



PHASE II SCOPE OF WORK

RTN: 4-3024519 &
4-19944
3 Philipps Road
Holbrook, Massachusetts

Former Holbrook Chemical
Corporation

225604.01

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TABLE OF CONTENTS

SECTION	PAGE NO.
1. INTRODUCTION.....	1-1
2. BACKGROUND	2-1
2.1 Site Description	2-1
2.2 Site History	2-1
2.3 Release History	2-1
2.3.1 RTN 4-3024519	2-1
2.3.2 RTN 4-19944	2-2
2.3.3 Development of PIP	2-3
2.4 Environmental Assessment History	2-3
2.5 Nangle Consulting Associates Inc. Investigation- August 2004.....	2-3
2.6 Woodard & Curran Environmental Site Assessment Report– June 15, 2006.....	2-3
2.7 Woodard & Curran Supplemental Subsurface Evaluation– June 8-11, 2009	2-6
2.8 Woodard & Curran Soil Borings - November 25, 2009	2-7
3. PRELIMINARY CONCEPTUAL SITE MODEL.....	3-1
3.1 Site Topography and Drainage.....	3-1
3.2 Site Geology and Stratigraphy.....	3-1
3.3 Site Hydrogeology	3-1
3.4 Nature and Extent of OHM	3-1
3.4.1 Soil	3-1
3.4.2 Groundwater.....	3-1
3.5 Phase II CSA Approach.....	3-2
4. PHASE II CSA ACTIVITIES	4-1
4.1 Site Access and Mobilization Coordination.....	4-1
4.2 Groundwater Sampling.....	4-1
4.2.1 Groundwater Flow Measurement and Analysis	4-1
4.3 Risk Characterization	4-1
4.3.1 Site Visit	4-1
4.3.2 Data Evaluation/Hazard Identification	4-2
4.3.3 Exposure Assessment.....	4-2
4.3.4 Toxicity Assessment.....	4-2
4.3.5 Environmental Risk Assessment	4-2
4.3.6 Safety and Public Welfare Risk Characterization	4-2
4.3.7 Risk Characterization Report.....	4-3
4.4 Phase II CSA Report	4-3
5. PROJECT SCHEDULE	5-1

LIST OF FIGURES

Figure 1: Site Locus

Figure 2: Site Plan

LIST OF TABLES

Table 1: Summary of Concentrations of Contaminants Detected in Soil

Table 2: Summary of Concentrations of Contaminants Detected in Groundwater

APPENDICES

Appendix A: BWSC-108 – Comprehensive Response Action Transmittal Form

1. INTRODUCTION

On behalf of TLA-Holbrook, LLC (TLA), Woodard and Curran, Inc. (Woodard & Curran) has prepared this Phase II Scope of Work Submittal for the Site at 3 Philipps Road in Holbrook, Massachusetts. In accordance with the Massachusetts Contingency Plan (MCP), 310 CMR 40.0833, this Scope of Work (SOW) describes an approach to meet Phase II Comprehensive Site Assessment (CSA) objectives. The objectives of a Phase II CSA, as outlined in 310 CMR 40.0834(2), include descriptions of the scope and nature of investigative and sampling programs that will be conducted to characterize the source, extent, and migration pathways of oil and/or hazardous material, and the risk of harm posed to health, safety, public welfare or the environment.

As part of this project, TLA has conducted a Public Involvement Plan (PIP) public meeting on October 27, 2009 and issued a Final PIP Report dated December 2009. Related project documents and copies of reports required under the MCP, including a copy of this Scope of Work, are on file with the Reference Librarian at the Holbrook Public Library and may be reviewed during normal library hours.

2. BACKGROUND

2.1 SITE DESCRIPTION

The subject property is located at 3 Philipps Road in Holbrook, Massachusetts (herein referred to as the Site). The property is an 11-acre parcel of land. The coordinates of the property are 42° 9' 7"N latitude, 71° 1' 39" longitude. The Universal Transverse Mercator (UTM) coordinates are 4668632 Northing and 332475 Easting in Zone 19. **Figure 1** provides a Site Locus. **Figure 2** is a Site Plan. The Site and immediate surrounding properties are classified as industrial warehouse properties. Nearby properties are residentially, commercially, and industrially developed. The nearest human receptors are residents living west of the Site along Centre Street. Notably, the Baird & McGuire EPA Superfund Site abuts the Site to the south-southeast. No institutions, which are defined as hospitals, health care facilities, orphanages, nursing homes, convalescent homes, educational facilities, or correctional facilities that provide overnight housing, were identified within 500 feet of the Site during site reconnaissance conducted in June 2009.

2.2 SITE HISTORY

From 1960 to approximately 1998, the subject property was owned by the Holbrook Chemical Corporation and operated as a chemical storage, processing, and sales company. Prior to 1960 the subject property was owned by the Portland Chemical Works. The Holbrook Chemical Corporation abandoned the property in the late 1990s and the Town of Holbrook took the land through tax title in June 2005. The Site is now occupied by Falvey Steel, Inc. TLA is under a lease with the Town of Holbrook to construct and operate a municipal solid waste transfer station at the Site, with the Town retaining ownership of the property.

Industrial process or the storage of large quantities of chemicals does not currently occur at the property. Between December 2004 and June 2009, subsurface investigation activities were conducted at the property. Results indicate that concentrations of metals, VOCs, pesticides, extractable petroleum hydrocarbons are present in soil above applicable Method 1 Standards. Imminent Hazards have not been identified at the disposal site.

2.3 RELEASE HISTORY

Information available from the MassDEP's Sites/Reportable Releases Lookup database (<http://www.mass.gov/dep/bwsc/sites/report.htm>) was used to identify releases in the area. Review of this database indicates that two release tracking numbers (RTNs) exist for the Site, 4-3024519 and 4-19944. RTN 4-19944 has been linked to RTN 4-3024519 through a previous submission to MassDEP. No releases, other than the release conditions assigned to the RTNs noted above, have been documented for the Site. The release history summaries for RTN 4-3024519 and 4-19944 are presented below.

2.3.1 RTN 4-3024519

The Massachusetts Department of Environmental Protection (DEP) was notified of a reportable release at the Site by the current operator of the Site, Falvey Steel Castings, Inc., in December 2004, when lead, beryllium, bis(2-Ethylhexyl)phthalate and C11-C22 Aromatic Hydrocarbons were detected in soil samples collected by Nangle Consulting Associates, Inc. during a limited due diligence investigation in August 2004 prior to a pending transfer of property ownership. Based on the reportable concentrations, Three Philipps Road, LLC (prospective purchaser at the time) withdrew from the Purchase and Sale agreement and provided the results from the due diligence assessment to both the owner (Holbrook Chemical) and current operator (Falvey Steel Castings, Inc.). Based upon the notification date associated with RTN 4-3024519, the disposal site is currently classified as a Tier 1D site by the DEP.

The reportable concentrations (RCs) detected in August 2004 are summarized below (results reported in milligrams per kilogram [mg/kg]). Given the location of the Site within a current drinking water resource area (i.e., IWPA), the appropriate category for soil that requires MassDEP notification is RCS-1:

- Bis (2-Ethylhexyl)phthalate (13,000 and 140,000 mg/kg) was detected in soil contained within a manhole structure behind the former mixing building and near an exterior piping/valve station behind the former mixing building, respectively.
- Beryllium (1.2 mg/kg) was detected in a soil sample obtained at the Site. It is assumed that the sample was obtained near the exterior piping/valve station behind the former mixing building as the location is not stated in any documentation available to Woodard & Curran.
- Lead (450 mg/kg) was detected in soil in the manhole structure behind the former mixing building.
- C11-C22 Aromatic Hydrocarbons (5,830 mg/kg) were detected in soil within the manhole structure behind the former mixing building.

These reportable concentrations were reported to DEP on December 24, 2004, by Falvey Steel Castings, a tenant on the property at the time and are the result of historical operations at the site when the Holbrook Chemical Co. operated on the property. At the time of notification, RTN 3-024519 was assigned to the disposal site. However, MassDEP implemented regional boundary changes in May 2006 and re-assigned the current RTN (RTN 4-3024519). The Site is currently designated a Tier II priority disposal site.

2.3.2 RTN 4-19944

The Massachusetts Department of Environmental Protection (DEP) was notified of a reportable release at the Site by the Town of Holbrook on July 3, 2007, when methylene chloride, trichloroethene, hexachlorobenzene, bis(2-ethylhexyl)phthalate, endrin aldehyde, C11-C-22 aromatic hydrocarbons, 1,4-dichlorobenzene, 1,2,4-trichlorobenzene, 4,4'-DDT, 4,4'-DDE, and arsenic were detected in soil samples collected during a limited supplemental due diligence investigation in March 2006. Pentachlorophenol was detected at an estimated concentration of 4.8 micrograms per liter ($\mu\text{g/L}$) in a groundwater sample obtained from monitoring well MW-1. The pentachlorophenol concentration is reported by the laboratory as "estimated" due to the concentration being slightly below the laboratory's method detection limit for the compound. Pentachlorophenol was not detected in soil samples collected at the Site and in other Site groundwater monitoring wells. Therefore, the presence of pentachlorophenol in groundwater is unlikely.

MassDEP was notified of the reportable condition and RTN 4-19944 was assigned to the release. This release is linked to RTN 4-3024519 and all subsequent response actions for this release will be completed under RTN 4-3024519. The reportable concentrations (RCs) detected in June 2006 are summarized below and the sample locations are shown in **Figure 2**. Given the location of the Site within a current drinking water resource area (i.e., Interim Wellhead Protection Area or IWPA), the appropriate category for soil and groundwater categories that require MassDEP notification is RCS-1:

- Methylene chloride (0.310 mg/kg) was detected in a soil sample obtained from boring MW-1 north of the largest Site building in the central portion of the Site.
- Trichloroethene (1.7 mg/kg) was detected in a soil sample obtained from boring S-13 north of the former mixing building in the central portion of the Site.
- Hexachlorobenzene (1.4 mg/kg) was detected in a soil sample obtained from boring S-7 completed along the southern exterior of the site garage building.
- Bis (2-Ethylhexyl)phthalate (4,600 mg/kg) was detected in a soil sample obtained from boring S-10 completed within the aboveground storage tank farm containment area.

- Endrin Aldehyde (52 mg/Kg) was detected in a soil sample obtained from boring S-9 completed in the roadway between the site garage building and aboveground storage tank farm within the aboveground storage tank containment area.
- C11-C22 aromatic hydrocarbons were detected in a soil sample obtained from boring S-7 and S-10 (259 mg/kg and 1,310 mg/kg, respectively).
- 1,4-dichlorobenzene was detected in a soil sample obtained from boring S-7 (1.3 mg/kg).
- 1,2,4-trichlorobenzene was detected in a soil sample obtained from boring S-7 (6.8 mg/kg).
- 4,4'-DDT was detected in a soil sample obtained from boring S-7 (47 mg/kg).
- 4,4'-DDE was detected in a soil sample obtained from boring MW-1 (12 mg/kg).
- Arsenic (52 mg/kg) was detected in a soil sample obtained from boring S-11 completed within the aboveground storage tank containment area.

2.3.3 Development of PIP

On September 1, 2009, the Site was designated as a Public Involvement Plan (PIP) site at the request of 10 Holbrook residents. On October 27, 2009, a public meeting was held at the Holbrook Town Hall to present the Draft PIP. During the public meeting the status of the Holbrook Chemical site was presented, including the historical information known about the operations at the former chemical company site and the results of the site assessment activities that have been completed to date. Also presented at the meeting were the proposed PIP and the anticipated future site assessment activities that will be completed at the site. Twelve (12) residents of Holbrook, Randolph and Braintree attended the meeting, including five (5) of the PIP petitioners.

The PIP was finalized with the inclusion of responses to public comments in December 2009.

2.4 ENVIRONMENTAL ASSESSMENT HISTORY

Site investigation activities have been performed at the Site. These investigations were conducted by Nangle Consulting Associates, Inc. (NCA) of Canton, Massachusetts in August 2004 and W&C in March 2007, June 2009 and November 2009.

2.5 NANGLE CONSULTING ASSOCIATES INC. INVESTIGATION- AUGUST 2004

On August 16, 2004, NCA completed a limited subsurface evaluation that included soil borings, the installation of groundwater monitoring wells, and the sampling of soil within a manhole structure and piping valve station behind the former Site mixing building. Elevated levels of bis(2-ethylhexyl)phthalate, lead, beryllium, and C11-C22 aromatic hydrocarbons were detected in the samples collected from the Site structures.

2.6 WOODARD & CURRAN ENVIRONMENTAL SITE ASSESSMENT REPORT- JUNE 15, 2006

An environmental site assessment (ESA) was conducted by Woodard & Curran to further investigate the baseline environmental quality of soil and groundwater at the Site through the installation of soil probes and groundwater monitoring wells. The field investigation methods and procedures included: pre-field activities; soil probe advancement and soil sampling; monitoring well installation and development; and groundwater gauging and sampling. These activities are summarized below.

Soil Sampling

W&C subcontracted with Geologic-Earth Exploration, Inc. of Norfolk, Massachusetts to advance 12 soil borings (S-1, S-5, S-7 through S-15, and S-17) at the Site on March 8, 2006. Soil borings were advanced using a Geoprobe® 5400 DT direct push track rig to depths ranging from 1 to 12 feet below ground surface (bgs). The locations of the borings are depicted on **Figure 2**. The rationale for establishing the boring locations is provided below:

- Boring S-1: assess soil near the Site office building;
- Boring S-5: assess soil upgradient of the aboveground tank farm;
- Boring S-7: assess soil downgradient from the Site garage;
- Borings S-8 through S-15: assess soil at the tank farm; and
- Boring S-17: assess soil downgradient of the former gasoline underground tanks as noted in the review of files available at the Holbrook Fire Department.

Continuous soil samples were collected and screened with a total organic vapor monitor (OVM) at 4-foot intervals. Shallow (0-4 feet) and deep (4-8 feet) soil samples were collected. A total of 16 soil samples were submitted to New England Testing Laboratory (NET Lab) of East Providence, Rhode Island for analysis on a standard turnaround time basis for one or more of the following compounds:

- Volatile Organic Compounds (VOCs) by United States Environmental Protection Agency (USEPA) Method 8260;
- Semi-Volatile Organic Compounds (SVOCs) by USEPA Method 8270C;
- Volatile Petroleum Hydrocarbons (VPH) including target compounds by DEP Method VPH-04-1;
- Extractable Petroleum Hydrocarbons (EPH) including target Polynuclear Aromatic Hydrocarbons (PAHs) by DEP Method EPH-04-1;
- Polychlorinated Biphenyls (PCBs) by USEPA Method 8082;
- Organochlorine Pesticides by USEPA Method 8081;
- Total Resource Conservation and Recovery Act (RCRA) 8 metals including Arsenic, Barium, Cadmium, Chromium, Lead, Mercury, Silver, and Selenium by USEPA Methods 6010B/7000/7471A; and
- Dioxins by USEPA Method 8280.

