Note: This Environmental Indicator has been revised from a YES determination to a NO determination, per December 23, 2010 letter from EPA to MassDEP.

**DOCUMENTATION OF ENVIRONMENTAL INDICATOR DETERMINATION**

Interim Final 2/5/99

**RCRA Corrective Action**
**Environmental Indicator (EI) RCRIS code (CA725)**

RDMS DocID 108686

**Current Human Exposures Under Control**

RDMS DocID 106724

**Facility Name:** **Walton and Lonsbury, Inc.**
**Facility Address:** **78 North Avenue, Attleboro, Massachusetts**
**Facility EPA ID #:** **MAD001197755**

1. Has **all** available relevant/significant information on known and reasonably suspected releases to soil, groundwater, surface water/sediments, and air, subject to RCRA Corrective Action (e.g., from Solid Waste Management Units (SWMU), Regulated Units (RU), and Areas of Concern (AOC)), been **considered** in this EI determination?

   __Y__ If yes - check here and continue with #2 below.

   _____ If no - re-evaluate existing data, or

   _____ if data are not available skip to #6 and enter "IN" (more information needed) status code.

## BACKGROUND

### Definition of Environmental Indicators (for the RCRA Corrective Action)

Environmental Indicators (EIs) are measures being used by the RCRA Corrective Action program to go beyond programmatic activity measures (e.g., reports received and approved, etc.) to track changes in the quality of the environment. The two EIs developed to-date indicate the quality of the environment in relation to current human exposures to contamination and the migration of contaminated groundwater. An EI for non-human (ecological) receptors is intended to be developed in the future.

### Definition of "Current Human Exposures Under Control" EI

A positive "Current Human Exposures Under Control" EI determination ("YE" status code) indicates that there are no "unacceptable" human exposures to "contamination" (i.e., contaminants in concentrations in excess of appropriate risk-based levels) that can be reasonably expected under current land- and groundwater-use conditions (for all "contamination" subject to RCRA corrective action at or from the identified facility (i.e., site-wide)).

RCRA RECORDS CENTER
FACILITY Walton + Lonsbury
I.D. NO. MAD001197755
FILE LOC. R-13
OTHER # 106724

## Relationship of EI to Final Remedies

While Final remedies remain the long-term objective of the RCRA Corrective Action program the EIs are near-term objectives which are currently being used as Program measures for the Government Performance and Results Act of 1993, (GPRA). The "Current Human Exposures Under Control" EI are for reasonably expected human exposures under current land- and groundwater-use conditions ONLY, and do not consider potential future land- or groundwater-use conditions or ecological receptors. The RCRA Corrective Action program's overall mission to protect human health and the environment requires that Final remedies address these issues (i.e., potential future human exposure scenarios, future land and groundwater uses, and ecological receptors).

## Duration / Applicability of EI Determinations

EI Determinations status codes should remain in the RCRIS national database ONLY as long as they remain true (i.e., RCRIS status codes must be changed when the regulatory authorities become aware of contrary information).

# FACILITY INFORMATION

### Site History/Background

The Walton and Lonsbury (W&L) facility is located at 78 North Avenue in Attleboro, Bristol County, Massachusetts. The W&L facility consists of a 15,000 square foot chrome plating facility on a 2.72 acre lot, and has operated since 1940. The Town of Attleboro Tax Assessor's Office lists the owner of the W&L property as Walton and Lonsbury, Inc. North of the building is an asphalt-paved parking area, to the west is a gravel and concrete driveway, and areas east and south of the building are covered with grass.

The W&L site is located within a small industrial park. The site is bounded by Walton Street to the north with industrial properties beyond; North Avenue to the east with residential properties and Hayward field beyond; undeveloped land to the south; and industrial properties to the west. Topography slopes gradually downward to the southeast, toward the wetland. The property is zoned Conservation-Residential. The building on site is connected to municipal water and sewer service.

W&L performs chromium plating of specialty parts. Facility operations include parts degreasing using solvents, grit blasting, hard chrome plating, stripping with acids, aqueous rinsing, grinding, and polishing. The chemicals that have been utilized for cleaning of parts and the method of wastewater disposal have varied throughout W&L's history, but the basic plating process has remained the same throughout W&L's operational history.

Chemical usage on the site has included the use of trichloroethylene (TCE) as a degreasing solvent prior to 1983, and 1,1,1-trichloroethane (TCA) as a degreasing solvent from approximately 1983 until approximately 1994. Since 1994, mineral spirits and two non-hazardous proprietary Safety Kleen solutions have been utilized by W&L for degreasing. Other chemicals historically utilized on

site include chromic oxide, chromic acid, hydrochloric acid, sulfuric acid, phosphoric acid, paint thinner, aluminum oxide, sodium hydroxide, sodium bisulfate, sodium hydrosulfate, and lead sulfate. Wastes generated by W&L have included hydrochloric acid, chromium hydroxide sludge, chromic-acid wastewater, chromic acid contaminated solids, TCE, TCA, aluminum-oxide dust, and cyanide plating bath solution.

Prior to 1970, untreated wastewater from facility operations was discharged directly to a wetland located on the southern side of the property. The wetland extends onto southern abutting properties. The untreated wastewater was discharged via an underground pipe. The pipe was abandoned and plugged in 1970, when a wastewater treatment system was constructed for the W&L facility. Chrome hydroxide sludge generated by the wastewater treatment process was discharged to a surface impoundment located south of the wastewater lagoon. After the treatment system was constructed, the treated effluent was discharged to a wastewater lagoon to remove particulates and subsequently to an open storm water trench under NPDES Permit MA0001040.

W&L submitted a Part A application as a hazardous waste facility to EPA on July 29, 1980. The application form documented that W&L had a process design capacity of 1,500,000 gallons per day (GPD) of tank storage, 10,000 GPD of surface impoundment treatment, and 75,000,000 GPD of disposal via a surface impoundment. With the submission of this application, W&L received Interim Status as a TSD facility.

On November 8, 1982, a Notice of Violation (NOV) was issued by MADEP due to violations of interim status standards. The NOV directed W&L to close the surface impoundments and install monitoring wells around the surface impoundments. A Surface Impoundment Closure Plan, dated December 15, 1982, was submitted to MADEP. A second NOV was issued on July 1, 1983. The NOV required W&L to submit a groundwater monitoring plan and a time line for installation of monitoring wells.

On September 14, 1983, EPA requested that W&L submit Part B of the hazardous waste facility permit application. On November 23, 1983, W&L submitted a letter to EPA indicating their intent to close the surface impoundments, which would preclude the need for filing a Part B application.

The W&L site has been assigned Release Tracking Number (RTN) 4-0023 by MADEP. A Tier 1A permit was issued to the site on May 30, 1995, extended on May 30, 2000, and expired on May 30, 2002. A second RTN, 4-11408, was issued in 1995 for a release of oil that was observed during removal of an underground storage tank (UST). A Response Action Outcome (RAO) was issued for closure of this RTN.

Refer to the Site Investigation and Interim Measures section for further details pertaining to the surface impoundment and lagoon closures and Tetra Tech NUS, Inc. (TtNUS) field sampling events in support of this RCRA EI determination.

Site Geology and Hydrogeology

The W&L property overlies the Wamsutta Formation, a red to pink, well-sorted conglomerate, greywacke, sandstone, and shale of Middle to Lower Pennsylvanian Age. Depth to bedrock in the site vicinity, based on boring logs, ranges in depth from approximately 22 to 40 feet below surface grade.

According to the Soil Survey for Bristol County, Massachusetts, Northern Part, the site is mapped as Urban Land. The Urban Land classification is given to urban areas where the soil surface is so altered or obscured by structures, etc. that identification of soils is not possible. Previous investigations at the site have described soils as fine sand, silty sand, and gravelly sand.

Surface water within one mile of the facility includes a wetland located on the southern side of the W&L property, wetlands and Bliss Brook, located approximately 730 feet east of the site, the Ten Mile River, located approximately 1,800 feet south-southwest of the site, the Bungay River, approximately 2,300 feet south of the site, and Manchester Pond, approximately 4,450 feet southwest of the site. Drinking water for the town of Attleboro is obtained from two surface water intakes, one in Orrs Pond, located approximately 2.4 miles west of the site, and one in Attleboro Reservoir, located approximately 3.1 miles east of the site.

The depth to groundwater at the site was measured during the November 2004 TtNUS sampling event in seven groundwater monitoring wells located on the W&L property and in the Paulette Lane and North Avenue residential neighborhoods. Groundwater levels ranged from 0.98 feet to 16.11 feet below grade surface at that time. Groundwater has historically been shown to flow southeast from the W&L property, below North Avenue and Paulette Lane and North Avenue residences, and discharges to Bliss Brook. Based on the November 2004 water level gauging data, an upward vertical gradient of approximately 1.0 percent in the vicinity of Bliss Brook was calculated

Solid Waste Management Units , Areas of Concern, and Sources

Twenty-one Areas and/or Units were identified in the "Revised Preliminary RCRA Data Input Forms for Summary Model/NCAPS", dated March 14, 1994, including the surface impoundment, lagoon, TCE Above ground Storage Tank (AST), TCA AST, wastewater treatment room, hazardous waste storage shed, hazardous waste storage garage, three Underground Storage Tanks (UST), abandoned industrial sewer line, abandoned dry well, electric room roof, plating room, outside drum storage pad, grinder exhaust area, receiving area, maintenance department, loading dock area, small plating room, polishing room, vapor degreaser area, and laboratory area.

The TtNUS 2005 Draft Site Inspection Report included fourteen sources in the evaluation, which are considered both Solid Waste Management Units (SWMU) and Areas of Concern (AOC). The SWMUs include four chromic acid storage tanks and chromium contaminated debris containers. The AOCs include the Capped Surface Impoundment, Capped Lagoon, a dry-well, and the location of contaminated groundwater to Bliss Brook surface water discharge. Sources include a 275-gallon TCA AST, 275-gallon TCE AST, four plating tanks, and contaminated soils.

W&L utilizes four waste chromic acid storage tanks with capacities of 500 gallons, 1,250 gallons, 1,650 gallons, and 2,400 gallons for a total of 5,800 gallons. According to Mr. Robert Haag of W&L, approximately 4,000 gallons of waste chromic acid is shipped off site every 90 days

Approximately 250 pounds of chromium contaminated debris (tape, gloves, etc. utilized in plating operations) is disposed off site every 90 days. This material is stored in one-ton plastic, pallet-size containers pending disposal. Small buckets are utilized across the facility to collect the debris, which is then transferred to the plastic containers for disposal.

Capped Surface Impoundment and Capped Lagoon: Between 1970 and 1985/1986, metal hydroxide sludge generated in the Walton and Lonsbury wastewater treatment plant was discharged to a surface impoundment north of the W&L building and had approximate dimensions of 170 feet long by 10 feet wide, by three feet deep. In November 1984, five samples of the surface impoundment sludge material were analyzed for total metals. The analytical results indicated that aluminum, cadmium, chromium, and nickel were detected in the samples at concentrations ranging from 471 ppm to 638 ppm, 12.0 ppm to 21.4 ppm, 392,000 ppm to 485,000 ppm, and 69.4 ppm to 153 ppm, respectively. Between 1970 and 1985/1986, wastewater effluent treated by the Walton and Lonsbury wastewater treatment plant was discharged under a NPDES permit to a wastewater lagoon for settlement of particulates prior to discharge to a storm water runoff ditch located along the western W&L property line. The wastewater lagoon was located north of the W&L building and had approximate dimensions of 170 feet long by 10 feet wide, by 0.5 to 1.0 feet deep. Between 1985 and 1986, the sludge and visually contaminated soils were removed from the surface impoundment and lagoon, according to a Closure Plan that had been submitted and approved by MADEP. Confirmatory samples were collected from the bottom of the excavated area and analyzed for total metals (chromium, hexavalent chromium, lead, nickel, and copper), Extraction Procedure (EP) Toxicity, and VOCs. There were no VOCs detected in the samples. Total metals analysis indicated the presence of elevated concentrations of chromium (up to 6,900 mg/kg), copper (up to 470 mg/kg), and lead (up to 10,500 mg/kg). EP Toxicity analysis detected concentrations of cadmium, chromium, lead, silver, aluminum, and copper at in these samples at up to 0.008 mg/L, 0.30 mg/L, 0.16 mg/L, 0.07 mg/L, 1.14 mg/L, and 0.02 mg/L, respectively.

An "abandoned" dry-well is located outside the building footprint, adjacent to the south side of the building. This dry-well is reportedly a potential source of organic pollutants from discharges to the dry-well that occurred "during the early years of operation of the facility", including discharge of TCE. A soil test boring was installed in 2001 adjacent to the reported location of the dry-well. However, analysis of a soil sample collected from this boring did not detect the presence of VOCs.

Contaminated Groundwater Discharge to Surface Water: W&L's environmental consultant interpreted the groundwater sampling data as representing two co-mingled groundwater plumes; a chlorinated VOC plume and a dissolved chromium plume. Based on the concentrations of chromium, hexavalent chromium, and chlorinated VOCs in surface water, groundwater, and/or sediment samples, the plumes are interpreted to flow southeast from the W&L site and discharge to Bliss Brook and associated wetlands, east of the Paulette Lane and North Avenue residential properties. During the Phase IIC investigation completed in 2001, surface water samples collected in Bliss Brook contained concentrations of chromium and hexavalent chromium of up to 0.89 mg/L

(sample designated S.St-12) and 0.50 mg/L (sample designated S.St-4), respectively. TCE and TCA concentrations of 1.0 ug/L were detected in samples collected from surface water sample locations S.St-4 and S.St-6. Historic sampling from the storm water system and wetland south of the W&L facility detected elevated TCE and PCE concentrations of up to 26 ug/L and 27 ug/L, respectively. Chromium concentrations in these samples were reported as below laboratory detection limits. Sediment samples collected from Bliss Brook in 2001 as part of Phase IIC investigations indicated that there were no VOCs present above laboratory detection limits. Total chromium and hexavalent chromium concentrations of up to 2,800 mg/Kg and 2.3 mg/Kg, were detected in the sediment samples.

A 275-gallon TCA AST was located in the building interior, along the western side of the building. TCA was reportedly utilized on the site from approximately 1983 until approximately 1994 for parts degreasing. Based on hazardous waste reports for 1988, 1989, and 1991, when the facility was utilizing TCA as a degreaser, the average annual usage of TCA was 147 gallons.

A 275-gallon TCE AST was located adjacent to the western exterior wall of the building. TCE was used as a degreasing solvent from an unknown time until prior to 1983, when the use of TCA was initiated. "A number of overflow spills are know to have occurred during the 1980s" from this AST.

There are currently four active plating tanks (out of a total of six) at the W&L facility. These tanks have capacities of 740 gallons, 680 gallons, 1,440 gallons, and 1,210 gallons. Although historical operations have utilized more than four tanks at a time, only these tanks were being utilized by W&L during a site reconnaissance performed in 2004.

Soil Contamination is present in two areas: (1) west of the W&L building,(extending into the wetland area on the western edge of the W&L property) and (2) east of residential properties on Paulette Lane and North Avenue. Contaminated soils on the W&L property have been attributed to precipitation runoff from the electric room roof and the pre-1970 wastewater discharge to the wetland. The exhaust vents for the chrome plating tanks were located immediately above the electrical room roof. Samples of roof runoff during precipitation events indicated elevated total chromium concentrations of up to 147 mg/L. Soil contamination in the wetland area is attributed to the pre-1970 discharge of wastewater. Concentrations of chromium and lead above Method 1 S-1/GW-2 and S-1/GW-3 standards were detected in soil samples collected from residential properties adjacent to Bliss Brook that are subject to flooding from Bliss Brook.

Site Investigations and Interim Measures

Numerous investigations have been conducted at the site. Some of the major regulatory actions, activities, and reports are summarized below.

In November 1983, four monitoring wells (MW-1 through MW-4) were installed by W&L's environmental consultant. Quarterly groundwater sampling was initiated for analysis for total metals, pH, specific conductance, and total organic halogens (TOX), and total organic carbon (TOC).

In November 1984, five samples of the surface impoundment sludge material were analyzed for total metals. The analytical results indicated that aluminum, cadmium, chromium, and nickel were detected in the samples at concentrations ranging from 471 ppm to 638 ppm, 12.0 ppm to 21.4 ppm, 392,000 ppm to 485,000 ppm, and 69.4 ppm to 153 ppm, respectively.

In 1985, closure of the surface impoundments in accordance with the MADEP approved Closure Plan was initiated. "All identifiable metal sludges were excavated and disposed of off-site at the Stablex Canada facility, located in Montreal, Quebec, Canada".

Monitoring wells MW-5 and MW-6S/MW-6D were installed in April and May 1985, respectively, as part of the surface impoundment post-closure monitoring program. Based on water level data collected from the six monitoring wells installed on the site in 1983 and 1985, groundwater was determined to flow from the northwest to the southeast across the W&L site. Analysis of groundwater samples collected in 1985 indicated that the only metals present at concentrations above laboratory detection limits were total chromium, copper, nickel, and zinc and that "statistically significant" changes in parameter concentrations/values, as compared to the background well (MW-1) had only occurred in samples collected from MW-6S. In January 1987 and 1988, the quarterly monitoring program was modified. Analysis of volatile organic compounds (VOCs) was added, and sampling for some parameters was discontinued. W&L concluded, based on evaluation of this groundwater sampling data, that concentrations of some VOCs and metals exhibited significant changes over the course of monitoring.

On December 17, 1986, W&L's environmental consultant sent a letter to MADEP that included a laboratory analytical report for eight samples collected from the bottom of the surface impoundment and lagoon after sludge and visibly contaminated soils were excavated during closure activities. The samples were analyzed for total metals (chromium, hexavalent chromium, lead, nickel, and copper), Extraction Procedure (E.P.) Toxicity, and VOCs. There were no VOCs detected in the samples. Total metals analysis indicated metals concentrations of chromium (up to 6,900 mg/kg), copper (up to 470 mg/kg), and lead (up to 10,500 mg/kg). E.P. Toxicity analytical results indicated that all E.P. Toxicity metal concentrations in two of the eight surface impoundment samples were below detection limits. The remaining samples contained cadmium, chromium, lead, silver, aluminum, and copper at concentrations of up to 0.008 mg/L, 0.30 mg/L, 0.16 mg/L, 0.07 mg/L, 1.14 mg/L, and 0.02 mg/L, respectively. The only standards specified in the February 4, 1985 Closure Plan to determine the extent of excavation were E.P. Toxicity metals. According to W&L, all E.P. Toxicity metal results were below the limits approved by MADEP in the closure plan. On January 15, 1987, MADEP sent a letter to W&L confirming that MADEP agreed W&L had removed all visible sludge and contaminated subsoils during closure activities. MADEP also indicated that the former surface impoundments could be backfilled; however, certification of closure was withheld pending resolution of "groundwater issues" (*i.e.*, the "significant" changes in concentrations in the wells over the range of monitoring data). The surface impoundments were backfilled with clean sand and gravel and were graded with a ten percent slope. The impoundments were capped with a six- to 12-inch clay cap, followed by loam and grass seed. No records of final excavation dimensions were located in any of the reviewed files.

In 1989, a Phase I Limited Site Investigation Report was completed by W&L's environmental consultant. Phase I activities were performed to help identify the sources and extent of contamination on the W&L site, and to identify what required remediation. A total of five groundwater monitoring micro-wells were installed as part of the Phase I (PS-1 through PS-5). Analysis of five groundwater samples confirmed the presence of VOCs in groundwater down-gradient of the dry-well and former TCE tank. Chrome concentrations were detected in samples collected down gradient of the exhaust vent/roof runoff area and within the most down gradient wells on the site. Based on the data, W&L concluded that off-site migration of contaminants was likely.

On August 10, 1990, a Phase IIA Preliminary Comprehensive Site Assessment for the W&L site was completed. The Phase IIA was performed to further define the sources and delineate the extent of surface and subsurface contamination on the W&L site. Analysis of 40 surface soil samples collected for the Phase IIA work and 19 surface soil samples collected during a followup STM evaluation (summarized in a September 9, 1991 report), indicated the presence of chromium and hexavalent chromium at concentrations of up to 81,800 ppm and 1,200 ppm, respectively. These chromium concentrations were detected in soil samples collected on the W&L property and two southern abutting properties. Concentrations of lead, nickel, and zinc were also detected in soil samples collected from the site.

Two surface water samples were collected from Bliss Brook as part of a STM evaluation, and were submitted for analysis of total cyanide, dissolved total chromium, dissolved hexavalent chromium, dissolved lead, dissolved zinc, dissolved nickel, and VOCs. Dissolved chromium, dissolved hexavalent chromium, TCE, 1,1-dichloroethane, and 1,1,1-trichloroethane were detected in these samples at concentrations of up to 1.25 mg/L, 0.80 mg/L, 7.2 ug/L, 6.4 ug/L, and 24 ug/L, respectively. The recommended STM was construction of an 8-foot security fence around the surface soils with chromium concentrations posing a possible human health risk. The fence was subsequently installed around these soils, which are located on three properties (W&L property and two southern abutting properties), and the fence is still in place.

In May 1993, the EPA issued an Administrative Consent Agreement and Order for W&L (Docket No. RCRA-I-89-1098) pertaining to W&L's RCRA practices, including illegal land disposal of wastes. The Order required W&L to implement a number of Supplemental Environmental Projects (SEPs) to reduce the waste generated by the facility as well as payment of a civil penalty.

On June 15, 1993, W&L's environmental consultant submitted a report to MADEP summarizing soil gas probe and surface water sampling activities that were performed at the W&L site and residential neighborhood as part of the Phase IIB assessment activities. Twelve soil gas probes were installed down gradient of W&L to determine if VOC contaminated groundwater was migrating beyond the W&L property boundaries. A portable pump was used to purge air from the soil gas probes prior to screening each probe with a photoionization detector (PID). Soil gas samples were then collected with the pump and analyzed with a portable gas chromatograph. TCE concentrations of 0.010 parts per million by volume (ppmv) and 0.040 ppmv were detected in two of the soil gas samples. Surface water samples were collected from four locations along Bliss brook for analysis for pH, dissolved chromium, and VOCs. Dissolved chromium, TCE, 1,1-DCA, 1,1-DCE, 1,2-DCE (total), TCA, and

TCE were detected in the surface water samples at concentrations of up to 0.75 ppb, 24 ppb, 2.9 ppb, 1.2 ppb, 11 ppb, and 32 ppb, respectively.

In August 1993, private use agricultural wells were identified on the properties located at 27 Paulette Lane and 51 North Avenue, which are down gradient of the W&L site. These wells were sampled by W&L as part of an Imminent Hazard (IH) evaluation. Total chromium was detected in samples collected from these two wells at concentrations of 20 mg/L and 0.13 mg/L, respectively.

In August 1994, W&L sampled soils on Paulette Lane and North Avenue residential properties (12 Paulette Lane, 20 Paulette Lane, 30 Paulette Lane, 37 Paulette Lane, 42 North Avenue, 48 North Avenue, 50 North Avenue, 65 North Avenue, 73 North Avenue) including wetland soils between residences and Bliss Brook. Wetland soils were included in the sampling event due to reports of Bliss Brook flooding during periods of heavy rain. Analysis of surface water samples indicated the presence of dissolved chromium and chlorinated VOCs, and it was unknown if wetland soils had been impacted by Bliss Brook surface water during flood events. Soils were analyzed for total lead, total chromium, and hexavalent chromium. Total lead and total chromium were detected at concentrations of up to 660 ppm (48 North Avenue) and 1,500 ppm (65 North Avenue), respectively. Hexavalent chromium was reported as non-detected in all of the samples. The highest concentration of chromium was detected in samples collected from wetland areas and areas subject to flooding adjacent to Bliss Brook, which is located to the east of Paulette Lane and North Avenue.

