No" responses to Questions A through E)?	☑ Yes ☐ No

Responses to questions G, H and I below is required for "Presumptive Certainty" status

G	Were the reporting limits at or below all CAM reporting limits specified in the selected CAM protocol(s)?	☑ Yes ☐ No

Data User Note: Data that achieve "Presumptive Certainty" status may not necessarily meet the data usability and representativeness requirements described in 310 CMR 40. 1056(2)(k) and WSC-07-350

H	Were all QC performance standards specified in the CAM protocol(s) achieved? See Section: SVOA Narration .	☐ Yes ☑ No
I	Were results reported for the complete analyte list specified in the selected CAM protocol(s)?	☑ Yes ☐ No

All negative responses must be addressed in an attached laboratory narrative.

I, the undersigned, attest under the pains and penalties of perjury that, based upon my personal inquiry of those responsible for obtaining the information, the material contained in this analytical report is, to the best of my knowledge and belief, accurate and complete.

Authorized Signature: Ethan Lee

Date: Tuesday, April 22, 2025

Printed Name: Ethan Lee

Position: Project Manager

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

ACCREDITED IN ACCORDANCE WITH nelac NY # 11301

MCP Certification Report

April 22, 2025

SDG I.D.: GCT00898

Cyanide Narration

Were all QA/QC performance criteria specified in the MADEP document CAM achieved? Yes.

Instrument:

LACHAT 04/14/25-1 Greg Danielewski, Chemist 04/14/25

CT00899 , CT00901 , CT00903

The samples were distilled in accordance with the method.
The initial calibration met criteria.
The calibration check standards (ICV,CCV) met criteria.
The initial and continuing calibration blanks (ICB,CCB) met criteria.

The method blank, laboratory control sample (LCS), and matrix spike (MS) were distilled with the samples.

QC (Batch Specific):

Batch 779263 (CS99214)

CT00899, CT00901, CT00903

All LCS recoveries were within 80 - 120 with the following exceptions: None.
Additional: MS acceptance range is 75-125%.

I attest under the pains and penalties of perjury that, based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

ETPH Narration

Were all QA/QC performance criteria specified in the MADEP document CAM achieved? Yes.

Instrument:

AU-FID1 04/17/25-1 Jeff Bucko, Chemist 04/17/25

CT00903 (1X)

The initial calibration (ET_312I) RSD for the compound list was less than 30% except for the following compounds: None.
As per section 7.2.3, a discrimination check standard was run (417A003_1) and contained the following outliers: None.
The continuing calibration %D for the compound list was less than 30% except for the following compounds:None.

AU-FID22 04/17/25-1 Jeff Bucko, Chemist 04/17/25

CT00899 (5X), CT00901 (5X)

The initial calibration (ETPH416I) RSD for the compound list was less than 30% except for the following compounds: None.
As per section 7.2.3, a discrimination check standard was run (417A028_1) and contained the following outliers: C36 36%L (20%)
The continuing calibration %D for the compound list was less than 30% except for the following compounds:None.

QC (Batch Specific):

Batch 779909 (CT07464)

CT00899, CT00901, CT00903

All LCS recoveries were within 50 - 150 with the following exceptions: None.
All LCSD recoveries were within 50 - 150 with the following exceptions: None.
All LCS/LCSD RPDs were less than 30% with the following exceptions: None.

Environmental Laboratories, Inc.
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ACCREDITED IN ACCORDANCE WITH nelac NY # 11301

MCP Certification Report

April 22, 2025

SDG I.D.: GCT00898

ETPH Narration

QC (Batch Specific):

Batch 779909 (CT07464)

CT00899, CT00901, CT00903

The ETPH/DRO LCS has been normalized based on the alkane calibration.

I attest under the pains and penalties of perjury that, based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

Mercury Narration

Were all QA/QC performance criteria specified in the analytical method achieved? Yes.

Instrument:

PSA 04/09/25 07:41 John Maslak, Chemist 04/09/25

CT00899, CT00901, CT00903

The initial calibration met criteria and the linear range is defined daily by the calibration range.
The Low-Level Calibration Verification (LLCV) met criteria.
The following Initial Calibration Verification (ICV) compounds did not meet criteria: None.
The following Initial Calibration Blank (ICB) compounds did not meet criteria: None.
The following Continuing Calibration Verification (CCV) compounds did not meet criteria: None.
The following Continuing Calibration Blank (CCB) compounds did not meet criteria: None.

QC (Batch Specific):

Batch 778452 (CT00871)

CT00899, CT00901, CT00903

All LCS recoveries were within 75 - 125 with the following exceptions: None.
All LCSD recoveries were within 75 - 125 with the following exceptions: None.
All LCS/LCSD RPDs were less than 30% with the following exceptions: None.
Additional Mercury Criteria: LCS acceptance range is 80-120% for aqueous and for soils the acceptance range is set by vendor limits. MS acceptance range is 75-125% for aqueous and 80-120% for soils.

ICP Metals Narration

Were all QA/QC performance criteria specified in the analytical method achieved? Yes.

Instrument:

ARCOS-3 04/10/25 10:52 Tina Hall, Chemist 04/10/25

CT00899, CT00901, CT00903

TThe initial calibration met criteria and the linear range is defined daily by the calibration range.
The Low-Level Calibration Verification (LLCV) met criteria.
The following Initial Calibration Verification (ICV) compounds did not meet criteria: None.
The following Initial Calibration Blank (ICB) compounds did not meet criteria: None.
The following Spectral Interference Check compounds did not meet criteria: None.
The following Continuing Calibration Verification (CCV) compounds did not meet criteria: None.
The following Continuing Calibration Blank (CCB) compounds did not meet criteria: None.

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

NY # 11301

Certification Report

April 22, 2025

SDG I.D.: GCT00898

ICP Metals Narration

QC (Batch Specific):

Batch 778880 (CT00879)

CT00899, CT00901, CT00903

All LCS recoveries were within 75 - 125 with the following exceptions: None.
All LCSD recoveries were within 75 - 125 with the following exceptions: None.
All LCS/LCSD RPDs were less than 30% with the following exceptions: None.
Additional Criteria: LCS acceptance range is 80-120% for aqueous and for soils the acceptance range is set by vendor limits. MS acceptance range 75-125%.

PCB Narration

Were all QA/QC performance criteria specified in the MADEP document CAM achieved? Yes.

Instrument:

AU-ECD1 04/21/25-1 Saadia Chudary, Chemist 04/21/25

CT00901 (2X)

The initial calibration (PC0402AI) RSD for the compound list was less than 20% except for the following compounds: None.
The initial calibration (PC0402BI) RSD for the compound list was less than 20% except for the following compounds: None.
The continuing calibration %D for the compound list was less than 20% except for the following compounds:
Samples: CT00901
Preceding CC 421B006 - None.
Succeeding CC 421B017 - PCB 1016 -23%L (%)

AU-ECD3 04/18/25-1 Saadia Chudary, Chemist 04/18/25

CT00899 (2X), CT00903 (2X)

The initial calibration (PC0325AI) RSD for the compound list was less than 20% except for the following compounds: None.
The initial calibration (PC0325BI) RSD for the compound list was less than 20% except for the following compounds: None.
The continuing calibration %D for the compound list was less than 20% except for the following compounds:None.

QC (Batch Specific):

Batch 779955 (CT00013)

CT00899, CT00901, CT00903

All LCS recoveries were within 40 - 140 with the following exceptions: None.
All LCSD recoveries were within 40 - 140 with the following exceptions: None.
All LCS/LCSD RPDs were less than 30% with the following exceptions: None.

I attest under the pains and penalties of perjury that, based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

SVOA Narration

Environmental Laboratories, Inc.
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ACCREDITED IN ACCORDANCE WITH nelac NY # 11301

MCP Certification Report

April 22, 2025

SDG I.D.: GCT00898

SVOA Narration

Were all QA/QC performance criteria specified in the MADEP document CAM achieved? No.

QC Batch 779917 (Samples: CT00899, CT00901, CT00903): -----

The QC recovery for one or more analytes is above the upper range but were not reported in the sample(s), therefore no significant bias is suspected. (2-Nitroaniline)

Instrument:

CHEM06 04/17/25-2 Matt Richard, Chemist 04/17/25

CT00899 (1X), CT00901 (1X), CT00903 (1X)

For 8270 full list, the DDT breakdown and pentachlorophenol & benzidine peak tailing were evaluated in the DFTPP tune and were found to be in control.
For 8270 BN list, benzidine peak tailing was evaluated in the DFTPP tune and was found to be in control.

Initial Calibration Evaluation (CHEM06/6_SVFULL_0411):
100% of target compounds met criteria.
The following compounds had %RSDs >20%: None.
The following compounds did not meet recommended response factors: 2-Nitrophenol 0.073 (0.1)

Continuing Calibration Verification (CHEM06/0417_20-6_SVFULL_0411) (MCP Compliance):
Internal standard areas were within 50 to 200% of the initial calibration with the following exceptions: None.
99% of target compounds met criteria.
The following compounds did not meet % deviation criteria: Bis(2-chloroisopropyl)ether 22%L (20%)
The following compounds did not meet maximum % deviations: None.
The following compounds did not meet recommended response factors: 2-Nitrophenol 0.084 (0.1)

QC (Batch Specific):

Batch 779917 (CS99853)

CT00899, CT00901, CT00903

All LCS recoveries were within 40 - 140 with the following exceptions: 2-Nitroaniline(167%)
All LCSD recoveries were within 40 - 140 with the following exceptions: 2-Nitroaniline(198%)
All LCS/LCSD RPDs were less than 30% with the following exceptions: None.
Additional 8270 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is at least 10%. (Acid surrogates acceptance range for aqueous samples: 10-110%, for soils 30-130%)

I attest under the pains and penalties of perjury that, based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

VOA Narration

Were all QA/QC performance criteria specified in the MADEP document CAM achieved? Yes.

Instrument:

CHEM26 04/08/25-2 Jane Li, Chemist 04/08/25

CT00898 (1X), CT00902 (1X)

Initial Calibration Evaluation (CHEM26/VT-040725):

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NY # 11301

MCP Certification Report

April 22, 2025

SDG I.D.: GCT00898

VOA Narration

Instrument:

CHEM26 04/08/25-2 Jane Li, Chemist 04/08/25

CT00898 (1X), CT00902 (1X)

97% of target compounds met criteria.
The following compounds had %RSDs >20%: Acetone 32% (20%), Chloroethane 26% (20%), trans-1,4-dichloro-2-butene 24% (20%)
The following compounds did not meet Table 4 recommended minimum response factors: 1,1,2-Trichloroethane 0.199 (0.2)

Continuing Calibration Verification (CHEM26/0408_38-VT-040725) (MCP Compliance):
Internal standard areas were within 50 to 200% of the initial calibration with the following exceptions: None.
99% of target compounds met criteria.
The following compounds did not meet % deviation criteria: trans-1,4-dichloro-2-butene 21%H (20%)
The following compounds did not meet maximum % deviations: None.
The following compounds did not meet Table 4 recommended minimum response factors: None.