Groundwater Sampling

Woodard & Curran subcontracted with Geologic-Earth Exploration, Inc. of Norfolk, Massachusetts to install three (3) groundwater monitoring wells (MW-1, MW-2, and MW-4) at the Site on March 9, 2006. Wells MW-3, MW-5, and MW-6 are existing wells shown on **Figure 2** that were installed prior to 2006 by unknown parties. Wells MW-7SD and MW-7T/WB were installed by the USEPA to assist in assessing potential groundwater impacts in the area due to the presence of the abutting Baird & McGuire Superfund Site. Well MW-1 was installed to assess upgradient groundwater quality and well MW-2 was installed to assess groundwater quality near the Site garage building. Well MW-4 was to be installed downgradient of the former mixing building and UST; however, only wells MW-1 and MW-2 were installed. Well MW-4 could not be installed due to refusal of the drilling equipment on large cobbles at 10 feet below ground surface (bgs), which prevented the augers from reaching the groundwater table to allow for installation of the well.

A groundwater sample was collected from each of the on-site monitoring wells, including the existing wells MW-3, MW-5, MW-6, MW-7SD and MW-7T/WB, with a peristaltic pump using modified low flow sampling methodology. Samples were collected in pre-preserved containers provided by the analytical laboratory. Samples were packed on ice and submitted to NET Lab for analysis for one or more of the following compounds:

- VOCs by USEPA Method 8260B;
- VPH including target compounds by MassDEP Method VPH-04-1;
- EPH including target PAHs by MassDEP Method EPH-04-1;
- Dissolved RCRA 8 metals including Arsenic, Barium, Cadmium, Chromium, Lead, Mercury, Silver, and Selenium by USEPA Methods 6010B/7000/7471A. Dissolved metals samples were field filtered through a 0.45-micron groundwater filter prior to being preserved;

- Organochlorine Pesticides by USEPA Method 8081; and
- Semi-Volatile Organic Compounds (SVOCs) by USEPA Method 8270C.

Sampling Results

The results of Woodard & Curran's March 8 and 9, 2006 soil sampling and March 15, 2006 groundwater sampling are summarized below and in **Tables 1** and **2**, respectively. Copies of the associated laboratory analytical reports have been previously submitted to MassDEP as part of the Phase I Initial Site Investigation.

Soil

No indications of contamination, such as staining or odors, were noted in soil and no elevated headspace readings were recorded with the photoionization detector (PID) in soil screened during the March 2006 ESA. On-site soils generally consisted of fine to coarse sand and gravel with cobbles. Refusal, due either to encountering bedrock or large cobbles, was encountered at several probe locations at depths ranging from 1 to 8 feet below ground surface (bgs). Approximately 1 to 10 feet of fill material consisting of a mixture of sand and gravel with some coal ash was found in probes S-7 through S-15 and S-17 as located in **Figure 2**.

Low, i.e. less than MCP Reportable Concentrations, concentrations of volatile organic compounds, semi-volatile organic compounds, extractable petroleum hydrocarbons, pesticides and total metals were detected in several of the soil samples analyzed. Based upon the results, the following soil samples contained oil and /or hazardous waste (OHM) concentrations that exceed the most stringent applicable Method 1 S-1/GW-1 standards:

- 1,4-dichlorobenzene (1.3 mg/Kg), 1,2,4-trichlorobenzene (6.8 mg/Kg), Hexachlorobenzene (1.4 mg/Kg), and arsenic (24 mg/Kg) were detected in the shallow (0-4 feet bgs) soil sample from probe S-7.
- Bis(2-Ethylhexyl)phthalate (4,600 mg/Kg) and C11-C22 Aromatic Hydrocarbons (1,310 mg/Kg) were detected in the S-10 probe sample taken from a depth of 0-4 feet bgs.
- Trichloroethene was detected at a concentration of 1.7 mg/Kg in a soil sample obtained from probe S-13 at a depth of 0-4 feet bgs.
- The pesticides 4,4'-DDT (47 mg/Kg) and 4,4'-DDE (12 mg/Kg) were detected in the soil sample obtained from probe S-11 at a depth of 0-4 feet bgs and MW-1 at a depth of 0-7 feet bgs, respectively.

MCP Method I standards have not been established for the VOC methylene chloride and pesticide endrin aldehyde. However, the concentrations detected during the 2006 subsurface investigation exceeded RCS-1 reporting criteria, as previously discussed in Section 2.6 of this report. Methylene Chloride, a common laboratory contaminant, was detected in only one soil sample (MW-1) analyzed. No other significant contaminant concentrations were reported in the MW-1 soil sample. Therefore Methylene Chloride is not considered a contaminant of concern at the Site but should be included in future analytical protocols.

Based on the soil sampling completed, it appears that the majority of the soil contamination at the Site is near surface (0-4 feet bgs) and limited to the bermed chemical silo area and the exterior piping/valve station behind the former mixing building. All available evidence indicates that the soil contamination is the result of historical operations at the Holbrook Chemical Co. facility.

Groundwater

No chemical sheens or odors were noted in the purge water from any of the 7 monitoring wells during development or sampling activities. The depth to groundwater varied from approximately 10.42 feet in the western portion of the subject property to approximately 4.87 feet in the eastern portion of the subject property.

Low, i.e. less than MCP Reportable Concentrations, concentrations of volatile organic compounds, volatile petroleum hydrocarbons, semi-volatile organic compounds, extractable petroleum hydrocarbons and dissolved metals were detected in the several of the groundwater samples analyzed. The semi-volatile organic compound and wood preservative/pesticide Pentachlorophenol was detected at an estimated concentration of 4.8 micrograms per liter (µg/L) in the groundwater sample obtained from monitoring well MW-1. The Pentachlorophenol concentration is reported by the laboratory as “estimated” due to the concentration being slightly below the laboratory’s method detection limit for the compound. Pentachlorophenol was not detected in soil samples collected at the Site and in other Site groundwater monitoring wells. Therefore, the presence of pentachlorophenol in groundwater at the Site is unlikely but must be included in future groundwater analytical protocols.

2.7 WOODARD & CURRAN SUPPLEMENTAL SUBSURFACE EVALUATION– JUNE 8-11, 2009

W&C subcontracted with Paul Aldinger and Associates (PAA) of East Providence, Rhode Island to complete 10 soil borings for the purposes of a geotechnical (potential Site development) and environmental investigation. W&C personnel were on-site in order to collect soil samples to gain additional analytical information to further support this Phase I ISI and tier classification. New Hampshire Boring, Inc. of Brockton, Massachusetts, as a subcontractor to PPA, advanced 10 soil borings for the purposes of environmental investigation (B-1, B-2, B-3, B-4, B-5, SAB-1, SAB-2, SAB-3B, SAB-4, and SAB-5) at the Site between June 8, 2009 and June 11, 2009. Soil borings were advanced using a truck-mounted auger rig and track-mounted auger rig to depths ranging from 6 to 14.5 feet below ground surface (bgs). The locations of the borings are depicted on **Figure 2** and completed in order to further assess Site conditions in areas that either had not been previously assessed or needed further assessment.

Continuous soil samples were collected and screened with a PID at 2-foot intervals to a depth of 6 feet bgs at all boring locations. Continuous sampling continued to a depth of 10 feet bgs at borings B-2, B-4, and B-5. Sampling to a depth of 10 feet bgs was attempted at B-3; however, refusal was encountered and the boring was terminated at 8 feet bgs. Composite soil samples were collected from shallow (0-6 feet) and deep (6-8, and 6-10 feet) soil samples at boring locations B-2, B-4 and B-5. Composite soil samples were collected from only the shallow (0-6 feet) soil samples at boring locations B-1, SAB-1 (0-4 feet), SAB-2 and SAB-3B. Soil samples collected from borings B-3, SAB-4, and SAB-5 were collected and field screened with a PID only. The maximum PID reading of 7.5 ppmv reported during the soil sampling was reported for a soil sample obtained at a depth of 8-10 feet at boring B-5.

The encountered soils consisted of sand, gravel and cobbles, with refusal encountered at each boring location with the exception of borings SAB-4 and SAB-5. Depth to refusal ranged from 2 to 14 feet below existing ground surface.

A total of 10 soil samples were submitted to Alpha Analytical Laboratories of Westborough, Massachusetts (Alpha) for analysis on a standard turnaround time basis for one or more of the following compounds:

- Volatile Organic Compounds (VOCs) by United States Environmental Protection Agency (USEPA) Method 8260;
- Base/Neutral Extractable Semi-Volatile Organic Compounds (SVOCs) by USEPA Method 8270C;
- Extractable Petroleum Hydrocarbons (EPH) including target Polynuclear Aromatic Hydrocarbons (PAHs) by DEP Method EPH-04-1;
- Organochlorine Pesticides by USEPA Method 8081;
- Total Resource Conservation and Recovery Act (RCRA) 8 metals including Arsenic, Barium, Cadmium, Chromium, Lead, Mercury, Silver, and Selenium by USEPA Methods 6010B/7000/7471A.

Sampling Results

The results of Woodard & Curran’s 2009 soil sampling event are summarized in **Table 1**. No compounds were detected at a concentration that exceeded an applicable S-1/GW-1 Soil Standard. Matrix interference resulted in several of the reported detection levels (RDL), specifically for 2-methylnaphthalene, acenaphthylene and dibenzo(a,h)anthracene, to

exceed the S-1/GW-1 and S-2/GW-1 Soil Standards. Due to poor sample recovery, the composite soil sample from boring B-5 (6-10') was analyzed for high range volatile organic compounds only and although no compounds were detected, the RDLs exceeded the applicable Method 1 Soil Standards.

2.8 WOODARD & CURRAN SOIL BORINGS - NOVEMBER 25, 2009

On November 25, 2009, Woodard & Curran oversaw the advancement of five (5) soil probes (WCB-1 through WCB-5) in the fenced-off area between the existing "Baird & McGuire" fence and the 3 Philipps Road property line. The purpose for the soil borings was to obtain soil samples to characterize the portion of the 3 Philipps Road property that had been included within the Baird & McGuire site security fence. The soil probe locations were as shown on **Figure 2**. Each soil probe was advanced using direct-push technology to a depth of 10 feet below ground surface (bgs) with the exception of probe WCB-3 which was advanced to a depth of 4 feet bgs where refusal was encountered.

Groundwater was encountered at a range in depth of 5-7 feet bgs at the probe locations which did not encounter refusal. The soil at each probe location consisted primarily of native fine, medium and coarse sands with some gravel. No fill material or ash was encountered at any of the 5 soil probe locations.

Continuous soil samples were obtained from each probe location. The soil samples were field screened for volatile organic compounds (VOC) using a photoionization detector (PID). The highest PID reading recorded was 0.4 ppmV at probe location WCB-3 at a depth of 2 feet bgs. As no ash was encountered at the soil probe locations, a total of five (5) soil samples were submitted to Alpha Laboratories, a Massachusetts certified laboratory located in Westborough, Massachusetts. All five soil samples were analyzed, with a standard 10-day turn around, for total arsenic. Samples from the two probe locations that reported detectable VOC concentrations during field screening (WCB-3 and WCB-4) were also analyzed for volatile organic compounds by EPA Method 8260B.

The analytical results are presented in **Table 1**. Arsenic was detected in each soil probe sample with the maximum arsenic concentration of 23 mg/Kg being reported at soil probe location WCB-4. The average total arsenic concentration for the five probe samples is 7.2 mg/kg. No detectable VOC concentrations were reported in the samples submitted from probes WCB-3 and WCB-4.

3. PRELIMINARY CONCEPTUAL SITE MODEL

3.1 SITE TOPOGRAPHY AND DRAINAGE

The Site, currently defined as the property at 3 Philipps Road, (refer to **Figure 2**) is almost entirely unpaved (with the exception of driveways and Site building footprints). The western portion of the Site is generally flat with some low lying wetland areas. The central and eastern portions of the Site slope to the east-southeast towards the Cochato River.

Since the majority of the Site is unpaved, precipitation events likely result in infiltration and may result in runoff to topographic lows such as the nearby wetlands.

3.2 SITE GEOLOGY AND STRATIGRAPHY

Two main soil units were identified at the Site during subsurface investigations. These units consist primarily of fill atop native materials. The fill layer is encountered at the central and eastern portions of the Site where improvements have occurred and consists of poorly graded sand, gravel, and cobble. The maximum fill thickness is 8 feet. The native materials are generally described as silty sands with varying amounts of fine gravel.

3.3 SITE HYDROGEOLOGY

The depth to groundwater at the Site occurs within 15 feet of the ground surface and appears to be deepest at the eastern portion of the disposal site (with respect to the local topography), with relative depths to groundwater generally decreasing with increasing distance in a westerly direction across the disposal site. Groundwater flow at the property has not been determined, but is likely to have localized flow components towards the nearest wetland features, with an overall westerly flow corresponding with the flow direction of the Cochato River which is located approximately 200 feet to the east of the eastern Site boundary. Based on the overall topography of the area, proximately of the Cochato River, and measured flow at the Baird & McGuire EPA Superfund Site, groundwater flow is to the east-southeast.

3.4 NATURE AND EXTENT OF OHM

3.4.1 Soil

Soil sampling results from soil boring activities at the Site are discussed in Sections 2.6 and 2.7. Soil analytical data for detected compounds are presented in Table 1. Subsurface assessment work has been performed to delineate the nature and extent of the impacted soil at the Site. Impacts to the soil appear to be primarily limited to the near surface (0-4 feet bgs) soils in the Silo Containment Area shown in **Figure 2** and in the area of the existing processing building.

Arsenic was identified in five (5) soil samples obtained from the southern portion of the Site. The average reported arsenic concentration was 7.2 mg/kg with the reported arsenic concentration of a soil sample obtained at a depth of 3 feet bgs at WCB-4 (23 mg/kg) being the only reported concentration that exceeded the S-1/GW-1 soil cleanup standard for arsenic (20 mg/kg).

3.4.2 Groundwater

Laboratory analysis of groundwater samples collected from the Site to date indicates that there were no detected concentrations of compounds that exceeded the applicable GW-1 Method 1 Standards with the exception of pentachlorophenol. Pentachlorophenol was reported in one monitoring well (MW-1) at an estimated concentration that slightly exceeded the Method 1 Standard but the value was estimated as it was below the reported laboratory detection limit. Pentachlorophenol was not reported in any other groundwater or soil samples obtained from the Site.

3.5 PHASE II CSA APPROACH

At this Site, near surface soils in the vicinity of the Silo Containment Area and the existing former processing building appear to have been primarily impacted by the surficial releases of pesticides, chlorinated organic compounds and arsenic. The work outlined in this Phase II CSA SOW has been designed to evaluate the impact these releases have had on the groundwater at the Site. The Phase II Scope of Work includes sampling the existing groundwater monitoring wells located at the Site. The data will be compiled, compared to previous groundwater analytical data and used to support a Phase II Comprehensive Site Assessment report that includes information about the source and nature and extent of the release as well as a characterization of the potential risk posed by the release to human health, the environment, safety, and public welfare.

Section 4 presents a detailed description of the planned Phase II CSA activities.

4. PHASE II CSA ACTIVITIES

The Phase II CSA activities focus on characterizing the source, nature, extent, and migration pathways of releases of oil and/or hazardous materials and the risk of harm posed to health, safety, public welfare or the environment from the OHM at the Site.

4.1 SITE ACCESS AND MOBILIZATION COORDINATION

Woodard & Curran will coordinate the mobilization of the equipment required to obtain groundwater samples from each existing groundwater monitoring well at the Site. Access will be obtained from the Massachusetts Department of Environmental Protection (MassDEP) to obtain groundwater samples from wells M-7T/WD and M-7SD, located along the eastern property boundary, which were previously sampled in March 2006 in support of the Phase I Initial Site Investigation for the Site.