In 1995, one 2,000-gallon No. 2 heating oil (UST) was removed from the W&L site. A release of oil to soils was observed during removal of the tank (PID soil head space readings of up to 650 ppmv), and MADEP issued Release Tracking Number (RTN) 4-11408. Approximately 20 cubic yards of petroleum contaminated soil was removed from the excavation. In September 1995, a Response Action Outcome (RAO) Statement was issued for the site by W&L's environmental consultant, who indicated that residual TPH concentrations in soil samples collected from the excavation posed No Significant Risk. A total of three fuel oil USTs have been present on the W&L site, which have all reportedly been removed. In addition to the tank removal in 1995, a 1,000 gallon UST was removed in 1985/1986. A discrepancy exists between information sources pertaining to the actual capacity of the USTs, which were registered with the Massachusetts State Fire Marshall's office as one 1,000-gallon and two 5,000-gallon, and reports on file with MADEP which indicate that one 1,000 gallon, one 4,000-gallon, and one 5,000 gallon USTs were previously located at the W&L site. Detailed information pertaining to removal of two of the USTS was not present in reviewed files.

In May 1996, an Immediate Response Action (IRA) Plan was implemented due to analytical documentation (February 1996 monitoring results required by 1995 ACO) of increases in surface water chromium concentrations. A June 21, 1996 IRA Completion Report summarized historical sampling and evaluated whether an Imminent Hazard (IH) existed due to the concentration of contaminants within the surface water of Bliss Brook. The report noted that Bliss Brook seasonally flooded the backyards of several residences. The IH evaluation stated that based on the exposure scenarios evaluated, there was no IH associated with the discharge of contaminated groundwater from the W&L site to Bliss Brook.

On June 28, 1996, a Release Abatement Measure (RAM) Plan for the site was submitted to MADEP, as required by the 1995 ACO. The RAM Plan outlined implementation of an air emissions control system and construction of a groundwater recovery and treatment system. The groundwater recovery system was scheduled for completion by the end of July 2000.

On May 27, 1999, a Draft RAM modification was completed by W&L's environmental consultant (a finalized RAM modification was not present in MADEP files). The modification was written to "enable the accomplishment of the maximum amount of risk reduction possible within the economically affordable scope of the subject RAM" (*i.e.*, limited funding was available from W&L escrow account, so the focus of the RAM was directed toward measures that would provide the most reduction in risk). The RAM modification included a groundwater fate and transport model. Utilizing the fate and transport model for the site (developed with MODFLOW), remedial alternatives were evaluated. Based on modeling simulations, W&L concluded that regardless of the remedial system utilized to cleanup/control groundwater contamination, chromium concentrations in groundwater and discharge of chromium-containing groundwater to Bliss Brook would not be significantly reduced within 40 years. However, VOCs could be substantially reduced through the use of a treatment system. W&L indicated that based on the limited funding available from the escrow account, RAM activities should be focused on VOC remediation. The Draft RAM modification recommended installation of six to eight down gradient monitoring wells, indoor air sampling of selected residences (based on proximity to the dissolved groundwater VOC plume), and installation of sub-slab ventilation to address VOC migration from groundwater to indoor air if needed. The groundwater treatment system was never constructed.

In 1999, W&L's environmental consultant submitted an IRA Plan in response to an October 8, 1999 MADEP letter. The MADEP letter indicated that analytical data submitted between April 1998 and September 1999 for groundwater samples collected up gradient of residential properties on Paulette Lane and North Avenue documented an increase in VOC concentrations. As a result, MADEP requested that an IRA be conducted. On November 10, 1999, W&L submitted an IRA Plan to delineate the down gradient extent of VOC impacted groundwater, and to determine whether a Critical Exposure Pathway (CEP) was present for the indoor air pathway.

On June 20, 2000, an IRA Status Report and Modification was submitted to MADEP for W&L. This report summarized work performed in response to the October 8, 1999 MADEP letter, including installation of five monitoring wells (RCA-17 through RCA-21) within 30 horizontal feet of private residences located at 51, 52, 60, 69, and 73 North Avenue. Soil samples were collected from the monitoring well borings, groundwater samples were collected from the five newly installed and four previously installed monitoring wells, and indoor air samples collected from the basement of residences located at 51, 60, 65, 69, and 73 North Avenue (52 North Avenue denied access), were collected as part of the IRA. Air samples were collected in Summa canisters and analyzed for VOCs using EPA Method TO-14.

Laboratory analysis of soil samples indicated that VOCs were not detected above the method detection limits in any of the shallow surface samples. Total chromium and lead were detected in the shallow soil samples; however, the concentrations of these metals were "at least three orders of magnitude below" applicable standards. Laboratory analysis of indoor air samples indicated the

presence of TCA concentrations ranging from 1.03 $\mu g/m^3$ to 3.72 $\mu g/m^3$; TCE at concentrations ranging from 4.39 $\mu g/m^3$ to 4.69 $\mu g/m^3$; and PCE concentrations ranging from below detection limits to 4.86 $\mu g/m^3$. Other VOCs, which are not COCs for the W&L site (Freon 11, Freon 12, toluene, xylenes, and 1,4-dichlorobenzene), were also detected. Vinyl chloride, 1,1-DCA, and TCE were detected in the groundwater sample collected from monitoring well RCA-17 at concentrations above the GW-2 standard. The 1,1-DCA concentration in the groundwater sample collected from monitoring well RCA-18 was also above the GW-2 standard. Hexavalent chromium concentrations in the groundwater samples ranged from 0.01 mg/L to 15 mg/L. Based on indoor air sample analytical results, sub-slab ventilation systems were recommended for the residences at 51, 60, 69, and 71 North Avenue.

On January 19, 2001, W&L's environmental consultant collected air samples from the first floor and basement of the residences located at 51, 60, 65, 69, and 73 North Avenue using Summa canisters. The samples were analyzed for VOCs via EPA Method TO-14. Laboratory analysis of the air samples detected concentrations of TCE above MADEP background concentrations; therefore, W&L concluded that based on the data a Critical Exposure Pathway (CEP) might exist, but that additional air sampling needed to be completed. An IRA Plan Modification was submitted to MADEP on May 22, 2001, and included expanded air sampling, collection of additional groundwater samples from existing wells, and preparation of an initial design report for proposed residential sub-slab ventilation systems.

In March 2001, MADEP's Office of Research and Standards (ORS) performed an IH evaluation for migration of VOCs from groundwater into indoor air of the residences and subsequent inhalation by residents. All of the air samples, with the exception of one, indicated that there were no non-cancer risks or excess lifetime cancer risks (ELCRs) above MADEP allowable Hazard Index (HI) of 1 or ELCR of $1.0 \times 10^{-5}$. It was suggested by ORS that the concentration of VOCs in groundwater below the residence with a calculated ELCR above $1.0 \times 10^{-5}$ "might not be the only source of the indoor air contamination", because detected concentrations within the sample collected from the first floor of 60 North Street were higher than those detected in the sample collected from the basement of this residence.

In June 2001, an IRA Status Report summarizing the results of the air sampling and additional soil and groundwater sampling was submitted to MADEP by W&L's environmental consultant. Eighteen additional soil samples (RCA-series) were collected from source areas of the site not previously sampled, including the grinder exhaust area, former TCE storage tank and fuel oil tank locations, dry-well, plating tank locations, and at the inferred end of the pre-1970 wastewater discharge outlet. Fifteen soil samples were also collected beyond the southern extent of the fenced area (WS-series). A total of thirty monitoring wells and temporary groundwater sampling locations on the W&L site, Paulette Lane residences, and North Avenue residences were sampled and analyzed for chlorinated VOCs, hexavalent chromium, and dissolved chromium. The IRA Status Report recommended sub-slab ventilation systems for seven residences (51, 60, 65, 69, and 73 North Avenue, and 27 and 37 Paulette Lane), based on VOC concentrations detected in groundwater samples. There were no metals detected above MCP Method 1 S-1/GW-2 or S-1/GW-3 standards in the surface soil samples (0-1 foot) collected from the borings completed near the grinder exhaust area or storage shed. Soil samples collected from borings in the drum storage area (0-1 foot bgs),

TCE AST/Fuel Oil USTs (8-9 feet bgs; 14-16 feet bgs), and adjacent to the plating baths/trenches (8.5-10 feet bgs, 13-14 feet bgs) contained chromium concentrations greater than MCP Method 1 S-1/GW-2 and/or S-1/GW-3 standards.

On November 7, 2001, the Phase IIC - Interim Comprehensive Site Assessment Report was submitted to MADEP by W&L's environmental consultant. The Phase IIC reviewed exposure points, routes of exposure, and exposure point concentrations for several identified areas across the W&L site and residential neighborhood. Three "hotspots", defined by W&L as a concentration greater than 10 times the exposure point concentration of the surrounding area, were identified. The chromium and lead concentrations associated with the former surface impoundments were identified as one hotspot. The second hotspot is located within the fenced area of the W&L property and is not readily accessible. The contaminated wetland soils in the residential neighborhood were identified as the third hotspot. Due to W&L's limited financial capability, MADEP requested that W&L prepare a preliminary Risk Assessment for soil and groundwater based on the applicable Method 1 Standards. Concentrations of lead and chromium detected in hotspot soil samples were above the MCP upper concentration limits. The result of the preliminary Method 1 Risk Assessment was that a statement of No Significant Risk to human health or the environment cannot be made for the W&L site. Recommendations for additional work at the W&L site included delineation of the down gradient extent of the groundwater plume, additional surface water and sediment characterization, and bedrock monitoring well installation to evaluate the presence of dense non-aqueous phase liquid (DNAPL).

During November 15-19 and November 29-30, 2004, TtNUS conducted a sampling effort as part of the W&L Site Inspection (SI). TtNUS also performed a visual survey of the area surrounding the wetland/headwaters of Bliss Brook. This survey was performed along public byways to determine if there are any industrial/commercial operations within this vicinity that could be a potential source of contaminants to the wetland and Bliss Brook. The immediate area around this wetland, with the exception of a school, several churches, and several office buildings, is residential.

TtNUS team personnel collected 14 soil samples, 14 sediment samples, seven surface water samples, and seven groundwater samples (not including Quality Assurance/ Quality Control (QA/QC) samples) as part of the W&L SI. The co-mingled chlorinated solvent and dissolved chromium plumes migrating southeast from the W&L property are known to be discharging to Bliss Brook. Sediment and surface water samples were collected from the brook to document the extent of impact to Bliss Brook, including from the wetland upstream of the zone of contaminated groundwater to surface water discharge, the Bungay River, and the Ten Mile River. File information indicates that during heavy rain events, Bliss Brook floods into adjacent residential properties. Prior to and during the TtNUS site reconnaissance, it rained. The rainwater swelled Bliss Brook beyond its banks and flooded the wetland areas located east of the backyard of these residences. Pin flags were set to mark the extent of the high water line as it was observed at that time. As part of the TtNUS SI, soil samples were collected from residential properties that abut Bliss Brook and that are subject to flooding. Groundwater samples were collected from five of the existing monitoring wells up gradient and down gradient of the facility. Although it is known that groundwater discharges to Bliss Brook to the east of Paulette Lane residences, it had not been determined whether Bliss Brook was a groundwater divide, preventing migration of contaminated groundwater to the east side of the

Brook. Therefore, a monitoring well couplet was installed on the eastern side of Bliss Brook, in a location down gradient of the contaminated groundwater plume. A shallow monitoring well (screened from 8.5 to 13.5 feet bgs) and a deep monitoring well (screened from 29.5 to 39.5 feet bgs), separated horizontally by approximately eight feet, make up the couplet. The couplet wells were sampled as part of the sampling event, and were used to determine the vertical gradient present in the vicinity of Bliss Brook by performing a groundwater elevation survey and water level gauging event.

Refer to Tables 1 through 3 for summary tables of the sediment, surface water, and soil sampling data from the 2004 TtNUS Site Inspection. Refer to Figure 1 for a site Locus and Figure 2 for sampling locations.

Current Site Conditions

On April 14, 2004, Tetra Tech NUS (TtNUS) team personnel conducted a Site Reconnaissance of the W&L site and off-site areas, including the residential neighborhoods across North Avenue and east of Bliss Brook. Chemical usage includes chromic acid salt, hydrochloric acid, sulfuric acid, sodium hydroxide, two proprietary Safety Kleen solvents, and mineral spirits. It was noted during the site reconnaissance that W&L currently leases a portion of the property that includes the capped surface impoundments to the tenant of the western abutting property. The tenant of this property filled the area around the impoundment so that the resulting ground surface is level. This area has been asphalt-paved and is currently used for parking and storage of vehicles and equipment. The chain-link fencing installed as a response to the IH evaluation associated with chromium concentrations in the soil and wetland samples was observed to be present and secure at the time of the site reconnaissance.

The main waste generated by W&L is a one to two percent chromic acid solution and chromium-contaminated solid waste. Every ninety days, approximately 4,000 gallons of chromic acid solution and 290 pounds of chromium-contaminated solid waste is shipped off site by a licensed contractor (either N.A. Environmental, General Chemical, or U.S. Waste). Safety Kleen disposes of mineral spirits and the proprietary solution used for degreasing on an as-needed basis.

Currently there are is no on-going environmental work occurring that is associated with RTN 4-0023 on behalf of W&L.

This Environmental Indicator Determination is based on data collected in 2004 and historical sampling data.

2. Are groundwater, soil, surface water, sediments, or air **media** known or reasonably suspected to be **"contaminated"**[1] above appropriately protective risk-based "levels" (applicable promulgated standards, as well as other appropriate standards, guidelines, guidance, or criteria) from releases subject to RCRA Corrective Action (from SWMUs, RUs or AOCs)?

| | Yes | No | ? | Rationale / Key Contaminants |
|---|---|---|---|---|
| Groundwater | X | | | MADEP GW-2 & GW-3 Standards exceeded. |
| Air (indoors)[2] | | X | | MADEP GW-2 Standards exceeded for one compound; however, analysis of air samples from residences have not indicated a Hazard Index of greater than 1.0 or an Excess Lifetime Cancer Risk (ELCR) of greater than 1.0E+05. |
| Surface Soil (e.g.<2 ft) | X | | | MADEP S-1/GW-2 and S-1/GW-3 Standards exceeded. |
| Surface Water | X | | | EPA National Recommended Water Quality Criteria exceeded. |
| Sediment | X | | | MADEP Threshold Effects Concentrations (TECs) exceeded. |
| Subsurf.Soil (e.g.>2 ft) | X | | | Method 1 S-1/GW-2 and S-1/GW-3 Standards exceeded. |
| Air (outdoors) | | X | | Not suspected. |

_____ If no (for all media) - skip to #6, and enter "YE," status code after providing or citing appropriate "levels," and referencing sufficient supporting documentation demonstrating that these "levels" are not exceeded.

__Y__ If yes (for any media) - continue after identifying key contaminants in each "contaminated" medium, citing appropriate "levels" (or provide an explanation for the determination that the medium could pose an unacceptable risk), and referencing supporting documentation.

_____ If unknown (for any media) - skip to #6 and enter "IN" status code.

Rationale and Reference(s):

References used for this determination include the reports listed below:

Phase 1 - Limited Site Investigation Report, by Resource Control Associates (February 1989).

Phase IIA Preliminary Comprehensive Site Assessment Report, by Resource Control Associates (August 1990).

Revised Preliminary RCRA Data Input Forms for Summary Model/NCAPS Forms, by TRC Environmental Corporation (March 1994).

Letter to Joseph Dorant (MADEP), RE: Surface Impoundment Sample Analyses, written by Robert Atwood (Ferrari-Atwood Engineering, Inc.) (December 1986).

Short-Term Measure Evaluation Report for Walton and Lonsbury, Inc., by Resource Control Associates, Inc. (September 1991).

Memorandum to Laura Stanley (MADEP), RE: Imminent Hazard Evaluation or Walton and Lonsbury, by Andrew Freidman (MADEP) (March 2001).
Immediate Response Action Plan Modification, by Resource Control Associates, Inc. (May 2001).
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Phase IIC - Interim Comprehensive Site Assessment Report, Walton and Lonsbury Facility, by Resource Control Associates (November 2001).
Draft Site Inspection Report, Walton and Lonsbury, Inc., Tetra Tech NUS, (July 2005).

The appropriately protective risk-based "levels" (applicable promulgated standards) used in this EI are the Massachusetts Contingency Plan (MCP) 310 CMR 40.0000 Method 1 risk characterization standards for soil and groundwater, the MADEP Threshold Effects Levels (TECs) for sediment screening, and the EPA's National Recommended Water Quality Criteria (RWQC) for surface water. If concentrations detected in soil, groundwater, sediment, and surface water at the site are less than the applicable Method 1 standards, TECs, or RWQC, then media are not considered to be contaminated. For this EI determination, the applicable soil and groundwater categories were assumed to be S-1/GW-2 for soil within 30 feet of a building (which is conservative because it represents concentrations which are protective of residential exposures to soil and indoor air over contaminated groundwater), and S-1/GW-3 for areas further than 30 feet from a building which are protective of residential exposures to soil and groundwater discharge to surface water. Data used for comparison to the standards is the 2004 soil, groundwater, surface water, and sediment data, which were collected during the Site Inspection. For areas where data was not collected in 2004, historical data was utilized.

Groundwater:

1,1,-Dichloroethene was detected in the groundwater sample collected by TtNUS in 2004 from RCA-17 at a concentration of 6 ppb. This compound has a Method 1 GW-2 standard of 1 ppb.

Surface Soils:

Total chromium and hexavalent chromium concentrations have been detected in surface soil samples collected from the area immediately west of the W&L building and the abutting wetland. Soils collected from this area in 1989 and 1991 contained total chromium concentrations of up to 81,800 mg/Kg (and hexavalent chromium concentrations of up to 1,200 mg/Kg . The Method 1 S-1/GW-2 and S-1/GW-3 for total chromium is 1,000 mg/Kg and hexavalent chromium is 200 mg/Kg). Since this area was known to be contaminated; no samples were collected from this area in 2004.

In 2004, TtNUS collected surface soil samples from residential properties adjacent to Bliss Brook. The soil samples were analyzed for metals and hexavalent chromium. Concentrations of chromium and lead exceeded the Method 1 Soil Standards. Chromium concentrations were detected in four soil samples at concentrations exceeding the MCP Method 1 S-1/GW-2 and S-1/GW-3 standards (1,000 ppm for both categories), and ranged from 1,690 ppm to 5,010 ppm. Hexavalent Chromium was not detected in concentrations that exceeded the MCP Method S-1/GW-2 & S-1/GW-3 Standards. Lead concentrations were detected in three soil samples at concentrations exceeding the MCP Method 1 S-1/GW-2 (300 ppm for both categories), and ranged from 327 ppm to 991 ppm.

Surface Water:

Historic groundwater sample analytical results have indicated the presence of two groundwater plumes migrating toward Bliss Brook. The co-mingled plumes of contaminated groundwater originate on the W&L site and flow to the southeast. The contaminated groundwater then discharges to Bliss Brook. Historic data for surface water samples collected from Bliss Brook have detected dissolved chromium, hexavalent chromium, and chlorinated VOCs.

In 2004, total chromium was detected in surface water samples collected from Bliss Brook and the Bungay River at concentrations of up to 477 ppb. Hexavalent chromium was detected at concentrations of up to 440 ppb. The EPA's National Recommended Water Quality Continuous Criteria Concentration for chromium and hexavalent chromium are 74 ppb and 11 ppb, respectively.

Sediment:

Total chromium, copper, lead, and nickel were detected in sediment samples collected from Bliss Brook during 2004 above the MADEP TECs. These samples were collected from the point of discharge of contaminated groundwater to Bliss Brook and downstream of this discharge area.

Subsurface Soils:

Soil samples collected as part of the post-excavation confirmatory soil sampling of the surface impoundment and lagoon on the W&L property contained concentrations of total chromium of up to 6,900 ppm and total lead of up to 10,500 ppm. The exact depth of the excavation is not documented in reviewed files. However, records indicate the surface impoundment and lagoon to have had depths of 3 feet and between 0.5 to 1.5 feet, respectively. After excavation of visible sludge and soil, these soils are believed to have been collected greater than 2 feet below natural surface grade. Additionally, at the present time, the impoundments have been capped, which places the soil sampling locations at even greater depths.

Refer to Attachment A for the data tables from the Phase IIC - Interim Comprehensive Site Assessment (2001) for historical groundwater, surface water, sediment, and soil data.

Footnotes:

[1] "Contamination" and "contaminated" describes media containing contaminants (in any form, NAPL and/or dissolved, vapors, or solids, that are subject to RCRA) in concentrations in excess of appropriately protective risk-based "levels" (for the media, that identify risks within the acceptable risk range).

[2] Recent evidence (from the Colorado Dept. of Public Health and Environment, and others) suggest that unacceptable indoor air concentrations are more common in structures above groundwater with volatile contaminants than previously believed. This is a rapidly developing field and reviewers are encouraged to look to the latest guidance for the

appropriate methods and scale of demonstration necessary to be reasonably certain that indoor air (in structures located above (and adjacent to) groundwater with volatile contaminants) does not present unacceptable risks.

3. Are there **complete pathways** between "contamination" and human receptors such that exposures can be reasonably expected under the current (land- and groundwater-use) conditions?

Summary Exposure Pathway Evaluation Table

| | Potential **Human Receptors** (Under Current Conditions) | | | | | | |
|---|---|---|---|---|---|---|---|
| **"Contaminated" Media** | Residents | Workers | Day-Care | Construction | Trespassers | Recreation | Food[3] |
| Groundwater | NO | NO | NO | NO | | | NO |
| ~~Air (indoors)~~ | ___ | ___ | ___ | ___ | ___ | ___ | ___ |
| Soil (surface, e.g., <2 ft) | YES | YES | NO | NO | YES | NO | NO |
| Surface Water | YES | YES | | | YES | NO | NO |
| Sediment | YES | YES | | | YES | NO | NO |
| Soil (subsurface e.g., >2 ft) | | | | NO | | | NO |
| ~~Air (outdoors)~~ | ___ | ___ | ___ | ___ | ___ | | |

Instructions for Summary Exposure Pathway Evaluation Table:

1. Strike-out specific Media including Human Receptors' spaces for Media which are not "contaminated") as identified in #2 above.

2. Enter "yes" or "no" for potential "completeness" under each "Contaminated" Media -- Human Receptor combination (Pathway).

Note: In order to focus the evaluation to the most probable combinations some potential "Contaminated" Media - Human Receptor combinations (Pathways) do not have check spaces ("___"). While these combinations may not be probable in most situations they may be possible in some settings and should be added as necessary.

_____ If no (pathways are not complete for any contaminated media-receptor combination) - skip to #6, and enter "YE" status code, after explaining and/or referencing condition(s) in-place, whether natural or man-made, preventing a complete exposure pathway from each contaminated medium (e.g., use optional Pathway Evaluation Work Sheet to analyze major pathways).

__Y__ If yes (pathways are complete for any "Contaminated" Media - Human Receptor combination) - continue after providing supporting explanation.