CHEM26 04/09/25-1 Jane Li, Chemist 04/09/25

CT00898 (50X), CT00900 (1X)

Initial Calibration Evaluation (CHEM26/VT-040725):
97% of target compounds met criteria.
The following compounds had %RSDs >20%: Acetone 32% (20%), Chloroethane 26% (20%), trans-1,4-dichloro-2-butene 24% (20%)
The following compounds did not meet Table 4 recommended minimum response factors: 1,1,2-Trichloroethane 0.199 (0.2)

Continuing Calibration Verification (CHEM26/0409_02-VT-040725) (MCP Compliance):
Internal standard areas were within 50 to 200% of the initial calibration with the following exceptions: None.
99% of target compounds met criteria.
The following compounds did not meet % deviation criteria: Acetone 21%L (20%)
The following compounds did not meet maximum % deviations: None.
The following compounds did not meet Table 4 recommended minimum response factors: None.

QC (Batch Specific):

Batch 778539 (CT00199) CHEM26 4/8/2025-2

CT00898(1X), CT00902(1X)

All LCS recoveries were within 70 - 130 with the following exceptions: None.
All LCSD recoveries were within 70 - 130 with the following exceptions: None.
All LCS/LCSD RPDs were less than 20% with the following exceptions: None.
Additional 8260 criteria: 10% of LCS/LCSD compounds can be outside of acceptance criteria as long as recovery is 40-160%.
The RPD criteria for the LCS/LCSD is 20%,
The MS/MSD RPD criteria is listed above.

Batch 778861 (CT00923) CHEM26 4/9/2025-1

CT00900(1X)

All LCS recoveries were within 70 - 130 with the following exceptions: None.
All LCSD recoveries were within 70 - 130 with the following exceptions: None.
All LCS/LCSD RPDs were less than 20% with the following exceptions: None.
Additional 8260 criteria: 10% of LCS/LCSD compounds can be outside of acceptance criteria as long as recovery is 40-160%.
The RPD criteria for the LCS/LCSD is 20%,

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ACCREDITED IN ACCORDANCE WITH nelac NY # 11301

MCP Certification Report

April 22, 2025

SDG I.D.: GCT00898

VOA Narration

QC (Batch Specific):

Batch 778861 (CT00923) CHEM26 4/9/2025-1

CT00900(1X)

The MS/MSD RPD criteria is listed above.

Batch 778861H (CT00923) CHEM26 4/9/2025-1

CT00898(50X)

All LCS recoveries were within 70 - 130 with the following exceptions: None.
All LCSD recoveries were within 70 - 130 with the following exceptions: None.
All LCS/LCSD RPDs were less than 20% with the following exceptions: None.
Additional 8260 criteria: 10% of LCS/LCSD compounds can be outside of acceptance criteria as long as recovery is 40-160%.
The RPD criteria for the LCS/LCSD is 20%,
The MS/MSD RPD criteria is listed above.

I attest under the pains and penalties of perjury that, based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

Cooler: Yes ☒ No ☐
Coolant: IPK ☒ ICE ☐ No ☐

PHOENIX
Environmental Laboratories, Inc.

CT/MA/RI CHAIN OF CUSTODY RECORD

587 East Middle Turnpike, P.O. Box 370, Manchester, CT 06040
Email: makrina@phoenixlabs.com Fax (860) 645-0823
Client Services (860) 645-1102

Temp: 1.8 °C Pg of

Data Delivery/Contact Options:
☐ Fax:
☐ Phone:
☒ Email: lstone@kleinfelder.com

Customer: Kleinfelder
Address: One Beacon Street, Suite 8100
Boston, MA 02118
Attn: Lisa Stone

Project: Sherman St Tank/Bellis Circle
Report to: Lisa Stone
Invoice to: AccountspayableUS@Kleinfelder.com
Quote #

Project P.O: 20231168.006A

This section MUST be completed with Bottle Quantities.

Client Sample - Information - Identification
Sampler's Signature _____ Date: _____

Matrix Code:
DW=Drinking Water **GW**=Ground Water **SW**=Surface Water **WW**=Waste Water
RW=Raw Water **SE**=Sediment **SL**=Sludge **S**=Soil **SD**=Solid **W**=Wipe **OIL**=Oil
B=Bulk **L**=Liquid **X** = _____(Other)

PHOENIX USE ONLY SAMPLE #	Customer Sample Identification	Sample Matrix	Date Sampled	Time Sampled	*MS/MSD (May be billable at analysis unit rate)	VOCs by 8260	TPH by 8015D Fingerprint	MCP 14 Metals	SVOCs by 8270	PCBs by 8082	Flashpoint by 1010	Corrosivity/pH by 9045	Reactivity by 9014 and 9030	Conductivity by 2510	GL Amber 8 oz. [ ] w/H_3PO_4 [ ] $NAHSO_4$	Soil VOA Vials [1] methanol [2] H_2O	GL Soil container (4) oz	GL Soil container (8) oz	40 ml VOA Vial [ ] As is [ ] HCl	GL Amber 1000ml [ ] As is [ ] H_2SO_4	PL As is [ ] 250ml [ ] 500ml [ ] 1000ml	PL H_2SO_4 [ ] 250ml [ ] 500ml	PL HNO_3 250ml	PL NaOH 250ml	Bacteria Bottle w/thio	Bacteria Bottle as is
00898	KLF-2 (1-2)		4/7/25	12:15		X										3										
00899	KLF-2 (0-5)		4/7/25	12:15			X	X	X	X	X	X	X	X				1	1								
00900	KLF-3 (1-2)		4/7/25	11:55		X										3										
00901	KLF-3 (0-5)		4/7/25	11:55			X	X	X	X	X	X	X	X				1	1								
00902	KLF-1 (2-3)		4/7/25	12:35		X										3										
00903	KLF-1 (2-5)		4/7/25	12:35			X	X	X	X	X	X	X	X				1	1								

Relinquished by:	Accepted by:	Date:	Time:
[signature]	[signature]	4-8-25	1100
Sarah Makrina	[signature]	4-8-25	11 11
[signature]	[signature]	4/8/25	18:25

Comments, Special Requirements or Regulations:

Turnaround Time:
☐ 1 Day* ☒ Standard
☐ 2 Days* ☐ Other
☐ 3 Days*
☐ 4 Days*
☐ 5 Days*

RI
☐ RES DEC
☐ I/C DEC
☐ GA Leachability
☐ GB Leachability
☐ GA -GW Objectives
☐ GB -GW Objectives
☐ Other

CT
☐ RCP Cert
☐ GWPC
☐ SWPC
☐ GA PMC
☐ GB PMC
☐ SWPC
☐ RES DEC
☐ I/C DEC

MA
☒ MCP Certification
☐ GW-1 ☒ RCS-1 / RCGW-1
☐ GW-2 ☐ RCS-2 / RCGW-2
☐ GW-3 ☐ _____
☐ S-1
☐ S-2
☐ S-3
☐ SW Protection

Data Format
☒ Excel
☒ PDF
☐ GIS/Key
☐ EQuIS
☐ Other

Data Package
☐ Tier II Checklist*
☒ Full Data Package*
☐ Phoenix Std
☐ Other

***MS/MSD are considered site samples and will be billed as such in accordance with the prices quoted.**

* SURCHARGES MAY APPLY

State where samples were collected: MA

* SURCHARGE APPLIES

Monday, April 28, 2025

Attn: Lisa Stone
Kleinfelder
One Beacon Street Suite 8100
Boston, MA 02108

Project ID: **SHERMAN ST TANK/BELLIS CIRCLE**
SDG ID: **GCT04068**
Sample ID#s: CT04068 - CT04069

This laboratory is in compliance with the NELAC requirements of procedures used except where indicated.

This report contains results for the parameters tested, under the sampling conditions described on the Chain Of Custody, as received by the laboratory. This report is incomplete unless all pages indicated in the pagination at the bottom of the page are included.

All soils, solids and sludges are reported on a dry weight basis unless otherwise noted in the sample comments.

A scanned version of the COC form accompanies the analytical report and is an exact duplicate of the original.

The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.

Sincerely yours,

Phyllis Shiller
Laboratory Director

NELAC - #NY11301
CT Lab Registration #PH-0618
MA Lab Registration #M-CT007
ME Lab Registration #CT-007
NH Lab Registration #213693-A,B
NJ Lab Registration #CT-003
NY Lab Registration #11301
PA Lab Registration #68-03530
RI Lab Registration #63
VT Lab Registration #VT11301

Environmental Laboratories, Inc.
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Tel. (860) 645-1102 Fax (860) 645-0823

NY # 11301

SDG Comments

April 28, 2025

SDG I.D.: GCT04068

Phoenix reporting levels may exceed those referenced in the CAM protocol. Please refer to criteria sheet for comparisons to requested MCP standards.

Environmental Laboratories, Inc.
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Tel. (860) 645-1102 Fax (860) 645-0823

Sample Id Cross Reference

April 28, 2025

SDG I.D.: GCT04068

Project ID: SHERMAN ST TANK/BELLIS CIRCLE

Client Id	Lab Id	Matrix	Col Date
KLF-3 (16-18`)	CT04068	SOIL	04/10/25 14:15
KLF-3 (14-18`)	CT04069	SOIL	04/10/25 14:15

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102

Analysis Report

April 28, 2025

FOR: Attn: Lisa Stone
Kleinfelder
One Beacon Street Suite 8100
Boston, MA 02108

Sample Information		Custody Information		Date	Time
Matrix:	SOIL	Collected by:		04/10/25	14:15
Location Code:	KLEINFL-BOSTON	Received by:	SR1	04/11/25	15:30
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	20231168.006A				

Laboratory Data

SDG ID: GCT04068
Phoenix ID: CT04068

Project ID: SHERMAN ST TANK/BELLIS CIRCLE
Client ID: KLF-3 (16-18`)