4.2 GROUNDWATER SAMPLING

Woodard & Curran will collect groundwater samples from the existing seven (7) monitoring wells at the Site, i.e. MW-1, MW-2, MW-3, MW-5, MW-6, M-7 T/WD and M-7 SD to document current groundwater conditions at the Site and determine if groundwater characteristics have changed at the Site since last characterized in 2006. Groundwater will be purged from the existing wells prior to sampling and samples will be collected using dedicated polyethylene tubing, a peristaltic pump and modified low flow sampling techniques. Groundwater samples will be collected in laboratory-supplied sample containers and transported to the analytical laboratory under Chain of Custody protocol. The groundwater samples will be analyzed for Method 8260 volatile organics, Method 8270 semi-volatile organics, and RCRA 8 dissolved metals.

4.2.1 Groundwater Flow Measurement and Analysis

In order to evaluate the direction of groundwater flow at the Site, depth to water level measurements will be collected using electronic water level meters and recorded for each of the existing monitoring wells. This data will be used, in conjunction with the measuring point elevation of the sample points, to develop a groundwater contour map depicting the direction of groundwater flow and to determine horizontal groundwater gradients.

4.3 RISK CHARACTERIZATION

Based on our current understanding of Site conditions and potential future site uses, Woodard & Curran anticipates that a Method 3 risk characterization will be conducted to define potential Site risks. A Method 3 assessment involves development of a risk characterization based on site-specific conditions when neither Method 1 nor Method 2 is considered appropriate. Method 3 is a cumulative risk approach that compares site-specific risk estimates to a cumulative Cancer Risk Limit of an excess lifetime cancer risk of one-in-one hundred thousand, and a cumulative Non-Cancer Risk Limit that has a Hazard Index equal to one. Under Method 3, the risk of harm to human health, safety, public welfare and the environment is characterized for all current and reasonably foreseeable future land uses. Reasonably foreseeable activities and/or uses may be managed and/or restricted by implementation of an Activity and Use Limitation (AUL, or deed restriction). The following tasks are required for a Method 3 risk characterization under the MCP:

4.3.1 Site Visit

A site visit will be conducted to assist in identifying several important parameters, including:

- current and reasonably foreseeable land uses;
- exposure points;
- potential receptors; and
- potential exposure routes.

4.3.2 Data Evaluation/Hazard Identification

Environmental data collected from the Site during the field program will be evaluated for use in the risk characterization. This evaluation will include a summary of the ranges of detected concentrations, frequencies of detection, location of maximum detected concentrations, and calculation of mean and median concentrations. After summarizing the data, chemicals of concern will be selected that will be evaluated in the risk characterization.

4.3.3 Exposure Assessment

Potential exposure pathways will be identified for both current and reasonably foreseeable future uses. The first step in this process identifies potential receptors, exposure points, and exposure routes. Next, the applicable MADEP soil and groundwater standards will be identified. Finally, the potential exposure for each receptor and exposure pathway will be evaluated, and doses will be estimated. Currently, the Site is an abandoned former chemical company with a portion of the property being used by a metal casting fabrication company for offices and storage of castings. Future plans for the property include the construction of a municipal solid waste transfer station.

The exposure assessment will be quantified by: 1) determining appropriate exposure point concentrations, and 2) calculating pathway specific intakes (such as, body weight, ingestion rates, lengths of exposure, etc.) for the identified exposure routes. The intake and dose calculations for various exposure routes will incorporate both site-specific values and default assumptions recommended by MADEP.

4.3.4 Toxicity Assessment

The dose-response assessment is the characterization of the relationship between the dose of a chemical of concern and the incidence of adverse health effects in an exposed population. Both carcinogenic and non-carcinogenic endpoints for each compound are identified and evaluated. The most recent toxicity values for carcinogenic effects (i.e., slope factors and unit risks) and non-carcinogenic effects (i.e., reference doses and reference concentrations) published in the literature will be utilized based on the routes of exposure (e.g., oral, dermal, inhalation) and exposure periods (e.g., chronic and subchronic). This information will be obtained by using EPA's *Integrated Risk Information System* (IRIS), which is a database that contains information on toxic substances. Other secondary information sources which will be evaluated include the *Health Effects Assessment Summary Tables* (HEAST) and the Agency for Toxic Substances Disease Registry (ATSDR) toxicological profiles. This information will be used to calculate cancer and non-cancer endpoints for the selected chemical of concern.

4.3.5 Environmental Risk Assessment

A Stage I Environmental Screening, which includes a habitat assessment, preliminary evaluation exposure pathways and potential receptors, and screening against ecotoxicological benchmarks, will be completed in accordance with the MCP. The purpose of the Stage I Environmental Screening is to determine whether there is current or potential future exposure of Environmental Receptors to compounds located at or emanating from the Site. If current or potential future exposures are not ruled out in Stage I Environmental Screening, those exposures are considered to be "potentially significant exposures" and a Stage II Environmental Risk Characterization is required.

4.3.6 Safety and Public Welfare Risk Characterization

The MADEP also requires that the risk characterization include a discussion on the impact of safety and public welfare under both current and reasonably foreseeable uses of the Site. To that end, sampling data will be compared to applicable or suitably analogous safety and public welfare guidelines and policies (e.g., Upper Concentration Limits or UCLs).

4.3.7 Risk Characterization Report

Using the information generated during the exposure assessment and the toxicity assessment, Woodard & Curran will estimate the carcinogenic and non-carcinogenic risks to human health in both quantitative and qualitative terms. The risk characterization compares both the measured and predicted exposure levels against chemical-specific toxicity information to determine if the current or future concentrations of chemicals of concern, either individually or in mixtures, at the Site present a potential risk to human health or the environment. The risk estimates will be compared to standard benchmark values specified by MADEP (e.g., excess lifetime cancer risk of one in 100,000 and a hazard index of 1.0 for non-carcinogens). These findings, as well as the uncertainties inherently present, will be combined and summarized to provide a comprehensive risk characterization. A description of the uncertainties will be a critical feature of the characterization, since it will demonstrate the level of confidence in the risk estimates and, if necessary, focus any remedial efforts.

4.4 PHASE II CSA REPORT

Woodard & Curran will evaluate the results of the field investigation and risk characterization and prepare a Phase II CSA report that presents a detailed description of the undertakings and recommendations for further actions. The Phase II CSA report will include site diagrams, showing the location of all wells and key surface features, boring and sampling logs, data tables, and laboratory analytical reports. Woodard & Curran will compare the results with the MCP to evaluate whether additional response actions are likely to be required and will include an interpretation of the data as they relate to environmental risk associated with the Site.

5. PROJECT SCHEDULE

Woodard & Curran proposes to complete the groundwater sampling described in this Phase II CSA Scope of Work in November 2012. Woodard & Curran anticipates that the Method 3 Risk Assessment and Phase II CSA will be completed and submitted to MassDEP by January 20, 2013.

LIST OF FIGURES

Figure 1: Site Locus

Figure 2: Site Plan



0 1000 FEET 0 500 1000 METERS
 Printed from TOPO! ©2000 Wildflower Productions (www.topo.com)

Base Map Source:
 TOPO!™ © 2000
 Wildflower Productions

LAT: 42° 09' 12" N
 LONG: -71° 01' 37" W

DES.BY: DR.BY: PAW CK.BY: JE

Former Holbrook Chemical Co.
 3 Philipps Road
 Holbrook, Massachusetts

FIGURE 1 **SITE LOCUS**

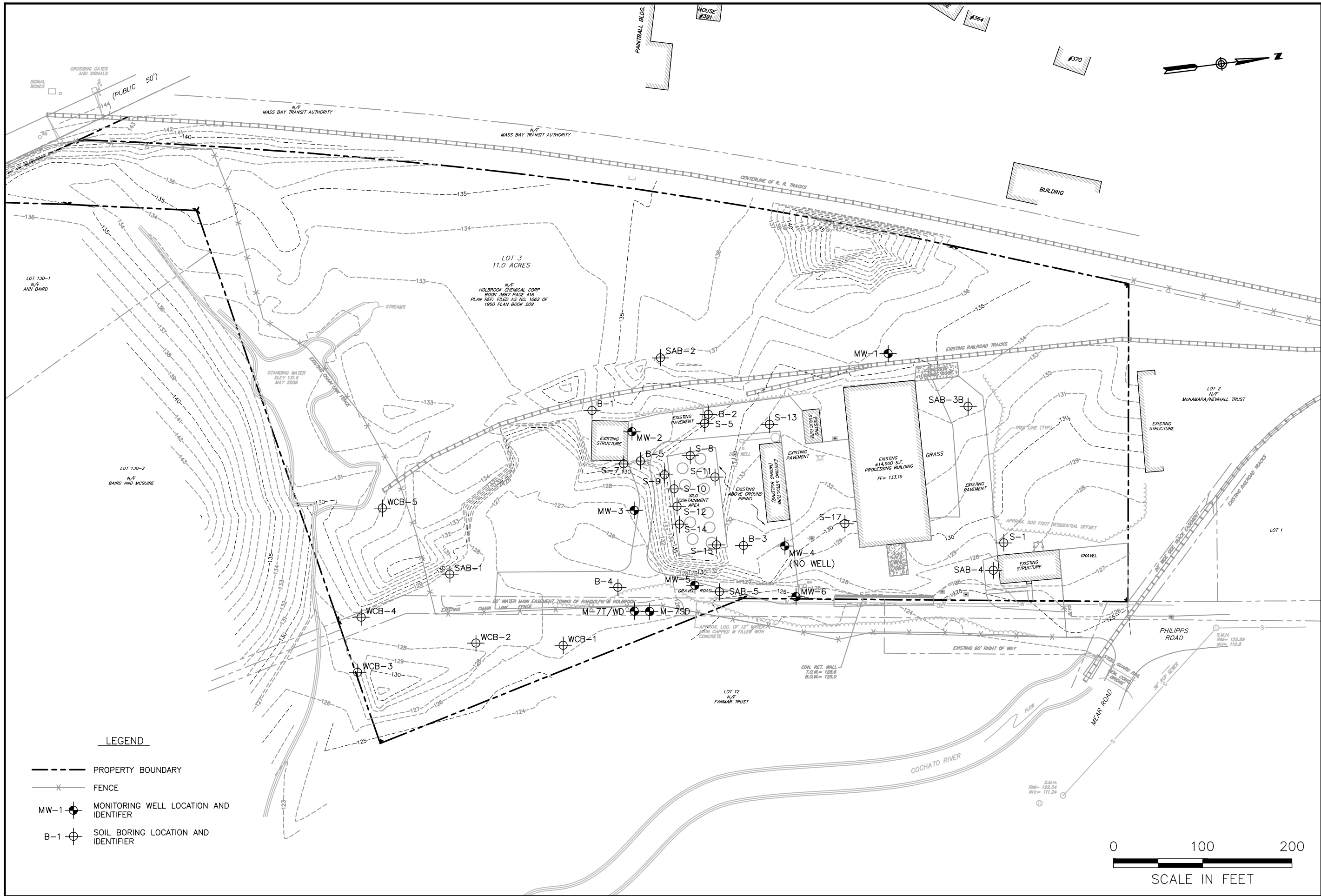
SCALE: AS SHOWN JOB NO.: 225604.00

DATE: SEPTEMBER 2012 FILE NAME:



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COMMITMENT & INTEGRITY DRIVE RESULTS



LIST OF TABLES

Table 1: Summary of Concentrations of Contaminants Detected in Soil

Table 2: Summary of Concentrations of Contaminants Detected in Groundwater

TABLE 1
CONCENTRATION OF CONTAMINANTS DETECTED IN SOIL
3 Philipps Road
Holbrook, Massachussets

Sample Location Identifier:	Method 1	Method 1	Method 1	Method 3	S-1	S-5	S-7	S-8	S-8	S-9	S-9
Date:	Cleanup Std.	Cleanup Std.	Cleanup Std.	UCL	3/8/06	3/8/06	3/8/06	3/8/06	3/8/06	3/8/06	3/8/06
Sample Depth (Feet bgs):	(S-1/GW-1)	(S-3/GW-1)	(S-3/GW-2)		0-4	0-4	0-4	0-4	4-8	0-4	4-8
<u><i>Volatile Organic Compounds (mg/Kg)</i></u>							NA				
Acetone	6	6	50	10000	<0.160	<0.150		<0.200	<0.170	<0.210	<0.240
Chloromethane	NS	NS	NS	NS	<0.032	<0.030		<0.039	<0.034	<0.041	<0.047
Bromomethane	10	10	3	7000	<0.032	<0.030		<0.039	<0.034	<0.041	<0.047
Methylene Chloride	NS	NS	NS	7000	<0.032	<0.030		<0.039	<0.034	<0.041	<0.047
Tetrachloroethene	1.0	1.0	10	5000	<0.032	<0.030		<0.039	<0.034	<0.041	<0.047
Trichloroethene	0.3	0.3	2	5000	<0.032	<0.030		0.200	<0.034	<0.041	<0.047
Benzene	2	2	700	2000	<0.032	<0.030		<0.039	<0.034	<0.041	<0.047
m & p-Xylene	400	400	300	2000	<0.063	<0.059		<0.078	<0.068	<0.083	<0.094
Toluene	30	30	300	10000	<0.032	<0.030		<0.039	<0.034	<0.041	<0.047
Chlorobenzene	1	1	3	10000	<0.032	<0.030		<0.039	<0.034	<0.041	<0.047
<u><i>Volatile Petroleum Hydrocarbons (mg/Kg)</i></u>						NA	NA				
Benzene	2	2	700	2000	<0.3			<0.3	<0.3	<0.3	<0.3
Ethylbenzene	80	80	2500	10000	<0.3			<0.3	<0.3	<0.3	<0.3
Methyl-tert-butyl ether	0.1	0.1	100	5000	<0.3			<0.3	<0.3	<0.3	<0.3
Naphthalene	4	4	40	10000	<1			<1	<1	<1	<1
Toluene	30	30	300	10000	<0.3			<0.3	<0.3	<0.3	<0.3
m&p-Xylenes	400	400	300	2000	<0.6			<0.6	<0.6	<0.6	<0.6
o-Xylene	400	400	300	10000	<0.6			<0.6	<0.6	<0.6	<0.6
C5-C8 Aliphatic Hydrocarbons	100	500	500	5000	<3.0			<3.0	<3.0	<3.0	<3.0
C9-C12 Aliphatic Hydrocarbons	1000	5000	5000	20000	<3.0			<3.0	<3.0	<3.0	<3.0
C9-C10 Aromatic Hydrocarbons	100	100	5000	5000	<3.0			<3.0	<3.0	<3.0	<3.0
<u><i>Semivolatile Organics (mg/Kg)</i></u>											
Phenol	1	1	50	10000	0.190	0.180	0.240	0.260	0.220	0.170	0.170
Benzoic acid	NS	NS	NS	NS	<0.770	<0.750	<0.820	<0.810	<0.800	0.084	<0.790
4-Methylphenol	NS	NS	NS	NS	<0.051	<0.050	0.056	<0.054	<0.053	<0.051	<0.053
1,4-Dichlorobenzene	0.7	0.7	4	2000	<0.051	<0.050	1.300	<0.054	<0.053	<0.051	<0.053
2,6-Dinitrotoluene	NS	NS	NS	NS	<0.051	<0.050	<0.055	<0.054	<0.053	<0.051	<0.053
2-Methylnaphthalene	4	4	2000	10000	<0.051	<0.050	0.073	<0.054	<0.053	<0.051	<0.053
Benzo(a)anthracene	7	300	300	100	<0.051	<0.050	<0.055	<0.054	<0.053	<0.051	<0.053
Naphthalene	4	4	40	10000	<0.051	<0.050	<0.055	<0.054	<0.053	<0.051	<0.053
Benzo(b)fluoranthene	7	300	300	100	<0.051	<0.050	<0.055	<0.054	<0.053	<0.051	<0.053
Hexachlorobenzene	0.7	30	30	30	<0.051	<0.050	1.400	<0.054	<0.053	<0.051	<0.053
1,2,4-Trichlorobenzene	2	100	70	10000	<0.051	<0.050	6.800	<0.054	<0.053	<0.051	<0.053
4-Bromophenyl phenyl ether	NS	NS	NS	NS	<0.051	<0.050	<0.055	<0.054	0.088	<0.051	<0.053
Butyl benzyl phthalate	NS	NS	NS	NS	<0.051	<0.050	<0.055	0.089	<0.053	0.230	<0.053