_____ If unknown (for any "Contaminated" Media - Human Receptor combination) - skip to #6 and enter "IN" status code

Rationale and Reference(s):

References used for this determination include the reports listed below:
Phase 1 - Limited Site Investigation Report, by Resource Control Associates (February 1989).
Phase IIA Preliminary Comprehensive Site Assessment Report, by Resource Control Associates (August 1990).
Revised Preliminary RCRA Data Input Forms for Summary Model/NCAPS Forms, by TRC Environmental Corporation (March 1994).
Letter to Joseph Dorant (MADEP), RE: Surface Impoundment Sample Analyses, written by Robert Atwood (Ferrari-Atwood Engineering, Inc.) (December 1986).
Short-Term Measure Evaluation Report for Walton and Lonsbury, Inc., by Resource Control Associates, Inc. (September 1991).
Memorandum to Laura Stanley (MADEP), RE: Imminent Hazard Evaluation or Walton and Lonsbury, by Andrew Freidman (MADEP) (March 2001).
Immediate Response Action Plan Modification, by Resource Control Associates, Inc. (May 2001).
IRA Status Report for Walton and Lonsbury Facility by Resource Control Associates (June 2001)
Phase IIC - Interim Comprehensive Site Assessment Report, Walton and Lonsbury Facility, by Resource Control Associates (November 2001).
Draft Site Inspection Report, Walton and Lonsbury, Inc., Tetra Tech NUS, (July 2005).

[3] Indirect Pathway/Receptor (e.g., vegetables, fruits, crops, meat and dairy products, fish, shellfish, etc.)

The site is located within an industrial park. Residential properties are located on Paulette Lane and North Avenue. The area is served by municipal water supply obtained from surface water intakes that are not within the downstream pathway of Bliss Brook. There is currently no ongoing construction at the site.

Although the groundwater concentration of 1,1-DCE in one well located within close proximity to a residence is above the Method 1 GW-3 standard (protective of migration of vapors to indoor air), this concentration is an order of magnitude lower than the concentrations detected in 2001, when indoor air sampling of this residence indicated that there were no Hazard indices or excess lifetime cancer risks (ELCR) greater than the allowable limits.

Surface soil samples collected on the subject property and in soil samples collected along Bliss Brook in areas subject to flooding have contained concentrations of chromium, lead, nickel, and zinc greater than the Method 1 S-1/GW-2 and S-1/GW-3 standards. This area is fenced and locked; therefore, trespassers and persons using this area for recreation are not expected. However, W&L workers are subject to exposure to these concentrations if they walk across the western portion of the W&L property. Exposure of residents in houses along Paulette Lane and North Avenue, as well as trespassers, to soils adjacent to Bliss Brook that are contaminated with chromium and lead is possible. Some areas along Bliss Brook are heavily overgrown and would discourage both residents and trespassers from accessing these areas. However, some areas along the brook were observed to

have paths and are relatively free of vegetation.

Residents in houses along Paulette Lane and North Avenue, trespassers, and workers at two commercial properties on North Avenue and bordered by Bliss Brook may be exposed to contaminated surface water and sediments in Bliss Brook. Children have been observed playing in Bliss Brook by MADEP personnel.

Exposure to subsurface soils is not expected due to the types of usage that workers at the W&L facility would have in the area where subsurface soils exceed the Method 1 standards.

4. Can the **exposures** from any of the complete pathways identified in #3 be reasonably expected to be **"significant"**[4] (i.e., potentially "unacceptable" because exposures can be reasonably expected to be: 1) greater in magnitude (intensity, frequency and/or duration) than assumed in the derivation of the acceptable "levels" (used to identify the "contamination"); or 2) the combination of exposure magnitude (perhaps even though low) and contaminant concentrations (which may be substantially above the acceptable "levels") could result in greater than acceptable risks)?

   ____ If no (exposures can not be reasonably expected to be significant (i.e., potentially "unacceptable") for any complete exposure pathway) - skip to #6 and enter "YE" status code after explaining and/or referencing documentation justifying why the exposures (from each of the complete pathways) to "contamination" (identified in #3) are not expected to be "significant."

   __Y__ If yes (exposures could be reasonably expected to be "significant" (i.e., potentially "unacceptable") for any complete exposure pathway) - continue after providing a description (of each potentially "unacceptable" exposure pathway) and explaining and/or referencing documentation justifying why the exposures (from each of the remaining complete pathways) to "contamination" (identified in #3) are not expected to be "significant."

   _____ If unknown (for any complete pathway) - skip to #6 and enter "IN" status code

   Rationale and Reference(s):

References used for this determination include the reports listed below:

Phase 1 - Limited Site Investigation Report, by Resource Control Associates (February 1989).

Phase IIA Preliminary Comprehensive Site Assessment Report, by Resource Control Associates (August 1990).

Revised Preliminary RCRA Data Input Forms for Summary Model/NCAPS Forms, by TRC Environmental Corporation (March 1994).

Letter to Joseph Dorant (MADEP), RE: Surface Impoundment Sample Analyses, written by Robert Atwood (Ferrari-Atwood Engineering, Inc.) (December 1986).

Short-Term Measure Evaluation Report for Walton and Lonsbury, Inc., by Resource Control

Associates, Inc. (September 1991).

Memorandum to Laura Stanley (MADEP), RE: Imminent Hazard Evaluation or Walton and Lonsbury, by Andrew Freidman (MADEP) (March 2001).
Immediate Response Action Plan Modification, by Resource Control Associates, Inc. (May 2001).
IRA Status Report for Walton and Lonsbury Facility by Resource Control Associates (June 2001)
Phase IIC - Interim Comprehensive Site Assessment Report, Walton and Lonsbury Facility, by Resource Control Associates (November 2001).
Draft Site Inspection Report, Walton and Lonsbury, Inc., Tetra Tech NUS, (July 2005).

The resident contaminated surface soil exposure pathway is expected to be significant, based on the type and amount of usage expected by Paulette Lane and North Avenue property residents. Exposure of these residents to contaminated sediment and surface water is expected to be less significant due to the lower likelihood of residents coming into contact with these media.

Exposure to contaminated surface soil, sediments, and surface water is not reasonably expected to be significant for workers or trespassers due to the low intensity of property usage and because exposure scenarios are not expected to be long term.

[4] If there is any question on whether the identified exposures are "significant" (i.e., potentially "unacceptable") consult a human health Risk Assessment specialist with appropriate education, training and experience.

5. Can the "significant" **exposures** (identified in #4) be shown to be within **acceptable** limits?

__Y__ If yes (all "significant" exposures have been shown to be within acceptable limits) - continue and enter "YE" after summarizing and referencing documentation justifying why all "significant" exposures to "contamination" are within acceptable limits (e.g., a site-specific Human Health Risk Assessment).

_____ If no (there are current exposures that can be reasonably expected to be "unacceptable")- continue and enter "NO" status code after providing a description of each potentially "unacceptable" exposure.

_____ If unknown (for any potentially "unacceptable" exposure) - continue and enter "IN" status code

Rationale and Reference(s):

References used for this determination include the reports listed below:
Phase 1 - Limited Site Investigation Report, by Resource Control Associates (February 1989).
Phase IIA Preliminary Comprehensive Site Assessment Report, by Resource Control Associates (August 1990).

Revised Preliminary RCRA Data Input Forms for Summary Model/NCAPS Forms, by TRC Environmental Corporation (March 1994).
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Phase IIC - Interim Comprehensive Site Assessment Report, Walton and Lonsbury Facility, by Resource Control Associates (November 2001).
Draft Site Inspection Report, Walton and Lonsbury, Inc., Tetra Tech NUS, (July 2005).

The only exposure scenario expected to be significant is the residential surface soil exposure pathway which exposes residents to lead and chromium in soils. EPA believes these **exposures are within acceptable limits** for the following reasons:

Standard risk assessment procedures allow for the averaging of lead concentrations across a site to determine risk. If the average is below 300 ppm, then the risk is at an acceptable level. Based on the lead concentrations detected in soil samples collected from the twelve soil sample locations, the average lead concentration in soils subject to flooding by Bliss Brook is 207 ppm, which is below the Method 1 S-1/GW-2 and S-1/GW-3 standards of 300 ppm. Additionally, the two background soil samples contained lead concentrations of 403 ppm and 315 ppm, indicating that the presence of lead in the site vicinity may not be attributable to W&L.

The chromium detected in soil samples above the 1000 ppm standard was trivalent chromium. The MADEP derivation of its Method 1 S-1/GW-2 and S-1/GW-3 chromium standard (direct exposure to residents) is initially based on a non carcinogenic Hazard Index (HI) of .2 which is more conservative than EPA's acceptable non-carcinogenic HI of 1 for total site wide contaminants. Using standard toxicity information and exposure scenarios, when this number is calculated for trivalent chromium, or any other non-carcinogenic compound, MADEP will limit the standard to a maximum of 1000 ppm even if the calculated value is well above 1000ppm. The calculated standard for chromium at a HI of .2 would be around 20,000 ppm. Also, EPA Region IX has developed preliminary remediation goals for various compounds using standard toxicity information and exposure scenarios and has calculated the value for trivalent chromium in residential soils at a HI of 1 to be a maximum of 100,000 ppm.

Based on the above, EPA believes that the potential exposure to lead and chromium in the residential soils are within acceptable limits.

6. Check the appropriate RCRIS status codes for the Current Human Exposures Under Control EI event code (CA725), and obtain Supervisor (or appropriate Manager) signature and date on the EI determination below (and attach appropriate supporting documentation as well as a map of the facility):

**YE** YE - Yes, "Current Human Exposures Under Control" has been verified. Based on a review of the information contained in this EI Determination, "Current Human Exposures" are expected to be "Under Control" at the Walton and Lonsbury facility, EPA ID # **MAD001197755**, located at 78 North Avenue in Attleboro, Massachusetts, under current and reasonably expected conditions. This determination will be re-evaluated when the Agency/State becomes aware of significant changes at the facility.

____ NO - "Current Human Exposures" are NOT "Under Control."

____ IN - More information is needed to make a determination.

Completed by (signature) Frank Battaglia Date 9/29/05
(print) Frank Battaglia
(title) RCRA Facility Manager

Supervisor (signature) for Date 5-19-06
(print) Matthew R. Hoagland
(title) Chief, RCRA Corrective Action Section
(EPA Region or State) EPA New England - Region 1

Locations where References may be found: The references can be found in the Walton and Lonsbury, Inc. file at the EPA Records Center at 1 Congress Street, Boston, MA.

Contact telephone and e-mail numbers

(name) Frank Battaglia
(phone #) (617) 918-1362
(e-mail) battaglia.frank@epa.gov

**FINAL NOTE: THE HUMAN EXPOSURES EI IS A QUALITATIVE SCREENING OF EXPOSURES AND THE DETERMINATIONS WITHIN THIS DOCUMENT SHOULD NOT BE USED AS THE SOLE BASIS FOR RESTRICTING THE SCOPE OF MORE DETAILED (E.G., SITE-SPECIFIC) ASSESSMENTS OF RISK.**

**Table 1**

**Sediment Sample Analytical Results for Walton and Lonsbury, Inc.**
**Exceeding MADEP Threshold Effect Concentrations**
**Samples Collected by TtNUS Team Personnel in November 2004**

| Sample Location | Element | Sample Concentration (ppm) | | MADEP TEC (ppm) |
|---|---|---|---|---|
| SD-01 (D13764) | Metals | | | |
| | Cadmium | 1.7 | | 0.99 |
| | Lead | 45.1 | | 35.8 |
| | Mercury | 0.23 | | 0.18 |
| SD-03 (D13766) | **Metals** | | | |
| | Arsenic | 20.0 | J | 9.79 |
| | Cadmium | 3.8 | | 0.99 |
| | Chromium | 8,140 | | 43.4 |
| | Copper | 33.0 | | 31.6 |
| | Lead | 114 | | 35.8 |
| | Zinc | 162 | | 121 |
| SD-04 (D13822) | **Metals** | | | |
| | Cadmium | 1.6 | | 0.99 |
| | Chromium | 1,220 | | 43.4 |
| | Copper | 45.0 | | 31.6 |
| | Lead | 102 | | 35.8 |
| | Mercury | 0.53 | | 0.18 |
| | Zinc | 135 | | 121 |

| | | | | |
|---|---|---|---|---|
| SD-05 (D13823) | **Metals** | | | |
| | Arsenic | 16.2 | J | 9.79 |
| | Cadmium | 3.4 | | 0.99 |
| | Chromium | 6,260 | | 43.4 |
| | Copper | 98.4 | | 31.6 |
| | Lead | 240 | | 35.8 |
| | Mercury | 0.59 | | 0.18 |
| | Zinc | 241 | | 121 |
| SD-06 (D13824) | **Metals** | | | |
| | Cadmium | 1.8 | | 0.99 |
| | Chromium | 1,660 | | 43.4 |
| | Copper | 51.6 | | 31.6 |
| | Lead | 68.3 | | 35.8 |
| SD-DUP-01 (D13825) | **Metals** | | | |
| | Cadmium | 11.7 | | 0.99 |
| | Chromium | 832 | | 43.4 |
| | Copper | 658 | | 31.6 |
| | Lead | 237 | | 35.8 |
| | Mercury | 2.9 | | 0.18 |
| | Nickel | 81.0 | | 22.7 |
| | Zinc | 509 | | 121 |
| SD-07 (D13826) | **Metals** | | | |
| | Cadmium | 2.1 | | 0.99 |
| | Copper | 220 | | 31.6 |
| | Lead | 585 | | 35.8 |
| | Mercury | 0.86 | | 0.18 |

| | | | | |
|---|---|---|---|---|
| SD-08 (D13827) | **Metals** | | | |
| | Cadmium | 14.1 | | 0.99 |
| | Chromium | 1,180 | | 43.4 |
| | Copper | 816 | | 31.6 |
| | Lead | 296 | | 35.8 |
| SD-08 (D13827) | Mercury | 3.3 | | 0.18 |
| | Nickel | 105 | | 22.7 |
| | Zinc | 605 | | 121 |
| SD-DUP-02 (D13828) | **Metals** | | | |
| | Arsenic | 11.5 | | 9.79 |
| | Cadmium | 16.6 | J | 0.99 |
| | Chromium | 1,320 | | 43.4 |
| | Copper | 781 | | 31.6 |
| | Lead | 234 | J | 35.8 |
| | Mercury | 0.98 | | 0.18 |
| | Nickel | 174 | | 22.7 |
| | Zinc | 470 | | 121 |
| SD-09 (D13829) | **Metals** | | | |
| | Cadmium | 12.4 | | 0.99 |
| | Chromium | 57.6 | | 43.4 |
| | Copper | 528 | | 31.6 |
| | Lead | 174 | | 35.8 |
| | Mercury | 2.1 | | 0.18 |
| | Nickel | 135 | | 22.7 |
| | Zinc | 322 | | 121 |

| | | | | |
|---|---|---|---|---|
| SD-10 (D13830) | **Metals** | | | |
| | Arsenic | 14.8 | | 9.79 |
| | Cadmium | 25.5 | J | 0.99 |
| | Chromium | 1,760 | | 43.4 |
| | Copper | 1,550 | | 31.6 |
| | Lead | 377 | J | 35.8 |
| | Mercury | 2.8 | | 0.18 |
| | Nickel | 325 | | 22.7 |
| | Zinc | 718 | | 121 |
| SD-11 (D13831) | **Metals** | | | |
| | Arsenic | 14.4 | | 9.79 |
| | Cadmium | 17.3 | J | 0.99 |
| | Chromium | 1,470 | | 43.4 |
| | Copper | 1,410 | | 31.6 |
| | Lead | 330 | J | 35.8 |
| | Mercury | 3.0 | | 0.18 |
| | Nickel | 182 | | 22.7 |
| | Zinc | 605 | | 121 |
| SD-12 (D13832) | **Metals** | | | |
| | Arsenic | 19.8 | | 9.79 |
| | Chromium | 107 | J | 43.4 |
| | Copper | 78.4 | J | 31.6 |
| | Lead | 175 | J | 35.8 |
| | Mercury | 0.26 | J | 0.18 |
| | Nickel | 33.0 | J | 22.7 |
| | Zinc | 166 | J | 121 |

| | | | | |
|---|---|---|---|---|
| SD-13 (D13833) | **Metals** | | | |
| | Arsenic | 10.5 | | 9.79 |
| | Cadmium | 14.3 | J | 0.99 |
| | Chromium | 1,090 | | 43.4 |
| | Copper | 650 | | 31.6 |
| | Lead | 186 | J | 35.8 |
| | Mercury | 0.94 | | 0.18 |
| | Nickel | 145 | | 22.7 |
| | Zinc | 415 | | 121 |
| SD-14 (D13834) | **Metals** | | | |
| | Cadmium | 2.4 | J | 0.99 |
| | Chromium | 209 | | 43.4 |
| | Copper | 172 | | 31.6 |
| | Lead | 65.1 | J | 35.8 |
| | Mercury | 0.49 | | 0.18 |
| | Nickel | 43.1 | | 22.7 |
| | Zinc | 139 | | 121 |

Notes:

TEC = Threshold effect concentrations - concentrations below which harmful effects are unlikely to be observed. TECs are only available for arsenic, cadmium, chromium, copper, lead, mercury, nickel, and zinc.

J = The associated numerical value is an estimated quantity.

ppm = Parts per million.

## Table 2

**Surface Water Sample Analytical Results**
**for Walton and Lonsbury, Inc.**
**Exceeding EPA National Recommended Water Quality Criteria**
**Samples Collected by TtNUS Team Personnel in November 2004**

| Sample Location | Element | Sample Concentration (ppb) | National Recommended Water Quality Criteria | |
|---|---|---|---|---|
| | | | CMC (ppb) | CCC (ppb) |
| SW-01 (MA1KY1) | **Metals** | | | |
| | Lead | 11.9 J | 65 | 2.5 |
| SW-03 (D13756) (MA1KY2) | **Metals** | | | |
| | Chromium | 294 | 570 | 74 |
| | Hexavalent Chromium | 320 | 16 | 11 |
| SW-04 (D13758) (MA1KY3) | **Metals** | | | |
| | Chromium | 407 | 570 | 74 |
| | Lead | 3.7 J | 65 | 2.5 |
| | Hexavalent Chromium | 370 | 16 | 11 |
| SW-06 (D13759) (MA1KY5) | **Metals** | | | |
| | Chromium | 477 | 570 | 74 |
| | Hexavalent Chromium | 440 | 16 | 11 |
| SW-08 (D13761) (MA1KY7) | **Metals** | | | |
| | Hexavalent Chromium | 77 | 16 | 11 |
| SW-DUP-01 (D13757) (MA1KY3) | **Metals** | | | |
| | Lead | 4.2 J | 65 | 2.5 |
| | Hexavalent Chromium | 42 | 16 | 11 |

Notes:

| | | |
|---|---|---|
| CCC | = | Continuous Criteria Concentration (CCC), which is the recommended chronic limit. |
| CMC | = | Criterion Maximum Concentration (CMC), which is the recommended acute limit. |
| J | = | The associated numerical value is an estimated quantity. |
| ppb | = | Parts per billion. |
| ppm | = | Parts per million. |

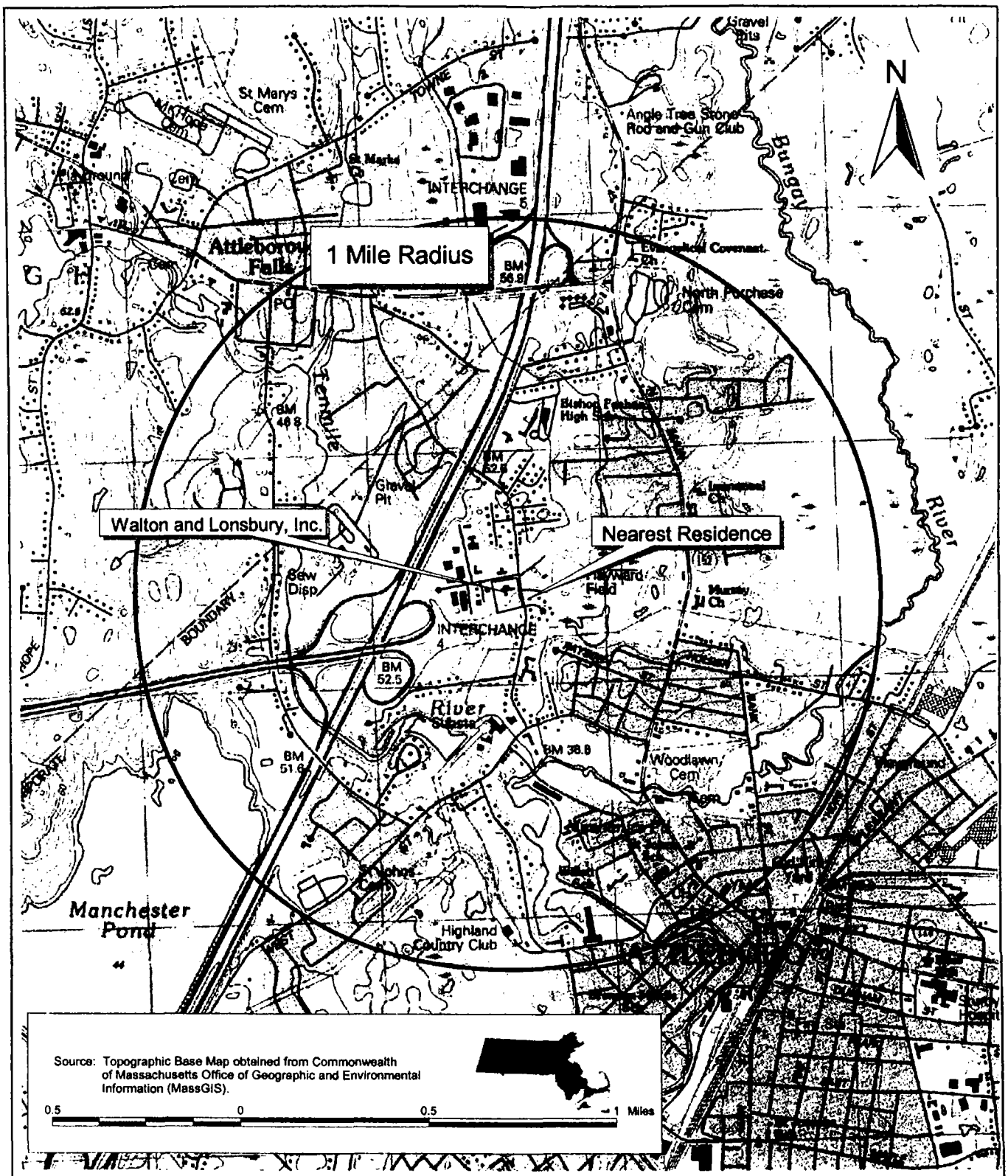
## Table 3

**Soil Sample Analytical Results**
**for Walton and Lonsbury, Inc.**
**Exceeding MCP RCS-1 and/or Method 1 Soil Standards**
**Samples Collected by TtNUS Team Personnel in November 2004**

| Sample Location | Element | Sample Concentration (ppm) | | Massachusetts Contingency Plan Method 1 Standards | | |
|---|---|---|---|---|---|---|
| | | | | RCS-1 (ppm) | S-1/GW-2 (ppm) | S-1/GW-3 (ppm) |
| SS-01 (D13737) (background) | **Metals** | | | | | |
| | Beryllium | 1.5 | | 0.7 | 0.7 | 0.7 |
| | Lead | 403 | J | 300 | 300 | 300 |
| SS-02 (D13738) (background) | **Metals** | | | | | |
| | Beryllium | 0.93 | | 0.7 | 0.7 | 0.7 |
| | Lead | 315 | J | 300 | 300 | 300 |
| SS-03 (D13739) | **Metals** | | | | | |
| | Chromium | 5,010 | | 1,000 | 1,000 | 1,000 |
| SS-DUP-01 (D13740) | **Metals** | | | | | |
| | Chromium | 3,040 | | 1,000 | 1,000 | 1,000 |
| SS-04 (D13741) | **Metals** | | | | | |
| | Chromium | 4,940 | | 1,000 | 1,000 | 1,000 |
| | Lead | 991 | J | 300 | 300 | 300 |
| SS-09 (D13746) | **Metals** | | | | | |
| | Lead | 327 | J | 300 | 300 | 300 |
| SS-10 (D13763) | **Metals** | | | | | |
| | Beryllium | 0.81 | | 0.7 | 0.7 | 0.7 |
| | Chromium | 1,690 | | 1,000 | 1,000 | 1,000 |
| | Lead | 362 | | 300 | 300 | 300 |

Notes:
J = The associated numerical value is an estimated quantity.
ppm = Parts per million.