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Field Extraction	Completed				04/10/25		SW5035A
Volatiles							
1,1,1,2-Tetrachloroethane	ND	4.2	ug/Kg	1	04/13/25	JLI	SW8260D
1,1,1-Trichloroethane	ND	4.2	ug/Kg	1	04/13/25	JLI	SW8260D
1,1,2,2-Tetrachloroethane	ND	2.5	ug/Kg	1	04/13/25	JLI	SW8260D
1,1,2-Trichloroethane	ND	4.2	ug/Kg	1	04/13/25	JLI	SW8260D
1,1-Dichloroethane	ND	4.2	ug/Kg	1	04/13/25	JLI	SW8260D
1,1-Dichloroethene	ND	4.2	ug/Kg	1	04/13/25	JLI	SW8260D
1,1-Dichloropropene	ND	4.2	ug/Kg	1	04/13/25	JLI	SW8260D
1,2,3-Trichlorobenzene	ND	4.2	ug/Kg	1	04/13/25	JLI	SW8260D
1,2,3-Trichloropropane	ND	4.2	ug/Kg	1	04/13/25	JLI	SW8260D
1,2,4-Trichlorobenzene	ND	4.2	ug/Kg	1	04/13/25	JLI	SW8260D
1,2,4-Trimethylbenzene	ND	4.2	ug/Kg	1	04/13/25	JLI	SW8260D
1,2-Dibromo-3-chloropropane	ND	4.2	ug/Kg	1	04/13/25	JLI	SW8260D
1,2-Dibromoethane	ND	0.42	ug/Kg	1	04/13/25	JLI	SW8260D
1,2-Dichlorobenzene	ND	4.2	ug/Kg	1	04/13/25	JLI	SW8260D
1,2-Dichloroethane	ND	4.2	ug/Kg	1	04/13/25	JLI	SW8260D
1,2-Dichloropropane	ND	4.2	ug/Kg	1	04/13/25	JLI	SW8260D
1,3,5-Trimethylbenzene	ND	4.2	ug/Kg	1	04/13/25	JLI	SW8260D
1,3-Dichlorobenzene	ND	4.2	ug/Kg	1	04/13/25	JLI	SW8260D
1,3-Dichloropropane	ND	4.2	ug/Kg	1	04/13/25	JLI	SW8260D
1,4-Dichlorobenzene	ND	4.2	ug/Kg	1	04/13/25	JLI	SW8260D
2,2-Dichloropropane	ND	4.2	ug/Kg	1	04/13/25	JLI	SW8260D
2-Chlorotoluene	ND	4.2	ug/Kg	1	04/13/25	JLI	SW8260D
2-Hexanone	ND	21	ug/Kg	1	04/13/25	JLI	SW8260D
2-Isopropyltoluene	ND	4.2	ug/Kg	1	04/13/25	JLI	SW8260D

Project ID: SHERMAN ST TANK/BELLIS CIRCLE
Client ID: KLF-3 (16-18`)

Phoenix I.D.: CT04068

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
4-Chlorotoluene	ND	4.2	ug/Kg	1	04/13/25	JLI	SW8260D
4-Methyl-2-pentanone	ND	21	ug/Kg	1	04/13/25	JLI	SW8260D
Acetone	ND	210	ug/Kg	1	04/13/25	JLI	SW8260D
Acrylonitrile	ND	4.2	ug/Kg	1	04/13/25	JLI	SW8260D
Benzene	ND	4.2	ug/Kg	1	04/13/25	JLI	SW8260D
Bromobenzene	ND	4.2	ug/Kg	1	04/13/25	JLI	SW8260D
Bromochloromethane	ND	4.2	ug/Kg	1	04/13/25	JLI	SW8260D
Bromodichloromethane	ND	4.2	ug/Kg	1	04/13/25	JLI	SW8260D
Bromoform	ND	4.2	ug/Kg	1	04/13/25	JLI	SW8260D
Bromomethane	ND	4.2	ug/Kg	1	04/13/25	JLI	SW8260D
Carbon Disulfide	ND	4.2	ug/Kg	1	04/13/25	JLI	SW8260D
Carbon tetrachloride	ND	4.2	ug/Kg	1	04/13/25	JLI	SW8260D
Chlorobenzene	ND	4.2	ug/Kg	1	04/13/25	JLI	SW8260D
Chloroethane	ND	4.2	ug/Kg	1	04/13/25	JLI	SW8260D
Chloroform	ND	4.2	ug/Kg	1	04/13/25	JLI	SW8260D
Chloromethane	ND	4.2	ug/Kg	1	04/13/25	JLI	SW8260D
cis-1,2-Dichloroethene	ND	4.2	ug/Kg	1	04/13/25	JLI	SW8260D
cis-1,3-Dichloropropene	ND	4.2	ug/Kg	1	04/13/25	JLI	SW8260D
Dibromochloromethane	ND	2.5	ug/Kg	1	04/13/25	JLI	SW8260D
Dibromomethane	ND	4.2	ug/Kg	1	04/13/25	JLI	SW8260D
Dichlorodifluoromethane	ND	4.2	ug/Kg	1	04/13/25	JLI	SW8260D
Ethylbenzene	ND	4.2	ug/Kg	1	04/13/25	JLI	SW8260D
Hexachlorobutadiene	ND	4.2	ug/Kg	1	04/13/25	JLI	SW8260D
Isopropylbenzene	ND	4.2	ug/Kg	1	04/13/25	JLI	SW8260D
m&p-Xylene	ND	4.2	ug/Kg	1	04/13/25	JLI	SW8260D
Methyl Ethyl Ketone	ND	25	ug/Kg	1	04/13/25	JLI	SW8260D
Methyl t-butyl ether (MTBE)	ND	8.3	ug/Kg	1	04/13/25	JLI	SW8260D
Methylene chloride	ND	8.3	ug/Kg	1	04/13/25	JLI	SW8260D
Naphthalene	ND	4.2	ug/Kg	1	04/13/25	JLI	SW8260D
n-Butylbenzene	ND	4.2	ug/Kg	1	04/13/25	JLI	SW8260D
n-Propylbenzene	ND	4.2	ug/Kg	1	04/13/25	JLI	SW8260D
o-Xylene	ND	4.2	ug/Kg	1	04/13/25	JLI	SW8260D
p-Isopropyltoluene	ND	4.2	ug/Kg	1	04/13/25	JLI	SW8260D
sec-Butylbenzene	ND	4.2	ug/Kg	1	04/13/25	JLI	SW8260D
Styrene	ND	4.2	ug/Kg	1	04/13/25	JLI	SW8260D
tert-Butylbenzene	ND	4.2	ug/Kg	1	04/13/25	JLI	SW8260D
Tetrachloroethene	ND	4.2	ug/Kg	1	04/13/25	JLI	SW8260D
Tetrahydrofuran (THF)	ND	8.3	ug/Kg	1	04/13/25	JLI	SW8260D
Toluene	ND	4.2	ug/Kg	1	04/13/25	JLI	SW8260D
Total Xylenes	ND	4.2	ug/Kg	1	04/13/25	JLI	SW8260D
trans-1,2-Dichloroethene	ND	4.2	ug/Kg	1	04/13/25	JLI	SW8260D
trans-1,3-Dichloropropene	ND	4.2	ug/Kg	1	04/13/25	JLI	SW8260D
trans-1,4-dichloro-2-butene	ND	8.3	ug/Kg	1	04/13/25	JLI	SW8260D
Trichloroethene	ND	4.2	ug/Kg	1	04/13/25	JLI	SW8260D
Trichlorofluoromethane	ND	4.2	ug/Kg	1	04/13/25	JLI	SW8260D
Trichlorotrifluoroethane	ND	8.3	ug/Kg	1	04/13/25	JLI	SW8260D
Vinyl chloride	ND	4.2	ug/Kg	1	04/13/25	JLI	SW8260D
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	91		%	1	04/13/25	JLI	70 - 130 %

Project ID: SHERMAN ST TANK/BELLIS CIRCLE
Client ID: KLF-3 (16-18`)

Phoenix I.D.: CT04068

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
% Bromofluorobenzene	87		%	1	04/13/25	JLI	70 - 130 %
% Dibromofluoromethane	90		%	1	04/13/25	JLI	70 - 130 %
% Toluene-d8	90		%	1	04/13/25	JLI	70 - 130 %

Oxygenates & Dioxane

1,4-Dioxane	ND	83	ug/Kg	1	04/13/25	JLI	SW8260D (OXY)
Diethyl ether	ND	4.2	ug/Kg	1	04/13/25	JLI	SW8260D (OXY)
Di-isopropyl ether	ND	4.2	ug/Kg	1	04/13/25	JLI	SW8260D (OXY)
Ethyl tert-butyl ether	ND	4.2	ug/Kg	1	04/13/25	JLI	SW8260D (OXY)
tert-amyl methyl ether	ND	4.2	ug/Kg	1	04/13/25	JLI	SW8260D (OXY)

Massachusetts does not offer certification for Soil/Solid matrices.

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

Results are reported on an ``as received`` basis, and are not corrected for dry weight.

All soils, solids and sludges are reported on a dry weight basis unless otherwise noted in the sample comments.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.

Phyllis Shiller, Laboratory Director

April 28, 2025

Reviewed and Released by: Ethan Lee, Project Manager

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102

Analysis Report

April 28, 2025

FOR: Attn: Lisa Stone
Kleinfelder
One Beacon Street Suite 8100
Boston, MA 02108

Sample Information		Custody Information		Date	Time
Matrix:	SOIL	Collected by:		04/10/25	14:15
Location Code:	KLEINFL-BOSTON	Received by:	SR1	04/11/25	15:30
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	20231168.006A				

Laboratory Data

SDG ID: GCT04068
Phoenix ID: CT04069

Project ID: SHERMAN ST TANK/BELLIS CIRCLE
Client ID: KLF-3 (14-18`)

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Silver	< 0.42	0.42	mg/Kg	1	04/15/25	CPP	SW6010D
Arsenic	8.99	0.84	mg/Kg	1	04/15/25	CPP	SW6010D
Barium	104	0.42	mg/Kg	1	04/15/25	CPP	SW6010D
Beryllium	0.95	0.34	mg/Kg	1	04/15/25	CPP	SW6010D
Cadmium	0.43	0.42	mg/Kg	1	04/15/25	CPP	SW6010D
Chromium	48.0	0.42	mg/Kg	1	04/15/25	CPP	SW6010D
Mercury	< 0.03	0.03	mg/Kg	2	04/15/25	ZT	SW7471B
Nickel	31.7	0.42	mg/Kg	1	04/15/25	CPP	SW6010D
Lead	11.6	0.42	mg/Kg	1	04/15/25	CPP	SW6010D
Antimony	< 4.2	4.2	mg/Kg	1	04/15/25	CPP	SW6010D
Selenium	< 1.7	1.7	mg/Kg	1	04/15/25	CPP	SW6010D
Thallium	< 3.8	3.8	mg/Kg	1	04/15/25	CPP	SW6010D
Vanadium	59.3	0.42	mg/Kg	1	04/15/25	CPP	SW6010D
Zinc	68.9	0.8	mg/Kg	1	04/15/25	CPP	SW6010D
Percent Solid	80		%		04/12/25	KG	SW846-%Solid
Conductivity - Soil Matrix	108	5	umhos/cm	1	04/11/25	AF	SW9050A
Corrosivity	Negative		Pos/Neg	1	04/11/25	KG/MW	SW846-Corr
Flash Point	>200	200	Degree F	1	04/13/25	G	SW1010B
Ignitability	Passed	140	degree F	1	04/13/25	G	SW846-Ignit
pH at 22C - Soil	7.80	1.00	pH Units	1	04/11/25 23:19	KG/MW	SW846 9045D
Reactivity Cyanide	< 6	6	mg/Kg	1	04/16/25	EG/GD	SW846 7.3.3.1/90
Reactivity Sulfide	< 20	20	mg/Kg	1	04/17/25	EG/GD	SW846 CH7
Reactivity	Negative		Pos/Neg	1	04/17/25	EG/GD	SW846-React
Mercury Digestion	Completed				04/14/25	AC1/AC1	SW7471B
Extraction of ETPH	Completed				04/23/25	S/Q	SW3546
Soil Extraction for PCB	Completed				04/26/25	H/U	SW3546
Soil Extraction for SVOA	Completed				04/18/25	B/H/Q	SW3546