TABLE 1
CONCENTRATION OF CONTAMINANTS DETECTED IN SOIL
 3 Philipps Road
 Holbrook, Massachussets

Sample Location Identifier:	Method 1	Method 1	Method 1	Method 3	S-1	S-5	S-7	S-8	S-8	S-9	S-9
Date:	Cleanup Std.	Cleanup Std.	Cleanup Std.	UCL	3/8/06	3/8/06	3/8/06	3/8/06	3/8/06	3/8/06	3/8/06
Sample Depth (Feet bgs):	(S-1/GW-1)	(S-3/GW-1)	(S-3/GW-2)		0-4	0-4	0-4	0-4	4-8	0-4	4-8
Di-n-octyl phthalate	NS	NS	NS	NS	<0.150	<0.150	<0.160	<0.160	<0.160	<0.150	<0.160
Di-n-Butylphthalate	NS	NS	NS	NS	0.420 ¹	0.230 ¹	0.330 ¹	0.420 ¹	0.560 ¹	0.420 ¹	0.230 ¹
Chrysene	7	40	40	400	<0.051	<0.050	<0.055	<0.054	<0.053	<0.051	<0.053
Pyrene	1000	5000	5000	10000	<0.051	<0.050	<0.055	<0.054	<0.053	<0.051	<0.053
Phenanthrene	700	700	2500	10000	<0.051	<0.050	0.064	<0.054	<0.053	<0.051	<0.053
Fluoranthene	1000	5000	5000	10000	<0.051	<0.050	<0.055	<0.054	<0.053	<0.051	<0.053
bis(2-Ethylhexyl)phthalate	100	100	1000	10000	0.270 ¹	0.550 ¹	5.300 ¹	0.530 ¹	0.270 ¹	1.100 ¹	0.270 ¹

TABLE 1
CONCENTRATION OF CONTAMINANTS DETECTED IN SOIL
3 Philipps Road
Holbrook, Massachussets

Sample Location Identifier:	Method 1	Method 1	Method 1	Method 3	S-1	S-5	S-7	S-8	S-8	S-9	S-9
Date:	Cleanup Std.	Cleanup Std.	Cleanup Std.	UCL	3/8/06	3/8/06	3/8/06	3/8/06	3/8/06	3/8/06	3/8/06
Sample Depth (Feet bgs):	(S-1/GW-1)	(S-3/GW-1)	(S-3/GW-2)		0-4	0-4	0-4	0-4	4-8	0-4	4-8
<u>EPH (mg/Kg)</u>											
Naphthalene	4	4	40	10000	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
2-Methylnaphthalene	4	4	2000	10000	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Phenanthrene	700	700	2500	10000	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Acenaphthylene	100	100	2500	10000	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Acenaphthene	20	20	5000	10000	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Fluorene	400	400	5000	10000	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Anthracene	1000	5000	5000	10000	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Fluoranthene	1000	5000	5000	10000	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Pyrene	1000	5000	5000	10000	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)anthracene	7	300	300	100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Chrysene	7	40	40	400	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(b)fluoranthene	7	300	300	100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(k)fluoranthene	70	3000	3000	400	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene	2	30	30	100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Indeno(1,2,3-cd)pyrene	7	300	300	100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Dibenzo(a,h)anthracene	0.7	30	30	100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(g,h,i)perylene	1000	2500	2500	10000	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
C9-C18 Aliphatic Hydrocarbons	1000	5000	5000	20000	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0
C19-C36 Aliphatic Hydrocarbons	2500	5000	5000	20000	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0
C11-C22 Aromatic Hydrocarbons	200	200	5000	10000	<10.0	<10.0	259	16	<10.0	<10.0	<10.0
<u>Dioxins (ug/Kg)</u>	NS	NS	NS	NS	NA	NA	ND	NA	NA	NA	NA
<u>Polychlorinated Biphenyls (PCBs) (mg/Kg)</u>	2	2	2	100	ND	ND	ND	ND	ND	ND	ND
<u>Pesticides (ug/Kg)</u>											
4,4'-DDE	3	30	30	90000	<10	NA	<10	<10	<10	<10	<10
4,4'-DDT	3	30	30	90000	<10	NA	47	<10	<10	<10	<10
Endrin aldehyde	NS	NS	NS	NS	<10	NA	<10	<10	<10	57	<10
<u>Metals (mg/Kg)</u>											
Arsenic	20	20	20	300	< 0.69	0.79	24	4.89	<0.71	<0.67	<0.66
Barium	1000	5000	5000	10000	16	21	32	36	20	23	27
Cadmium	2	30	30	800	0.41	0.33	0.36	0.51	0.43	0.34	0.46
Chromium (total)	30	200	200	10000	6.93	4.69	11	12	5.04	7.26	11
Lead	300	300	300	6000	5.21	4.49	20	6.93	4.75	5.45	4.28
Mercury	20	300	30	600	<0.061	<0.064	<0.071	<0.066	<0.068	<0.069	<0.069
Selenium	400	800	800	10000	<0.69	<0.66	<0.71	<0.73	<0.71	<0.67	<0.66
Silver	100	200	200	2000	<0.34	<0.33	<0.36	<0.36	<0.35	<0.34	<0.33

TABLE 1
CONCENTRATION OF CONTAMINANTS DETECTED IN SOIL
 3 Philipps Road
 Holbrook, Massachussets

Sample Location Identifier:	Method 1	Method 1	Method 1	Method 3	S-1	S-5	S-7	S-8	S-8	S-9	S-9
Date:	Cleanup Std.	Cleanup Std.	Cleanup Std.	UCL	3/8/06	3/8/06	3/8/06	3/8/06	3/8/06	3/8/06	3/8/06
Sample Depth (Feet bgs):	(S-1/GW-1)	(S-3/GW-1)	(S-3/GW-2)		0-4	0-4	0-4	0-4	4-8	0-4	4-8
Notes:											
Detectable concentrations highlighted in yellow.											
Bold Type - Concentration exceeds applicable Method 1 S-1 Cleanup Standard.											
Italicized Type - Concentration exceeds applicable Method 1 S-3 Cleanup Standard.											
NA = Not Analyzed.											
ND = None Detected.											
NS = No Standard.											
¹ Compound reported in blank.											
< = Less than minimum reporting limit as indicated by the laboratory.											

TABLE 1
CONCENTRATION OF CONTAMINANTS DETECTED IN SOIL
3 Philipps Road
Holbrook, Massachussets

Sample Location Identifier:	Method 1	Method 1	Method 1	Method 3	S-10	S-11	S-11	S-12	S-12	S-13	S-14
Date:	Cleanup Std.	Cleanup Std.	Cleanup Std.	UCL	3/8/06	3/8/06	3/8/06	3/8/06	3/8/06	3/8/06	3/8/06
Sample Depth (Feet bgs):	(S-1/GW-1)	(S-3/GW-1)	(S-3/GW-2)		0-4	0-4	4-8	0-4	4-7	0-4	0-4
<u><i>Volatile Organic Compounds (mg/Kg)</i></u>											
Acetone	6	6	50	10000	<0.140	<0.240	<0.230	<0.140	<0.150	<0.150	<0.140
Chloromethane	NS	NS	NS	NS	<0.028	<0.048	<0.046	<0.027	<0.030	<0.031	<0.028
Bromomethane	10	10	3	7000	<0.028	<0.048	<0.046	<0.027	<0.030	<0.031	<0.028
Methylene Chloride	NS	NS	NS	7000	<0.028	<0.048	<0.046	<0.027	<0.030	<0.031	<0.028
Tetrachloroethene	1.0	1.0	10	5000	<0.028	<0.048	<0.046	<0.027	<0.030	0.170	<0.028
Trichloroethene	0.3	0.3	2	5000	<0.028	<0.048	0.063	<0.027	<0.030	1.700	<0.028
Benzene	2	2	700	2000	<0.028	<0.048	<0.046	<0.027	<0.030	0.035	<0.028
m & p-Xylene	400	400	300	2000	<0.057	0.061	<0.093	<0.054	<0.059	<0.061	<0.056
Toluene	30	30	300	10000	<0.028	0.097	<0.046	<0.027	<0.030	<0.031	<0.028
Chlorobenzene	1	1	3	10000	<0.028	<0.048	<0.046	<0.027	<0.030	<0.031	<0.028
<u><i>Volatile Petroleum Hydrocarbons (mg/Kg)</i></u>											
Benzene	2	2	700	2000	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Ethylbenzene	80	80	2500	10000	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Methyl-tert-butyl ether	0.1	0.1	100	5000	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Naphthalene	4	4	40	10000	<1	<1	<1	<1	<1	<1	<1
Toluene	30	30	300	10000	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
m&p-Xylenes	400	400	300	2000	<0.6	<0.6	<0.6	<0.6	<0.6	<0.6	<0.6
o-Xylene	400	400	300	10000	<0.6	<0.6	<0.6	<0.6	<0.6	<0.6	<0.6
C5-C8 Aliphatic Hydrocarbons	100	500	500	5000	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0
C9-C12 Aliphatic Hydrocarbons	1000	5000	5000	20000	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0
C9-C10 Aromatic Hydrocarbons	100	100	5000	5000	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0
<u><i>Semivolatile Organics (mg/Kg)</i></u>											
Phenol	1	1	50	10000	0.260	0.270	0.240	0.330	0.070	0.210	0.180
Benzoic acid	NS	NS	NS	NS	<0.850	<0.760	<0.850	<0.820	<0.820	<0.800	<0.770
4-Methylphenol	NS	NS	NS	NS	<0.057	<0.051	<0.057	<0.055	<0.055	<0.054	<0.052
1,4-Dichlorobenzene	0.7	0.7	4	2000	<0.057	<0.051	<0.057	<0.055	<0.055	<0.054	<0.052
2,6-Dinitrotoluene	NS	NS	NS	NS	<0.057	<0.051	<0.057	<0.055	<0.055	<0.054	<0.052
2-Methylnaphthalene	4	4	2000	10000	<0.057	<0.051	0.064	<0.055	<0.055	<0.054	<0.052
Benzo(a)anthracene	7	300	300	100	0.062	<0.051	<0.057	<0.055	<0.055	<0.054	<0.052
Naphthalene	4	4	40	10000	<0.057	<0.051	<0.057	<0.055	<0.055	<0.054	<0.052
Benzo(b)fluoranthene	7	300	300	100	<0.057	<0.051	0.075	<0.055	<0.055	<0.054	0.160
Hexachlorobenzene	0.7	30	30	30	<0.057	<0.051	<0.057	<0.055	<0.055	<0.054	<0.052
1,2,4-Trichlorobenzene	2	100	70	10000	<0.057	<0.051	<0.057	<0.055	<0.055	<0.054	<0.052
4-Bromophenyl phenyl ether	NS	NS	NS	NS	<0.057	<0.051	<0.057	<0.055	<0.055	<0.054	<0.052
Butyl benzyl phthalate	NS	NS	NS	NS	<0.057	<0.051	<0.057	<0.055	<0.055	<0.054	<0.052

TABLE 1
CONCENTRATION OF CONTAMINANTS DETECTED IN SOIL
 3 Philipps Road
 Holbrook, Massachussets

Sample Location Identifier:	Method 1	Method 1	Method 1	Method 3	S-10	S-11	S-11	S-12	S-12	S-13	S-14
Date:	Cleanup Std.	Cleanup Std.	Cleanup Std.	UCL	3/8/06	3/8/06	3/8/06	3/8/06	3/8/06	3/8/06	3/8/06
Sample Depth (Feet bgs):	(S-1/GW-1)	(S-3/GW-1)	(S-3/GW-2)		0-4	0-4	4-8	0-4	4-7	0-4	0-4
Di-n-octyl phthalate	NS	NS	NS	NS	<0.170	<0.150	<0.170	0.610	<0.160	<0.160	<0.150
Di-n-Butylphthalate	NS	NS	NS	NS	0.320 ¹	0.210 ¹	0.380 ¹	0.350 ¹	0.410 ¹	0.320 ¹	0.190 ¹
Chrysene	7	40	40	400	<0.057	<0.051	0.070	<0.055	<0.055	<0.054	0.057
Pyrene	1000	5000	5000	10000	0.065	<0.051	0.081	<0.055	<0.055	<0.054	<0.052
Phenanthrene	700	700	2500	10000	<0.057	<0.051	0.110	<0.055	<0.055	<0.054	<0.052
Fluoranthene	1000	5000	5000	10000	0.083	<0.051	0.088	<0.055	<0.055	<0.054	<0.052
bis(2-Ethylhexyl)phthalate	100	100	1000	10000	4600 ¹	5.200 ¹	0.500 ¹	6.600 ¹	9.300 ¹	4.600 ¹	0.800 ¹

TABLE 1
CONCENTRATION OF CONTAMINANTS DETECTED IN SOIL
3 Philipps Road
Holbrook, Massachussets

Sample Location Identifier:	Method 1	Method 1	Method 1	Method 3	S-10	S-11	S-11	S-12	S-12	S-13	S-14
Date:	Cleanup Std.	Cleanup Std.	Cleanup Std.	UCL	3/8/06	3/8/06	3/8/06	3/8/06	3/8/06	3/8/06	3/8/06
Sample Depth (Feet bgs):	(S-1/GW-1)	(S-3/GW-1)	(S-3/GW-2)		0-4	0-4	4-8	0-4	4-7	0-4	0-4
<u>EPH (mg/Kg)</u>											
Naphthalene	4	4	40	10000	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
2-Methylnaphthalene	4	4	2000	10000	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Phenanthrene	700	700	2500	10000	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Acenaphthylene	100	100	2500	10000	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Acenaphthene	20	20	5000	10000	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Fluorene	400	400	5000	10000	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Anthracene	1000	5000	5000	10000	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Fluoranthene	1000	5000	5000	10000	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Pyrene	1000	5000	5000	10000	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)anthracene	7	300	300	100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Chrysene	7	40	40	400	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(b)fluoranthene	7	300	300	100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(k)fluoranthene	70	3000	3000	400	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene	2	30	30	100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Indeno(1,2,3-cd)pyrene	7	300	300	100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Dibenzo(a,h)anthracene	0.7	30	30	100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(g,h,i)perylene	1000	2500	2500	10000	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
C9-C18 Aliphatic Hydrocarbons	1000	5000	5000	20000	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0
C19-C36 Aliphatic Hydrocarbons	2500	5000	5000	20000	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0
C11-C22 Aromatic Hydrocarbons	200	200	5000	10000	1310	<10.0	20	150	149	19	<10.0
<u>Dioxins (ug/Kg)</u>	NS	NS	NS	NS	NA	NA	NA	NA	NA	NA	NA
<u>Polychlorinated Biphenyls (PCBs) (mg/Kg)</u>	2	2	2	100	ND	ND	ND	ND	ND	ND	ND
<u>Pesticides (ug/Kg)</u>											
4,4'-DDE	3	30	30	90000	<10	<10	<10	<10	<10	<10	<10
4,4'-DDT	3	30	30	90000	<10	<10	<10	<10	<10	<10	<10
Endrin aldehyde	NS	NS	NS	NS	<10	<10	<10	<10	73	<10	<10
<u>Metals (mg/Kg)</u>											
Arsenic	20	20	20	300	1.30	52	4.11	0.67	<0.69	2.52	<0.69
Barium	1000	5000	5000	10000	20	19	57	32	24	25	35
Cadmium	2	30	30	800	0.34	<0.34	0.62	0.33	0.35	0.88	0.62
Chromium (total)	30	200	200	10000	7.51	6.59	5.82	12	8.05	3.93	12
Lead	300	300	300	6000	5.88	58	9.16	5.15	5.41	11	5.60
Mercury	20	300	30	600	<0.076	<0.059	<0.075	<0.066	<0.060	<0.065	<0.068
Selenium	400	800	800	10000	<0.68	<0.69	<0.78	<0.67	<0.69	<0.59	<0.69
Silver	100	200	200	2000	<0.34	<0.34	<0.39	<0.33	<0.35	<0.29	<0.35