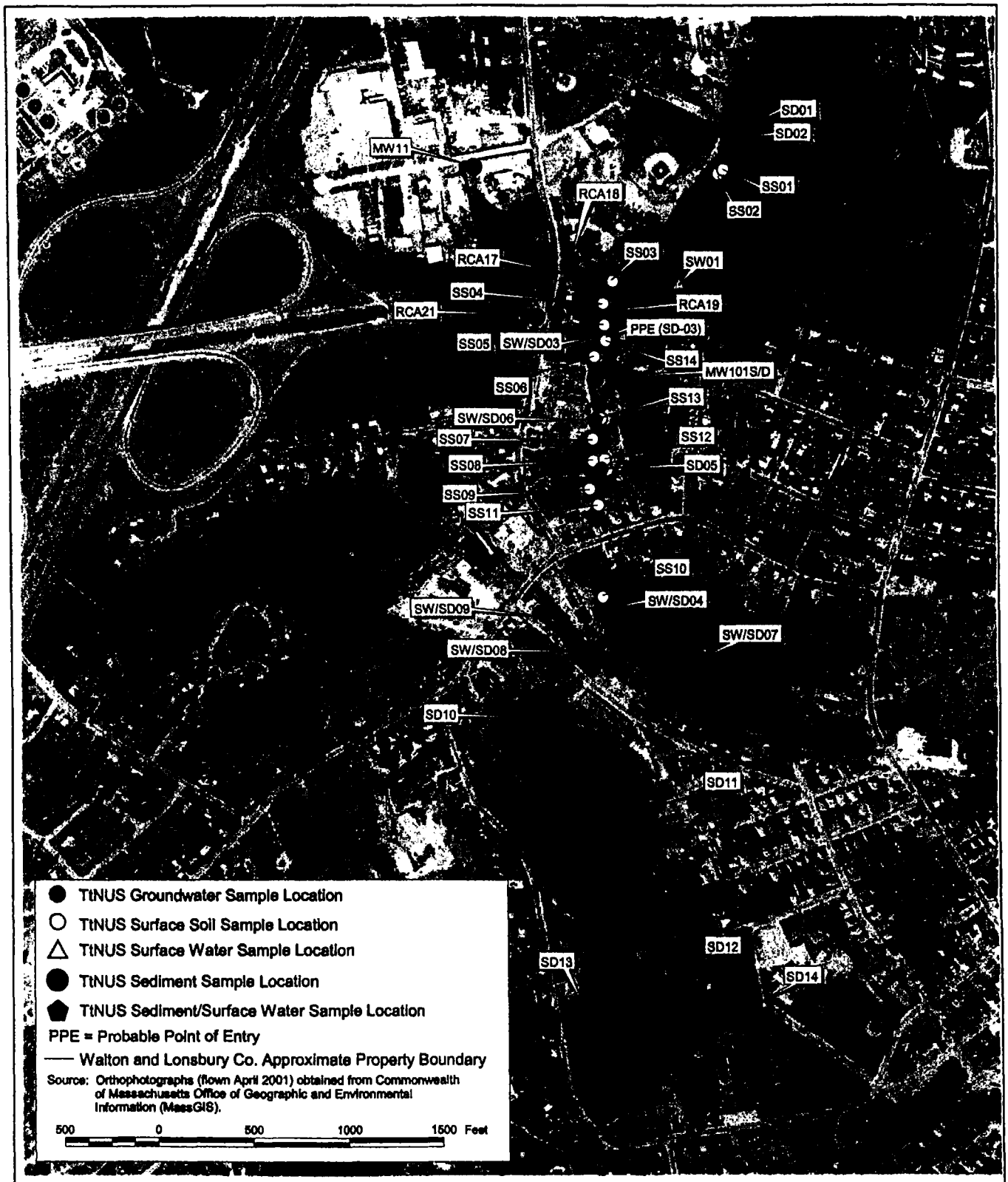
# FIGURES




TETRA TECH NUS, INC.
55 JONSPIN ROAD
WILMINGTON, MA 01887

SITE LOCATION
WALTON AND LONSBURY, INC.
ATTLEBORO, MASSACHUSETTS

| | |
|---|---|
| SCALE | As Shown |
| FILE | \GIS\SITEASSESSMENT\WALTONLONSBURY\WALTON.APR |
| REV | 0 |
| DATE | 07/21/04 |
| FIGURE NUMBER | FIGURE 1 |




TETRA TECH NUS, INC.
55 JONSPIN ROAD
WILMINGTON, MA 01887

TETRA TECH NUS, INC. (TtNUS) SAMPLE LOCATIONS
WALTON AND LONSBURY, INC.
ATTLEBORO, MASSACHUSETTS

| | |
|---|---|
| SCALE | As Shown |
| FILE | \GIS\SITEASSESSMENT\WALTON\LONSBURY\WALTON.APR |
| REV | 1 |
| DATE | 07/21/05 |
| FIGURE NUMBER | FIGURE 2 |

**ATTACHMENT A**

TABLE 3E
HISTORICAL AND CURRENT GROUNDWATER LABORATORY ANALYTICAL RESULTS

WALTON AND LONSBURY, INC
78 NORTH AVENUE
ATTLEBORO, MASSACHUSETTS

| PARAMETER | SAMPLE IDENTIFICATION | | | | | | | | | | | | | | | | | | | | | | | | | | | | | MCP METHOD 1 STANDARDS | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | MW-13 | | | | | MW-14 | | | | | MW-15 | | | | | MW-16 | | | | | RCA-17 | | RCA-18 | | RCA-19 | | RCA-20 | RCA-21 | | | |
| Date Sampled | 4/22/1998[a] | 8/20/1998[a] | 3/25/1999[a] | 9/23/1999[a] | 4/24/2000[a] | 4/22/1998[a] | 8/20/1998[a] | 3/25/1999[a] | 9/23/1999[a] | 4/24/2000[a] | 4/22/1998[a] | 8/20/1998[a] | 3/25/1999[a] | 9/23/1999[a] | 4/24/2000[a] | 4/22/1998[a] | 8/20/1998[a] | 3/25/1999[a] | 9/23/1999[a] | 4/24/2000[a] | 4/24/2000[d] | 1/17/2001[e] | 4/24/2000[d] | 1/17/2001[e] | 4/24/2000[d] | 1/17/2001[e] | 4/24/2000[d] | 4/24/2000[d] | 1/17/2001[e] | GW-2 | GW-3 |
| VOLATILE ORGANIC COMPOUNDS [a] NOTES: [a] = VOCs by EPA Method 8260 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Dichlorodifluoromethane | < 1 | < 2 | <5 | <5 | <5 | < 1 | < 2 | <5 | <5 | <5 | < 1 | < 2 | < 50 | < 50 | <25 | < 1 | < 2 | <5 | <5 | <5 | <10 | <2.5 | <5 | <0.5 | <5 | <0.5 | <5 | <5 | <0.5 | NA | NA |
| Chloromethane | < 1 | < 2 | <5 | <5 | <5 | < 1 | < 2 | <5 | <5 | <5 | < 1 | < 2 | < 50 | < 50 | <25 | < 1 | < 2 | <5 | <5 | <5 | <10 | <2.5 | <5 | <0.5 | <5 | <0.5 | <5 | <5 | <0.5 | NA | NA |
| Vinyl Chloride | < 1 | < 2 | <2 | <2 | <2 | < 1 | < 2 | <2 | <2 | <2 | [redacted] | [redacted] | < 50 | < 20 | [redacted] | < 1 | < 2 | <2 | <2 | <2 | [redacted] | <2.5 | <2 | <0.5 | <2 | <0.5 | <2 | <2 | <0.5 | [redacted] | 40,000 |
| Bromomethane | < 1 | < 2 | <5 | <5 | <5 | < 1 | < 2 | <5 | <5 | <5 | < 1 | < 2 | < 50 | < 50 | <25 | < 1 | < 2 | <5 | <5 | <5 | <10 | <2.5 | <5 | <0.5 | <5 | <0.5 | <5 | <5 | <0.5 | 2 | 50,000 |
| Chloroethane | < 1 | < 2 | <5 | <5 | <5 | < 1 | < 2 | <5 | <5 | <5 | < 1 | < 2 | < 50 | < 50 | <25 | < 1 | < 2 | <5 | <5 | <5 | <10 | <2.5 | <5 | <0.5 | <5 | <0.5 | <5 | <5 | <0.5 | NA | NA |
| Trichlorofluoromethane | < 1 | < 2 | <1 | <1 | <1 | < 1 | < 2 | <1 | <1 | <1 | < 1 | <2 | < 10 | < 10 | <5 | < 1 | < 2 | <1 | <1 | <1 | <2 | <2.5 | <1 | <0.5 | <1 | <0.5 | <1 | <1 | <0.5 | NA | NA |
| 1,1-Dichloroethene | < 1 | < 1 | <1 | <1 | <1 | < 1 | < 1 | <1 | <1 | <1 | [redacted] | [redacted] | [redacted] | [redacted] | [redacted] | < 1 | < 1 | <1 | <1 | <1 | [redacted] | [redacted] | [redacted] | [redacted] | <1 | [redacted] | 1 | <1 | [redacted] | [redacted] | 50,000 |
| Methylene Chloride | 1 | < 1 | <1 | <1 | <1 | 1 | < 1 | <1 | <1 | <1 | 1 | < 1 | < 10 | < 10 | <5 | < 1 | < 1 | <1 | <1 | <1 | <2 | <13 | <1 | <2.5 | <1 | <2.5 | <1 | <1 | <2.5 | 50,000 | 50,000 |
| trans-1,2-Dichloroethene | < 1 | < 1 | <1 | <1 | <1 | < 1 | < 1 | <1 | <1 | <1 | < 1 | < 1 | < 10 | < 10 | <5 | < 1 | < 1 | <1 | <1 | <1 | <2 | <2.5 | <1 | <0.5 | <1 | <0.5 | <1 | <1 | <0.5 | 20,000 | 50,000 |
| 1,1-Dichloroethane | < 1 | < 1 | <1 | <1 | <1 | < 1 | < 1 | <1 | <1 | <1 | 250 | 342 | 280 | 240 | 140 | < 1 | < 1 | <1 | <1 | <1 | 54 | 59 | 2 | 13 | 3 | 6 | 5 | 9 | 17 | 9,000 | 50,000 |
| cis-1,2-Dichloroethene | < 1 | < 1 | <1 | <1 | <1 | < 1 | < 1 | <1 | <1 | <1 | 75 | 74 | 84 | 86 | 66 | < 1 | < 1 | <1 | <1 | <1 | 22 | 18 | <1 | 5 | <1 | 2 | <1 | 2 | 6 | 30,000 | 50,000 |
| Chloroform | < 1 | < 1 | <1 | <1 | <1 | < 1 | 12 | <1 | 22 | <1 | < 1 | < 1 | < 10 | < 10 | <5 | < 1 | < 1 | <1 | <1 | <1 | <2 | <2.5 | <1 | <0.5 | <1 | <0.5 | <1 | <1 | <0.5 | 400 | 10,000 |
| 1,2-Dichloroethane | < 1 | < 1 | <1 | <1 | <1 | < 1 | < 1 | <1 | <1 | <1 | < 1 | < 1 | < 10 | < 10 | <5 | < 1 | < 1 | <1 | <1 | <1 | <2 | <2.5 | <1 | <0.5 | <1 | <0.5 | <1 | <1 | <0.5 | 20 | 50,000 |
| 1,1,1-Trichloroethane | < 1 | < 1 | <1 | <1 | <1 | < 1 | < 1 | <1 | <1 | <1 | 1,100 | 1,330 | 740 | 610 | 350 | 1 | < 1 | 2 | <1 | 1 | 130 | 240 | 9 | 42 | 4 | 18 | 8 | <1 | <0.5 | 4,000 | 50,000 |
| Carbon Tetrachloride | < 1 | < 1 | <1 | <1 | <1 | < 1 | < 1 | <1 | <1 | <1 | < 1 | < 1 | < 10 | < 10 | <5 | < 1 | < 1 | <1 | <1 | <1 | <2 | <2.5 | <1 | <0.5 | <1 | <0.5 | <1 | <1 | <0.5 | 20 | 50,000 |
| 1,2-Dichloropropane | < 1 | < 1 | <1 | <1 | <1 | < 1 | < 1 | <1 | <1 | <1 | < 1 | < 1 | < 10 | < 10 | <5 | < 1 | < 1 | <1 | <1 | <1 | <2 | <2.5 | <1 | <0.5 | <1 | <0.5 | <1 | <1 | <0.5 | 9 | 30,000 |
| Trichloroethene | < 1 | < 1 | <1 | <1 | <1 | < 1 | < 1 | <1 | <1 | <1 | 675 | 850 | 600 | 530 | 300 | 1 | 2 | 2 | <1 | 3 | 88 | 120 | 4 | 25 | 4 | 13 | 4 | 5 | 19 | 3,000 | 20,000 |
| Bromodichloromethane | < 1 | < 1 | <1 | <1 | <1 | < 1 | < 1 | <1 | <1 | <1 | < 1 | < 1 | < 10 | < 10 | <5 | < 1 | < 1 | <1 | <1 | <1 | <2 | <2.5 | <1 | <0.5 | <1 | <0.5 | <1 | <1 | <0.5 | NA | 50,000 |
| 2-Chloroethyl Vinyl Ether | < 10 | -- | <5 | <5 | <5 | < 10 | -- | <5 | <5 | <5 | < 10 | -- | < 50 | < 50 | <25 | < 10 | -- | <5 | <5 | <5 | <10 | -- | <5 | -- | <5 | -- | <5 | 5 | -- | NA | NA |
| cis-1,3-Dichloropropene | < 1 | < 0.5 | <1 | <1 | <1 | < 1 | < 0.5 | <1 | <1 | <1 | < 1 | < 0.5 | < 10 | < 10 | <5 | < 1 | < 0.5 | <1 | <1 | <1 | <2 | <2.5 | <1 | <0.5 | <1 | <0.5 | <1 | <1 | <0.5 | 5 | 2,000 |
| trans-1,3-Dichloropropene | < 1 | < 0.5 | <1 | <1 | <1 | < 1 | < 0.5 | <1 | <1 | <1 | < 1 | < 0.5 | < 10 | < 10 | <5 | < 1 | < 0.5 | <1 | <1 | <1 | <2 | <2.5 | <1 | <0.5 | <1 | <0.5 | <1 | <1 | <0.5 | 5 | 2,000 |
| 1,1,2-Trichloroethane | < 1 | < 1 | <1 | <1 | <1 | < 1 | < 1 | <1 | <1 | <1 | < 1 | < 1 | < 10 | < 10 | <5 | < 1 | < 1 | <1 | <1 | <1 | <2 | <2.5 | <1 | <0.5 | <1 | <0.5 | <1 | <1 | <0.5 | 20,000 | 50,000 |
| Dibromochloromethane | < 1 | < 1 | <1 | <1 | <1 | < 1 | < 1 | <1 | <1 | <1 | < 1 | < 1 | < 10 | < 10 | <5 | < 1 | < 1 | <1 | <1 | <1 | <2 | <2.5 | <1 | <0.5 | <1 | <0.5 | <1 | <1 | <0.5 | NA | 50,000 |
| Tetrachloroethene | < 1 | < 1 | <1 | <1 | <1 | < 1 | < 1 | <1 | <1 | <1 | 11 | 16 | 7 j | 13 | 12 | < 1 | < 1 | <1 | <1 | <1 | 7 | 4 | <1 | 0.7 | <1 | <0.5 | <1 | <1 | <0.5 | 3,000 | 5,000 |
| Chlorobenzene | < 1 | < 1 | <1 | <1 | <1 | < 1 | < 1 | <1 | <1 | <1 | < 1 | < 1 | < 10 | < 10 | <5 | < 1 | < 1 | <1 | <1 | <1 | <2 | <2.5 | <1 | <0.5 | <1 | <0.5 | <1 | <1 | <0.5 | 1,000 | 500 |
| Bromoform | < 1 | < 2 | <1 | <1 | <1 | < 1 | < 2 | <1 | <1 | <1 | < 1 | < 2 | < 10 | < 10 | <5 | < 1 | < 2 | <1 | <1 | <1 | <2 | <2.5 | <1 | <0.5 | <1 | <0.5 | <1 | <1 | <0.5 | 800 | 50,000 |
| 1,1,2,2-Tetrachloroethane | < 1 | < 1 | <1 | <1 | <1 | < 1 | < 1 | <1 | <1 | <1 | < 1 | < 1 | < 10 | < 10 | <5 | < 1 | < 1 | <1 | <1 | <1 | <2 | <2.5 | <1 | <0.5 | <1 | <0.5 | <1 | <1 | <0.5 | 20 | 20,000 |
| 1,3-Dichlorobenzene | < 1 | < 1 | <1 | <1 | <1 | < 1 | < 1 | <1 | <1 | <1 | < 1 | < 1 | < 10 | < 10 | <5 | < 1 | < 1 | <1 | <1 | <1 | <2 | <2.5 | <1 | <0.5 | <1 | <0.5 | <1 | <1 | <0.5 | 10,000 | 8,000 |
| 1,4-Dichlorobenzene | < 1 | < 1 | <1 | <1 | <1 | < 1 | < 1 | <1 | <1 | <1 | < 1 | < 1 | < 10 | < 10 | <5 | < 1 | < 1 | <1 | <1 | <1 | <2 | <2.5 | <1 | <0.5 | <1 | <0.5 | <1 | <1 | <0.5 | 30,000 | 8,000 |
| 1,2-Dichlorobenzene | < 1 | < 1 | <1 | <1 | <1 | < 1 | < 1 | <1 | <1 | <1 | < 1 | < 1 | < 10 | < 10 | <5 | < 1 | < 1 | <1 | <1 | <1 | <2 | <2.5 | <1 | <0.5 | <1 | <0.5 | <1 | <1 | <0.5 | 10,000 | 8,000 |
| METALS [b] NOTES: [b] = VOCs by EPA Method 8260B; Dissolved Cr and Pb by EPA Method 6010; Cr (VI) by Method 7196/HACH. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Chromium | < 0.05 | [redacted] | 0.03 | [redacted] | 0.03 | 0.99 | [redacted] | 1.9 | 1.6 | 0.78 | 0.94 | 0.28 | 0.07 | 0.01 | 0.03 | < 0.05 | < 0.05 | 0.02 | 0.02 | 0.01 | 15 | [redacted] | 0.34 | [redacted] | 0.48 | [redacted] | <0.01 | <0.01 | <0.01 | NA | [redacted] |
| Lead | < 0.1 | [redacted] | < 0.003 | -- | -- | [redacted] | [redacted] | < 0.003 | -- | -- | [redacted] | [redacted] | < 0.003 | -- | -- | [redacted] | [redacted] | < 0.003 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | NA | [redacted] |
| METALS [c] NOTES: [c] = VOCs by EPA Method 8260B; Dissolved Cr by EPA Method 6010B; Cr (VI) by Method SM 3500-Cr-D. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Hexavalent Chromium | < 0.01 | [redacted] | 0.04 | [redacted] | 0.04 | [redacted] | [redacted] | [redacted] | [redacted] | [redacted] | [redacted] | < 0.05 | 0.05 | 0.03 | 0.01 | < 0.01 | < 0.05 | 0.04 | 0.02 | 0.02 | [redacted] | [redacted] | [redacted] | [redacted] | [redacted] | [redacted] | <0.01 | <0.01 | 0.02 | NA | 0.1 |

NOTES:

-- = not analyzed.

[a] = VOCs by EPA Method 8010 (by EPA Method 8260 low level); Dissolved Cr and Pb by EPA Method 6010; Cr (VI) by Method 7196/HACH.

[b] = VOCs by EPA Method 8260B; Dissolved Cr and Pb by EPA Method 6010; Cr (VI) by Method 7196.

[c] = VOCs by EPA Method 8021B; Dissolved Cr and Pb by EPA Method 6010B; Cr (VI) by Method SM 3500-Cr-D.

[d] = VOCs by EPA Method 8021B; Dissolved Cr by EPA Method 6010B; Cr (VI) by Method SM 3500-Cr-D.

[e] = VOCs by EPA Method 8260B; Dissolved Cr by EPA Method 6010B; Cr (VI) by Method SM 3500-Cr-D

** = The groundwater sample collected at MW-16 on August 20, 1998 was analyzed using EPA Method 8260B, carbon disulfide, which is not included in the 8021 list, was detected at a concentration of 1 ug/L.

j = laboratory notation indicating an estimated value detected below the reporting limit for the analyte.

NA = no applicable standard.

mg/L = milligrams per liter (parts per million).

ug/L = micrograms per liter (parts per billion).