Ver 1

Project ID: SHERMAN ST TANK/BELLIS CIRCLE
Client ID: KLF-3 (14-18`)

Phoenix I.D.: CT04069

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Total Metals Digest	Completed				04/11/25	B/AG	SW3050B
Polychlorinated Biphenyls							
PCB-1016	ND	82	ug/Kg	2	04/24/25	SC	SW8082A
PCB-1221	ND	82	ug/Kg	2	04/24/25	SC	SW8082A
PCB-1232	ND	82	ug/Kg	2	04/24/25	SC	SW8082A
PCB-1242	ND	82	ug/Kg	2	04/24/25	SC	SW8082A
PCB-1248	ND	82	ug/Kg	2	04/24/25	SC	SW8082A
PCB-1254	ND	82	ug/Kg	2	04/24/25	SC	SW8082A
PCB-1260	ND	82	ug/Kg	2	04/24/25	SC	SW8082A
PCB-1262	ND	82	ug/Kg	2	04/24/25	SC	SW8082A
PCB-1268	ND	82	ug/Kg	2	04/24/25	SC	SW8082A
QA/QC Surrogates							
% DCBP	86		%	2	04/24/25	SC	30 - 150 %
% DCBP (Confirmation)	82		%	2	04/24/25	SC	30 - 150 %
% TCMX	73		%	2	04/24/25	SC	30 - 150 %
% TCMX (Confirmation)	67		%	2	04/24/25	SC	30 - 150 %
TPH by GC (Extractable (C9-C36))							
Fuel Oil #2 / Diesel Fuel	ND	61	mg/kg	1	04/24/25	JRB	SW8015D
Fuel Oil #4	ND	61	mg/kg	1	04/24/25	JRB	SW8015D
Fuel Oil #6	ND	61	mg/kg	1	04/24/25	JRB	SW8015D
Kerosene	ND	61	mg/kg	1	04/24/25	JRB	SW8015D
Motor Oil	ND	61	mg/kg	1	04/24/25	JRB	SW8015D
Total TPH	ND	61	mg/kg	1	04/24/25	JRB	SW8015D
Unidentified	ND	61	mg/kg	1	04/24/25	JRB	SW8015D
QA/QC Surrogates							
% COD (surr)	95		%	1	04/24/25	JRB	50 - 150 %
% Terphenyl (surr)	84		%	1	04/24/25	JRB	50 - 150 %
Semivolatiles							
1,1-Biphenyl	ND	50	ug/Kg	1	04/19/25	MR	SW8270E
1,2,4,5-Tetrachlorobenzene	ND	290	ug/Kg	1	04/19/25	MR	SW8270E
1,2,4-Trichlorobenzene	ND	290	ug/Kg	1	04/19/25	MR	SW8270E
1,2-Dichlorobenzene	ND	290	ug/Kg	1	04/19/25	MR	SW8270E
1,2-Diphenylhydrazine	ND	410	ug/Kg	1	04/19/25	MR	SW8270E
1,3-Dichlorobenzene	ND	290	ug/Kg	1	04/19/25	MR	SW8270E
1,4-Dichlorobenzene	ND	290	ug/Kg	1	04/19/25	MR	SW8270E
2,2'-Oxybis(1-Chloropropane)	ND	290	ug/Kg	1	04/19/25	MR	SW8270E
2,4,5-Trichlorophenol	ND	290	ug/Kg	1	04/19/25	MR	SW8270E
2,4,6-Trichlorophenol	ND	290	ug/Kg	1	04/19/25	MR	SW8270E
2,4-Dichlorophenol	ND	290	ug/Kg	1	04/19/25	MR	SW8270E
2,4-Dimethylphenol	ND	290	ug/Kg	1	04/19/25	MR	SW8270E
2,4-Dinitrophenol	ND	410	ug/Kg	1	04/19/25	MR	SW8270E
2,4-Dinitrotoluene	ND	290	ug/Kg	1	04/19/25	MR	SW8270E
2,6-Dinitrotoluene	ND	290	ug/Kg	1	04/19/25	MR	SW8270E
2-Chloronaphthalene	ND	290	ug/Kg	1	04/19/25	MR	SW8270E
2-Chlorophenol	ND	290	ug/Kg	1	04/19/25	MR	SW8270E
2-Methylnaphthalene	ND	290	ug/Kg	1	04/19/25	MR	SW8270E
2-Methylphenol (o-cresol)	ND	290	ug/Kg	1	04/19/25	MR	SW8270E

Project ID: SHERMAN ST TANK/BELLIS CIRCLE
Client ID: KLF-3 (14-18`)

Phoenix I.D.: CT04069

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
2-Nitroaniline	ND	410	ug/Kg	1	04/19/25	MR	SW8270E
2-Nitrophenol	ND	290	ug/Kg	1	04/19/25	MR	SW8270E
3&4-Methylphenol (m&p-cresol)	ND	410	ug/Kg	1	04/19/25	MR	SW8270E
3,3'-Dichlorobenzidine	ND	290	ug/Kg	1	04/19/25	MR	SW8270E
3-Nitroaniline	ND	410	ug/Kg	1	04/19/25	MR	SW8270E
4,6-Dinitro-2-methylphenol	ND	410	ug/Kg	1	04/19/25	MR	SW8270E
4-Bromophenyl phenyl ether	ND	410	ug/Kg	1	04/19/25	MR	SW8270E
4-Chloro-3-methylphenol	ND	290	ug/Kg	1	04/19/25	MR	SW8270E
4-Chloroaniline	ND	290	ug/Kg	1	04/19/25	MR	SW8270E
4-Chlorophenyl phenyl ether	ND	290	ug/Kg	1	04/19/25	MR	SW8270E
4-Nitroaniline	ND	650	ug/Kg	1	04/19/25	MR	SW8270E
4-Nitrophenol	ND	290	ug/Kg	1	04/19/25	MR	SW8270E
Acenaphthene	ND	290	ug/Kg	1	04/19/25	MR	SW8270E
Acenaphthylene	ND	290	ug/Kg	1	04/19/25	MR	SW8270E
Acetophenone	ND	290	ug/Kg	1	04/19/25	MR	SW8270E
Aniline	ND	410	ug/Kg	1	04/19/25	MR	SW8270E
Anthracene	ND	290	ug/Kg	1	04/19/25	MR	SW8270E
Benz(a)anthracene	ND	290	ug/Kg	1	04/19/25	MR	SW8270E
Benzidine	ND	290	ug/Kg	1	04/19/25	MR	SW8270E
Benzo(a)pyrene	ND	290	ug/Kg	1	04/19/25	MR	SW8270E
Benzo(b)fluoranthene	ND	290	ug/Kg	1	04/19/25	MR	SW8270E
Benzo(ghi)perylene	ND	290	ug/Kg	1	04/19/25	MR	SW8270E
Benzo(k)fluoranthene	ND	290	ug/Kg	1	04/19/25	MR	SW8270E
Benzoic acid	ND	810	ug/Kg	1	04/19/25	MR	SW8270E
Benzyl butyl phthalate	ND	290	ug/Kg	1	04/19/25	MR	SW8270E
Bis(2-chloroethoxy)methane	ND	290	ug/Kg	1	04/19/25	MR	SW8270E
Bis(2-chloroethyl)ether	ND	410	ug/Kg	1	04/19/25	MR	SW8270E
Bis(2-ethylhexyl)phthalate	ND	410	ug/Kg	1	04/19/25	MR	SW8270E
Carbazole	ND	410	ug/Kg	1	04/19/25	MR	SW8270E
Chrysene	ND	290	ug/Kg	1	04/19/25	MR	SW8270E
Dibenz(a,h)anthracene	ND	290	ug/Kg	1	04/19/25	MR	SW8270E
Dibenzofuran	ND	290	ug/Kg	1	04/19/25	MR	SW8270E
Diethyl phthalate	ND	290	ug/Kg	1	04/19/25	MR	SW8270E
Dimethylphthalate	ND	290	ug/Kg	1	04/19/25	MR	SW8270E
Di-n-butylphthalate	ND	410	ug/Kg	1	04/19/25	MR	SW8270E
Di-n-octylphthalate	ND	290	ug/Kg	1	04/19/25	MR	SW8270E
Fluoranthene	ND	290	ug/Kg	1	04/19/25	MR	SW8270E
Fluorene	ND	290	ug/Kg	1	04/19/25	MR	SW8270E
Hexachlorobenzene	ND	290	ug/Kg	1	04/19/25	MR	SW8270E
Hexachlorobutadiene	ND	290	ug/Kg	1	04/19/25	MR	SW8270E
Hexachlorocyclopentadiene	ND	290	ug/Kg	1	04/19/25	MR	SW8270E
Hexachloroethane	ND	290	ug/Kg	1	04/19/25	MR	SW8270E
Indeno(1,2,3-cd)pyrene	ND	290	ug/Kg	1	04/19/25	MR	SW8270E
Isophorone	ND	290	ug/Kg	1	04/19/25	MR	SW8270E
Naphthalene	ND	290	ug/Kg	1	04/19/25	MR	SW8270E
Nitrobenzene	ND	290	ug/Kg	1	04/19/25	MR	SW8270E
N-Nitrosodimethylamine	ND	410	ug/Kg	1	04/19/25	MR	SW8270E
N-Nitrosodi-n-propylamine	ND	290	ug/Kg	1	04/19/25	MR	SW8270E
N-Nitrosodiphenylamine	ND	410	ug/Kg	1	04/19/25	MR	SW8270E

Project ID: SHERMAN ST TANK/BELLIS CIRCLE
Client ID: KLF-3 (14-18`)

Phoenix I.D.: CT04069

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Pentachloronitrobenzene	ND	410	ug/Kg	1	04/19/25	MR	SW8270E
Pentachlorophenol	ND	410	ug/Kg	1	04/19/25	MR	SW8270E
Phenanthrene	ND	290	ug/Kg	1	04/19/25	MR	SW8270E
Phenol	ND	290	ug/Kg	1	04/19/25	MR	SW8270E
Pyrene	ND	290	ug/Kg	1	04/19/25	MR	SW8270E
Pyridine	ND	410	ug/Kg	1	04/19/25	MR	SW8270E
QA/QC Surrogates							
% 2,4,6-Tribromophenol	74		%	1	04/19/25	MR	30 - 130 %
% 2-Fluorobiphenyl	68		%	1	04/19/25	MR	30 - 130 %
% 2-Fluorophenol	66		%	1	04/19/25	MR	30 - 130 %
% Nitrobenzene-d5	66		%	1	04/19/25	MR	30 - 130 %
% Phenol-d5	62		%	1	04/19/25	MR	30 - 130 %
% Terphenyl-d14	77		%	1	04/19/25	MR	30 - 130 %

Massachusetts does not offer certification for Soil/Solid matrices.