TABLE 1
CONCENTRATION OF CONTAMINANTS DETECTED IN SOIL
 3 Philipps Road
 Holbrook, Massachussets

Sample Location Identifier:	Method 1	Method 1	Method 1	Method 3	S-10	S-11	S-11	S-12	S-12	S-13	S-14
Date:	Cleanup Std.	Cleanup Std.	Cleanup Std.	UCL	3/8/06	3/8/06	3/8/06	3/8/06	3/8/06	3/8/06	3/8/06
Sample Depth (Feet bgs):	(S-1/GW-1)	(S-3/GW-1)	(S-3/GW-2)		0-4	0-4	4-8	0-4	4-7	0-4	0-4
Notes:											
Detectable concentrations highlighted in yellow.											
Bold Type - Concentration exceeds applicable Method 1 S-1 Cleanup Standard.											
Italicized Type - Concentration exceeds applicable Method 1 S-3 Cleanup Standard.											
NA = Not Analyzed.											
ND = None Detected.											
NS = No Standard.											
¹ Compound reported in blank.											
< = Less than minimum reporting limit as indicated by the laboratory.											

TABLE 1
CONCENTRATION OF CONTAMINANTS DETECTED IN SOIL
3 Philipps Road
Holbrook, Massachussets

Sample Location Identifier:	Method 1	Method 1	Method 1	Method 3	S-15	S-17
Date:	Cleanup Std.	Cleanup Std.	Cleanup Std.	UCL	3/8/06	3/8/06
Sample Depth (Feet bgs):	(S-1/GW-1)	(S-3/GW-1)	(S-3/GW-2)		0-1	0-4
<u><i>Volatile Organic Compounds (mg/Kg)</i></u>						NA
Acetone	6	6	50	10000	<0.230	
Chloromethane	NS	NS	NS	NS	<0.045	
Bromomethane	10	10	3	7000	<0.045	
Methylene Chloride	NS	NS	NS	7000	<0.045	
Tetrachloroethene	1.0	1.0	10	5000	<0.045	
Trichloroethene	0.3	0.3	2	5000	<0.045	
Benzene	2	2	700	2000	<0.045	
m & p-Xylene	400	400	300	2000	<0.090	
Toluene	30	30	300	10000	<0.045	
Chlorobenzene	1	1	3	10000	<0.045	
<u><i>Volatile Petroleum Hydrocarbons (mg/Kg)</i></u>						
Benzene	2	2	700	2000	<0.3	<0.3
Ethylbenzene	80	80	2500	10000	<0.3	<0.3
Methyl-tert-butyl ether	0.1	0.1	100	5000	<0.3	<0.3
Naphthalene	4	4	40	10000	<1	<1
Toluene	30	30	300	10000	<0.3	<0.3
m&p-Xylenes	400	400	300	2000	<0.6	<0.6
o-Xylene	400	400	300	10000	<0.6	<0.6
C5-C8 Aliphatic Hydrocarbons	100	500	500	5000	<3.0	<3.0
C9-C12 Aliphatic Hydrocarbons	1000	5000	5000	20000	<3.0	<3.0
C9-C10 Aromatic Hydrocarbons	100	100	5000	5000	<3.0	<3.0
<u><i>Semivolatile Organics (mg/Kg)</i></u>						NA
Phenol	1	1	50	10000	0.310	
Benzoic acid	NS	NS	NS	NS	<0.880	
4-Methylphenol	NS	NS	NS	NS	<0.059	
1,4-Dichlorobenzene	0.7	0.7	4	2000	<0.059	
2,6-Dinitrotoluene	NS	NS	NS	NS	<0.059	
2-Methylnaphthalene	4	4	2000	10000	0.075	
Benzo(a)anthracene	7	300	300	100	<0.059	
Naphthalene	4	4	40	10000	0.075	
Benzo(b)fluoranthene	7	300	300	100	<0.059	
Hexachlorobenzene	0.7	30	30	30	<0.059	
1,2,4-Trichlorobenzene	2	100	70	10000	<0.059	
4-Bromophenyl phenyl ether	NS	NS	NS	NS	0.100	
Butyl benzyl phthalate	NS	NS	NS	NS	<0.059	

TABLE 1
CONCENTRATION OF CONTAMINANTS DETECTED IN SOIL
 3 Philipps Road
 Holbrook, Massachussets

Sample Location Identifier:	Method 1	Method 1	Method 1	Method 3	S-15	S-17
Date:	Cleanup Std.	Cleanup Std.	Cleanup Std.	UCL	3/8/06	3/8/06
Sample Depth (Feet bgs):	(S-1/GW-1)	(S-3/GW-1)	(S-3/GW-2)		0-1	0-4
Di-n-octyl phthalate	NS	NS	NS	NS	6.200	
Di-n-Butylphthalate	NS	NS	NS	NS	0.270 ¹	
Chrysene	7	40	40	400	<0.059	
Pyrene	1000	5000	5000	10000	<0.059	
Phenanthrene	700	700	2500	10000	<0.059	
Fluoranthene	1000	5000	5000	10000	<0.059	
bis(2-Ethylhexyl)phthalate	100	100	1000	10000	44.000 ¹	

TABLE 1
CONCENTRATION OF CONTAMINANTS DETECTED IN SOIL
3 Philipps Road
Holbrook, Massachussets

Sample Location Identifier:	Method 1	Method 1	Method 1	Method 3	S-15	S-17
Date:	Cleanup Std.	Cleanup Std.	Cleanup Std.	UCL	3/8/06	3/8/06
Sample Depth (Feet bgs):	(S-1/GW-1)	(S-3/GW-1)	(S-3/GW-2)		0-1	0-4
<u>EPH (mg/Kg)</u>						
Naphthalene	4	4	40	10000	<0.5	<0.5
2-Methylnaphthalene	4	4	2000	10000	<0.5	<0.5
Phenanthrene	700	700	2500	10000	<0.5	<0.5
Acenaphthylene	100	100	2500	10000	<0.5	<0.5
Acenaphthene	20	20	5000	10000	<0.5	<0.5
Fluorene	400	400	5000	10000	<0.5	<0.5
Anthracene	1000	5000	5000	10000	<0.5	<0.5
Fluoranthene	1000	5000	5000	10000	<0.5	<0.5
Pyrene	1000	5000	5000	10000	<0.5	<0.5
Benzo(a)anthracene	7	300	300	100	<0.5	<0.5
Chrysene	7	40	40	400	<0.5	<0.5
Benzo(b)fluoranthene	7	300	300	100	<0.5	<0.5
Benzo(k)fluoranthene	70	3000	3000	400	<0.5	<0.5
Benzo(a)pyrene	2	30	30	100	<0.5	<0.5
Indeno(1,2,3-cd)pyrene	7	300	300	100	<0.5	<0.5
Dibenzo(a,h)anthracene	0.7	30	30	100	<0.5	<0.5
Benzo(g,h,i)perylene	1000	2500	2500	10000	<0.5	<0.5
C9-C18 Aliphatic Hydrocarbons	1000	5000	5000	20000	<10.0	<10.0
C19-C36 Aliphatic Hydrocarbons	2500	5000	5000	20000	<10.0	<10.0
C11-C22 Aromatic Hydrocarbons	200	200	5000	10000	<10.0	21
<u>Dioxins (ug/Kg)</u>	NS	NS	NS	NS	NA	NA
<u>Polychlorinated Biphenyls (PCBs) (mg/Kg)</u>	2	2	2	100	ND	NA
<u>Pesticides (ug/Kg)</u>						
4,4'-DDE	3	30	30	90000	<10	NA
4,4'-DDT	3	30	30	90000	<10	NA
Endrin aldehyde	NS	NS	NS	NS	<10	NA
<u>Metals (mg/Kg)</u>						
Arsenic	20	20	20	300	14	3.49
Barium	1000	5000	5000	10000	35	61
Cadmium	2	30	30	800	0.85	0.84
Chromium (total)	30	200	200	10000	16	13
Lead	300	300	300	6000	16	9.55
Mercury	20	300	30	600	<0.081	<0.061
Selenium	400	800	800	10000	<0.77	<0.70
Silver	100	200	200	2000	<0.38	<0.35

TABLE 1
CONCENTRATION OF CONTAMINANTS DETECTED IN SOIL
 3 Philipps Road
 Holbrook, Massachussets

Sample Location Identifier:	Method 1	Method 1	Method 1	Method 3	S-15	S-17
Date:	Cleanup Std.	Cleanup Std.	Cleanup Std.	UCL	3/8/06	3/8/06
Sample Depth (Feet bgs):	(S-1/GW-1)	(S-3/GW-1)	(S-3/GW-2)		0-1	0-4
Notes:						
Detectable concentrations highlighted in yellow.						
Bold Type - Concentration exceeds applicable Method 1 S-1 Cleanup Standard.						
Italicized Type - Concentration exceeds applicable Method 1 S-3 Cleanup Standard.						
NA = Not Analyzed.						
ND = None Detected.						
NS = No Standard.						
¹ Compound reported in blank.						
< = Less than minimum reporting limit as indicated by the laboratory.						

TABLE 1
CONCENTRATION OF CONTAMINANTS DETECTED IN SOIL
3 Philipps Road
Holbrook, Massachussets

File No. 218390.00
Page 13 of 24
10/12/2012

Sample Location Identifier:	Method 1	Method 1	Method 1	Method 3	MW-1	MW-2	MW-4	B-1	B-2	B-2	B-4
Date:	Cleanup Std.	Cleanup Std.	Cleanup Std.	UCL	3/9/06	3/9/06	3/9/06	6/8/09	6/8/09	6/8/09	6/8/09
Sample Depth (Feet bgs):	(S-1/GW-1)	(S-3/GW-1)	(S-3/GW-2)		0-7	5-7	5-7	0-6	0-6	6-10	0-6
<u><i>Volatile Organic Compounds (mg/Kg)</i></u>											NA
Acetone	6	6	50	10000	<0.160	<0.110	<0.140	<0.018	<0.018	<0.0078	
Chloromethane	NS	NS	NS	NS	0.048	0.030	0.040	<0.0090	<0.009	<0.0039	
Bromomethane	10	10	3	7000	0.100	0.080	0.087	<0.0036	<0.0036	<0.0016	
Methylene Chloride	NS	NS	NS	7000	0.310	<0.023	<0.029	<0.018	<0.018	<0.0078	
Tetrachloroethene	1.0	1.0	10	5000	<0.033	<0.023	<0.029	<0.0018	<0.0018	<0.00078	
Trichloroethene	0.3	0.3	2	5000	0.150	<0.023	<0.029	<0.0018	<0.0018	<0.00078	
Benzene	2	2	700	2000	<0.033	<0.023	<0.029	<0.0018	<0.0018	<0.00078	
m & p-Xylene	400	400	300	2000	<0.066	<0.046	<0.058	<0.0036	<0.0036	<0.0016	
Toluene	30	30	300	10000	<0.033	<0.023	<0.029	<0.0027	<0.0027	<0.0012	
Chlorobenzene	1	1	3	10000	<0.033	<0.023	0.050	<0.0018	<0.0018	<0.00078	
<u><i>Volatile Petroleum Hydrocarbons (mg/Kg)</i></u>					NA			NA	NA	NA	NA
Benzene	2	2	700	2000		<0.3	<0.3				
Ethylbenzene	80	80	2500	10000		<0.3	<0.3				
Methyl-tert-butyl ether	0.1	0.1	100	5000		<0.3	<0.3				
Naphthalene	4	4	40	10000		<1	<1				
Toluene	30	30	300	10000		<0.3	<0.3				
m&p-Xylenes	400	400	300	2000		<0.6	<0.6				
o-Xylene	400	400	300	10000		<0.6	<0.6				
C5-C8 Aliphatic Hydrocarbons	100	500	500	5000		<3.0	<3.0				
C9-C12 Aliphatic Hydrocarbons	1000	5000	5000	20000		<3.0	<3.0				
C9-C10 Aromatic Hydrocarbons	100	100	5000	5000		<3.0	<3.0				
<u><i>Semivolatile Organics (mg/Kg)</i></u>									NA	NA	
Phenol	1	1	50	10000	0.170	0.110	0.094	NA			NA
Benzoic acid	NS	NS	NS	NS	<0.890	<0.750	<0.820	NA			NA
4-Methylphenol	NS	NS	NS	NS	<0.060	<0.050	<0.054	NA			NA
1,4-Dichlorobenzene	0.7	0.7	4	2000	<0.060	<0.050	<0.054	<0.350			<0.360
2,6-Dinitrotoluene	NS	NS	NS	NS	<0.060	<0.050	0.480	<0.350			<0.360
2-Methylnaphthalene	4	4	2000	10000	<0.060	<0.050	<0.054	<0.350			<0.360
Benzo(a)anthracene	7	300	300	100	<0.060	<0.050	<0.054	<0.350			<0.360
Naphthalene	4	4	40	10000	<0.060	<0.050	<0.054	<0.350			<0.360
Benzo(b)fluoranthene	7	300	300	100	<0.060	<0.050	<0.054	<0.350			0.42
Hexachlorobenzene	0.7	30	30	30	<0.060	<0.050	<0.054	<0.350			<0.360
1,2,4-Trichlorobenzene	2	100	70	10000	<0.060	<0.050	<0.054	<0.350			<0.360
4-Bromophenyl phenyl ether	NS	NS	NS	NS	<0.060	<0.050	<0.054	<0.350			<0.360
Butyl benzyl phthalate	NS	NS	NS	NS	<0.060	<0.050	<0.054	<0.350			<0.360

TABLE 1
CONCENTRATION OF CONTAMINANTS DETECTED IN SOIL
 3 Philipps Road
 Holbrook, Massachussets