*Bold values exceed the lowest applicable MCP Method 1 Groundwater Standard*

TABLE 1F
GROUNDWATER LABORATORY ANALYTICAL RESULTS

WALTON AND LONSBURY, INC
78 NORTH AVENUE
ATTLEBORO, MASSACHUSETTS

| PARAMETER | WS-3 (TP) | WS-6 (TP) | WS-9 (TP) | WS-13 (TP) | WS-13(TP) | WS-15 | MW-1 | MW-2 | MW-3 | MW-4 | MW-5B | MW-5B | MW-5D | MW-6S | MW-7 | MW-8 | MW-9D | MW-9S | MW-10S | MW-10D | MW-11 | MW-12D | MW-12S | MW-13 | MW-14 | MW-15 | MW-16 | RCA-17 | RCA-18 | RCA-19 | RCA-21 | RCA-22 | RCA-23 | RCA-30 | RCA-31 | MCP METHOD 1 GROUNDWATER STANDARDS | | UPPER CONCENTRATION LIMIT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Date Sampled | 5/9/2001 | 5/9/2001 | 5/9/2001 | 5/9/2001 | 5/11/2001 | 5/11/2001 | 5/11/2001 | 5/10/2001 | 5/10/2001 | 5/10/2001 | 5/11/2001 | 5/11/2001 | 5/11/2001 | 5/11/2001 | 5/10/2001 | 5/10/2001 | 5/10/2001 | 5/10/2001 | 5/10/2001 | 5/10/2001 | 5/10/2001 | 5/10/2001 | 5/10/2001 | 5/11/2001 | 5/11/2001 | 5/11/2001 | 5/11/2001 | 5/11/2001 | 5/11/2001 | 5/11/2001 | 5/11/2001 | 5/10/2001 | 5/10/2001 | 5/10/2001 | 5/10/2001 | GW-2 | GW-3 | |
| VOLATILE ORGANIC COMPOUNDS (µg/L) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Dichlorodifluoromethane | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <50 | <5 | <100 | <5 | <5 | <5 | <5 | <10 | <5 | <5 | <5 | <5 | <20 | <5 | <5 | <20 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | NA | NA | NA |
| Chloromethane | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <50 | <5 | <100 | <5 | <5 | <5 | <5 | <10 | <5 | <5 | <5 | <5 | <20 | <5 | <5 | <20 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | NA | NA | NA |
| Vinyl Chloride | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <20 | <2 | <40 | <2 | <2 | <2 | <2 | [redacted] | <2 | <2 | <2 | <2 | <8 | <2 | <2 | <8 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | [redacted] | 40,000 | 200,000 |
| Bromomethane | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <50 | <5 | <100 | <5 | <5 | <5 | <5 | <10 | <5 | <5 | <5 | <5 | <20 | <5 | <5 | <20 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | 1 | 10,000 | 100,000 |
| Chloroethane | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <50 | <5 | <100 | <5 | <5 | <5 | <5 | <10 | <5 | <5 | <5 | <5 | <20 | <5 | <5 | <20 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | NA | NA | NA |
| [redacted] | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <10 | <1 | <20 | <1 | <1 | <1 | <1 | <2 | <1 | <1 | <1 | <1 | <4 | <1 | <1 | <4 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | NA | NA | NA |
| [redacted] | <1 | <1 | <1 | <1 | 1 | <1 | <1 | <1 | <1 | 1 | [redacted] | [redacted] | 1 | [redacted] | <1 | <1 | <1 | <1 | [redacted] | <1 | <1 | <1 | <1 | [redacted] | <1 | <1 | [redacted] | <1 | [redacted] | [redacted] | <1 | [redacted] | [redacted] | [redacted] | <1 | [redacted] | 10,000 | 100,000 |
| Methylene Chloride | <2.5 | <2.5 | <2.5 | <2.5 | <2.5 | <2.5 | <2.5 | <2.5 | <2.5 | <2.5 | <13 | <130 | <2.5 | <250 | <2.5 | <5 | <2.5 | <2.5 | <5 | <2.5 | <2.5 | <2.5 | <2.5 | <50 | <2.5 | <2.5 | <50 | <2.5 | <13 | <2.5 | <2.5 | <2.5 | <2.5 | <2.5 | <2.5 | 50,000 | 100,000 | 100,000 |
| trans-1,2-Dichloroethene | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <10 | <1 | <1 | 36 | <1 | <1 | <1 | <1 | <2 | <1 | <1 | <1 | <1 | <4 | <1 | <1 | <4 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | 20,000 | 100,000 | 100,000 |
| 1,1-Dichloroethane | <1 | 1 | <1 | 1 | 10 | 10 | 1 | <1 | <1 | 2 | 3 | 25 | 200 | 6 | 71 | <1 | 1 | 2 | <2 | 1 | 2 | 1 | <1 | 3 | 35 | <1 | <1 | 300 | 2 | 28 | 4 | 5 | 23 | 4 | <1 | 1 | 7 | 6,000 | 50,000 | 100,000 |
| cis-1,2-Dichloroethene | <1 | 1 | <1 | 1 | 3 | 8 | <1 | <1 | 2 | 6 | 14 | 36 | 3 | 710 | <1 | <1 | 5 | 140 | 17 | <1 | <1 | 3 | <1 | 11 | <1 | <1 | 110 | <1 | 23 | 2 | <1 | 6 | <1 | <1 | <1 | 70,000 | 50,000 | 100,000 |
| Chloroform | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <10 | <1 | <20 | <1 | <1 | <1 | <1 | <2 | <1 | <1 | <1 | <1 | <4 | <1 | 2 | <4 | 2 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | 400 | 10,000 | 100,000 |
| 1,2-Dichloroethane | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <10 | <1 | <20 | <1 | <1 | <1 | <1 | <2 | <1 | <1 | <1 | <1 | <4 | <1 | <1 | <4 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | 70 | 50,000 | 100,000 |
| [redacted] | <1 | <1 | <1 | <1 | 11 | <1 | <1 | <1 | <1 | <1 | [redacted] | [redacted] | 3 | [redacted] | <1 | 3 | <1 | <1 | <2 | <1 | <1 | <1 | <1 | [redacted] | <1 | <1 | [redacted] | 1 | 140 | 16 | 4 | <1 | 2 | 2 | 30 | <1 | 4,000 | 50,000 | 100,000 |
| Carbon Tetrachloride | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <10 | <1 | <20 | <1 | <1 | <1 | <1 | <2 | <1 | <1 | <1 | <1 | <4 | <1 | <1 | <4 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | 20 | 50,000 | 100,000 |
| 1,2-Dichloropropane | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <10 | <1 | <20 | <1 | <1 | <1 | <1 | <2 | <1 | <1 | <1 | <1 | <4 | <1 | <1 | <4 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | 1 | 30,000 | 100,000 |
| [redacted] | <1 | <1 | 2 | <1 | 4 | 12 | <1 | <1 | 7 | 36 | 150 | 230 | 20 | [redacted] | <1 | 15 | 14 | [redacted] | 52 | 34 | <1 | 30 | 23 | <1 | <1 | [redacted] | 3 | 190 | 8 | 4 | 21 | 1 | <1 | 6 | 11 | [redacted] | 20,000 | 50,000 |
| Bromodichloromethane | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <10 | <1 | <20 | <1 | <1 | <1 | <1 | <2 | <1 | <1 | <1 | <1 | <4 | <1 | <1 | <4 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | NA | 30,000 | 100,000 |
| 2-Chloroethyl Vinyl Ether | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <50 | <5 | <100 | <5 | <5 | <5 | <5 | <10 | <5 | <5 | <5 | <5 | <20 | <5 | <5 | <20 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | <5 | NA | NA | NA |
| cis-1,3-Dichloropropene | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <10 | <1 | <20 | <1 | <1 | <1 | <1 | <2 | <1 | <1 | <1 | <1 | <4 | <1 | <1 | <4 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | NA | NA | NA |
| trans-1,3-Dichloropropene | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <10 | <1 | <20 | <1 | <1 | <1 | <1 | <2 | <1 | <1 | <1 | <1 | <4 | <1 | <1 | <4 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | NA | NA | NA |
| 1,1,2-Trichloroethane | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <10 | <1 | <20 | <1 | <1 | <1 | <1 | <2 | <1 | <1 | <1 | <1 | <4 | <1 | <1 | <4 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | 20,000 | 50,000 | 100,000 |
| Dibromochloromethane | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <10 | <1 | <20 | <1 | <1 | <1 | <1 | <2 | <1 | <1 | <1 | <1 | <4 | <1 | <1 | <4 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | NA | 50,000 | 100,000 |
| Tetrachloroethene | <1 | <1 | <1 | <1 | <1 | 3 | <1 | <1 | <1 | <1 | <1 | 30 | <1 | 85 | <1 | 2 | 2 | <2 | 4 | <1 | <1 | <1 | 29 | <1 | <1 | 35 | <1 | 4 | <1 | <1 | <1 | <1 | <1 | 1 | <1 | 200 | 50,000 | 50,000 |
| Chlorobenzene | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <10 | <1 | <20 | <1 | <1 | <1 | <1 | <2 | <1 | <1 | <1 | <1 | <4 | <1 | <1 | <4 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | 1,000 | 500 | 10,000 |
| Benzene | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <10 | <1 | <20 | <1 | <1 | <1 | <1 | <2 | <1 | <1 | <1 | <1 | <4 | <1 | <1 | <4 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | 800 | 50,000 | 100,000 |
| 1,1,2,2-Tetrachloroethane | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <10 | <1 | <20 | <1 | <1 | <1 | <1 | <2 | <1 | <1 | <1 | <1 | <4 | <1 | <1 | <4 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | 20 | 20,000 | 100,000 |
| 1,3-Dichlorobenzene | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <10 | <1 | <20 | <1 | <1 | <1 | <1 | <2 | <1 | <1 | <1 | <1 | <4 | <1 | <1 | <4 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | 10,000 | 6,000 | 100,000 |
| 1,4-Dichlorobenzene | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <10 | <1 | <20 | <1 | <1 | <1 | <1 | <2 | <1 | <1 | <1 | <1 | <4 | <1 | <1 | <4 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | 30,000 | 6,000 | 100,000 |
| 1,2-Dichlorobenzene | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <10 | <1 | <20 | <1 | <1 | <1 | <1 | <2 | <1 | <1 | <1 | <1 | <4 | <1 | <1 | <4 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | 60,000 | 6,000 | 100,000 |
| Arsenic | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | NA | 400 | 4,000 |
| Barium | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | NA | 30,000 | 100,000 |
| Cadmium | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | NA | 50 | 500 |
| Chromium | 530 | 210 | 200 | - | <10 | <10 | <10 | 16 | <10 | 10 | 10 | 20 | <10 | 300 | [redacted] | - | - | <10 | 30 | 10 | 60 | <10 | <10 | 40 | 360 | 110 | 70 | 10 | [redacted] | [redacted] | 90 | <10 | [redacted] | 1,370 | [redacted] | NA | 2,000 | 20,000 |
| Lead | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | NA | 20 | 200 |
| Mercury | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | NA | 1 | 20 |
| Selenium | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | NA | 50 | 500 |
| Silver | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | NA | 7 | 400 |
| Chromium, Hexavalent | 10 | <10 | <10 | - | <10 | <10 | <10 | 10 | [redacted] | 10 | <10 | <10 | <10 | <10 | [redacted] | [redacted] | [redacted] | <10 | 30 | 20 | 20 | 40 | 60 | [redacted] | [redacted] | 60 | 20 | [redacted] | [redacted] | [redacted] | <10 | [redacted] | [redacted] | [redacted] | [redacted] | NA | 100 | 1,000 |
| C9 to C18 Aliphatic | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | <400 | <400 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 1,000 | 20,000 | 100,000 |
| C19 to C36 Aliphatic | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | <400 | <400 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | NA | 20,000 | 100,000 |
| C11 to C22 Aromatic | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | <200 | 230 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 20,000 | 20,000 | 100,000 |
| Naphthalene | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | <13 | <11 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 6,000 | 6,000 | 60,000 |
| 2-Methylnaphthalene | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | <8 | <8 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 10,000 | 2,000 | 100,000 |
| Phenanthrene | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | <13 | <11 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | NA | 3k | 3,000 |
| Acenaphthene | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | <13 | <11 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | NA | 5,000 | 50,000 |

NOTES:
TP = temporary overland groundwater sampling point
- = not analyzed
NA = no standard promulgated.
µg/L = micrograms per liter (parts per billion)
* WS-13(TP) was resampled on May 11, 2001 due to limited sample volume collected on May 9, 2001.
Bold concentrations exceed MCP Method 1 GW-2 or GW-3 Standards
Bold Italicized concentrations exceed MCP Upper Concentration Limits.

TABLE 4A
HISTORICAL SURFACE WATER
LABORATORY ANALYTICAL RESULTS

WALTON AND LONSBURY, INC.
78 NORTH AVENUE
ATTLEBORO, MASSACHUSETTS

| PARAMETER | SAMPLE IDENTIFICATION | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | | | | | | | | | | | | | | |
| Date Sampled | 7/20/1981[a] | 5/14/1993[a] | 2/6/1996[a] | 5/6/1996[b] | 8/8/1996[c] | 2/11/1997[d] | 9/4/1997[e] | 4/22/1998[f] | 8/20/1998[g] | 3/25/1999[h] | 9/23/1999[i] | 4/24/2000[j] | 6/22/2001[k] | 5/14/1993[a] | 5/6/1996[b] | 8/8/1996[c] | 2/11/1997[d] | 9/4/1997[e] | 4/22/1998[f] | 8/21/1998[g] | 3/25/1999[h] | 9/23/1999[i] | 4/24/2000[j] | 6/22/2001[k] |
| VOLATILE ORGANIC COMPOUNDS | | | | | | | | | | | | | | | | | | | | | | | | |
| Dichlorodifluoromethane | < 0.50 | – | – | <1 | <1 | – | – | – | <2 | <5 | <5 | <5 | <5 | – | <1 | <1 | – | – | <1 | <2 | <5 | <5 | <5 | <5 |
| Chloromethane | < 0.50 | < 1.0 | < 1.0 | <1 | <1 | <2 | <2 | <1 | <2 | <5 | <5 | <5 | <5 | < 1.0 | <1 | <1 | <2 | <2 | <1 | <2 | <5 | <5 | <5 | <5 |
| Vinyl Chloride | < 0.50 | < 1.0 | < 1.0 | <1 | <1 | <2 | <2 | <1 | <2 | <2 | <2 | <2 | <2 | < 1.0 | <1 | <1 | <2 | <2 | <1 | <2 | <2 | <2 | <2 | <2 |
| Bromomethane | < 0.50 | < 1.0 | < 1.0 | <1 | <1 | <2 | <2 | <1 | <2 | <5 | <5 | <5 | <5 | < 1.0 | <1 | <1 | <2 | <2 | <1 | <2 | <5 | <5 | <5 | <5 |
| Chloroethane | < 0.50 | < 1.0 | < 1.0 | <1 | <1 | <2 | <2 | <1 | <2 | <5 | <5 | <5 | <5 | < 1.0 | <1 | <1 | <2 | <2 | <1 | <2 | <5 | <5 | <5 | <5 |
| Trichlorofluoromethane | < 0.20 | < 1.0 | < 1.0 | <1 | <1 | <1 | <1 | <1 | <2 | <1 | <1 | <1 | <1 | < 1.0 | <1 | <1 | <1 | <1 | <1 | <2 | <1 | <1 | <1 | <1 |
| 1,1-Dichloroethene | < 0.20 | < 0.5 | < 0.50 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | < 0.5 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 |
| Methylene Chloride | < 0.20 | – | < 3.0 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | < 2.5 | – | 18 | <1 | <1 | <1 | 4 | <1 | <1 | <1 | <1 | < 2.5 |
| trans-1,2-Dichloroethene | < 0.20 | < 0.5 | < 0.50 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | < 0.5 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 |
| 1,1-Dichloroethane | < 0.20 | < 0.5 | 2.3 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | 2.3 | <1 | <1 | <1 | 1 | <1 | <1 | <1 | <1 | <1 | <1 |
| cis-1,2-Dichloroethene | – | < 0.5 | < 0.50 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | < 0.5 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 |
| Chloroform | 0.13 | < 0.5 | 0.68 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | < 0.5 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 |
| 1,2-Dichloroethane | < 0.20 | < 0.5 | 1.2 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | < 0.5 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 |
| 1,1,1-Trichloroethane | < 0.20 | < 0.5 | 7.4 | 4 | <1 | 2 | <1 | <1 | 2 | <1 | <1 | 1 | <1 | 7.7 | 2 | 1 | 3 | 1 | 1 | 1 | <1 | 1 | 1 | 2 |
| Carbon Tetrachloride | < 0.20 | < 0.5 | < 0.50 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | < 0.5 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 |
| 1,2-Dichloropropane | < 0.02 | < 0.5 | < 0.50 | <1 | <1 | <1 | <1 | <1 | <2 | <1 | <1 | <1 | <1 | < 0.5 | <1 | <1 | <1 | <1 | <1 | <2 | <1 | <1 | <1 | <1 |
| Trichloroethene | < 0.20 | < 0.5 | 1.4 | 2 | <1 | 1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | 1.9 | <1 | <1 | 2 | 1 | <1 | <1 | <1 | <1 | 1 | 1 |
| Bromodichloromethane | < 0.50 | < 0.5 | < 0.50 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | < 0.5 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 |
| 2-Chloroethyl Vinyl Ether | < 0.50 | < 0.5 | < 0.50 | <1 | <1 | <1 | <1 | < 10 | – | <5 | <5 | <5 | <5 | < 0.5 | <1 | <1 | <1 | <1 | < 10 | – | <5 | <5 | <5 | <5 |
| cis-1,3-Dichloropropene | < 0.50 | < 0.5 | < 0.50 | <1 | < 0.5 | < 0.5 | < 0.5 | <1 | <0.5 | <1 | <1 | <1 | <1 | < 0.5 | <1 | < 0.5 | < 0.5 | < 0.5 | <1 | <0.5 | <1 | <1 | <1 | <1 |
| trans-1,3-Dichloropropene | < 0.50 | < 0.5 | < 0.50 | <1 | < 0.5 | < 0.5 | < 0.5 | <1 | <0.5 | <1 | <1 | <1 | <1 | < 0.5 | <1 | < 0.5 | < 0.5 | < 0.5 | <1 | <0.5 | <1 | <1 | <1 | <1 |
| 1,1,2-Trichloroethane | < 0.20 | < 0.5 | < 0.50 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | < 0.5 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 |
| Dibromochloromethane | < 0.50 | < 0.5 | < 0.50 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | < 0.5 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 |
| Tetrachloroethene | < 0.20 | < 0.5 | < 0.50 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | < 0.5 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 |
| Chlorobenzene | < 0.50 | < 0.5 | < 0.50 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | < 0.5 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 |
| Bromoform | < 0.50 | < 0.5 | < 0.50 | <1 | <1 | <1 | <1 | <1 | <2 | <1 | <1 | <1 | <1 | < 0.5 | <1 | <1 | <1 | <1 | <1 | <2 | <1 | <1 | <1 | <1 |
| 1,1,2,2-Tetrachloroethane | < 0.20 | < 0.5 | < 0.50 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | < 0.5 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 |
| 1,3-Dichlorobenzene | < 0.50 | < 0.5 | < 0.50 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | < 0.5 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 |
| 1,4-Dichlorobenzene | < 0.50 | < 0.5 | < 0.50 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | < 0.5 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 |
| 1,2-Dichlorobenzene | < 0.50 | < 0.5 | < 0.50 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | < 0.5 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 |
| METALS | | | | | | | | | | | | | | | | | | | | | | | | |
| Chromium | 0.18 | 0.75 | 0.2 | 3.79 | 0.063 | 0.801 | 0.124 | 0.76 | 0.54 | 0.34 | 0.1 | 1.8 | 0.10 | 0.78 | 0.47 | 0.541 | 0.566 | 0.832 | 0.40 | 0.50 | 0.25 | 0.21 | 0.23 | 0.45 |
| Lead | < 0.08 | – | < 0.050 | < 0.005 | 0.010 | < 0.005 | < 0.005 | < 0.1 | <0.1 | < 0.003 | – | – | – | – | <0.005 | < 0.005 | 0.0054 | < 0.005 | < 0.1 | <0.1 | < 0.003 | – | – | – |
| Zinc | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – |
| Nickel | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – |
| Cyanide | < 0.02 | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – | – |
| OTHER PARAMETERS | | | | | | | | | | | | | | | | | | | | | | | | |
| Chromium, Hexavalent | < 0.02 | – | 0.6 | 1.61 | 0.098 | 0.722 | < 0.05 | 0.15 | 0.26 | 0.29 | 0.04 | 0.5 | 0.06 | – | 0.44 | 0.273 | 0.401 | 0.591 | 0.36 | 0.48 | 0.18 | 0.60 | 0.28 | 0.47 |

NOTES:
– = not analyzed.
mg/L = milligrams per liter (parts per million).
ug/L = micrograms per liter (parts per billion).
1.3 / 1.3 = duplicate results.
B = laboratory qualifier indicating that the compound was detected in the associated method blank.
SUPERSCRIPT LEGEND (ANALYTICAL METHODS):
a = VOCs by EPA Method 601, dissolved Cr and Pb by SW-846 6010, dissolved Cr (VI) by SM 3500-Cr-D
b = VOCs by EPA Method 8010A, total Cr by 200.7/6010, total Pb by 239.2/7421, Cr (VI) by 307A/7196
c = VOCs by EPA Method 601, total Cr by 200.7/6010, total Pb by 239.2/7421, Cr (VI) by 307A/7196
d = VOCs by EPA Method 8260A, total Cr by 200.7/6010, total Pb by 239.2/7421, Cr (VI) by 307A/7196
e = VOCs by EPA Method 8260B, total Cr by 200.7/6010, total Pb by 239.2/7421, Cr (VI) by 307A/7196
f = VOCs by EPA Method 8010 by EPA Method 8260 Low Level, dissolved Cr and Pb by 6010, Cr (VI) by 7196 HACH
g = VOCs by EPA Method 8260B, total Cr and Pb by 6010B, Cr (VI) by 7196
h = VOCs by EPA Method 8021B, Total Cr and Pb by 6010B, Cr (VI) by SM 3500-Cr-D
i = VOCs by EPA Method 601, Total Cr, Ni, Zn
j = VOCs by EPA Method 601, Dissolved Total Cr and Pb by EPA Method 6010, Dissolved Cr (VI) by SM 3500-Cr-D, Total Cu by EPA Method 335.3
k = VOCs by EPA Method 8021B, Total Cr by 6010B, Cr (VI) by SM 3500-Cr-D
l = VOCs by EPA Method 601, Dissolved Total Cr, Pb, and Ni by EPA Method 6010, Dissolved Cr (VI) by SM 3500 Cr-D
m = VOCs by EPA Method 601, Dissolved Total Cr by EPA Method 200.7