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

Per 1.4.6 of EPA method 8270D, 1,2-Diphenylhydrazine is unstable and readily converts to Azobenzene. Azobenzene is used for the calibration of 1,2-Diphenylhydrazine.

Corrosivity is based solely on the pH analysis performed above.

Ignitability is based solely on the results of the closed cup flashpoint analysis performed above. Passed is >140 degree F.

The regulatory hold time for pH is immediately. This pH was performed in the laboratory and may be considered outside of hold-time.

The reactivity, reported above, is based only on the EPA Interim Guidance for Reactive Cyanide. This method is no longer listed in the current version of SW-846.

The reactivity, reported above, is based only on the EPA Interim Guidance for Reactive Sulfide. This method is no longer listed in the current version of SW-846.

All soils, solids and sludges are reported on a dry weight basis unless otherwise noted in the sample comments.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.

Phyllis Shiller, Laboratory Director

April 28, 2025

Reviewed and Released by: Ethan Lee, Project Manager

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102

QA/QC Report

April 28, 2025

QA/QC Data

SDG I.D.: GCT04068

Parameter	Blank	Blk RL	Sample Result	Dup Result	Dup RPD	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
QA/QC Batch 779267 (mg/kg), QC Sample No: CT03833 (CT04069)													
Mercury - Soil	BRL	0.02	<0.03	<0.03	NC	109	109	0.0	109	104	4.7	75 - 125	30
Comment:													
Additional Mercury Criteria: LCS acceptance range is 80-120% for aqueous and for soils the acceptance range is set by vendor limits. MS acceptance range is 75-125% for aqueous and 80-120% for soils.													
QA/QC Batch 779136 (mg/kg), QC Sample No: CT04038 (CT04069)													
ICP Metals - Soil													
Antimony	BRL	3.3	<3.9	<3.5	NC	94.0	90.2	4.1	90.0			75 - 125	30
Arsenic	BRL	0.67	30.2	24.8	19.6	101	99.7	1.3	96.4			75 - 125	30
Barium	BRL	0.33	74.3	79.4	6.60	105	111	5.6	111			75 - 125	30
Beryllium	BRL	0.27	0.57	0.61	NC	112	107	4.6	105			75 - 125	30
Cadmium	BRL	0.33	<0.39	<0.35	NC	116	108	7.1	105			75 - 125	30
Chromium	BRL	0.33	31.3	26.0	18.5	113	110	2.7	103			75 - 125	30
Lead	BRL	0.33	266	258	3.10	110	109	0.9	107			75 - 125	30
Nickel	BRL	0.33	20.6	19.2	7.00	115	111	3.5	105			75 - 125	30
Selenium	BRL	1.3	<1.6	<1.4	NC	96.4	90.2	6.6	85.5			75 - 125	30
Silver	BRL	0.33	<0.39	<0.35	NC	108	106	1.9	102			75 - 125	30
Thallium	BRL	3.0	<3.5	<3.1	NC	112	106	5.5	103			75 - 125	30
Vanadium	BRL	0.33	31.0	26.0	17.5	116	113	2.6	104			75 - 125	30
Zinc	BRL	0.67	101	94.2	7.00	109	105	3.7	99.5			75 - 125	30
Comment:													
Additional Criteria: LCS acceptance range is 80-120% for aqueous and for soils the acceptance range is set by vendor limits. MS acceptance range 75-125%.													

Environmental Laboratories, Inc.
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Tel. (860) 645-1102

QA/QC Report

April 28, 2025

QA/QC Data

SDG I.D.: GCT04068

Parameter	Blank	Blk RL	Sample Result	Dup Result	Dup RPD	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
QA/QC Batch 779630 (mg/Kg), QC Sample No: CT02371 (CT04069)													
Reactivity Cyanide	BRL	5	<7	<6.7	NC	98.6						80 - 120	30
Reactivity Sulfide	BRL	20	<20	<20	NC	92.0						80 - 120	30
Comment:													
Additional: MS acceptance range is 75-125%.													
QA/QC Batch 779164 (PH), QC Sample No: CT03627 (CT04069)													
pH			8.01	8.02	0.10	100						85 - 115	20
Comment:													
Additional: LCS acceptance range is 85-115% MS acceptance range 75-125%.													
QA/QC Batch 779138 (umhos/cm), QC Sample No: CT04069 (CT04069)													
Conductivity - Soil Matrix	BRL	5	108	106	1.90	100						75 - 125	30
Comment:													
Additional: LCS acceptance range is 85-115% MS acceptance range 75-125%.													
QA/QC Batch 779233 (Degree F), QC Sample No: CT04107 (CT04069)													
Flash Point			>200	>200	NC	100						75 - 125	30
Comment:													
Additional: LCS acceptance range is 85-115% MS acceptance range 75-125%.													

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QA/QC Report

April 28, 2025

QA/QC Data

SDG I.D.: GCT04068

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits	
QA/QC Batch 780837 (mg/Kg), QC Sample No: CT03642 (CT04069)											
TPH by GC (Extractable Products) - Soil											
Total TPH	ND	50	109	105	3.7	77	73	5.3	50 - 150	30	
% COD (surr)	106	%	117	113	3.5	143	93	42.4	50 - 150	30	r
% Terphenyl (surr)	99	%	92	92	0.0	79	68	15.0	50 - 150	30	
Comment:											
The ETPH/DRO LCS has been normalized based on the alkane calibration.											
QA/QC Batch 780797 (ug/Kg), QC Sample No: CT04732 (CT04069)											
Polychlorinated Biphenyls - Soil											
PCB-1016	ND	33	81	81	0.0	68	72	5.7	40 - 140	30	
PCB-1221	ND	33							40 - 140	30	
PCB-1232	ND	33							40 - 140	30	
PCB-1242	ND	33							40 - 140	30	
PCB-1248	ND	33							40 - 140	30	
PCB-1254	ND	33							40 - 140	30	
PCB-1260	ND	33	81	80	1.2	69	71	2.9	40 - 140	30	
PCB-1262	ND	33							40 - 140	30	
PCB-1268	ND	33							40 - 140	30	
% DCBP (Surrogate Rec)	85	%	101	103	2.0	83	84	1.2	30 - 150	30	
% DCBP (Surrogate Rec) (Confirm	90	%	103	105	1.9	85	86	1.2	30 - 150	30	
% TCMX (Surrogate Rec)	74	%	84	86	2.4	71	72	1.4	30 - 150	30	
% TCMX (Surrogate Rec) (Confirm	78	%	91	94	3.2	77	79	2.6	30 - 150	30	
QA/QC Batch 780262 (ug/kg), QC Sample No: CT08037 (CT04069)											
Semivolatiles - Soil											
1,1-Biphenyl	ND	230	64	60	6.5	60	63	4.9	40 - 140	30	
1,2,4,5-Tetrachlorobenzene	ND	230	65	59	9.7	61	63	3.2	40 - 140	30	
1,2,4-Trichlorobenzene	ND	230	61	58	5.0	57	62	8.4	40 - 140	30	
1,2-Dichlorobenzene	ND	180	59	56	5.2	56	61	8.5	40 - 140	30	
1,2-Diphenylhydrazine	ND	230	71	65	8.8	66	71	7.3	40 - 140	30	
1,3-Dichlorobenzene	ND	230	56	51	9.3	50	56	11.3	40 - 140	30	
1,4-Dichlorobenzene	ND	230	56	53	5.5	51	55	7.5	40 - 140	30	
2,2'-Oxybis(1-Chloropropane)	ND	230	52	51	1.9	53	56	5.5	40 - 140	30	
2,4,5-Trichlorophenol	ND	230	73	67	8.6	70	68	2.9	30 - 130	30	
2,4,6-Trichlorophenol	ND	130	75	71	5.5	71	73	2.8	30 - 130	30	
2,4-Dichlorophenol	ND	130	69	66	4.4	67	69	2.9	30 - 130	30	
2,4-Dimethylphenol	ND	230	83	78	6.2	75	79	5.2	30 - 130	30	
2,4-Dinitrophenol	ND	230	80	76	5.1	71	78	9.4	30 - 130	30	
2,4-Dinitrotoluene	ND	130	77	72	6.7	73	76	4.0	40 - 140	30	
2,6-Dinitrotoluene	ND	130	76	72	5.4	71	74	4.1	40 - 140	30	
2-Chloronaphthalene	ND	230	72	67	7.2	66	70	5.9	40 - 140	30	
2-Chlorophenol	ND	230	64	64	0.0	62	65	4.7	30 - 130	30	
2-Methylnaphthalene	ND	230	66	61	7.9	63	67	6.2	40 - 140	30	