Sample Location Identifier:	Method 1	Method 1	Method 1	Method 3	MW-1	MW-2	MW-4	B-1	B-2	B-2	B-4
Date:	Cleanup Std.	Cleanup Std.	Cleanup Std.	UCL	3/9/06	3/9/06	3/9/06	6/8/09	6/8/09	6/8/09	6/8/09
Sample Depth (Feet bgs):	(S-1/GW-1)	(S-3/GW-1)	(S-3/GW-2)		0-7	5-7	5-7	0-6	0-6	6-10	0-6
Di-n-octyl phthalate	NS	NS	NS	NS	<0.180	<0.360	<0.520	<0.350			<0.360
Di-n-Butylphthalate	NS	NS	NS	NS	0.570 ¹	0.360 ¹	0.520 ¹	<0.350			<0.360
Chrysene	7	40	40	400	<0.060	<0.050	<0.054	<0.350			<0.360
Pyrene	1000	5000	5000	10000	<0.060	<0.050	<0.054	<0.350			0.5
Phenanthrene	700	700	2500	10000	<0.060	<0.050	<0.054	<0.350			<0.360
Fluoranthene	1000	5000	5000	10000	0.069	<0.050	<0.054	<0.350			0.56
bis(2-Ethylhexyl)phthalate	100	100	1000	10000	1.100 ¹	6.400 ¹	0.290 ¹	7.5			<0.720

TABLE 1
CONCENTRATION OF CONTAMINANTS DETECTED IN SOIL
3 Philipps Road
Holbrook, Massachussets

File No. 218390.00
Page 15 of 24
10/12/2012

Sample Location Identifier:	Method 1	Method 1	Method 1	Method 3	MW-1	MW-2	MW-4	B-1	B-2	B-2	B-4
Date:	Cleanup Std.	Cleanup Std.	Cleanup Std.	UCL	3/9/06	3/9/06	3/9/06	6/8/09	6/8/09	6/8/09	6/8/09
Sample Depth (Feet bgs):	(S-1/GW-1)	(S-3/GW-1)	(S-3/GW-2)		0-7	5-7	5-7	0-6	0-6	6-10	0-6
<u>EPH (mg/Kg)</u>									NA	NA	
Naphthalene	4	4	40	10000	<0.5	<0.5	<0.5	<0.347			<1.79
2-Methylnaphthalene	4	4	2000	10000	<0.5	<0.5	<0.5	<0.347			<1.79
Phenanthrene	700	700	2500	10000	<0.5	<0.5	<0.5	<0.347			<1.79
Acenaphthylene	100	100	2500	10000	<0.5	<0.5	<0.5	<0.347			<1.79
Acenaphthene	20	20	5000	10000	<0.5	<0.5	<0.5	<0.347			<1.79
Fluorene	400	400	5000	10000	<0.5	<0.5	<0.5	<0.347			<1.79
Anthracene	1000	5000	5000	10000	<0.5	<0.5	<0.5	<0.347			<1.79
Fluoranthene	1000	5000	5000	10000	<0.5	<0.5	<0.5	<0.347			<1.79
Pyrene	1000	5000	5000	10000	<0.5	<0.5	<0.5	<0.347			<1.79
Benzo(a)anthracene	7	300	300	100	<0.5	<0.5	<0.5	<0.347			<1.79
Chrysene	7	40	40	400	<0.5	<0.5	<0.5	<0.347			<1.79
Benzo(b)fluoranthene	7	300	300	100	<0.5	<0.5	<0.5	<0.347			<1.79
Benzo(k)fluoranthene	70	3000	3000	400	<0.5	<0.5	<0.5	<0.347			<1.79
Benzo(a)pyrene	2	30	30	100	<0.5	<0.5	<0.5	<0.347			<1.79
Indeno(1,2,3-cd)pyrene	7	300	300	100	<0.5	<0.5	<0.5	<0.347			<1.79
Dibenzo(a,h)anthracene	0.7	30	30	100	<0.5	<0.5	<0.5	<0.347			<1.79
Benzo(g,h,i)perylene	1000	2500	2500	10000	<0.5	<0.5	<0.5	<0.347			<1.79
C9-C18 Aliphatic Hydrocarbons	1000	5000	5000	20000	<10.0	<10.0	<10.0	<6.94			<35.8
C19-C36 Aliphatic Hydrocarbons	2500	5000	5000	20000	24	<10.0	<10.0	<6.94			41.4
C11-C22 Aromatic Hydrocarbons	200	200	5000	10000	19	<10.0	<10.0	8.45			53.5
<u>Dioxins (ug/Kg)</u>	NS	NS	NS	NS	NA	NA	NA	NA	NA	NA	NA
<u>Polychlorinated Biphenyls (PCBs) (mg/Kg)</u>	2	2	2	100	NA	NA	NA	NA	NA	NA	NA
<u>Pesticides (ug/Kg)</u>							NA			NA	
4,4'-DDE	3	30	30	90000	12	<10		<3.47	<3.58	NA	<3.58
4,4'-DDT	3	30	30	90000	17	<10		<3.47	<3.58	NA	<3.58
Endrin aldehyde	NS	NS	NS	NS	<10	<10		NA	NA	NA	NA
<u>Metals (mg/Kg)</u>									NA	NA	
Arsenic	20	20	20	300	1.04	<0.67	1.25	2.1	NA	NA	1.7
Barium	1000	5000	5000	10000	34	23	21	24	NA	NA	27
Cadmium	2	30	30	800	0.52	0.47	0.42	<0.42	NA	NA	<0.44
Chromium (total)	30	200	200	10000	11	7.56	6.60	6.9	NA	NA	20
Lead	300	300	300	6000	231	5.081	101	6.2	NA	NA	5.3
Mercury	20	300	30	600	0.062	<0.061	<0.069	<0.08	NA	NA	<0.09
Selenium	400	800	800	10000	<0.74	<0.67	<0.69	<2.1	NA	NA	<2.2
Silver	100	200	200	2000	<0.37	<0.33	<0.35	<0.42	NA	NA	<0.44

TABLE 1
CONCENTRATION OF CONTAMINANTS DETECTED IN SOIL
 3 Philipps Road
 Holbrook, Massachussets

Sample Location Identifier:	Method 1	Method 1	Method 1	Method 3	MW-1	MW-2	MW-4	B-1	B-2	B-2	B-4
Date:	Cleanup Std.	Cleanup Std.	Cleanup Std.	UCL	3/9/06	3/9/06	3/9/06	6/8/09	6/8/09	6/8/09	6/8/09
Sample Depth (Feet bgs):	(S-1/GW-1)	(S-3/GW-1)	(S-3/GW-2)		0-7	5-7	5-7	0-6	0-6	6-10	0-6
Notes:											
Detectable concentrations highlighted in yellow.											
Bold Type - Concentration exceeds applicable Method 1 S-1 Cleanup Standard.											
Italicized Type - Concentration exceeds applicable Method 1 S-3 Cleanup Standard.											
NA = Not Analyzed.											
ND = None Detected.											
NS = No Standard.											
¹ Compound reported in blank.											
< = Less than minimum reporting limit as indicated by the laboratory.											

TABLE 1
CONCENTRATION OF CONTAMINANTS DETECTED IN SOIL
3 Philipps Road
Holbrook, Massachussets

Sample Location Identifier:	Method 1	Method 1	Method 1	Method 3	B-4	B-5	B-5	SAB-1	SAB-2	SAB-3B
Date:	Cleanup Std.	Cleanup Std.	Cleanup Std.	UCL	6/8/09	6/8/09	6/8/09	6/8/09	6/8/09	6/8/09
Sample Depth (Feet bgs):	(S-1/GW-1)	(S-3/GW-1)	(S-3/GW-2)		6-10	0-6	6-10	0-4	0-6	0-6
<u><i>Volatile Organic Compounds (mg/Kg)</i></u>					NA			NA		
Acetone	6	6	50	10000		<0.010	<0.590		0.067	<0.011
Chloromethane	NS	NS	NS	NS		<0.0052	<0.300		<0.0062	<0.0011
Bromomethane	10	10	3	7000		<0.0021	<0.120		<0.0025	<0.0023
Methylene Chloride	NS	NS	NS	7000		<0.010	<0.590		<0.012	<0.011
Tetrachloroethene	1.0	1.0	10	5000		<0.0010	<0.059		<0.0012	<0.0011
Trichloroethene	0.3	0.3	2	5000		<0.0010	<0.059		<0.0012	<0.0011
Benzene	2	2	700	2000		<0.010	<0.059		<0.0012	<0.0011
m & p-Xylene	400	400	300	2000		<0.0021	<0.120		<0.0025	<0.0023
Toluene	30	30	300	10000		<0.0016	<0.089		<0.0019	<0.0017
Chlorobenzene	1	1	3	10000		<0.001	<0.059		<0.0012	<0.0011
<u><i>Volatile Petroleum Hydrocarbons (mg/Kg)</i></u>					NA	NA	NA	NA	NA	NA
Benzene	2	2	700	2000						
Ethylbenzene	80	80	2500	10000						
Methyl-tert-butyl ether	0.1	0.1	100	5000						
Naphthalene	4	4	40	10000						
Toluene	30	30	300	10000						
m&p-Xylenes	400	400	300	2000						
o-Xylene	400	400	300	10000						
C5-C8 Aliphatic Hydrocarbons	100	500	500	5000						
C9-C12 Aliphatic Hydrocarbons	1000	5000	5000	20000						
C9-C10 Aromatic Hydrocarbons	100	100	5000	5000						
<u><i>Semivolatile Organics (mg/Kg)</i></u>								NA		
Phenol	1	1	50	10000	NA	NA	NA		NA	NA
Benzoic acid	NS	NS	NS	NS	NA	NA	NA		NA	NA
4-Methylphenol	NS	NS	NS	NS	NA	NA	NA		NA	NA
1,4-Dichlorobenzene	0.7	0.7	4	2000	<0.380	<0.360	<0.360		<0.370	<0.360
2,6-Dinitrotoluene	NS	NS	NS	NS	<0.380	<0.360	<0.360		<0.370	<0.360
2-Methylnaphthalene	4	4	2000	10000	<0.380	<0.360	<0.360		<0.370	<0.360
Benzo(a)anthracene	7	300	300	100	<0.380	<0.360	<0.360		<0.370	<0.360
Naphthalene	4	4	40	10000	<0.380	<0.360	<0.360		<0.370	<0.360
Benzo(b)fluoranthene	7	300	300	100	<0.380	<0.360	<0.360		<0.370	<0.360
Hexachlorobenzene	0.7	30	30	30	<0.380	<0.360	<0.360		<0.370	<0.360
1,2,4-Trichlorobenzene	2	100	70	10000	<0.380	<0.360	<0.360		<0.370	<0.360
4-Bromophenyl phenyl ether	NS	NS	NS	NS	<0.380	<0.360	<0.360		<0.370	<0.360
Butyl benzyl phthalate	NS	NS	NS	NS	<0.380	<0.360	<0.360		<0.370	<0.360

TABLE 1
CONCENTRATION OF CONTAMINANTS DETECTED IN SOIL
 3 Philipps Road
 Holbrook, Massachussets

Sample Location Identifier:	Method 1	Method 1	Method 1	Method 3	B-4	B-5	B-5	SAB-1	SAB-2	SAB-3B
Date:	Cleanup Std.	Cleanup Std.	Cleanup Std.	UCL	6/8/09	6/8/09	6/8/09	6/8/09	6/8/09	6/8/09
Sample Depth (Feet bgs):	(S-1/GW-1)	(S-3/GW-1)	(S-3/GW-2)		6-10	0-6	6-10	0-4	0-6	0-6
Di-n-octyl phthalate	NS	NS	NS	NS	<0.380	<0.360	<0.360		<0.370	<0.360
Di-n-Butylphthalate	NS	NS	NS	NS	<0.380	<0.360	<0.360		<0.370	<0.360
Chrysene	7	40	40	400	<0.380	<0.360	<0.360		<0.370	<0.360
Pyrene	1000	5000	5000	10000	<0.380	<0.360	<0.360		<0.370	<0.360
Phenanthrene	700	700	2500	10000	<0.380	<0.360	<0.360		<0.370	<0.360
Fluoranthene	1000	5000	5000	10000	<0.380	<0.360	<0.360		<0.370	<0.360
bis(2-Ethylhexyl)phthalate	100	100	1000	10000	<0.760	1.3	<0.720		<0.730	<0.720

TABLE 1
CONCENTRATION OF CONTAMINANTS DETECTED IN SOIL
3 Philipps Road
Holbrook, Massachussets

Sample Location Identifier:	Method 1	Method 1	Method 1	Method 3	B-4	B-5	B-5	SAB-1	SAB-2	SAB-3B
Date:	Cleanup Std.	Cleanup Std.	Cleanup Std.	UCL	6/8/09	6/8/09	6/8/09	6/8/09	6/8/09	6/8/09
Sample Depth (Feet bgs):	(S-1/GW-1)	(S-3/GW-1)	(S-3/GW-2)		6-10	0-6	6-10	0-4	0-6	0-6
<u>EPH (mg/Kg)</u>								NA	NA	NA
Naphthalene	4	4	40	10000	<0.379	<0.725	<0.362			
2-Methylnaphthalene	4	4	2000	10000	<0.379	<0.725	<0.362			
Phenanthrene	700	700	2500	10000	<0.379	<0.725	<0.362			
Acenaphthylene	100	100	2500	10000	<0.379	<0.725	<0.362			
Acenaphthene	20	20	5000	10000	<0.379	<0.725	<0.362			
Fluorene	400	400	5000	10000	<0.379	<0.725	<0.362			
Anthracene	1000	5000	5000	10000	<0.379	<0.725	<0.362			
Fluoranthene	1000	5000	5000	10000	<0.379	<0.725	<0.362			
Pyrene	1000	5000	5000	10000	<0.379	<0.725	<0.362			
Benzo(a)anthracene	7	300	300	100	<0.379	<0.725	<0.362			
Chrysene	7	40	40	400	<0.379	<0.725	<0.362			
Benzo(b)fluoranthene	7	300	300	100	<0.379	<0.725	<0.362			
Benzo(k)fluoranthene	70	3000	3000	400	<0.379	<0.725	<0.362			
Benzo(a)pyrene	2	30	30	100	<0.379	<0.725	<0.362			
Indeno(1,2,3-cd)pyrene	7	300	300	100	<0.379	<0.725	<0.362			
Dibenzo(a,h)anthracene	0.7	30	30	100	<0.379	<0.725	<0.362			
Benzo(g,h,i)perylene	1000	2500	2500	10000	<0.379	<0.725	<0.362			
C9-C18 Aliphatic Hydrocarbons	1000	5000	5000	20000	<7.58	<14.5	<7.25			
C19-C36 Aliphatic Hydrocarbons	2500	5000	5000	20000	<7.58	16.1	<7.25			
C11-C22 Aromatic Hydrocarbons	200	200	5000	10000	<7.58	19.4	<7.25			
<u>Dioxins (ug/Kg)</u>	NS	NS	NS	NS	NA	NA	NA	NA	NA	NA
<u>Polychlorinated Biphenyls (PCBs) (mg/Kg)</u>	2	2	2	100	NA	NA	NA	NA	NA	NA
<u>Pesticides (ug/Kg)</u>					NA		NA	NA	NA	
4,4'-DDE	3	30	30	90000	NA	<3.62	NA			<3.58
4,4'-DDT	3	30	30	90000	NA	<3.62	NA			<3.58
Endrin aldehyde	NS	NS	NS	NS	NA	NA	NA			NA
<u>Metals (mg/Kg)</u>					NA	NA	NA			NA
Arsenic	20	20	20	300	NA	NA	NA	2.5		
Barium	1000	5000	5000	10000	NA	NA	NA	27		
Cadmium	2	30	30	800	NA	NA	NA	<0.43		
Chromium (total)	30	200	200	10000	NA	NA	NA	21		
Lead	300	300	300	6000	NA	NA	NA	8.5		
Mercury	20	300	30	600	NA	NA	NA	<0.08		
Selenium	400	800	800	10000	NA	NA	NA	<2.1		
Silver	100	200	200	2000	NA	NA	NA	0.61		

TABLE 1
CONCENTRATION OF CONTAMINANTS DETECTED IN SOIL
 3 Philipps Road
 Holbrook, Massachussets

Sample Location Identifier:	Method 1	Method 1	Method 1	Method 3	B-4	B-5	B-5	SAB-1	SAB-2	SAB-3B
Date:	Cleanup Std.	Cleanup Std.	Cleanup Std.	UCL	6/8/09	6/8/09	6/8/09	6/8/09	6/8/09	6/8/09
Sample Depth (Feet bgs):	(S-1/GW-1)	(S-3/GW-1)	(S-3/GW-2)		6-10	0-6	6-10	0-4	0-6	0-6
Notes:										
Detectable concentrations highlighted in yellow.										
Bold Type - Concentration exceeds applicable Method 1 S-1 Cleanup Standard.										
Italicized Type - Concentration exceeds applicable Method 1 S-3 Cleanup Standard.										
NA = Not Analyzed.										
ND = None Detected.										
NS = No Standard.										
¹ Compound reported in blank.										
< = Less than minimum reporting limit as indicated by the laboratory.										