TABLE 4A
HISTORICAL SURFACE WATER
LABORATORY ANALYTICAL RESULTS

WALTON AND LONSBURY INC.
78 NORTH AVENUE
ATTLEBORO, MASSACHUSETTS

| PARAMETER | SAMPLE IDENTIFICATION | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | S.St-1 | S.St-2 | S.St-3 | S.St-7 | S.St-7A | S.St-8 | S.St-9 | S.St-10 | S.St-11 | S.St-11 | S.St-12 | S.St-12 | S.St-4 | | | | | | | | | | | | | |
| Date Sampled | 11/16/1988[f] | 11/16/1988[f] | 11/16/1988[f] | 5/14/1993[a] | 5/14/1993[a] | 3/8/1994[a] | 5/6/1996[a] | 5/6/1996[a] | 6/22/2001[a] | 9/20/2001[a] | 6/22/2001[a] | 9/20/2001[a] | 6/8/1991[f] | 7/20/1991[f] | 5/14/1993[a] | 2/8/1995[a] | 5/6/1995[a] | 6/8/1995[a] | 3/11/1997[a] | 9/4/1997[a] | 4/23/1998[a] | 8/20/1998[a] | 3/25/1999[a] | 9/23/1999[a] | 4/24/2000[a] | 6/22/2001[a] |
| VOLATILE ORGANIC COMPOUNDS | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Dichlorodifluoromethane | – | – | – | – | – | – | < 1 | < 1 | < 5 | – | < 5 | – | < 0.50 | < 0.50 | – | < 1.0 | <1 | <1 | – | – | – | <2 | < 5 | < 5 | < 5 | < 5 |
| Chloromethane | < 2 | – | – | < 1.0 | < 1.0 | < 5.0 | < 1 | < 1 | < 5 | – | < 5 | – | < 0.50 | < 0.50 | < 1.0 | < 1.0 | <1 | <1 | <2 | <2 | <1 | <2 | < 5 | < 5 | < 5 | < 5 |
| Vinyl Chloride | < 2 | – | – | < 1.0 | < 1.0 | < 5.0 | < 1 | < 1 | < 2 | – | < 2 | – | < 0.50 | < 0.50 | < 1.0 | < 1.0 | <1 | <1 | <2 | <2 | <1 | <2 | <2 | <2 | <2 | <2 |
| Bromomethane | – | – | – | < 1.0 | < 1.0 | < 5.0 | < 1 | < 1 | < 5 | – | < 5 | – | < 0.50 | < 0.50 | < 1.0 | < 1.0 | <1 | <1 | <2 | <2 | <1 | <2 | < 5 | < 5 | < 5 | < 5 |
| Chloroethane | < 2 | – | – | < 1.0 | < 1.0 | < 5.0 | < 1 | < 1 | < 5 | – | < 5 | – | < 0.50 | < 0.50 | < 1.0 | < 1.0 | <1 | <1 | <2 | <2 | <1 | <2 | < 5 | < 5 | < 5 | < 5 |
| Trichlorofluoromethane | – | – | – | < 1.0 | < 1.0 | < 5.0 | < 1 | < 1 | < 1 | – | < 1 | – | < 0.20 | < 0.20 | < 1.0 | < 1.0 | <1 | <1 | <1 | <1 | <1 | <2 | <1 | <1 | <1 | <1 |
| 1,1-Dichloroethene | < 2 | ND | ND | < 0.5 | < 0.5 | 8.5 | < 1 | < 1 | < 1 | – | < 1 | – | ND / ND | 0.68 / 0.45 | < 0.5 | 0.68 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 |
| Methylene Chloride | – | – | – | – | – | 15 | 16 | <1 | < 2.5 | – | < 2.5 | – | < 0.20 | < 0.20 | – | < 3.0 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | < 2.5 |
| trans-1,2-Dichloroethene | ND | ND | ND | < 0.5 | < 0.5 | < 2.5 | < 1 | < 1 | < 1 | – | < 1 | – | < 0.20 | < 0.20 | < 0.5 | < 0.50 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 |
| 1,1-Dichloroethane | ND | ND | ND | 1.9 | 1.9 | 60 | < 1 | < 1 | < 1 | – | < 1 | – | 2.7 / 2.2 | 8.0 / 6.4 | 1.7 | 2.3 | <1 | <1 | <1 | 1 | <1 | <1 | <1 | <1 | <1 | <1 |
| cis-1,2-Dichloroethene | – | – | – | < 0.5 | < 0.5 | < 2.5 | < 1 | < 1 | < 1 | – | < 1 | – | – | – | < 0.5 | < 0.50 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 |
| Chloroform | – | – | – | < 0.5 | < 0.5 | < 2.5 | < 1 | < 1 | < 1 | – | 2 | – | 0.48 / 0.35 | 0.24 / 0.27 | < 0.5 | < 0.50 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 |
| 1,2-Dichloroethane | – | – | – | < 0.5 | < 0.5 | < 2.5 | < 1 | < 1 | < 1 | – | < 1 | – | < 0.20 | < 0.20 | < 0.5 | < 0.50 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 |
| 1,1,1-Trichloroethane | ND | ND | ND | 11 | 11 | 200 | < 1 | < 1 | < 1 | – | < 1 | – | 15 / 13 | 23 / 24 | 8.7 | 8.3 | 2 | 2 | 3 | 2 | 2 | 2 | <1 | 2 | 2 | 1 |
| Carbon Tetrachloride | – | – | – | < 0.5 | < 0.5 | < 2.5 | < 1 | < 1 | < 1 | – | < 1 | – | < 0.20 | < 0.20 | < 0.5 | < 0.50 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 |
| 1,2-Dichloropropane | – | – | – | < 0.5 | < 0.5 | < 2.5 | < 1 | < 1 | < 1 | – | < 1 | – | < 0.02 | < 0.02 | < 0.5 | < 0.50 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 |
| Trichloroethene | 27 | 23 | 2 | 2.9 | 2.4 | 95 | < 1 | < 1 | 1 | – | < 1 | – | 4.6 / 3.8 | 8.5 / 7.2 | 2.5 | 2.7 | 1 | 1 | 2 | 2 | 1 | 1 | <1 | <1 | 1 | 1 |
| Bromodichloromethane | – | – | – | < 0.5 | < 0.5 | < 2.5 | < 1 | < 1 | < 1 | – | < 1 | – | < 0.50 | < 0.50 | < 0.5 | < 0.50 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 |
| 2-Chloroethyl Vinyl Ether | – | – | – | < 0.5 | < 0.5 | < 2.5 | < 1 | < 1 | < 5 | – | < 5 | – | < 0.50 | < 0.50 | < 0.5 | < 0.50 | <1 | <1 | <1 | <1 | <10 | – | < 5 | < 5 | < 5 | < 5 |
| cis-1,3-Dichloropropene | – | – | – | < 0.5 | < 0.5 | < 2.5 | < 1 | < 1 | < 1 | – | < 1 | – | < 0.50 | < 0.50 | < 0.5 | < 0.50 | <1 | < 0.5 | < 0.5 | < 0.5 | <1 | <0.5 | <1 | <1 | <1 | <1 |
| trans-1,3-Dichloropropene | – | – | – | < 0.5 | < 0.5 | < 2.5 | < 1 | < 1 | < 1 | – | < 1 | – | < 0.50 | < 0.50 | < 0.5 | < 0.50 | <1 | < 0.5 | < 0.5 | < 0.5 | <1 | <0.5 | <1 | <1 | <1 | <1 |
| 1,1,2-Trichloroethane | – | – | – | < 0.5 | < 0.5 | < 2.5 | < 1 | < 1 | < 1 | – | < 1 | – | < 0.20 | < 0.20 | < 0.5 | < 0.50 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 |
| Dibromochloromethane | ND | ND | ND | < 0.5 | < 0.5 | < 2.5 | < 1 | < 1 | < 1 | – | < 1 | – | < 0.50 | < 0.50 | < 0.5 | < 0.50 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 |
| Tetrachloroethene | 24 | 23 | 2 | < 0.5 | < 0.5 | < 2.5 | < 1 | < 1 | < 1 | – | < 1 | – | < 0.20 | < 0.20 | < 0.5 | < 0.50 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 |
| Chlorobenzene | – | – | – | < 0.5 | < 0.5 | < 2.5 | < 1 | < 1 | < 1 | – | < 1 | – | < 0.50 | < 0.50 | < 0.5 | < 0.50 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 |
| Bromoform | – | – | – | < 0.5 | < 0.5 | < 2.5 | < 1 | < 1 | < 1 | – | < 1 | – | < 0.50 | < 0.50 | < 0.5 | < 0.50 | <1 | <1 | <1 | <1 | <1 | <2 | <1 | <1 | <1 | <1 |
| 1,1,2,2-Tetrachloroethane | – | – | – | < 0.5 | < 0.5 | < 2.5 | < 1 | < 1 | < 1 | – | < 1 | – | < 0.20 | < 0.20 | < 0.5 | < 0.50 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 |
| 1,3-Dichlorobenzene | – | – | – | < 0.5 | < 0.5 | < 2.5 | < 1 | < 1 | < 1 | – | < 1 | – | < 0.50 | < 0.50 | < 0.5 | < 0.50 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 |
| 1,4-Dichlorobenzene | – | – | – | < 0.5 | < 0.5 | < 2.5 | < 1 | < 1 | < 1 | – | < 1 | – | < 0.50 | < 0.50 | < 0.5 | < 0.50 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 |
| 1,2-Dichlorobenzene | – | – | – | < 0.5 | < 0.5 | < 2.5 | < 1 | < 1 | < 1 | – | < 1 | – | < 0.50 | < 0.50 | < 0.5 | < 0.50 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 |
| METALS | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Chromium | < 0.03 | < 0.03 | < 0.03 | 0.68 | 0.57 | 0.10 | 0.322 | < 0.030 | 0.34 | 0.41 | 0.09 | 0.04 | 0.09 / 0.08 | 1.3 / 1.25 | 0.68 | 0.79 | 0.531 | 0.346 | 0.564 | 0.939 | 0.48 | 0.41 | 0.35 | 1.0 | 0.32 | 0.51 |
| Lead | – | – | – | – | – | < 0.050 | < 0.005 | < 0.005 | – | – | – | – | < 0.06 | ND | – | < 0.050 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.10 | <0.1 | < 0.005 | – | – | – |
| Zinc | 0.02 | 0.03 | 0.03 | – | – | – | – | – | – | – | – | – | < 0.06 | – | – | – | – | – | – | – | – | – | – | – | – | – |
| Nickel | < 0.02 | < 0.02 | < 0.02 | – | – | – | – | – | – | – | – | – | < 0.05 | – | – | – | – | – | – | – | – | – | – | – | – | – |
| Cyanide | – | – | – | – | – | – | – | – | – | – | – | – | – | ND / ND | – | – | – | – | – | – | – | – | – | – | – | – |
| Chromium, Hexavalent | – | – | – | – | – | 0.030 | 0.050 | < 0.050 | 0.40 | 0.30 | 0.16 | < 0.01 | 0.30 | 1.3 / 1.3 | – | 0.70 | 0.480 | 0.426 | 0.511 | 0.596 | 0.4 | 0.4 | 0.27 | 0.70 | 0.3 | 0.50 |

NOTES:
– = not analyzed.
mg/L = milligrams per liter (parts per million).
ug/L = micrograms per liter (parts per billion).
1.3 / 1.3 = duplicate results.
B = laboratory qualifier indicating that the compound was detected in the associated method blank.
SUPERSCRIPT LEGEND (ANALYTICAL METHODS):
a = VOCs by EPA Method 601, dissolved Cr and Pb by SW-846 6010, dissolved Cr (VI) by SM 3500-Cr-D
b = VOCs by EPA Method 8010A , total Cr by 200.7/6010, total Pb by 239.2/7421, Cr (VI) by 307A/7196
c = VOCs by EPA Method 601, total Cr by 200.7/6010, total Pb by 239.2/7421, Cr (VI) by 307A/7196
d = VOCs by EPA Method 8260A, total Cr by 200.7/6010, total Pb by 239.2/7421, Cr (VI) by 307A/7196
e = VOCs by EPA Method 8260B, total Cr by 200.7/6010, total Pb by 239.2/7421, Cr (VI) by 307A/7196
f = VOCs by EPA Method 8010 by EPA Method 8260 Low Level, dissolved Cr and Pb by 6010, Cr (VI) by 7196 HACH
g = VOCs by EPA Method 8260B, total Cr and Pb by 6010B, Cr (VI) by 7196
h = VOCs by EPA Method 8021B, Total Cr and Pb by 6010B, Cr (VI) by SM 3500-Cr-D
i = VOCs by EPA Method 601, Total Cr, Ni, Zn
j = VOCs by EPA Method 601, Dissolved Total Cr and Pb by EPA Method 6010, Dissolved Cr (VI) by SM 3500 Cr-D Total Cn by EPA Method 335.3
k = VOCs by EPA Method 8021B, Total Cr by 6010B, Cr (VI) by SM 3500-Cr-D
l = VOCs by EPA Method 601, Dissolved Total Cr, Pb, and Ni by EPA Method 6010, Dissolved Cr (VI) by SM 3500-Cr-D
m = VOCs by EPA Method 601, Dissolved Total Cr by EPA Method 200.7

TABLE 6
BLISS BROOK SEDIMENT LABORATORY ANALYTICAL RESULTS

WALTON AND LONSBURY, INC.
78 NORTH AVENUE
ATTLEBORO, MASSACHUSETTS

| PARAMETER | SAMPLE IDENTIFICATION | | | | | | |
|---|---|---|---|---|---|---|---|
| | S-ST-4 | S-ST-5 | S-ST-6 | S-ST-11 | S-ST-11 | S-ST-12 | S-ST-12 |
| Date Sampled | 6/22/2001 | 6/22/2001 | 6/22/2001 | 6/22/2001 | 9/20/2001 | 6/22/2001 | 9/20/2001 |
| Area of Concern | BLISS BROOK SEDIMENTS | | | | | | |
| VOLATILE ORGANICS COMPOUNDS BY EPA Method 8021B (ug/kg) | | | | | | | |
| Dichlorodifluoromethane | < 330 | < 1,700 | < 320 | < 400 | – | < 1,600 | – |
| Chloromethane | < 330 | < 1,700 | < 320 | < 400 | – | < 1,600 | – |
| Vinyl Chloride | < 130 | < 660 | < 130 | < 160 | – | < 640 | – |
| Bromomethane | < 330 | < 1,700 | < 320 | < 400 | – | < 1,600 | – |
| Chloroethane | < 330 | < 1,700 | < 320 | < 400 | – | < 1,600 | – |
| Trichlorofluoromethane | < 65 | < 330 | < 64 | < 81 | – | < 320 | – |
| 1,1-Dichloroethene | < 65 | < 330 | < 64 | < 81 | – | < 320 | – |
| Methylene Chloride | < 1,300 | < 6,600 | < 1,300 | < 1,600 | – | < 6,400 | – |
| trans-1,2-Dichloroethene | < 65 | < 330 | <64 | < 81 | – | < 320 | – |
| 1,1-Dichloroethane | < 65 | < 330 | <64 | < 81 | – | < 320 | – |
| cis-1,2-Dichloroethene | < 65 | < 330 | <64 | < 81 | – | < 320 | – |
| Chloroform | < 65 | < 330 | <64 | < 81 | – | < 320 | – |
| 1,2-Dichloroethane | < 65 | < 330 | <64 | < 81 | – | < 320 | – |
| 1,1,1-Trichloroethane | < 65 | < 330 | <64 | < 81 | – | < 320 | – |
| Carbon Tetrachloride | < 65 | < 330 | <64 | < 81 | – | < 320 | – |
| 1,2-Dichloropropane | < 65 | < 330 | <64 | < 81 | – | < 320 | – |
| Trichloroethene | < 65 | < 330 | <64 | < 81 | – | < 320 | – |
| Bromodichloromethane | < 65 | < 330 | <64 | < 81 | – | < 320 | – |
| 2-Chloroethyl Vinyl Ether | < 330 | < 1,700 | < 320 | < 400 | – | < 1,600 | – |
| cis-1,3-Dichloropropene | < 65 | < 330 | <64 | < 81 | – | < 320 | – |
| trans-1,3-Dichloropropene | < 65 | < 330 | <64 | < 81 | – | < 320 | – |
| 1,1,2-Trichloroethane | < 65 | < 330 | <64 | < 81 | – | < 320 | – |
| Dibromochloromethane | < 65 | < 330 | <64 | < 81 | – | < 320 | – |
| Tetrachloroethene | < 65 | < 330 | <64 | < 81 | – | < 320 | – |
| Chlorobenzene | < 65 | < 330 | <64 | < 81 | – | < 320 | – |
| Bromoform | < 65 | < 330 | <64 | < 81 | – | < 320 | – |
| 1,1,2,2-Tetrachloroethane | < 65 | < 330 | <64 | < 81 | – | < 320 | – |
| 1,3-Dichlorobenzene | < 65 | < 330 | <64 | < 81 | – | < 320 | – |
| 1,4-Dichlorobenzene | < 65 | < 330 | <64 | < 81 | – | < 320 | – |
| 1,2-Dichlorobenzene | < 65 | < 330 | <64 | < 81 | – | < 320 | – |
| METALS BY EPA Method 6010B (mg/kg) | | | | | | | |
| Chromium | 17 | 310 | 200 | 1,600 | 2,800 | < 71 | < 16 |
| Lead | – | – | – | – | – | – | – |
| Zinc | – | – | – | – | – | – | – |
| Nickel | – | – | – | – | – | – | – |
| Total Cyanide | – | – | – | – | – | – | – |
| INORGANIC CHEMISTRY EPA Method 3060A (mg/kg) | | | | | | | |
| Chromium, Hexavalent | < 0.13 | < 0.59 | < 0.13 | < 0.19 | 0.56 | 2.3 | 0.36 |

TRC 43.4 mg/kg

NOTES:
– = not analyzed.
mg/kg = miligrams per kilogram (parts per million).
ug/L = micrograms per kilogram (parts per billion).
1.3 / 1.3 = duplicate results.

TABLE 2A
HISTORICAL SOIL LABORATORY ANALYTICAL RESULTS
OCTOBER, 1986

WALTON AND LONSBURY, INC.
78 NORTH AVENUE
ATTLEBORO, MASSACHUSETTS

| PARAMETER | SAMPLE IDENTIFICATION | | | | | | | | MCP METHOD 1 SOIL STANDARDS | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1 I | 2 I | 3 I | 4 I | 1 L | 2 L | 3 L | 4 L | | | |
| Date Sampled | 10/15/1986 | 10/15/1986 | 10/15/1986 | 10/15/1986 | 10/15/1986 | 10/15/1986 | 10/15/1986 | 10/15/1986 | S-1/GW-2/3 | S-2/GW-2/3 | S-3/GW-2/3 |
| Area of Concern | Surface Impoundment | | | | Lagoon | | | | | | |
| VOLATILE ORGANIC COMPOUNDS by EPA Method 600/4-82-057 (mg/kg) | | | | | | | | | | | |
| Benzene | < 1 | < 1 | < 1 | < 1 | < 1 | < 1 | < 1 | < 1 | 40 | 60 | 100 |
| Bromoform | < 1 | < 1 | < 1 | < 1 | < 1 | < 1 | < 1 | < 1 | 20 | 20 | 20 |
| Carbon Tetrachloride | < 1 | < 1 | < 1 | < 1 | < 1 | < 1 | < 1 | < 1 | 4 | 4 | 4 |
| Chlorobenzene | < 1 | < 1 | < 1 | < 1 | < 1 | < 1 | < 1 | < 1 | 40 | 40 | 40 |
| Chlorodibromoethane | < 1 | < 1 | < 1 | < 1 | < 1 | < 1 | < 1 | < 1 | NA | NA | NA |
| Chloroethane | < 1 | < 1 | < 1 | < 1 | < 1 | < 1 | < 1 | < 1 | NA | NA | NA |
| 2-Chloroethyl Vinyl Ether | < 1 | < 1 | < 1 | < 1 | < 1 | < 1 | < 1 | < 1 | NA | NA | NA |
| Chloroform | < 1 | < 1 | < 1 | < 1 | < 1 | < 1 | < 1 | < 1 | 10 | 10 | 10 |
| Dichlorobromomethane | < 1 | < 1 | < 1 | < 1 | < 1 | < 1 | < 1 | < 1 | 20 | 20 | 90 |
| 1,1-Dichloroethane | < 1 | < 1 | < 1 | < 1 | < 1 | < 1 | < 1 | < 1 | 100 | 400 | 400 |
| 1,2-Dichloroethane | < 1 | < 1 | < 1 | < 1 | < 1 | < 1 | < 1 | < 1 | 0.2 | 0.2 | 0.2 |
| 1,1-Dichloroethene | < 1 | < 1 | < 1 | < 1 | < 1 | < 1 | < 1 | < 1 | 0.1 | 0.1 | 0.1 |
| 1,2-Dichloropropane | < 1 | < 1 | < 1 | < 1 | < 1 | < 1 | < 1 | < 1 | 0.2 | 0.2 | 0.2 |
| 1,2-Dichloropropene (cis and trans) | < 1 | < 1 | < 1 | < 1 | < 1 | < 1 | < 1 | < 1 | 0.1 | 0.1 | 0.1 |
| Ethylbenzene | < 1 | < 1 | < 1 | < 1 | < 1 | < 1 | < 1 | < 1 | 500 | 500 | 500 |
| Methyl Bromide | < 1 | < 1 | < 1 | < 1 | < 1 | < 1 | < 1 | < 1 | NA | NA | NA |
| Methyl Chloride | < 1 | < 1 | < 1 | < 1 | < 1 | < 1 | < 1 | < 1 | NA | NA | NA |
| Methylene Chloride | < 1 | < 1 | < 1 | < 1 | < 1 | < 1 | < 1 | < 1 | 100 | 200 | 700 |
| 1,1,2,2-Tetrachloroethane | < 1 | < 1 | < 1 | < 1 | < 1 | < 1 | < 1 | < 1 | 0.2 | 0.2 | 0.2 |
| Tetrachloroethene | < 1 | < 1 | < 1 | < 1 | < 1 | < 1 | < 1 | < 1 | 20 | 30 | 100 |
| Toluene | < 1 | < 1 | < 1 | < 1 | < 1 | < 1 | < 1 | < 1 | 500 | 500 | 500 |
| trans-1,2-Dichloroethene | < 1 | < 1 | < 1 | < 1 | < 1 | < 1 | < 1 | < 1 | 500 | 800 | 2,500 |
| 1,1,1-Trichloroethane | < 1 | < 1 | < 1 | < 1 | < 1 | < 1 | < 1 | < 1 | 100 | 500 | 500 |
| 1,1,2-Trichloroethane | < 1 | < 1 | < 1 | < 1 | < 1 | < 1 | < 1 | < 1 | 2 | 3 | 10 |
| Trichloroethene | < 1 | < 1 | < 1 | < 1 | < 1 | < 1 | < 1 | < 1 | 20 | 20 | 20 |
| Trichlorofluoromethane | < 1 | < 1 | < 1 | < 1 | < 1 | < 1 | < 1 | < 1 | NA | NA | NA |
| Vinyl Chloride | < 1 | < 1 | < 1 | < 1 | < 1 | < 1 | < 1 | < 1 | 0.3 | 0.4 | 0.4 |
| Xylenes | < 1 | < 1 | < 1 | < 1 | < 1 | < 1 | < 1 | < 1 | 500 | 500 | 500 |
| METALS by EPA Method 600/4-79-020 (mg/kg) | | | | | | | | | | | |
| Total Chromium | 4,200 | 4,800 | 150 | 4,400 | 6,900 | 6,900 | 3,700 | 4,200 | 1,000 | 2,500 | 5,000 |
| Total Copper | 41 | 49 | 5.0 | 41 | 220 | 440 | 470 | 320 | NA | NA | NA |
| Total Lead | 4,200 | 730 | 230 | 230 | 10,500 | 9,900 | 10,400 | 6,100 | 300 | 600 | 600 |
| Total Nickel | 7.0 | 11 | 4.8 | 9.8 | 9.4 | 25 | 11 | 19 | 300 | 700 | 700 |
| Hexavalent Chromium | < 0.50 | < 0.50 | < 0.50 | < 0.50 | 1.13 | < 0.50 | < 0.50 | < 0.50 | 200 | 600 | 1,000 |

NOTES:
NA = no standard promulgated.
mg/kg = milligrams per kilogram (parts per million).
Bold values exceed lowest applicable MCP Method 1 Soil Standard.