QA/QC Data

SDG I.D.: GCT04068

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits	
2-Methylphenol (o-cresol)	ND	230	71	69	2.9	69	73	5.6	30 - 130	30	
2-Nitroaniline	ND	330	121	113	6.8	105	104	1.0	40 - 140	30	
2-Nitrophenol	ND	230	82	79	3.7	80	84	4.9	30 - 130	30	
3&4-Methylphenol (m&p-cresol)	ND	230	61	61	0.0	61	64	4.8	30 - 130	30	
3,3'-Dichlorobenzidine	ND	130	93	86	7.8	55	47	15.7	40 - 140	30	
3-Nitroaniline	ND	330	83	77	7.5	70	75	6.9	40 - 140	30	
4,6-Dinitro-2-methylphenol	ND	230	78	74	5.3	72	78	8.0	30 - 130	30	
4-Bromophenyl phenyl ether	ND	230	75	69	8.3	69	71	2.9	40 - 140	30	
4-Chloro-3-methylphenol	ND	230	75	72	4.1	77	77	0.0	30 - 130	30	
4-Chloroaniline	ND	230	83	80	3.7	72	73	1.4	40 - 140	30	
4-Chlorophenyl phenyl ether	ND	230	69	65	6.0	64	68	6.1	40 - 140	30	
4-Nitroaniline	ND	230	83	77	7.5	79	83	4.9	40 - 140	30	
4-Nitrophenol	ND	230	83	75	10.1	82	89	8.2	30 - 130	30	
Acenaphthene	ND	230	65	62	4.7	62	65	4.7	40 - 140	30	
Acenaphthylene	ND	130	61	58	5.0	57	61	6.8	40 - 140	30	
Acetophenone	ND	230	65	64	1.6	66	69	4.4	40 - 140	30	
Aniline	ND	330	72	64	11.8	39	49	22.7	40 - 140	30	m
Anthracene	ND	230	73	67	8.6	67	69	2.9	40 - 140	30	
Benz(a)anthracene	ND	230	73	66	10.1	70	72	2.8	40 - 140	30	
Benzidine	ND	330	82	66	21.6	<10	<10	NC	40 - 140	30	m
Benzo(a)pyrene	ND	130	74	68	8.5	67	71	5.8	40 - 140	30	
Benzo(b)fluoranthene	ND	160	69	63	9.1	67	70	4.4	40 - 140	30	
Benzo(ghi)perylene	ND	230	82	74	10.3	67	71	5.8	40 - 140	30	
Benzo(k)fluoranthene	ND	230	69	62	10.7	63	69	9.1	40 - 140	30	
Benzoic Acid	ND	670	107	105	1.9	102	109	6.6	30 - 130	30	
Benzyl butyl phthalate	ND	230	110	100	9.5	104	111	6.5	40 - 140	30	
Bis(2-chloroethoxy)methane	ND	230	69	65	6.0	65	67	3.0	40 - 140	30	
Bis(2-chloroethyl)ether	ND	130	61	61	0.0	62	65	4.7	40 - 140	30	
Bis(2-ethylhexyl)phthalate	ND	230	99	88	11.8	90	98	8.5	40 - 140	30	
Carbazole	ND	230	72	67	7.2	66	67	1.5	40 - 140	30	
Chrysene	ND	230	68	62	9.2	60	64	6.5	40 - 140	30	
Dibenz(a,h)anthracene	ND	130	81	75	7.7	66	69	4.4	40 - 140	30	
Dibenzofuran	ND	230	69	63	9.1	63	67	6.2	40 - 140	30	
Diethyl phthalate	ND	230	75	70	6.9	74	80	7.8	40 - 140	30	
Dimethylphthalate	ND	230	74	68	8.5	69	72	4.3	40 - 140	30	
Di-n-butylphthalate	ND	670	77	72	6.7	70	73	4.2	40 - 140	30	
Di-n-octylphthalate	ND	230	108	96	11.8	93	96	3.2	40 - 140	30	
Fluoranthene	ND	230	69	64	7.5	61	61	0.0	40 - 140	30	
Fluorene	ND	230	71	66	7.3	66	71	7.3	40 - 140	30	
Hexachlorobenzene	ND	130	88	78	12.0	78	82	5.0	40 - 140	30	
Hexachlorobutadiene	ND	230	64	59	8.1	58	63	8.3	40 - 140	30	
Hexachlorocyclopentadiene	ND	230	65	53	20.3	48	42	13.3	40 - 140	30	
Hexachloroethane	ND	130	61	56	8.5	53	62	15.7	40 - 140	30	
Indeno(1,2,3-cd)pyrene	ND	230	81	73	10.4	65	68	4.5	40 - 140	30	
Isophorone	ND	130	62	60	3.3	59	61	3.3	40 - 140	30	
Naphthalene	ND	230	62	58	6.7	58	62	6.7	40 - 140	30	
Nitrobenzene	ND	130	68	67	1.5	68	73	7.1	40 - 140	30	
N-Nitrosodimethylamine	ND	230	49	46	6.3	35	38	8.2	40 - 140	30	m
N-Nitrosodi-n-propylamine	ND	130	66	68	3.0	68	70	2.9	40 - 140	30	
N-Nitrosodiphenylamine	ND	130	68	63	7.6	63	68	7.6	40 - 140	30	
Pentachloronitrobenzene	ND	230	86	81	6.0	80	85	6.1	40 - 140	30	
Pentachlorophenol	ND	230	91	86	5.6	89	89	0.0	30 - 130	30	
Phenanthrene	ND	130	70	65	7.4	67	68	1.5	40 - 140	30	

QA/QC Data

SDG I.D.: GCT04068

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits	
Phenol	ND	230	70	68	2.9	66	70	5.9	30 - 130	30	
Pyrene	ND	230	66	62	6.3	57	58	1.7	40 - 140	30	
Pyridine	ND	230	40	37	7.8	28	29	3.5	40 - 140	30	l,m
% 2,4,6-Tribromophenol	99	%	100	86	15.1	89	90	1.1	30 - 130	30	
% 2-Fluorobiphenyl	74	%	64	57	11.6	56	59	5.2	30 - 130	30	
% 2-Fluorophenol	77	%	67	64	4.6	58	60	3.4	30 - 130	30	
% Nitrobenzene-d5	77	%	66	63	4.7	64	67	4.6	30 - 130	30	
% Phenol-d5	78	%	70	67	4.4	66	67	1.5	30 - 130	30	
% Terphenyl-d14	71	%	52	48	8.0	42	43	2.4	30 - 130	30	

Comment:

Additional 8270 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is at least 10%. (Acid surrogates acceptance range for aqueous samples: 10-110%, for soils 30-130%)

QA/QC Batch 779292 (ug/kg), QC Sample No: CT04100 (CT04068)

Volatiles - Soil (Low Level)

1,1,1,2-Tetrachloroethane	ND	5.0	113	114	0.9	101	102	1.0	70 - 130	20	
1,1,1-Trichloroethane	ND	5.0	106	105	0.9	94	96	2.1	70 - 130	20	
1,1,2,2-Tetrachloroethane	ND	3.0	101	101	0.0	114	110	3.6	70 - 130	20	
1,1,2-Trichloroethane	ND	5.0	98	100	2.0	84	83	1.2	70 - 130	20	
1,1-Dichloroethane	ND	5.0	106	105	0.9	99	100	1.0	70 - 130	20	
1,1-Dichloroethene	ND	5.0	103	101	2.0	93	95	2.1	70 - 130	20	
1,1-Dichloropropene	ND	5.0	98	97	1.0	87	87	0.0	70 - 130	20	
1,2,3-Trichlorobenzene	ND	5.0	103	101	2.0	38	33	14.1	70 - 130	20	m
1,2,3-Trichloropropane	ND	5.0	91	103	12.4	117	114	2.6	70 - 130	20	
1,2,4-Trichlorobenzene	ND	5.0	107	105	1.9	47	42	11.2	70 - 130	20	m
1,2,4-Trimethylbenzene	ND	1.0	104	104	0.0	109	104	4.7	70 - 130	20	
1,2-Dibromo-3-chloropropane	ND	5.0	129	126	2.4	99	95	4.1	70 - 130	20	
1,2-Dibromoethane	ND	5.0	107	108	0.9	97	94	3.1	70 - 130	20	
1,2-Dichlorobenzene	ND	5.0	103	103	0.0	79	73	7.9	70 - 130	20	
1,2-Dichloroethane	ND	5.0	90	90	0.0	83	84	1.2	70 - 130	20	
1,2-Dichloropropane	ND	5.0	99	100	1.0	92	93	1.1	70 - 130	20	
1,3,5-Trimethylbenzene	ND	1.0	105	104	1.0	118	114	3.4	70 - 130	20	
1,3-Dichlorobenzene	ND	5.0	105	103	1.9	87	81	7.1	70 - 130	20	
1,3-Dichloropropane	ND	5.0	99	101	2.0	98	98	0.0	70 - 130	20	
1,4-Dichlorobenzene	ND	5.0	105	104	1.0	87	81	7.1	70 - 130	20	
1,4-dioxane	ND	100	103	113	9.3	116	135	15.1	40 - 160	20	
2,2-Dichloropropane	ND	5.0	117	116	0.9	98	103	5.0	70 - 130	20	
2-Chlorotoluene	ND	5.0	101	99	2.0	112	108	3.6	70 - 130	20	
2-Hexanone	ND	25	97	98	1.0	28	17	48.9	40 - 160	20	m,r
2-Isopropyltoluene	ND	5.0	103	101	2.0	111	107	3.7	70 - 130	20	
4-Chlorotoluene	ND	5.0	104	102	1.9	106	101	4.8	70 - 130	20	
4-Methyl-2-pentanone	ND	25	98	98	0.0	43	34	23.4	40 - 160	20	m,r
Acetone	ND	10	92	89	3.3	53	55	3.7	40 - 160	20	
Acrylonitrile	ND	5.0	111	109	1.8	42	33	24.0	70 - 130	20	m,r
Benzene	ND	1.0	101	100	1.0	90	89	1.1	70 - 130	20	
Bromobenzene	ND	5.0	100	100	0.0	105	103	1.9	70 - 130	20	
Bromochloromethane	ND	5.0	98	99	1.0	92	93	1.1	70 - 130	20	
Bromodichloromethane	ND	5.0	100	101	1.0	88	89	1.1	70 - 130	20	
Bromoform	ND	5.0	119	123	3.3	84	82	2.4	70 - 130	20	
Bromomethane	ND	5.0	88	86	2.3	66	67	1.5	40 - 160	20	
Carbon Disulfide	ND	5.0	106	103	2.9	89	88	1.1	70 - 130	20	
Carbon tetrachloride	ND	5.0	109	109	0.0	92	94	2.2	70 - 130	20	
Chlorobenzene	ND	5.0	99	98	1.0	86	84	2.4	70 - 130	20	