TABLE 1
CONCENTRATION OF CONTAMINANTS DETECTED IN SOIL
3 Philipps Road
Holbrook, Massachussets

Sample Location Identifier:	Method 1	Method 1	Method 1	Method 3	WCB-1	WCB-2	WCB-3	WCB-4	WCB-5
Date:	Cleanup Std.	Cleanup Std.	Cleanup Std.	UCL	11/25/09	11/25/09	11/25/09	11/25/09	11/25/09
Sample Depth (Feet bgs):	(S-1/GW-1)	(S-3/GW-1)	(S-3/GW-2)		3	4	2	3	3-4
<u><i>Volatile Organic Compounds (mg/Kg)</i></u>					NA	NA			NA
Acetone	6	6	50	10000			<0.790	<0.870	
Chloromethane	NS	NS	NS	NS			<0.400	<0.440	
Bromomethane	10	10	3	7000			<0.160	<0.350	
Methylene Chloride	NS	NS	NS	7000			<0.790	<0.870	
Tetrachloroethene	1.0	1.0	10	5000			<0.079	<0.087	
Trichloroethene	0.3	0.3	2	5000			<0.079	<0.087	
Benzene	2	2	700	2000			<0.079	<0.079	
m & p-Xylene	400	400	300	2000			<0.160	<0.170	
Toluene	30	30	300	10000			<0.120	<0.130	
Chlorobenzene	1	1	3	10000			<0.079	<0.087	
<u><i>Volatile Petroleum Hydrocarbons (mg/Kg)</i></u>					NA	NA	NA	NA	NA
Benzene	2	2	700	2000					
Ethylbenzene	80	80	2500	10000					
Methyl-tert-butyl ether	0.1	0.1	100	5000					
Naphthalene	4	4	40	10000					
Toluene	30	30	300	10000					
m&p-Xylenes	400	400	300	2000					
o-Xylene	400	400	300	10000					
C5-C8 Aliphatic Hydrocarbons	100	500	500	5000					
C9-C12 Aliphatic Hydrocarbons	1000	5000	5000	20000					
C9-C10 Aromatic Hydrocarbons	100	100	5000	5000					
<u><i>Semivolatile Organics (mg/Kg)</i></u>					NA	NA	NA	NA	NA
Phenol	1	1	50	10000					
Benzoic acid	NS	NS	NS	NS					
4-Methylphenol	NS	NS	NS	NS					
1,4-Dichlorobenzene	0.7	0.7	4	2000					
2,6-Dinitrotoluene	NS	NS	NS	NS					
2-Methylnaphthalene	4	4	2000	10000					
Benzo(a)anthracene	7	300	300	100					
Naphthalene	4	4	40	10000					
Benzo(b)fluoranthene	7	300	300	100					
Hexachlorobenzene	0.7	30	30	30					
1,2,4-Trichlorobenzene	2	100	70	10000					
4-Bromophenyl phenyl ether	NS	NS	NS	NS					
Butyl benzyl phthalate	NS	NS	NS	NS					

TABLE 1
CONCENTRATION OF CONTAMINANTS DETECTED IN SOIL
 3 Philipps Road
 Holbrook, Massachussets

Sample Location Identifier:	Method 1	Method 1	Method 1	Method 3	WCB-1	WCB-2	WCB-3	WCB-4	WCB-5
Date:	Cleanup Std.	Cleanup Std.	Cleanup Std.	UCL	11/25/09	11/25/09	11/25/09	11/25/09	11/25/09
Sample Depth (Feet bgs):	(S-1/GW-1)	(S-3/GW-1)	(S-3/GW-2)		3	4	2	3	3-4
Di-n-octyl phthalate	NS	NS	NS	NS					
Di-n-Butylphthalate	NS	NS	NS	NS					
Chrysene	7	40	40	400					
Pyrene	1000	5000	5000	10000					
Phenanthrene	700	700	2500	10000					
Fluoranthene	1000	5000	5000	10000					
bis(2-Ethylhexyl)phthalate	100	100	1000	10000					

TABLE 1
CONCENTRATION OF CONTAMINANTS DETECTED IN SOIL
3 Philipps Road
Holbrook, Massachussets

Sample Location Identifier:	Method 1	Method 1	Method 1	Method 3	WCB-1	WCB-2	WCB-3	WCB-4	WCB-5
Date:	Cleanup Std.	Cleanup Std.	Cleanup Std.	UCL	11/25/09	11/25/09	11/25/09	11/25/09	11/25/09
Sample Depth (Feet bgs):	(S-1/GW-1)	(S-3/GW-1)	(S-3/GW-2)		3	4	2	3	3-4
<u>EPH (mg/Kg)</u>					NA	NA	NA	NA	NA
Naphthalene	4	4	40	10000					
2-Methylnaphthalene	4	4	2000	10000					
Phenanthrene	700	700	2500	10000					
Acenaphthylene	100	100	2500	10000					
Acenaphthene	20	20	5000	10000					
Fluorene	400	400	5000	10000					
Anthracene	1000	5000	5000	10000					
Fluoranthene	1000	5000	5000	10000					
Pyrene	1000	5000	5000	10000					
Benzo(a)anthracene	7	300	300	100					
Chrysene	7	40	40	400					
Benzo(b)fluoranthene	7	300	300	100					
Benzo(k)fluoranthene	70	3000	3000	400					
Benzo(a)pyrene	2	30	30	100					
Indeno(1,2,3-cd)pyrene	7	300	300	100					
Dibenzo(a,h)anthracene	0.7	30	30	100					
Benzo(g,h,i)perylene	1000	2500	2500	10000					
C9-C18 Aliphatic Hydrocarbons	1000	5000	5000	20000					
C19-C36 Aliphatic Hydrocarbons	2500	5000	5000	20000					
C11-C22 Aromatic Hydrocarbons	200	200	5000	10000					
<u>Dioxins (ug/Kg)</u>	NS	NS	NS	NS	NA	NA	NA	NA	NA
<u>Polychlorinated Biphenyls (PCBs) (mg/Kg)</u>	2	2	2	100	NA	NA	NA	NA	NA
<u>Pesticides (ug/Kg)</u>					NA	NA	NA	NA	NA
4,4'-DDE	3	30	30	90000					
4,4'-DDT	3	30	30	90000					
Endrin aldehyde	NS	NS	NS	NS					
<u>Metals (mg/Kg)</u>									
Arsenic	20	20	20	300	2.4	1.4	6.9	23	2.5
Barium	1000	5000	5000	10000	NA	NA	NA	NA	NA
Cadmium	2	30	30	800	NA	NA	NA	NA	NA
Chromium (total)	30	200	200	10000	NA	NA	NA	NA	NA
Lead	300	300	300	6000	NA	NA	NA	NA	NA
Mercury	20	300	30	600	NA	NA	NA	NA	NA
Selenium	400	800	800	10000	NA	NA	NA	NA	NA
Silver	100	200	200	2000	NA	NA	NA	NA	NA

TABLE 1
CONCENTRATION OF CONTAMINANTS DETECTED IN SOIL
 3 Philipps Road
 Holbrook, Massachussets

Sample Location Identifier:	Method 1	Method 1	Method 1	Method 3	WCB-1	WCB-2	WCB-3	WCB-4	WCB-5
Date:	Cleanup Std.	Cleanup Std.	Cleanup Std.	UCL	11/25/09	11/25/09	11/25/09	11/25/09	11/25/09
Sample Depth (Feet bgs):	(S-1/GW-1)	(S-3/GW-1)	(S-3/GW-2)		3	4	2	3	3-4
Notes:									
Detectable concentrations highlighted in yellow.									
Bold Type - Concentration exceeds applicable Method 1 S-1 Cleanup Standard.									
Italicized Type - Concentration exceeds applicable Method 1 S-3 Cleanup Standard.									
NA = Not Analyzed.									
ND = None Detected.									
NS = No Standard.									
¹ Compound reported in blank.									
< = Less than minimum reporting limit as indicated by the laboratory.									

TABLE 2
CONCENTRATION OF CONTAMINANTS DETECTED IN GROUNDWATER
3 Philipps Road
Holbrook, Massachussets

Sample Location Identifier: Date:	MW-1 3/15/2006	MW-2 3/15/2006	MW-3 3/15/2006	MW-5 3/15/2006	MW-6 3/15/2006	MW-7SD 3/15/2006	MW-7T/WB 3/15/2006	Method 1 (GW-1)
<u><i>Volatile Organic Compounds (mg/L)</i></u>								
Acetone	0.019	<0.0050	<0.0050	0.0086	<0.0050	<0.0050	<0.0050	6.3
tert-Butyl methyl ether	0.015	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.07
Trichloroethene	<0.001	<0.0010	<0.0010	<0.0010	0.0026	<0.0010	<0.0010	0.005
<u><i>Volatile Petroleum Hydrocarbons (mg/L)</i></u>	NA		NA					
Benzene		<0.005		<0.005	<0.005	<0.005	<0.005	0.005
Ethylbenzene		<0.005		<0.005	<0.005	<0.005	<0.005	0.7
Methyl-tert-butyl ether		<0.010		<0.010	<0.010	<0.010	<0.010	0.07
Naphthalene		<0.010		<0.010	<0.010	<0.010	<0.010	0.14
Toluene		<0.005		<0.005	<0.005	<0.005	<0.005	1
m&p-Xylenes		<0.010		<0.010	<0.010	<0.010	<0.010	10
o-Xylene		<0.010		<0.010	<0.010	<0.010	<0.010	10
C5-C8 Aliphatic Hydrocarbons		<0.050		0.065	<0.050	<0.050	<0.050	0.3
C9-C12 Aliphatic Hydrocarbons		<0.050		<0.050	<0.050	<0.050	<0.050	0.7
C9-C10 Aromatic Hydrocarbons		<0.050		<0.050	<0.050	<0.050	<0.050	0.2
<u><i>Semivolatile Organics (mg/L)</i></u>								
Benzoic Acid	0.083	<0.025	<0.016	<0.024	<0.025	<0.017	<0.016	
Pentachlorophenol	0.0048 ¹	<0.0085	<0.0054	<0.0079	<0.0085	<0.0056	<0.0055	0.001
Benidine	<0.086	<0.100	<0.065	<0.095	<0.100	<0.067	0.060 ¹	
bis(2-Ethylhexyl)phthalate	0.0016	<0.0051	<0.0032	<0.0048	<0.0051	<0.0034	<0.0032	0.006
<u><i>EPH (ug/L)</i></u>			NA					
Naphthalene	<1	<1		2	<1	<1	<1	140
2-Methylnaphthalene	<1	<1		1	<1	<1	<1	10
Phenanthrene	<1	<1		<1	<1	<1	<1	40
Acenaphthylene	<1	<1		<1	<1	<1	<1	300
Acenaphthene	<5	<5		<5	<5	<5	<5	20
Fluorene	<5	<5		<5	<5	<5	<5	30
Anthracene	<5	<5		<5	<5	<5	<5	0.06
Fluoranthene	<5	<5		<5	<5	<5	<5	90
Pyrene	<5	<5		<5	<5	<5	<5	80
Benzo(a)anthracene	<1	<1		<1	<1	<1	<1	1
Chrysene	<2	<2		<2	<2	<2	<2	2
Benzo(b)fluoranthene	<1	<1		<1	<1	<1	<1	1
Benzo(k)fluoranthene	<1	<1		<1	<1	<1	<1	1
Benzo(a)pyrene	<0.2	<0.2		<0.2	<0.2	<0.2	<0.2	0.2
Indeno(1,2,3-cd)pyrene	<0.5	<0.5		<0.5	<0.5	<0.5	<0.5	0.5
Dibenzo(a,h)anthracene	<0.5	<0.5		<0.5	<0.5	<0.5	<0.5	0.5
Benzo(g,h,i)perylene	<5	<5		<5	<5	<5	<5	50
C9-C18 Aliphatic Hydrocarbons	<50	<50		<50	<50	<50	<50	700
C19-C36 Aliphatic Hydrocarbons	<50	<50		<50	<50	<50	<50	14000
C11-C22 Aromatic Hydrocarbons	<50	<50		<50	<50	<50	<50	200
<u><i>Pesticides (mg/L)</i></u>	ND	ND	ND	ND	ND	ND	NA	
<u><i>Dissolved Metals (mg/L)</i></u>								
Arsenic	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.01
Barium	0.031	0.035	0.072	0.060	0.076	0.065	0.049	2
Cadmium	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.005
Chromium (total)	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.1
Lead	<0.005	<0.005	0.007	<0.005	<0.005	<0.005	<0.005	0.015
Mercury	<0.0002	<0.0002	<0.0005	<0.0002	<0.0002	<0.0002	<0.0002	0.002
Selenium	0.02	<0.01	0.01	0.01	0.01	<0.01	0.02	0.05
Silver	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.1

Notes:

Yellow highlight denotes detected concentration.

Bold Type - Concentration exceeds the Reportable Concentrations GW-1.

NA = Not Analyzed.

ND = None Detected.

¹Estimated due to concentration being below laboratory limit.

< = Less than minimum reporting limit as indicated by the laboratory.

Appendix A: BWSC-108 – Comprehensive Response Action Transmittal Form



Massachusetts Department of Environmental Protection
Bureau of Waste Site Cleanup

BWSC108

**COMPREHENSIVE RESPONSE ACTION TRANSMITTAL
FORM & PHASE I COMPLETION STATEMENT**

Release Tracking Number

4

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3024519

Pursuant to 310 CMR 40.0484 (Subpart D) and 40.0800 (Subpart H)

A. SITE LOCATION:

1. Site Name: **NO LOCATION AID**

2. Street Address: **3 PHILIPPS RD**

3. City/Town: **HOLBROOK** 4. ZIP Code: **023430000**

☐ 5. Check here if a Tier Classification Submittal has been provided to DEP for this disposal site.