TABLE 2B
HISTORICAL SOIL LABORATORY ANALYTICAL RESULTS
NOVEMBER 16, 1989

WALTON AND LONSBURY, INC.
78 NORTH AVENUE
ATTLEBORO, MASSACHUSETTS

| PARAMETER | Hexavalent Chromium | Total Chromium | Total Nickel | Total Zinc | Total VOCs |
|---|---|---|---|---|---|
| SAMPLE IDENTIFICATION* | | | | | |
| SS-1S | 175 | 473 | 7.07 | 53.5 | – |
| SS-1D | – | 7,020 | – | – | – |
| SS-2S | < 22.1 | 271 | 7.0 | 18.0 | – |
| SS-2D | – | 634 | – | – | – |
| SS-3S | – | 199 | – | – | – |
| SS-3D | – | 209 | – | – | – |
| SS-4S | – | 66.0 | – | – | – |
| SS-4D | – | 21.2 | – | – | – |
| SS-5S | 538 | 7,540 | 7.0 | 15.0 | – |
| SS-5D | – | 4,640 | – | – | – |
| SS-6S | < 25.5 | 378 | 5.0 | 26.0 | – |
| SS-6D | – | 385 | – | – | – |
| SS-7S | < 24.6 | 35.4 | 2.02 | 15.2 | – |
| SS-7D | – | 357 | – | – | – |
| SS-8S | – | 106 | – | – | – |
| SS-8D | – | 27.7 | – | – | – |
| SS-9S | – | 563 | – | – | – |
| SS-9D | – | 125 | – | – | – |
| SS-10S | – | 2,630 | – | – | – |
| SS-10D | – | 460 | – | – | – |
| SS-11S | – | 348 | – | – | – |
| SS-11D | – | 3,170 | – | – | – |
| SS-12S | – | 14,060 | – | – | – |
| SS-12D | – | 1,208 | – | – | – |
| SS-13S | – | 42.0 | – | – | – |
| SS-13D | – | 40.0 | – | – | – |
| SS-14S** | – | 16,800 | – | – | – |
| SS-14D** | – | 1,297 | – | – | – |
| WS-1 | – | 76,000 | 76.0 | 97.0 | ND |
| WS-2 | – | 23,000 | 17.2 | 65.6 | ND |
| WS-3 | – | 81,800 | 24.0 | 86.0 | ND |
| WS-4 | – | 16,000 | 46.0 | 110 | ND |
| WS-5 | – | 3,260 | 26.0 | 92.0 | ND |
| WS-6 | – | 50,600 | 13.8 | 122 | ND |
| WS-7 | – | 7,110 | 22.0 | 55.0 | ND |
| WS-8 | – | 352 | 23.0 | 78.0 | ND |
| WS-9 | – | 54.4 | 5.94 | 17.8 | ND |
| WS-10 | – | 91.0 | 12.0 | 40.0 | ND |
| WS-11 | – | 231 | 24.0 | 77.0 | ND |
| WS-14 | – | 562 | 25.0 | 103 | ND |
| MCP METHOD 1 SOIL STANDARDS | | | | | |
| S-1/GW-2/3 | 200 | 1,000 | 300 | 2,500 | NA |
| S-2/GW-2/3 | 600 | 2,500 | 700 | 2,500 | NA |
| S-3/GW-2/3 | 1,000 | 5,000 | 700 | 5,000 | NA |
| UCLs | 10,000 | 10,000 | 7,000 | 10,000 | NA |

NOTES:
All results expressed in mg/kg (parts per million)
– = not analyzed
* "S" samples collected from 0-6 inches below grade; "D" samples collected from 6-12 inches below grade.
** SS-14S/D are duplicate samples of SS-12S/D.
NA = Standards promulgated on a per contaminant basis.
VOCs = Volatile Organic Compounds.
Bold values exceed the lowest applicable MCP Method 1 Soil Standard.

TABLE 2C
**HISTORICAL SOIL LABORATORY ANALYTICAL RESULTS**
**JUNE 7, 1991**

WALTON AND LONSBURY, INC.
78 NORTH AVENUE
ATTLEBORO, MASSACHUSETTS

| PARAMETER | Hexavalent Chromium | Total Chromium | Total Nickel | Total Zinc | Total Lead |
|---|---|---|---|---|---|
| SAMPLE IDENTIFICATION | | | | | |
| SS-14 | < 1 | 14 | 53 | 42 | 120 |
| SS-15 | < 1 | 78 | < 10 | 34 | 220 |
| SS-16 | < 1 | **48,000** | 25 | 140 | **10,000** |
| SS-16A | 17 / ND | **36,000 / 67,000** | 25 / 13 | 120 / 120 | **5,600 / 3,800** |
| SS-17 | < 1 | 37 | < 10 | 34 | 120 |
| SS-18 | < 1 | 42 | < 10 | 46 | 77 |
| SS-19 | 12 | 75 | < 10 | 28 | 59 |
| SS-20 | < 1 | **7,000** | < 10 | 37 | 67 |
| SS-21 | < 1 | 230 | < 10 | 19 | 110 |
| SS-22 | **1,200** | **9,800** | < 10 | 35 | **10,000** |
| SS-22A* | ND / ND | 25 / 28 | – | – | 41 / 47 |
| SS-23 | < 1 | 580 | 32 | 62 | **430** |
| SS-24 | < 1 | 30 | < 10 | 11 | 32 |
| SS-25 | < 1 | 25 | < 10 | 11 | 25 |
| SS-26 | 77 | 350 | 28 | 53 | **420** |
| SS-27 | 35 | 400 | 24 | 59 | **560** |
| SS-28 | < 1 | 45 | 10 | 31 | 27 |
| SS-29 | < 1 | 22 | < 10 | 11 | 18 |
| SS-30* | ND | 40 | – | – | 166 |
| Blank (aqueous) | < 0.02 | < 0.02 | < 0.05 | < 0.02 | < 0.06 |
| MCP METHOD 1 SOIL STANDARDS | | | | | |
| S-1/GW-2/3 | 200 | 1,000 | 300 | 2,500 | 300 |
| S-2/GW-2/3 | 600 | 2,500 | 700 | 2,500 | 600 |
| S-3/GW-2/3 | 1,000 | 5,000 | 700 | 5,000 | 600 |
| UCL | 10,000 | 10,000 | 7,000 | 10,000 | 6,000 |

**NOTES:**
All results expressed in mg/kg (parts per million)
ND = not detected.
– = not analyzed.
25 / 28 = duplicate results.
* Samples collected July 20, 1991.
NA = Standards promulgated on a per contaminant basis.
VOCs = Volatile Organic Compounds.
**Bold** values exceed the lowest applicable MCP Method 1 Soil Standard.

TABLE 2D
HISTORICAL SOIL LABORATORY ANALYTICAL RESULTS
AUGUST, 1993

WALTON AND LONSBURY, INC.
78 NORTH AVENUE
ATTLEBORO, MASSACHUSETTS

| PARAMETER | SAMPLE IDENTIFICATION | | | | | | | | | | | | MCP METHOD 1 SOIL STANDARDS | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 27 Paulette Lane | 27 Paulette Lnae | 27 Paulette Lane | 27 Paulette Lane | 27 Paulette Lane | 27 Paulette Lane | 37 Paulette Lane | 37 Paulette Lane | 51 North Avenue | 51 North Avenue | 51 North Avenue | 51 North Avenue | | |
| Location | SS-1 | SS-1 | SS-2 | SS-2 | SS-3 | SS-3 | SS-T | SS-T | SS-4 | SS-4 | SS-5 | SS-5 | | |
| Depth Sampled | 0-3" | 12" | 0-3" | 12" | 0-3" | 12" | 0-3" | 12" | 0-3" | 12" | 0-3" | 12" | | |
| Date Sampled | 8/20/1993 | 8/20/1993 | 8/20/1993 | 8/20/1993 | 8/20/1993 | 8/20/1993 | 8/20/1993 | 8/20/1993 | 8/20/1993 | 8/20/1993 | 8/20/1993 | 8/20/1993 | S-1/GW-2 | S-1/GW-3 |
| VOLATILE ORGANIC COMPOUNDS by EPA Method 8010 (ug/kg) | | | | | | | | | | | | | | |
| Dichlorodifluoromethane | < 5.4 | < 7.9 | < 5.9 | < 5.6 | < 6.6 | < 5.3 | < 5.9 | < 5.4 | < 5.4 | < 5.6 | < 6.1 | < 5.3 | NA | NA |
| Chloromethane | < 5.4 | < 7.9 | < 5.9 | < 5.6 | < 6.6 | < 5.3 | < 5.9 | < 5.4 | < 5.4 | < 5.6 | < 6.1 | < 5.3 | NA | NA |
| Vinyl Chloride | < 5.4 | < 7.9 | < 5.9 | < 5.6 | < 6.6 | < 5.3 | < 5.9 | < 5.4 | < 5.4 | < 5.6 | < 6.1 | < 5.3 | 300 | 300 |
| Bromomethane | < 5.4 | < 7.9 | < 5.9 | < 5.6 | < 6.6 | < 5.3 | < 5.9 | < 5.4 | < 5.4 | < 5.6 | < 6.1 | < 5.3 | 3,000 | 50,000 |
| Chloroethane | < 5.4 | < 7.9 | < 5.9 | < 5.6 | < 6.6 | < 5.3 | < 5.9 | < 5.4 | < 5.4 | < 5.6 | < 6.1 | < 5.3 | NA | NA |
| Trichlorofluoromethane | < 5.4 | < 7.9 | < 5.9 | < 5.6 | < 6.6 | < 5.3 | < 5.9 | < 5.4 | < 5.4 | < 5.6 | < 6.1 | < 5.3 | NA | NA |
| 1,1-Dichloroethene | < 5.4 | < 7.9 | < 5.9 | < 5.6 | < 6.6 | < 5.3 | < 5.9 | < 5.4 | < 5.4 | < 5.6 | < 6.1 | < 5.3 | 100 | 2,000 |
| trans-1,2-Dichloroethene | < 5.4* | < 7.9* | < 5.9* | < 5.6* | < 6.6* | < 5.3* | < 5.9* | < 5.4* | < 5.4* | < 5.6* | < 6.1* | < 5.3* | 500,000 | 500,000 |
| 1,1-Dichloroethane | < 5.4 | < 7.9 | < 5.9 | < 5.6 | < 6.6 | < 5.3 | < 5.9 | < 5.4 | < 5.4 | < 5.6 | < 6.1 | < 5.3 | 100,000 | 100,000 |
| cis-1,2-Dichloroethene | < 5.4* | < 7.9* | < 5.9* | < 5.6* | < 6.6* | < 5.3* | < 5.9* | < 5.4* | < 5.4* | < 5.6* | < 6.1* | < 5.3* | 100,000 | 100,000 |
| Chloroform | < 5.4 | < 7.9 | < 5.9 | < 5.6 | < 6.6 | < 5.3 | < 5.9 | < 5.4 | < 5.4 | < 5.6 | < 6.1 | < 5.3 | 10,000 | 200,000 |
| 1,2-Dichloroethane | < 5.4 | < 7.9 | < 5.9 | < 5.6 | < 6.6 | < 5.3 | < 5.9 | < 5.4 | < 5.4 | < 5.6 | < 6.1 | < 5.3 | 200 | 10,000 |
| 1,1,1-Trichloroethane | < 5.4 | < 7.9 | < 5.9 | < 5.6 | < 6.6 | < 5.3 | < 5.9 | < 5.4 | < 5.4 | < 5.6 | < 6.1 | < 5.3 | 100,000 | 100,000 |
| Carbon Tetrachloride | < 5.4 | < 7.9 | < 5.9 | < 5.6 | < 6.6 | < 5.3 | < 5.9 | < 5.4 | < 5.4 | < 5.6 | < 6.1 | < 5.3 | 4,000 | 7,000 |
| 1,2-Dichloropropane | < 5.4 | < 7.9 | < 5.9 | < 5.6 | < 6.6 | < 5.3 | < 5.9 | < 5.4 | < 5.4 | < 5.6 | < 6.1 | < 5.3 | 200 | 8,000 |
| Trichloroethene | < 5.4 | < 7.9 | < 5.9 | < 5.6 | < 6.6 | < 5.3 | < 5.9 | < 5.4 | < 5.4 | < 5.6 | < 6.1 | < 5.3 | 20,000 | 20,000 |
| Bromodichloromethane | < 5.4 | < 7.9 | < 5.9 | < 5.6 | < 6.6 | < 5.3 | < 5.9 | < 5.4 | < 5.4 | < 5.6 | < 6.1 | < 5.3 | 20,000 | 20,000 |
| 2-Chloroethyl Vinyl Ether | < 5.4 | < 7.9 | < 5.9 | < 5.6 | < 6.6 | < 5.3 | < 5.9 | < 5.4 | < 5.4 | < 5.6 | < 6.1 | < 5.3 | NA | NA |
| cis-1,3-Dichloropropene | < 5.4 | < 7.9 | < 5.9 | < 5.6 | < 6.6 | < 5.3 | < 5.9 | < 5.4 | < 5.4 | < 5.6 | < 6.1 | < 5.3 | NA | NA |
| trans-1,3-Dichloropropene | < 5.4 | < 7.9 | < 5.9 | < 5.6 | < 6.6 | < 5.3 | < 5.9 | < 5.4 | < 5.4 | < 5.6 | < 6.1 | < 5.3 | NA | NA |
| 1,1,2-Trichloroethane | < 5.4 | < 7.9 | < 5.9 | < 5.6 | < 6.6 | < 5.3 | < 5.9 | < 5.4 | < 5.4 | < 5.6 | < 6.1 | < 5.3 | 2,000 | 2,000 |
| Dibromochloromethane | < 5.4 | < 7.9 | < 5.9 | < 5.6 | < 6.6 | < 5.3 | < 5.9 | < 5.4 | < 5.4 | < 5.6 | < 6.1 | < 5.3 | 10,000 | 10,000 |
| Tetrachloroethene | < 5.4 | < 7.9 | < 5.9 | < 5.6 | < 6.6 | < 5.3 | < 5.9 | < 5.4 | < 5.4 | < 5.6 | < 6.1 | < 5.3 | 20,000 | 20,000 |
| Chlorobenzene | 8.8 | < 7.9 | < 5.9 | 9.7 | < 6.6 | < 5.3 | 13 | 8.8 | 7.6 | 6.4 | 6.1 | < 5.3 | 80,000 | 40,000 |
| Bromoform | < 5.4 | < 7.9 | < 5.9 | < 5.6 | < 6.6 | < 5.3 | < 5.9 | < 5.4 | < 5.4 | < 5.6 | < 6.1 | < 5.3 | 20,000 | 100,000 |
| 1,1,2,2-Tetrachloroethane | < 5.4 | < 7.9 | < 5.9 | < 5.6 | < 6.6 | < 5.3 | < 5.9 | < 5.4 | < 5.4 | < 5.6 | < 6.1 | < 5.3 | 200 | 500 |
| 1,3-Dichlorobenzene | < 5.4 | < 7.9 | < 5.9 | < 5.6 | < 6.6 | < 5.3 | < 5.9 | < 5.4 | < 5.4 | < 5.6 | < 6.1 | < 5.3 | 100,000 | 100,000 |
| 1,4-Dichlorobenzene | < 5.4 | < 7.9 | < 5.9 | < 5.6 | < 6.6 | < 5.3 | < 5.9 | < 5.4 | < 5.4 | < 5.6 | < 6.1 | < 5.3 | 40,000 | 40,000 |
| METALS by EPA Method 6010 (mg/kg) | | | | | | | | | | | | | | |
| Total Chromium | 230 | 9.8 | 18 | 6.7 | 180 | 6.4 | 33 | 9.1 | 9.7 | 7.8 | 8.5 | 34 | 1,000 | 1,000 |
| Total Lead | 30 | 9.4 | 50 | 17 | 32 | 5.4 | 170 | 35 | 110 | 45 | 48 | 19 | 300 | 300 |
| INORGANIC CHEMISTRY by Method 7196 (mg/kg) | | | | | | | | | | | | | | |
| Hexavalent Chromium | < 20 | 1.0 | 23 | < 10 | < 10 | < 1 | 23 | 35 | < 10 | < 10 | < 10 | 21 | 200 | 200 |

NOTES:
NA = no standard promulgated.
mg/kg = milligrams per kilogram (parts per million).
ug/kg = micrograms per kilogram (parts per billion).

TABLE 2E
HISTORICAL SOIL LABORATORY ANALYTICAL RESULTS
AUGUST, 1994

WALTON AND LONSBURY, INC.
78 NORTH AVENUE
ATTLEBORO, MASSACHUSETTS

| | PARAMETER | Hexavalent Chromium | Total Chromuim | Total Lead |
|---|---|---|---|---|
| | ANALYTICAL METHOD | 7196 | EPA Method 6010 | EPA Method 7421 |
| LOCATION | SAMPLE IDENTIFICATION | | | |
| 5 Paulette Lane | 5P (C-4) | <6.1 | 9.5 | 19 |
| 6 Paulette Lane | 6P (C-4) | <2.4 | 19 | 17 |
| 12 Paulette Lane | 12 (C-4) | <12 | 6.3 | 18 |
| 20 Paulette Lane | 20 P-B (C-3) | <56 | 8.9 | 13 |
| 27 Paulette Lane | 27 P-B (C-3) | <12 | 7.9 | 41 |
| 29 Paullette Lane | 29 P-F (C-3) | <12 | 11 | 13 |
| 29 Paullette Lane | 29 P-B (C-3) | <5.7 | 3.6 | 12 |
| 30 Paulette Lane | 30 P-B (C-3) | <6.1 | 4.1 | 11 |
| 37 Paulette Lane | 37A P-B, 37B P-B (C-3) | <6.0/<2.2 | 3.5/4.6 | 11/10 |
| 34 North Avenue | 34 N (C-4) | <11 | 2.4 | 22 |
| 42 North Avenue | 42 N-W (Grab) | <14 | 7.5 | 120 |
| 42 North Avenue | 42 N-B (C-3) | <11 | 4.3 | 200 |
| 48 North Avenue | 48 N-F(C-3) | <12 | 5.9 | 320 |
| [redacted] | 48 N-W (Grab) | <17 | 28 | [redacted] |
| 48 North Avenue | 48 N-B (C-3) | <65 | 9.9 | 170 |
| 50 North Avenue | 50 N-W (Grab) | <14 | 16 | 350 |
| 50 North Avenue | 50 N-B (C-3) | <12 | 9.1 | 140 |
| 51 North Avenue | 51 N-B (C-3) | <12 | 6.8 | 150 |
| 60 North Avenue | 60 N-W (Grab) | <12 | 11 | 57 |
| 60 North Avenue | 60 N-B (C-3) | <12 | 5.7 | 39 |
| 65 North Avenue | 65 N-W (Grab) | <110 | [redacted] | 120 |
| 65 North Avenue | 65 N-B (C-3) | <12 | 5.7 | 99 |
| 65 North Avenue | 65 N-F (C-3) | <12 | 7.8 | 54 |
| 69 North Avenue | 69 N-W (Grab) | <58 | 4.1 | 57 |
| 70 North Avenue | 69 N-B (C-3) | <57 | 5.8 | 90 |
| 73 North Avenue | 73 N-F (C-3) | <12 | 11 | 88 |
| Deanville Road* | SS-A | < 1.36 | 11.3 | 14 |
| Deanville Road* | SS-B | < 1.26 | 11.4 | 12 |
| Deanville Road* | SS-C | < 1.18 | 13.5 | 12 |
| Deanville Road* | SS-D | < 1.21 | 27.2 | < 10 |
| MCP METHOD 1 SOIL STANDARDS | | | | |
| | S-1/GW-2/3 | 200 | 1,000 | 300 |
| | S-2/GW-2/3 | 600 | 2,500 | 600 |
| | S-3/GW-2/3 | 1,000 | 5,000 | 600 |
| | UCLs | 10,000 | 10,000 | 6,000 |

NOTES:
All results expressed in mg/kg (parts per million)
* = Deanville Road soil samples were collected on September 4, 1997. Total chromium and lead were analyzed by EPA Method 6010. Leachable hexavalent chromium was analyzed by Method 307B/7196.
C-X = composite of three or four soil samples collected from 1-6" below grade.
Grab = discreet soil sample collected from 1-6" below grade.
UCLs = upper concentration limits.
Bold values exceed the lowest applicable MCP Method 1 Soil Standard.

TABLE 2F
HISTORICAL SOIL LABORATORY ANALYTICAL RESULTS
APRIL, 2000

WALTON AND LONSBURY, INC.
78 NORTH AVENUE
ATTLEBORO, MASSACHUSETTS

| PARAMETER | SAMPLE IDENTIFICATION | | | | | MCP METHOD 1 SOIL STANDARDS | |
|---|---|---|---|---|---|---|---|
| | RCSB-17 | RCSB-18 | RCSB-19 | RCSB-20 | RCSB-21 | | |
| Depth Sampled | 6'-8' | 6'-8' | 4'-6' | 12'-14' | 4'-8' | | |
| Date Sampled | 4/22/2000 | 4/22/2000 | 4/22/2000 | 4/22/2000 | 4/22/2000 | S-1/GW-2 | S-1/GW-3 |
| VOLATILE ORGANIC COMPOUNDS BY EPA METHOD 8260B (ug/kg) | | | | | | | |
| Chloromethane | <12 | <13 | <10 | <10 | <10 | NA | NA |
| Vinyl Chloride | <12 | <13 | <10 | <10 | <10 | 300 | 300 |
| Bromomethane | <12 | <13 | <10 | <10 | <10 | 3,000 | 50,000 |
| Chloroethane | <12 | <13 | <10 | <10 | <10 | NA | NA |
| 1,1-Dichloroethene | <6 | <7 | <5 | <5 | <5 | NA | NA |
| Acetone | <60 | <67 | <50 | <50 | <50 | 60,000 | 60,000 |
| Carbon Disulfide | <60 | <67 | <50 | <50 | <50 | NA | NA |
| Methylene Chloride | <12 | <13 | <10 | <10 | <10 | 100,000 | 100,000 |
| *trans*- 1,2-Dichloroethene | <6 | <7 | <5 | <5 | <5 | 500,000 | 500,000 |
| 1,1-Dichloroethane | <6 | <7 | <5 | <5 | <5 | 100,000 | 100,000 |
| *cis*- 1,2-Dichloroethene | <6 | <7 | <5 | <5 | <5 | 100,000 | 100,000 |
| 2-Butanone | <60 | <67 | <50 | <50 | <50 | 40,000 | 40,000 |
| Chloroform | <6 | <7 | <5 | <5 | <5 | 10,000 | 200,000 |
| 1,1,1-Trichloroethane | <6 | <7 | <5 | <5 | <5 | 100,000 | 100,000 |
| Carbon Tetrachloride | <6 | <7 | <5 | <5 | <5 | 4,000 | 7,000 |
| Benzene | <6 | <7 | <5 | <5 | <5 | 40,000 | 40,000 |
| 1,2-Dichloroethane | <6 | <7 | <5 | <5 | <5 | 200 | 10,000 |
| Trichloroethene | <6 | <7 | <5 | <5 | <5 | NA | NA |
| 1,2-Dichloropropane | <6 | <7 | <5 | <5 | <5 | 200 | 8,000 |
| Bromodichloromethane | <6 | <7 | <5 | <5 | <5 | 20,000 | 20,000 |
| *cis*- 1,3-Dichloropropene | <6 | <7 | <5 | <5 | <5 | NA | NA |
| 4-Methyl-2-Pentanone | <60 | <67 | <50 | <50 | <50 | 70,000 | 70,000 |
| Toluene | <6 | <7 | <5 | <5 | <5 | 500,000 | 500,000 |
| *trans*- 1,3-Dichloropropene | <6 | <7 | <5 | <5 | <5 | NA | NA |
| 1,1,2-Trichloroethane | <6 | <7 | <5 | <5 | <5 | 2,000 | 2,000 |
| Tetrachloroethene | <6 | <7 | <5 | <5 | <5 | 20,000 | 70,000 |
| 2-Hexanone | <60 | <67 | <50 | <50 | <50 | NA | NA |
| Dibromochloromethane | <6 | <7 | <5 | <5 | <5 | 10,000 | 10,000 |
| Chlorobenzene | <6 | <7 | <5 | <5 | <5 | 80,000 | 40,000 |
| Ethylbenzene | <6 | <7 | <5 | <5 | <5 | 500,000 | 500,000 |
| *meta*- Xylene and *para*- Xylene | <6 | <7 | <5 | <5 | <5 | 500,000 | 500,000 |
| *ortho*- Xylene | <6 | <7 | <5 | <5 | <5 | 500,000 | 500,000 |
| Styrene | <6 | <7 | <5 | <5 | <5 | 20,000 | 20,000 |
| Bromoform | <6 | <7 | <5 | <5 | <5 | 20,000 | 100,000 |
| 1,1,2,2-Tetrachloroethane | <6 | <7 | <5 | <5 | <5 | 200 | 500 |
| METALS BY EPA METHOD 6010B (mg/kg) | | | | | | | |
| Total Chromium | <13 | <12 | 19 | 23 | <11 | 1,000 | 1,000 |
| Total Lead | 70 | 48 | 140 | 91 | 25 | 300 | 300 |
| INORGANIC CHEMISTRY (mg/kg) | | | | | | | |
| Hexavalent Chromium | <12 | <12 | <12 | <12 | <12 | 200 | 200 |