QA/QC Data

SDG I.D.: GCT04068

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits	
Chloroethane	ND	5.0	92	91	1.1	93	94	1.1	70 - 130	20	
Chloroform	ND	5.0	98	98	0.0	90	92	2.2	70 - 130	20	
Chloromethane	ND	5.0	100	99	1.0	88	86	2.3	40 - 160	20	
cis-1,2-Dichloroethene	ND	5.0	100	100	0.0	90	91	1.1	70 - 130	20	
cis-1,3-Dichloropropene	ND	5.0	110	110	0.0	79	76	3.9	70 - 130	20	
Dibromochloromethane	ND	3.0	110	110	0.0	97	98	1.0	70 - 130	20	
Dibromomethane	ND	5.0	96	96	0.0	86	87	1.2	70 - 130	20	
Dichlorodifluoromethane	ND	5.0	95	94	1.1	85	84	1.2	40 - 160	20	
Diethyl ether	ND	5.0	99	99	0.0	99	99	0.0	70 - 130	20	
Di-isopropyl ether	ND	5.0	117	125	6.6	102	106	3.8	70 - 130	20	
Ethyl tert-butyl ether	ND	5.0	117	118	0.9	118	118	0.0	70 - 130	20	
Ethylbenzene	ND	1.0	102	101	1.0	94	93	1.1	70 - 130	20	
Hexachlorobutadiene	ND	5.0	105	102	2.9	81	76	6.4	70 - 130	20	
Isopropylbenzene	ND	1.0	102	101	1.0	133	130	2.3	70 - 130	20	m
m&p-Xylene	ND	2.0	102	101	1.0	92	90	2.2	70 - 130	20	
Methyl ethyl ketone	ND	5.0	102	99	3.0	54	51	5.7	40 - 160	20	
Methyl t-butyl ether (MTBE)	ND	1.0	102	104	1.9	102	102	0.0	70 - 130	20	
Methylene chloride	ND	5.0	101	100	1.0	97	97	0.0	70 - 130	20	
Naphthalene	ND	5.0	103	102	1.0	37	31	17.6	70 - 130	20	m
n-Butylbenzene	ND	1.0	111	107	3.7	103	99	4.0	70 - 130	20	
n-Propylbenzene	ND	1.0	104	102	1.9	125	122	2.4	70 - 130	20	
o-Xylene	ND	2.0	101	100	1.0	88	86	2.3	70 - 130	20	
p-Isopropyltoluene	ND	1.0	103	100	3.0	108	104	3.8	70 - 130	20	
sec-Butylbenzene	ND	1.0	105	103	1.9	119	116	2.6	70 - 130	20	
Styrene	ND	5.0	101	100	1.0	73	69	5.6	70 - 130	20	m
tert-amyl methyl ether	ND	5.0	115	118	2.6	114	113	0.9	70 - 130	20	
tert-Butylbenzene	ND	1.0	103	101	2.0	124	121	2.4	70 - 130	20	
Tetrachloroethene	ND	5.0	100	98	2.0	82	81	1.2	70 - 130	20	
Tetrahydrofuran (THF)	ND	5.0	101	99	2.0	83	81	2.4	70 - 130	20	
Toluene	ND	1.0	99	98	1.0	84	83	1.2	70 - 130	20	
trans-1,2-Dichloroethene	ND	5.0	105	103	1.9	95	97	2.1	70 - 130	20	
trans-1,3-Dichloropropene	ND	5.0	115	117	1.7	83	79	4.9	70 - 130	20	
trans-1,4-dichloro-2-butene	ND	5.0	149	140	6.2	97	87	10.9	70 - 130	20	l
Trichloroethene	ND	5.0	101	99	2.0	87	86	1.2	70 - 130	20	
Trichlorofluoromethane	ND	5.0	96	94	2.1	87	85	2.3	70 - 130	20	
Trichlorotrifluoroethane	ND	5.0	101	98	3.0	91	91	0.0	70 - 130	20	
Vinyl chloride	ND	5.0	102	100	2.0	93	92	1.1	70 - 130	20	
% 1,2-dichlorobenzene-d4	93	%	94	93	1.1	89	87	2.3	70 - 130	20	
% Bromofluorobenzene	88	%	92	92	0.0	76	75	1.3	70 - 130	20	
% Dibromofluoromethane	91	%	93	95	2.1	98	97	1.0	70 - 130	20	
% Toluene-d8	90	%	92	92	0.0	89	89	0.0	70 - 130	20	

Comment:

Additional 8260 criteria: 10% of LCS/LCSD compounds can be outside of acceptance criteria as long as recovery is 40-160%.
The RPD criteria for the LCS/LCSD is 20%,
The MS/MSD RPD criteria is listed above.

l = This parameter is outside laboratory LCS/LCSD specified recovery limits.
m = This parameter is outside laboratory MS/MSD specified recovery limits.
r = This parameter is outside laboratory RPD specified recovery limits.

QA/QC Data

SDG I.D.: GCT04068

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits

If there are any questions regarding this data, please call Phoenix Client Services at extension 200.

RPD - Relative Percent Difference
LCS - Laboratory Control Sample
LCSD - Laboratory Control Sample Duplicate
MS - Matrix Spike
MS Dup - Matrix Spike Duplicate
NC - No Criteria
Intf - Interference
(ISO) - Isotope Dilution

Phyllis Shiller, Laboratory Director
April 28, 2025

Monday, April 28, 2025

Criteria: MA: CAM, S1

State: MA

Sample Criteria Exceedances Report

GCT04068 - KLEINFL-BOSTON

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units

*** No Data to Display ***

Phoenix Laboratories does not assume responsibility for the data contained in this exceedance report. It is provided as an additional tool to identify requested criteria exceedences. All efforts are made to ensure the accuracy of the data (obtained from appropriate agencies). A lack of exceedence information does not necessarily suggest conformance to the criteria. It is ultimately the site professional's responsibility to determine appropriate compliance.

MassDEP Analytical Protocol Certification Form

Laboratory Name: Phoenix Environmental Laboratories, Inc. **Project #:**

Project Location: SHERMAN ST TANK/BELLIS CIRCLE **RTN:**

This Form provides certifications for the following data set: [list Laboratory Sample ID Number(s)]
CT04068, CT04069

Matrices: ☐ Groundwater/Surface Water ☑ Soil/Sediment ☐ Drinking Water ☐ Air ☐ Other:

CAM Protocol (check all that apply below)

8260 VOC CAM II A ☑	7470/7471 Hg CAM III B ☑	MassDEP VPH CAM IV A ☐	8081 Pesticides CAM V B ☐	7196 Hex Cr CAM VI B ☐	MassDEP APH CAM IX A ☐
8270 SVOC CAM II B ☑	7010 Metals CAM III C ☐	MassDEP EPH CAM IV B ☐	8151 Herbicides CAM V C ☐	8330 Explosives CAM VIII A ☐	TO-15 VOC CAM IX B ☐
6010 Metals CAM III A ☑	6020 Metals CAM III D ☐	8082 PCB CAM V A ☑	9012 Total Cyanide/PAC CAM V1 A ☐	6860 Perchlorate CAM VIII B ☐	

Affirmative responses to questions A through F are required for "Presumptive Certainty" status

A	Were all samples received in a condition consistent with those described on the Chain-of-Custody, properly preserved (including temperature*) in the field or laboratory, and prepared/analyzed with method holding times? (* see narrative)	☑ Yes ☐ No
B	Were the analytical method(s) and all associated QC requirements specified in the selected CAM protocol(s) followed?	☑ Yes ☐ No
C	Were all required corrective actions and analytical response actions specified in the selected CAM protocol(s) implemented for all identified performance standard non-conformances?	☑ Yes ☐ No
D	Does the laboratory report comply with all the reporting requirements speified in CAM VII A, "Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data"?	☑ Yes ☐ No
E	a. VPH, EPH, and APH Methods only: Was each method conducted without significant modification(s)? (refer to the individual method(s) for a list of significant modifications). b. APH and TO-15 methods only: Was the complete analyte list reported for each method?	☐ Yes ☐ No ☐ Yes ☐ No
F	Were all applicable CAM protocol QC and performance standard non-conformances identified and evaluated in a laboratory narrative (including all "No" responses to Questions A through E)?	☑ Yes ☐ No

Responses to questions G, H and I below is required for "Presumptive Certainty" status

G	Were the reporting limits at or below all CAM reporting limits specified in the selected CAM protocol(s)?	☑ Yes ☐ No

Data User Note: Data that achieve "Presumptive Certainty" status may not necessarily meet the data usability and representativeness requirements described in 310 CMR 40. 1056(2)(k) and WSC-07-350

H	Were all QC performance standards specified in the CAM protocol(s) achieved? See Sections: SVOA, VOA Narrations .	☐ Yes ☑ No
I	Were results reported for the complete analyte list specified in the selected CAM protocol(s)?	☑ Yes ☐ No

All negative responses must be addressed in an attached laboratory narrative.

I, the undersigned, attest under the pains and penalties of perjury that, based upon my personal inquiry of those responsible for obtaining the information, the material contained in this analytical report is, to the best of my knowledge and belief, accurate and complete.

Authorized Signature: Ethan Lee

Date: Monday, April 28, 2025

Printed Name: Ethan Lee

Position: Project Manager

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

ACCREDITED IN ACCORDANCE WITH nelac NY # 11301

MCP Certification Report

April 28, 2025

SDG I.D.: GCT04068

Cyanide Narration

Were all QA/QC performance criteria specified in the MADEP document CAM achieved? Yes.

Instrument:

LACHAT 04/16/25-1 Ian Gray, Greg Danielewski, Chemist 04/16/25

CT04069

The samples were distilled in accordance with the method.
The initial calibration met criteria.
The calibration check standards (ICV,CCV) met criteria.
The initial and continuing calibration blanks (ICB,CCB) met criteria.

The method blank, laboratory control sample (LCS), and matrix spike (MS) were distilled with the samples.

QC (Batch Specific):

Batch 779630 (CT02371)

CT04069

All LCS recoveries were within 80 - 120 with the following exceptions: None.
Additional: MS acceptance range is 75-125%.

I attest under the pains and penalties of perjury that, based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

ETPH Narration

Were all QA/QC performance criteria specified in the MADEP document CAM achieved? Yes.

Instrument:

AU-XL2 04/24/25-1 Jeff Bucko, Chemist 04/24/25

CT04069 (1X)

The initial calibration (ETPH410I) RSD for the compound list was less than 30% except for the following compounds: None.
As per section 7.2.3, a discrimination check standard was run (424A003_1) and contained the following outliers: None.
The continuing calibration %D for the compound list was less than 30% except for the following compounds:None.

QC (Batch Specific):

Batch 780837 (CT03642)

CT04069

All LCS recoveries were within 50 - 150 with the following exceptions: None.
All LCSD recoveries were within 50 - 150 with the following exceptions: None.
All LCS/LCSD RPDs were less than 30% with the following exceptions: None.
The ETPH/DRO LCS has been normalized based on the alkane calibration.

I attest under the pains and penalties of perjury that, based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

NY # 11301

Certification Report

April 28, 2025

SDG I.D.: GCT04068

Mercury Narration

Were all QA/QC performance criteria specified in the analytical method achieved? Yes.

Instrument:

PSA 04/15/25 07:31 Zade-Anne Taylor, Chemist 04/15/25

CT04069

The initial calibration met criteria and the linear range is defined daily by the calibration range.
The Low-Level Calibration Verification (LLCV) met criteria.
The following Initial Calibration Verification (ICV) compounds did not meet criteria: None.
The following Initial Calibration Blank (ICB) compounds did not meet criteria: None.
The following Continuing Calibration Verification (CCV) compounds did not meet criteria: None.
The following Continuing Calibration Blank (CCB) compounds did not meet criteria: None.

QC (Batch Specific):

Batch 779267 (CT03833)

CT04069

All LCS recoveries were within 75 - 125 with the following exceptions: None.
All LCSD recoveries were within 75 - 125 with the following exceptions: None.
All LCS/LCSD RPDs were less than 30% with the following exceptions: None.
Additional Mercury Criteria: LCS acceptance range is 80-120% for aqueous and for soils the acceptance range is set by vendor limits. MS acceptance range is 75-125% for aqueous and 80-120% for soils.