☐ a. Tier IA ☐ b. Tier IB ☐ c. Tier IC ☒ d. Tier II

6. If applicable, provide the Permit Number: _____

B. THIS FORM IS BEING USED (check all that apply)

☐ 1. Submit a **Phase I Completion Statement**, pursuant to 310 CMR 40.0484.

☐ 2. Submit a **Revised Phase I Completion Statement**, pursuant to 310 CMR 40.0484.

☒ 3. Submit a **Phase II Scope of Work**, pursuant to 310 CMR 40.0834.

☐ 4. Submit an **interim Phase II Report**. This report does not satisfy the response action deadline requirements in 310 CMR 40.0500.

☐ 5. Submit a **final Phase II Report and Completion Statement**, pursuant to 310 CMR 40.0836.

☐ 6. Submit a **Revised Phase II Report and Completion Statement**, pursuant to 310 CMR 40.0836.

☐ 7. Submit a **Phase III Remedial Action Plan and Completion Statement**, pursuant to 310 CMR 40.0862.

☐ 8. Submit a **Revised Phase III Remedial Action Plan and Completion Statement**, pursuant to 310 CMR 40.0862.

☐ 9. Submit a **Phase IV Remedy Implementation Plan**, pursuant to 310 CMR 40.0874.

☐ 10. Submit a **Modified Phase IV Remedy Implementation Plan**, pursuant to 310 CMR 40.0874.

☐ 11. Submit an **As-Built Construction Report**, pursuant to 310 CMR 40.0875.

☐ 12. Submit a **Phase IV Status Report**, pursuant to 310 CMR 40.0877.

☐ 13. Submit a **Phase IV Completion Statement**, pursuant to 310 CMR 40.0878 and 40.0879.

Specify the outcome of Phase IV activities: (check one)

☐ a. Phase V Operation, Maintenance or Monitoring of the Comprehensive Remedial Action is necessary to achieve a Response Action Outcome.

☐ b. The requirements of a Class A Response Action Outcome have been met. No additional Operation, Maintenance or Monitoring is necessary to ensure the integrity of the Response Action Outcome. A completed Response Action Outcome Statement and Report (BWSC104) will be submitted to DEP.

☐ c. The requirements of a Class C Response Action Outcome have been met. No additional Operation, Maintenance or Monitoring is necessary to ensure the integrity of the Response Action Outcome. A completed Response Action Outcome Statement and Report (BWSC104) has been or will be submitted to DEP.

☐ d. The requirements of a Class C Response Action Outcome have been met. Further Operation, Maintenance or Monitoring of the remedial action is necessary to ensure that conditions are maintained and that further progress is made toward a Permanent Solution. A completed Response Action Outcome Statement and Report (BWSC104) has been or will be submitted to DEP.



COMPREHENSIVE RESPONSE ACTION TRANSMITTAL
FORM & PHASE I COMPLETION STATEMENT

Release Tracking Number

4

-

3024519

Pursuant to 310 CMR 40.0484 (Subpart D) and 40.0800 (Subpart H)

B. THIS FORM IS BEING USED TO (cont.): (check all that apply)

- ☐ 14. Submit a **Revised Phase IV Completion Statement**, pursuant to 310 CMR 40.0878 and 40.0879.
- ☐ 15. Submit a **Phase V Status Report**, pursuant to 310 CMR 40.0892.
- ☐ 16. Submit a **Remedial Monitoring Report**. (This report can only be submitted through eDEP.)
- a. Type of Report: (check one) ☐ i. Initial Report ☐ ii. Interim Report ☐ iii. Final Report
- b. Frequency of Submittal: (check all that apply)
- ☐ i. A Remedial Monitoring Report(s) submitted monthly to address an Imminent Hazard.
- ☐ ii. A Remedial Monitoring Report(s) submitted monthly to address a Condition of Substantial Release Migration.
- ☐ iii. A Remedial Monitoring Report(s) submitted concurrent with a Status Report.
- c. Status of Site: (check one) ☐ i. Phase IV ☐ ii. Phase V ☐ iii. Remedy Operation Status ☐ iv. Class C RAO
- d. Number of Remedial Systems and/or Monitoring Programs:
- A separate BWSC108A, CRA Remedial Monitoring Report, must be filled out for each Remedial System and/or Monitoring Program addressed by this transmittal form.
- ☐ 17. Submit a **Remedy Operation Status**, pursuant to 310 CMR 40.0893.
- ☐ 18. Submit a **Status Report to maintain a Remedy Operation Status**, pursuant to 310 CMR 40.0893(2).
- ☐ 19. Submit a **Transfer and/or a Modification of Persons Maintaining a Remedy Operation Status (ROS)**, pursuant to 310 CMR 40.0893(5) (check one, or both, if applicable).
- ☐ a. Submit a Transfer of Persons Maintaining an ROS (the transferee should be the person listed in Section D, "Person Undertaking Response Actions").
- ☐ b. Submit a Modification of Persons Maintaining an ROS (the primary representative should be the person listed in Section D, "Person Undertaking Response Actions").
- c. Number of Persons Maintaining an ROS not including the primary representative: _____
- ☐ 20. Submit a **Termination of a Remedy Operation Status**, pursuant to 310 CMR 40.0893(6). (check one)
- ☐ a. Submit a notice indicating ROS performance standards have not been met. A plan and timetable pursuant to 310 CMR 40.0893(6)(b) for resuming the ROS are attached.
- ☐ b. Submit a notice of Termination of ROS.
- ☐ 21. Submit a **Phase V Completion Statement**, pursuant to 310 CMR 40.0894.
- Specify the outcome of Phase V activities: (check one)
- ☐ a. The requirements of a Class A Response Action Outcome have been met. No additional Operation, Maintenance or Monitoring is necessary to ensure the integrity of the Response Action Outcome. A completed Response Action Outcome Statement (BWSC104) will be submitted to DEP.
- ☐ b. The requirements of a Class C Response Action Outcome have been met. No additional Operation, Maintenance or Monitoring is necessary to ensure the integrity of the Response Action Outcome. A completed Response Action Outcome Statement and Report (BWSC104) will be submitted to DEP.
- ☐ c. The requirements of a Class C Response Action Outcome have been met. Further Operation, Maintenance or Monitoring of the remedial action is necessary to ensure that conditions are maintained and/or that further progress is made toward a Permanent Solution. A completed Response Action Outcome Statement and Report (BWSC104) will be submitted to DEP.
- ☐ 22. Submit a **Revised Phase V Completion Statement**, pursuant to 310 CMR 40.0894.
- ☐ 23. Submit a **Post-Class C Response Action Outcome Status Report**, pursuant to 310 CMR 40.0898.



COMPREHENSIVE RESPONSE ACTION TRANSMITTAL
FORM & PHASE I COMPLETION STATEMENT

Release Tracking Number

4

-

3024519

Pursuant to 310 CMR 40.0484 (Subpart D) and 40.0800 (Subpart H)

C. LSP SIGNATURE AND STAMP:

I attest under the pains and penalties of perjury that I have personally examined and am familiar with this transmittal form, including any and all documents accompanying this submittal. In my professional opinion and judgment based upon application of (i) the standard of care in 309 CMR 4.02(1), (ii) the applicable provisions of 309 CMR 4.02(2) and (3), and 309 CMR 4.03(2), and (iii) the provisions of 309 CMR 4.03(3), to the best of my knowledge, information and belief,

> if Section B indicates that a **Phase I, Phase II, Phase III, Phase IV or Phase V Completion Statement** and/or a **Termination of a Remedy Operation Status** is being submitted, the response action(s) that is (are) the subject of this submittal (i) has (have) been developed and implemented in accordance with the applicable provisions of M.G.L. c. 21E and 310 CMR 40.0000, (ii) is (are) appropriate and reasonable to accomplish the purposes of such response action(s) as set forth in the applicable provisions of M.G.L. c. 21E and 310 CMR 40.0000, and (iii) comply(ies) with the identified provisions of all orders, permits, and approvals identified in this submittal;

> if Section B indicates that a **Phase II Scope of Work** or a **Phase IV Remedy Implementation Plan** is being submitted, the response action(s) that is (are) the subject of this submittal (i) has (have) been developed in accordance with the applicable provisions of M.G.L. c. 21E and 310 CMR 40.0000, (ii) is (are) appropriate and reasonable to accomplish the purposes of such response action(s) as set forth in the applicable provisions of M.G.L. c. 21E and 310 CMR 40.0000, and (iii) comply(ies) with the identified provisions of all orders, permits, and approvals identified in this submittal;

> if Section B indicates that an **As-Built Construction Report**, a **Remedy Operation Status**, a **Phase IV, Phase V or Post-Class C RAO Status Report**, a **Status Report to Maintain a Remedy Operation Status**, a **Transfer or Modification of Persons Maintaining a Remedy Operation Status** and/or a **Remedial Monitoring Report** is being submitted, the response action(s) that is (are) the subject of this submittal (i) is (are) being implemented in accordance with the applicable provisions of M.G.L. c. 21E and 310 CMR 40.0000, (ii) is (are) appropriate and reasonable to accomplish the purposes of such response action(s) as set forth in the applicable provisions of M.G.L. c. 21E and 310 CMR 40.0000, and (iii) comply(ies) with the identified provisions of all orders, permits, and approvals identified in this submittal.

I am aware that significant penalties may result, including, but not limited to, possible fines and imprisonment, if I submit information which I know to be false, inaccurate or materially incomplete.

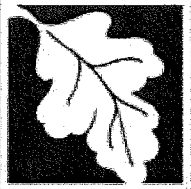
1. LSP #: 3760

2. First Name: CRAIG E3. Last Name: BLAKE

4. Telephone: 78125102005. Ext.:6. FAX:

7. Signature:

8. Date: (mm/dd/yyyy)9. LSP Stamp:



Massachusetts Department of Environmental Protection
Bureau of Waste Site Cleanup

BWSC108

COMPREHENSIVE RESPONSE ACTION TRANSMITTAL
FORM & PHASE I COMPLETION STATEMENT

Release Tracking Number

4 - 3024519

Pursuant to 310 CMR 40.0484 (Subpart D) and 40.0800 (Subpart H)

D. PERSON UNDERTAKING RESPONSE ACTIONS:

1. Check all that apply: ☒ a. change in contact name ☒ b. change of address ☐ c. change in the person undertaking response actions
2. Name of Organization: TLA-HOLBROOK LLC
3. Contact First Name: VINCENT 4. Last Name: BARLETTA
5. Street: 40 SHAWMUT ROAD 6. Title:
7. City/Town: CANTON 8. State: MA 9. ZIP Code: 02012-0000
10. Telephone: (781) 737-1704 11. Ext.: 12. FAX:

E. RELATIONSHIP TO SITE OF PERSON UNDERTAKING RESPONSE ACTIONS:

☒ Check here to change relationship

- ☒ 1. RP or PRP ☐ a. Owner ☐ b. Operator ☐ c. Generator ☐ d. Transporter
- ☒ e. Other RP or PRP Specify: TENANT

- ☐ 2. Fiduciary, Secured Lender or Municipality with Exempt Status (as defined by M.G.L. c. 21E, s. 2)
- ☐ 3. Agency or Public Utility on a Right of Way (as defined by M.G.L. c. 21E, s. 5(j))
- ☐ 4. Any Other Person Undertaking Response Actions Specify Relationship:

F. REQUIRED ATTACHMENT AND SUBMITTALS:

- ☐ 1. Check here if the Response Action(s) on which this opinion is based, if any, are (were) subject to any order(s), permit(s) and/or approval(s) issued by DEP or EPA. If the box is checked, you MUST attach a statement identifying the applicable provisions thereof.
- ☐ 2. Check here to certify that the Chief Municipal Officer and the Local Board of Health have been notified of the submittal of any Phase Reports to DEP.
- ☐ 3. Check here to certify that the Chief Municipal Officer and the Local Board of Health have been notified of the availability of a Phase III Remedial Action Plan.
- ☐ 4. Check here to certify that the Chief Municipal Officer and the Local Board of Health have been notified of the availability of a Phase IV Remedy Implementation Plan.
- ☐ 5. Check here to certify that the Chief Municipal Officer and the Local Board of Health have been notified of any field work involving the implementation of a Phase IV Remedial Action.
- ☐ 6. If submitting a Transfer of a Remedy Operation Status (as per 310 CMR 40.0893(5)), check here to certify that a statement detailing the compliance history for the person making this submittal (transferee) is attached.
- ☐ 7. If submitting a Modification of a Remedy Operation Status (as per 310 CMR 40.0893(5)), check here to certify that a statement detailing the compliance history for each new person making this submittal is attached.
- ☐ 8. Check here if any non-updatable information provided on this form is incorrect, e.g. Site Name. Send corrections to: BWSC.eDEP@state.ma.us.
- ☒ 9. Check here to certify that the LSP Opinion containing the material facts, data, and other information is attached.



Massachusetts Department of Environmental Protection
Bureau of Waste Site Cleanup

BWSC108

COMPREHENSIVE RESPONSE ACTION TRANSMITTAL
FORM & PHASE I COMPLETION STATEMENT

Release Tracking Number

4

-

3024519

Pursuant to 310 CMR 40.0484 (Subpart D) and 40.0800 (Subpart H)

G. CERTIFICATION OF PERSON UNDERTAKING RESPONSE ACTIONS:

1. I, , attest under the pains and penalties of perjury (i) that I have personally examined and am familiar with the information contained in this submittal, including any and all documents accompanying this transmittal form, (ii) that, based on my inquiry of those individuals immediately responsible for obtaining the information, the material information contained in this submittal is, to the best of my knowledge and belief, true, accurate and complete, and (iii) that I am fully authorized to make this attestation on behalf of the entity legally responsible for this submittal. I/the person or entity on whose behalf this submittal is made am/is aware that there are significant penalties, including, but not limited to, possible fines and imprisonment, for willfully submitting false, inaccurate, or incomplete information.

>if Section B indicates that this is a **Modification of a Remedy Operation Status (ROS)**, I attest under the pains and penalties of perjury that I am fully authorized to act on behalf of all persons performing response actions under the ROS as stated in 310 CMR 40.0893(5)(d) to receive oral and written correspondence from MassDEP with respect to performance of response actions under the ROS, and to receive a statement of fee amount as per 4.03(3).

I understand that any material received by the Primary Representative from MassDEP shall be deemed received by all the persons perform ing response actions under the ROS, and I am aware that there are significant penalties, including, but not limited to, possible fines and imprisonment, for willfully submitting false, inaccurate or incomplete information.

2. By: 3. Title:
Signature

4. For: 5. Date:
TLA-HOLBROOK LLC (mm/dd/yyyy)
(Name of person or entity recorded in Section D)

☐ 6. Check here if the address of the person providing certification is different from address recorded in Section D.

7. Street: _____

8. City/Town: _____ 9. State: _____ 10. ZIP Code: _____

11. Telephone: _____ 12. Ext.: _____ 13. FAX: _____

YOU ARE SUBJECT TO AN ANNUAL COMPLIANCE ASSURANCE FEE OF UP TO \$10,000 PER BILLABLE YEAR FOR THIS DISPOSAL SITE. YOU MUST LEGIBLY COMPLETE ALL RELEVANT SECTIONS OF THIS FORM OR DEP MAY RETURN THE DOCUMENT AS INCOMPLETE. IF YOU SUBMIT AN INCOMPLETE FORM, YOU MAY BE PENALIZED FOR MISSING A REQUIRED DEADLINE.

Date Stamp (DEP USE ONLY:)