ICP Metals Narration

Were all QA/QC performance criteria specified in the analytical method achieved? Yes.

Instrument:

ARCOS-3 04/15/25 09:47 Cindy Pearce, Chemist 04/15/25

CT04069

TThe initial calibration met criteria and the linear range is defined daily by the calibration range.
The Low-Level Calibration Verification (LLCV) met criteria.
The following Initial Calibration Verification (ICV) compounds did not meet criteria: None.
The following Initial Calibration Blank (ICB) compounds did not meet criteria: None.
The following Spectral Interference Check compounds did not meet criteria: None.
The following Continuing Calibration Verification (CCV) compounds did not meet criteria: None.
The following Continuing Calibration Blank (CCB) compounds did not meet criteria: None.

QC (Batch Specific):

Batch 779136 (CT04038)

CT04069

All LCS recoveries were within 75 - 125 with the following exceptions: None.
All LCSD recoveries were within 75 - 125 with the following exceptions: None.
All LCS/LCSD RPDs were less than 30% with the following exceptions: None.
Additional Criteria: LCS acceptance range is 80-120% for aqueous and for soils the acceptance range is set by vendor limits. MS acceptance range 75-125%.

PCB Narration

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

ACCREDITED IN ACCORDANCE WITH nelac NY # 11301

MCP Certification Report

April 28, 2025

SDG I.D.: GCT04068

Were all QA/QC performance criteria specified in the MADEP document CAM achieved? Yes.

Instrument:

AU-ECD7 04/24/25-1 Saadia Chudary, Chemist 04/24/25

CT04069 (2X)

The initial calibration (PC0211AI) RSD for the compound list was less than 20% except for the following compounds: None.
The initial calibration (PC0211BI) RSD for the compound list was less than 20% except for the following compounds: None.
The continuing calibration %D for the compound list was less than 20% except for the following compounds:
Samples: CT04069
Preceding CC 424B005 - None.
Succeeding CC 424B020 - DCBP SURR 25%H (20%)

QC (Batch Specific):

Batch 780797 (CT04732)

CT04069

All LCS recoveries were within 40 - 140 with the following exceptions: None.
All LCSD recoveries were within 40 - 140 with the following exceptions: None.
All LCS/LCSD RPDs were less than 30% with the following exceptions: None.

I attest under the pains and penalties of perjury that, based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

SVOA Narration

Were all QA/QC performance criteria specified in the MADEP document CAM achieved? No.

QC Batch 780262 (Samples: CT04069): -----

The QC recoveries for one or more analytes are below method criteria. A slight low bias is likely. (Pyridine)

Instrument:

CHEM28 04/18/25-1 Robert Looney, Chemist 04/18/25

CT04069 (1X)

For 8270 full list, the DDT breakdown and pentachlorophenol & benzidine peak tailing were evaluated in the DFTPP tune and were found to be in control.
For 8270 BN list, benzidine peak tailing was evaluated in the DFTPP tune and was found to be in control.

Initial Calibration Evaluation (CHEM28/28_SVFULL_0411):
100% of target compounds met criteria.
The following compounds had %RSDs >20%: None.
The following compounds did not meet recommended response factors: 2-Nitrophenol 0.062 (0.1), Hexachlorobenzene 0.081 (0.1)

Continuing Calibration Verification (CHEM28/0418_05-28_SVFULL_0411) (MCP Compliance):
Internal standard areas were within 50 to 200% of the initial calibration with the following exceptions: None.
100% of target compounds met criteria.
The following compounds did not meet % deviation criteria: None.
The following compounds did not meet maximum % deviations: None.
The following compounds did not meet recommended response factors: 2-Nitrophenol 0.062 (0.1), Hexachlorobenzene 0.080

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NY # 11301

MCP Certification Report

April 28, 2025

SDG I.D.: GCT04068

SVOA Narration

Instrument:

CHEM28 04/18/25-1 Robert Looney, Chemist 04/18/25

CT04069 (1X)
(0.1)

QC (Batch Specific):

Batch 780262 (CT08037)

CT04069

All LCS recoveries were within 40 - 140 with the following exceptions: None.
All LCSD recoveries were within 40 - 140 with the following exceptions: Pyridine(37%)
All LCS/LCSD RPDs were less than 30% with the following exceptions: None.
Additional 8270 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is at least 10%. (Acid surrogates acceptance range for aqueous samples: 10-110%, for soils 30-130%)

I attest under the pains and penalties of perjury that, based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

VOA Narration

Were all QA/QC performance criteria specified in the MADEP document CAM achieved? No.

QC Batch 779292 (Samples: CT04068): -----

The LCS and/or the LCSD recovery is above the upper range for one or more analytes that were not reported in the sample(s), therefore no significant bias is suspected. (trans-1,4-dichloro-2-butene)

Instrument:

CHEM03 04/13/25-1 Jane Li, Chemist 04/13/25

CT04068 (1X)

Initial Calibration Evaluation (CHEM03/VT-L040625):
94% of target compounds met criteria.
The following compounds had %RSDs >20%: 1,2-Dibromo-3-chloropropane 27% (20%), 2,2-Dichloropropane 23% (20%), Bromoform 23% (20%), trans-1,3-Dichloropropene 27% (20%), trans-1,4-dichloro-2-butene 40% (20%)
The following compounds did not meet Table 4 recommended minimum response factors: trans-1,3-Dichloropropene 0.299 (0.3)

Continuing Calibration Verification (CHEM03/0413_02-VT-L040625) (MCP Compliance):
Internal standard areas were within 50 to 200% of the initial calibration with the following exceptions: None.
97% of target compounds met criteria.
The following compounds did not meet % deviation criteria: 1,2-Dibromo-3-chloropropane 25%H (20%), Bromoform 22%H (20%), trans-1,4-dichloro-2-butene 34%H (20%)
The following compounds did not meet maximum % deviations: None.
The following compounds did not meet Table 4 recommended minimum response factors: None.

QC (Batch Specific):

Batch 779292 (CT04100) CHEM03 4/13/2025-1

CT04068(1X)

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NY # 11301

MCP Certification Report

April 28, 2025

SDG I.D.: GCT04068

VOA Narration

QC (Batch Specific):

Batch 779292 (CT04100) CHEM03 4/13/2025-1

CT04068(1X)

All LCS recoveries were within 70 - 130 with the following exceptions: trans-1,4-dichloro-2-butene(149%)
All LCSD recoveries were within 70 - 130 with the following exceptions: trans-1,4-dichloro-2-butene(140%)
All LCS/LCSD RPDs were less than 20% with the following exceptions: None.
Additional 8260 criteria: 10% of LCS/LCSD compounds can be outside of acceptance criteria as long as recovery is 40-160%.
The RPD criteria for the LCS/LCSD is 20%,
The MS/MSD RPD criteria is listed above.

I attest under the pains and penalties of perjury that, based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

Cooler: Yes ☒ No ☐
Coolant: IPK ☒ ICE ☐ No ☐

PHOENIX
Environmental Laboratories, Inc.

CT/MA/RI CHAIN OF CUSTODY RECORD

Temp 2.9° C Pg of

587 East Middle Turnpike, P.O. Box 370, Manchester, CT 06040
Email: makrina@phoenixlabs.com Fax (860) 645-0823
Client Services (860) 645-1102

Data Delivery/Contact Options:
☐ Fax:
☐ Phone:
☒ Email: lstone@kleinfelder.com

Customer: Kleinfelder
Address: One Beacon Street, Suite 8100
Boston, MA 02118
Attn: Lisa Stone

Project: Sherman St Tank/Bellis Circle
Report to: Lisa Stone
Invoice to: AccountspayableUS@Kleinfelder.com
Quote #

Project P.O: 20231168.006A

This section MUST be completed with Bottle Quantities.

Client Sample - Informetion - Identificetion
Sampler's Signature _____ Date: _____

Matrix Code:
DW=Drinking Water **GW**=Ground Water **SW**=Surface Water **WW**=Waste Water
RW=Raw Water **SE**=Sediment **SL**=Sludge **S**=Soil **SD**=Solid **W**=Wipe **OIL**=Oil
B=Bulk **L**=Liquid **X** = _____(Other)

PHOENIX USE ONLY SAMPLE #	Customer Sample Identification	Sample Matrix	Date Sampled	Time Sampled	*MS/MSD (May be billable at analysis unit rate)	VOCs by 8260	TPH by 8015D Fingerprint	MCP 14 Metals	SVOCs by 8270	PCBs by 8082	Flashpoint by 1010	Corrosivity/pH by 9045	Reactivity by 9014 and 9030	Conductivity by 2510		GL Amber 8 oz.[ ] w/H_3PO_4 [ ]$NAHSO_4$	Soil VOA Vials [1] methanol [X] H_2O	GL Soil container (4) oz	GL Soil container (8) oz	40 ml VOA Vial [ ] As is [ ] HCl	GL Amber 1000ml [ ] As is [ ] HCl	PL As is [ ]250ml [ ]500ml [ ]H_2SO_4	PL H_2SO_4 [ ]250ml [ ]500ml [ ]1000ml	PL HNO_3 250ml	PL NaOH 250ml	Bacteria Bottle w/thio	Bacteria Bottle as is	
04068	KLF-3 (16-18')		4/10/25	14:15	X											3												
* 04069	KLF-3 (14-18')		4/10/25	14:15		X	X	X	X	X	X	X	X				1	1										

Relinquished by:	Accepted by:	Date:	Time:
		4/11/25	11 22 AM
		4/11/25	1530

Comments, Special Requirements or Regulations:
* 8oz jar rec'd broken, transferred at lab. EJ

Turnaround Time:
☐ 1 Day* ☒ Standard
☐ 2 Days* ☐ Other
☐ 3 Days*
☐ 4 Days*
☐ 5 Days*

RI
☐ RES DEC
☐ I/C DEC
☐ GA Leachability
☐ GB Leachability
☐ GA -GW Objectives
☐ GB -GW Objectives
☐ Other

CT
☐ RCP Cert
☐ GWPC
☐ SWPC
☐ GA PMC
☐ GB PMC
☐ SWPC
☐ RES DEC
☐ I/C DEC

MA
☒ MCP Certification
☐ GW-1 ☒ RCS-1 / RCGW-1
☐ GW-2 ☐ RCS-2 / RCGW-2
☐ GW-3 ☐ _____
☐ S-1
☐ S-2
☐ S-3
☐ SW Protection

Data Format
☒ Excel
☒ PDF
☐ GIS/Key
☐ EQuIS
☐ Other

Data Package
☐ Tier II Checklist*
☒ Full Data Package*
☐ Phoenix Std
☐ Other

***MS/MSD are considered site samples and will be billed as such in accordance with the prices quoted.**

* SURCHARGES MAY APPLY

State where samples were collected: MA

* SURCHARGE APPLIES