NOTES:
-- = not analyzed
NA = no critierla listed
mg/kg = milligrams per kilogram (parts per million)
ug/kg = micrograms per kilogram (parts per billion)
* = Metals samples all taken from a depth of approximately 0'-6" below ground surface

TABLE 2H
RESIDENTIAL SOIL LABORATORY ANALYTICAL RESULTS

WALTON AND LONSBURY, INC.
78 NORTH AVENUE
ATTLEBORO, MASSACHUSETTS

| PARAMETER | SAMPLE IDENTIFICATION | | | | | | | | MCP METHOD 1 SOIL STANDARDS | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 5 Paulette Lane | 27 Paulette Ln. | 30 Paulette Lane | 37 Paulette Lane | 37 Paulette Lane | 65 North Avenue | 73 North Avenue | 69 North Avenue | | |
| Date Sampled | 7/18/2001 | 7/18/2001 | 7/18/2001 | 7/18/2001 | 9/20/2001 | 9/20/2001 | 7/18/2001 | 7/18/2001 | | |
| | Surface Soil Samples | | | | | | | | S-1/GW-2 | S-1/GW-3 |
| **VOLATILE ORGANIC COMPOUNDS (EPA METHOD 8260B) (ug/kg)** | | | | | | | | | | |
| Dichlorodifluoromethane | < 270 | < 600 | < 600 | < 1,300 | -- | -- | < 290 | < 290 | NA | NA |
| Chloromethane | < 270 | < 600 | < 600 | < 1,300 | -- | -- | < 290 | < 290 | NA | NA |
| Vinyl Chloride | <110 | < 240 | < 240 | < 530 | -- | -- | <110 | <110 | 300 | 300 |
| Bromomethane | < 270 | < 600 | < 600 | < 1,300 | -- | -- | < 290 | < 290 | 3,000 | 50,000 |
| Chloroethane | < 270 | < 600 | < 600 | < 1,300 | -- | -- | < 290 | < 290 | NA | NA |
| Trichlorofluoromethane | < 53 | < 120 | < 120 | < 260 | -- | -- | < 57 | < 57 | NA | NA |
| 1,1-Dichloroethane | < 53 | < 120 | < 120 | < 260 | -- | -- | < 57 | < 57 | 100 | 2,000 |
| Methylene Chloride | < 1,100 | < 2,400 | < 2,400 | < 5,300 | -- | -- | < 1,100 | < 1,100 | 100,000 | 100,000 |
| trans-1,2-Dichloroethene | < 53 | < 120 | < 120 | < 260 | -- | -- | < 57 | < 57 | 500,000 | 500,000 |
| 1,1-Dichloroethane | < 53 | < 120 | < 120 | < 260 | -- | -- | < 57 | < 57 | 100,000 | 100,000 |
| cis-1,2-Dichloroethene | < 53 | < 120 | < 120 | < 260 | -- | -- | < 57 | < 57 | 100,000 | 100,000 |
| Chloroform | < 53 | < 120 | < 120 | < 260 | -- | -- | < 57 | < 57 | 10,000 | 200,000 |
| 1,2-Dichloroethane | < 53 | < 120 | < 120 | < 260 | -- | -- | < 57 | < 57 | 200 | 10,000 |
| 1,1,1-Trichloroethane | < 53 | < 120 | < 120 | < 260 | -- | -- | < 57 | < 57 | 100,000 | 100,000 |
| Carbon Tetrachloride | < 53 | < 120 | < 120 | < 260 | -- | -- | < 57 | < 57 | 4,000 | 7,000 |
| 1,2-Dichloropropane | < 53 | < 120 | < 120 | < 260 | -- | -- | < 57 | < 57 | 200 | 8,000 |
| Trichloroethene | < 53 | < 120 | < 120 | < 260 | -- | -- | < 57 | < 57 | 20,000 | 20,000 |
| Bromodichloromethane | < 53 | < 120 | < 120 | < 260 | -- | -- | < 57 | < 57 | 20,000 | 20,000 |
| 2-Chloroethyl Vinyl Ether | < 270 | < 600 | < 600 | < 1,300 | -- | -- | < 290 | < 290 | NA | NA |
| cis-1,3-Dichloropropene | < 53 | < 120 | < 120 | < 260 | -- | -- | < 57 | < 57 | NA | NA |
| trans-1,3-Dichloropropene | < 53 | < 120 | < 120 | < 260 | -- | -- | < 57 | < 57 | NA | NA |
| 1,1,2-Trichloroethane | < 53 | < 120 | < 120 | < 260 | -- | -- | < 57 | < 57 | 2,000 | 2,000 |
| Dibromochloromethane | < 53 | < 120 | < 120 | < 260 | -- | -- | < 57 | < 57 | 10,000 | 10,000 |
| Tetrachloroethene | < 53 | < 120 | < 120 | < 260 | -- | -- | < 57 | < 57 | 20,000 | 20,000 |
| Chlorobenzene | < 53 | < 120 | < 120 | < 260 | -- | -- | < 57 | < 57 | 80,000 | 40,000 |
| Bromoform | < 53 | < 120 | < 120 | < 260 | -- | -- | < 57 | < 57 | 20,000 | 100,000 |
| 1,1,2,2-Tetrachloroethane | < 53 | < 120 | < 120 | < 260 | -- | -- | < 57 | < 57 | 200 | 500 |
| 1,3-Dichlorobenzene | < 53 | < 120 | < 120 | < 260 | -- | -- | < 57 | < 57 | 100,000 | 100,000 |
| 1,4-Dichlorobenzene | < 53 | < 120 | < 120 | < 260 | -- | -- | < 57 | < 57 | 40,000 | 40,000 |
| 1,2-Dichlorobenzene | < 53 | < 120 | < 120 | < 260 | -- | -- | < 57 | < 57 | 100,000 | 100,000 |
| **METALS (EPA METHOD 6010) (mg/kg)** | | | | | | | | | | |
| Chromium | 16 | < 12 | 45 | 12,000 | 1,900 | 1,900 | 24 | < 11 | 1,000 | 1,000 |
| **INORGANIC CHEMISTRY (EPA METHOD 7196A) (mg/kg)** | | | | | | | | | | |
| Hexavalent Chromium | < 0.1 | < 0.1 | < 0.1 | 1.10 | 4.2 | 0.30 | < 0.1 | < 0.1 | 200 | 200 |

NOTES:
-- = Not analyzed
NA = no standard promulgated.
mg/kg = milligrams per kilogram (parts per million)
ug/kg = micrograms per kilogram (parts per billion)
**Bold** values exceed the lowest applicable MCP Method 1 Soil Standard.

TABLE 3G
SOIL LABORATORY ANALYTICAL RESULTS

WALTON AND LONSBURY, INC
78 NORTH AVENUE
ATTLEBORO, MASSACHUSETTS

| PARAMETER | RCA-22 | RCA-22 | RCA-23 | RCA-33 | RCA-33 | RCSB-24 | RCSB-24 | RCSB-21 | RCSB-25 | RCSB-26 | RCSB-26 | RCSB-27 | RCSB-27 | RCA-30 | RCA-31 | RCA-35 | RCA-35 | RCA-35 | WS-10 | WS-11 | WS-17 | WS-17 | WS-3R | WS-3R | WS-5R | WS-5R | WS-6R | WS-6R | WS-12 | WS-13 | WS-14 | WS-15 | WS-16 | MCP METHOD 1 SOIL STANDARDS S1 | | S2 | | S3 | | UPPER CONCENTRATION LIMITS (UCL) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Depth Sampled | 0-1' | 8.5-10' | 13-14' | 0-1' | 5-6' | 0-1' | 4-8' | 8-9' | 14-16' | 0-1' | 6-7' | 4-6" | 12' | 0-1' | 15.5' | 2-3' | 9-10' | 14-15' | 1-2' | 3-4' | 1-2' | 3-4' | 0-6" | 1-2' | 0-6" | 1-2' | 0-6" | 1-2' | 0-6" | 0-6" | 0-6" | 0-6" | 3-6" | | | | | | | |
| Date Sampled | 5/8/2001 | 5/8/2001 | 5/8/2001 | 5/8/2001 | 5/8/2001 | 5/8/2001 | 5/8/2001 | 5/8/2001 | 5/8/2001 | 5/8/2001 | 5/8/2001 | 5/3/2001 | 5/3/2001 | 5/8/2001 | 5/8/2001 | 5/8/2001 | 5/8/2001 | 5/8/2001 | 5/3/2001 | 5/3/2001 | 5/4/2001 | 5/4/2001 | 5/9/2001 | 5/9/2001 | 5/9/2001 | 5/9/2001 | 5/8/2001 | 5/8/2001 | 5/9/2001 | 5/9/2001 | 5/9/2001 | 5/9/2001 | 5/9/2001 | GW-2 | GW-3 | GW-2 | GW-3 | GW-2 | GW-3 | (UCL) |
| Area of Concern | Piping Trenches | | | Property Boundary | | Outside Drum Storage Pad | | TCE/Fuel Oil Tanks | | Storage Shed | | Grinder Exhaust Area | | Former Wastewater Discharge | | Former Oil/Water Separator | | | Wetland | | Wetland | | Wetland | | Wetland | | Wetland | | Wetland | Wetland | Wetland | Wetland | Wetland | | | | | | | |
| EXTRACTABLE PETROLEUM HYDROCARBONS by MADEP EPH [illegible] | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| C9 - C18 Aliphatics | - | - | - | - | - | - | - | 1,100 | <32 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 1,000 | 1,000 | 2,500 | 2,500 | 5,000 | 5,000 | 20,000 |
| C19 - C36 Aliphatics | - | - | - | - | - | - | - | 110 | <32 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 2500 | 2,500 | 5,000 | 5,000 | 5,000 | 5,000 | 20,000 |
| C11 - C22 Aromatics | - | - | - | - | - | - | - | 630 | <32 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 800 | 800 | 2,000 | 2,000 | 5,000 | 5,000 | 10,000 |
| Naphthalene | - | - | - | - | - | - | - | 1.3 | <0.53 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 100 | 100 | 1,000 | 1,000 | 1,000 | 1,000 | 10,000 |
| 2-Methylnaphthalene | - | - | - | - | - | - | - | 17 | <0.53 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 500 | 500 | 1,000 | 1,000 | 2,000 | 1,000 | 10,000 |
| Phenanthrene | - | - | - | - | - | - | - | 4.2 | <0.54 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 1,000 | 100 | 2,500 | 100 | 2,500 | 100 | 10,000 |
| Acenaphthene | - | - | - | - | - | - | - | 2.9 | <0.53 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 1,000 | 1,000 | 2,500 | 2,500 | 5,000 | 4,000 | 10,000 |
| Acenaphthylene | - | - | - | - | - | - | - | 1.5 | <0.53 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 100 | 100 | 2,500 | 1,000 | 2,500 | 1,000 | 10,000 |
| Fluorene | - | - | - | - | - | - | - | <0.54 | <0.53 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 1,000 | 1,000 | 2,000 | 2,000 | 5,000 | 4,000 | 10,000 |
| Anthracene | - | - | - | - | - | - | - | 0.82 | <0.53 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 1,000 | 1,000 | 2,500 | 2,500 | 5,000 | 5,000 | 10,000 |
| Fluoranthene | - | - | - | - | - | - | - | <0.54 | <0.53 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 1,000 | 1,000 | 2,000 | 1,000 | 6,000 | 1,000 | 10,000 |
| Pyrene | - | - | - | - | - | - | - | <0.58 | <0.53 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 700 | 700 | 2,000 | 2,000 | 5,000 | 5,000 | 10,000 |
| Benzo(a)anthracene | - | - | - | - | - | - | - | <0.58 | <0.53 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 0.7 | 0.7 | 1 | 1 | 4 | 4 | 100 |
| Chrysene | - | - | - | - | - | - | - | <0.58 | <0.53 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 7 | 7 | 10 | 10 | 40 | 40 | 400 |
| Benzo(b)fluoranthene | - | - | - | - | - | - | - | <0.58 | <0.53 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 0.7 | 0.7 | 1 | 1 | 4 | 4 | 100 |
| Benzo(k)fluoranthene | - | - | - | - | - | - | - | <0.58 | <0.53 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 7 | 7 | 10 | 10 | 40 | 40 | 400 |
| Benzo(a)pyrene | - | - | - | - | - | - | - | <0.58 | <0.53 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 0.7 | 0.7 | 0.7 | 0.7 | 0.7 | 0.7 | 100 |
| Indeno(1,2,3-c,d)pyrene | - | - | - | - | - | - | - | <0.58 | <0.53 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 0.7 | 0.7 | 1 | 1 | 4 | 4 | 100 |
| Dibenzo(a,h)anthracene | - | - | - | - | - | - | - | <0.56 | <0.53 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 0.7 | 0.7 | 0.7 | 0.7 | 0.8 | 0.8 | 100 |
| Benzo(g,h,i)perylene | - | - | - | - | - | - | - | <0.58 | <0.53 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 1000 | 1,000 | 2,500 | 2,500 | 2,500 | 2,500 | 10,000 |
| VOLATILE ORGANIC COMPOUNDS [illegible] | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Dichlorodifluoromethane | <280 | <270 | <280 | <330 | <290 | <290 | <280 | - | <2,700 | <260 | <270 | - | - | <330 | <300 | <360 | <280 | <270 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | NA | NA | NA | NA | NA | NA | NA |
| Chloromethane | <280 | <270 | <280 | <330 | <290 | <290 | <280 | - | <2,700 | <260 | <280 | - | - | <330 | <300 | <280 | <280 | <270 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | NA | NA | NA | NA | NA | NA | NA |
| Vinyl Chloride | <110 | <110 | <110 | <130 | <110 | <120 | <110 | - | <1,100 | <110 | <120 | - | - | <130 | <120 | <100 | <110 | <110 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 300 | 300 | 400 | 500 | 400 | 2,000 | 20,000 |
| Bromomethane | <280 | <270 | <280 | <330 | <280 | <280 | <280 | - | <2,700 | <280 | <290 | - | - | <330 | <300 | <280 | <280 | <270 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 3,000 | 10,000 | 3,000 | 200,000 | 3,000 | 700,000 | 7,000,000 |
| Chloroethane | <280 | <270 | <280 | <330 | <290 | <290 | <280 | - | <2,700 | <280 | <290 | - | - | <330 | <300 | <280 | <280 | <270 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | NA | NA | NA | NA | NA | NA | NA |
| Trichlorofluoromethane | <58 | <55 | <55 | <66 | <57 | <58 | <57 | - | <540 | <53 | <58 | - | - | <67 | <61 | <52 | <58 | <54 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | NA | NA | NA | NA | NA | NA | NA |
| 1,1-Dichloroethene | <56 | <56 | <53 | <66 | <57 | <58 | <57 | - | <540 | <53 | <58 | - | - | <67 | <61 | <52 | <58 | <54 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 100 | 2,000 | 100 | 2,000 | 100 | 300 | 50,000 |
| Methylene Chloride | <1,100 | <1,100 | <1,100 | <1,300 | <1,100 | <1,200 | <1,100 | - | <11,000 | <1,100 | <1,200 | - | - | <1,300 | <1,200 | <1,000 | <1,100 | <1,100 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 100,000 | 100,000 | 200,000 | 200,000 | 700,000 | 700,000 | 7,000,000 |
| trans-1,2-Dichloroethene | <56 | <56 | <55 | <66 | <57 | <58 | <57 | - | <540 | <53 | <56 | - | - | <67 | <61 | <52 | <54 | <54 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 500,000 | 500,000 | 800,000 | 800,000 | 2,500,000 | 2,000,000 | 10,000,000 |
| 1,1-Dichloroethane | <58 | <55 | <56 | <66 | <57 | <58 | <57 | - | <540 | <53 | <58 | - | - | <67 | <61 | <52 | <56 | <54 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 100,000 | 100,000 | 400,000 | 500,000 | 400,000 | 500,000 | 5,000,000 |
| cis-1,2-Dichloroethene | <56 | <56 | <55 | <66 | <57 | <58 | <57 | - | <540 | <53 | <58 | - | - | <67 | <61 | <52 | <54 | <54 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 100,000 | 100,000 | 500,000 | 500,000 | 500,000 | 500,000 | 5,000,000 |
| Chloroform | <56 | <55 | <56 | <66 | <57 | <58 | <57 | - | <540 | <53 | <58 | - | - | <67 | <61 | <52 | <56 | <54 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 10,000 | 200,000 | 10,000 | 200,000 | 10,000 | 300,000 | 5,000,000 |
| 1,2-Dichloroethane | <56 | <56 | <55 | <66 | <57 | <58 | <57 | - | <540 | <53 | <54 | - | - | <67 | <61 | <52 | <54 | <54 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 200 | 10,000 | 200 | 20,000 | 200 | 80,000 | 800,000 |
| 1,1,1-Trichloroethane | <56 | <55 | <56 | <66 | <57 | <58 | <57 | - | <540 | <53 | <58 | - | - | <67 | <61 | <52 | <58 | <54 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 100,000 | 100,000 | 500,000 | 800,000 | 500,000 | 500,000 | 5,000,000 |
| Carbon Tetrachloride | <56 | <55 | <56 | <66 | <57 | <58 | <57 | - | <540 | <53 | <58 | - | - | <67 | <61 | <52 | <56 | <54 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 4,000 | 7,500 | 4,000 | 10,000 | 4,000 | 40,000 | 400,000 |
| 1,2-Dichloropropane | <58 | <55 | <56 | <66 | <57 | <58 | <57 | - | <540 | <53 | <58 | - | - | <67 | <61 | <52 | <56 | <54 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 200 | 4,000 | 200 | 10,000 | 200 | 40,000 | 400,000 |
| Trichloroethene | <56 | <55 | <56 | <66 | <57 | 80 | <52 | - | 2,900 | <53 | <54 | - | - | <61 | <61 | <52 | <56 | <54 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 20,000 | 20,000 | 20,000 | 100,000 | 20,000 | 500,000 | 5,000,000 |
| Bromodichloromethane | <56 | <55 | <58 | <66 | <57 | <58 | <57 | - | <540 | <53 | <54 | - | - | <67 | <61 | <52 | <56 | <54 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 20,000 | 20,000 | 20,000 | 20,000 | 80,000 | 80,000 | 800,000 |
| 2-Chloroethyl Vinyl Ether | <280 | <270 | <280 | <330 | <290 | <290 | <280 | - | <540 | <280 | <290 | - | - | <330 | <300 | <280 | <280 | <270 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | NA | NA | NA | NA | NA | NA | NA |
| cis-1,3-Dichloropropene | <58 | <56 | <55 | <66 | <57 | <58 | <57 | - | <540 | <53 | <58 | - | - | <67 | <61 | <52 | <54 | <52 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | NA | NA | NA | NA | NA | NA | NA |
| trans-1,3-Dichloropropene | <56 | <54 | <55 | <66 | <57 | <58 | <57 | - | <540 | <53 | <58 | - | - | <67 | <61 | <52 | <54 | <54 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | NA | NA | NA | NA | NA | NA | NA |
| 1,1,2-Trichloroethane | <58 | <55 | <58 | <66 | <57 | <58 | <57 | - | <540 | <53 | <58 | - | - | <67 | <61 | <52 | <54 | <54 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 1,000 | 2,000 | 3,000 | 3,000 | 2 | 2 | NA |
| Dibromochloromethane | <56 | <55 | <56 | <66 | <57 | <58 | <57 | - | <540 | <53 | <58 | - | - | <67 | <61 | <52 | <58 | <54 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 10,000 | 10,000 | 20,000 | 20,000 | 70,000 | 70,000 | 700,000 |
| Tetrachloroethene | <56 | <55 | <55 | <66 | <57 | <58 | <57 | - | <540 | <53 | <56 | - | - | <67 | <61 | <52 | <58 | <54 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 20,000 | 20,000 | 20,000 | 100,000 | 100,000 | 100,000 | 1,000,000 |
| Chlorobenzene | <58 | <55 | <55 | <66 | <57 | <58 | <57 | - | <540 | <53 | <58 | - | - | <67 | <61 | <52 | <56 | <54 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 80,000 | 40,000 | 60,000 | 40,000 | 80,000 | 40,000 | 10,000,000 |
| Bromoform | <56 | <54 | <58 | <66 | <57 | <58 | <57 | - | <540 | <53 | <58 | - | - | <67 | <61 | <52 | <56 | <54 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 20,000 | 100,000 | 20,000 | 200,000 | 20,000 | 700,000 | 7,000,000 |
| 1,1,2,2-Tetrachloroethane | <58 | <55 | <55 | <66 | <57 | <58 | <57 | - | <540 | <53 | <58 | - | - | <67 | <61 | <52 | <56 | <54 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 200 | 900 | 200 | 600 | 300 | 20,000 | 20,000 |
| 1,3-Dichlorobenzene | <58 | <55 | <55 | <66 | <57 | <58 | <57 | - | <540 | <53 | <58 | - | - | <67 | <61 | <52 | <58 | <54 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 100,000 | 100,000 | 500,000 | 500,000 | 500,000 | 500,000 | 5,000,000 |
| 1,4-Dichlorobenzene | <56 | <56 | <55 | <66 | <57 | <58 | <57 | - | <540 | <53 | <58 | - | - | <67 | <61 | <52 | <54 | <54 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 40,000 | 40,000 | 80,000 | 80,000 | 200,000 | 200,000 | 2,000,000 |
| METALS [illegible] | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Arsenic | <1.2 | <1.1 | <1.2 | 2.7 | <1.2 | <1.2 | <1.1 | - | <1.1 | 2.2 | <1.2 | 3.1 | 2.3 | 1.7 | <1.2 | <1.1 | <1.2 | <1.1 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 30 | 30 | 30 | 30 | 30 | 30 | 300 |
| Barium | <23 | <22 | <23 | 38 | <24 | 82 | <23 | - | <21 | 28 | <24 | 38 | 34 | <28 | <24 | <21 | <23 | <22 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 1,000 | 1,000 | 2,500 | 2,500 | 5,000 | 5,000 | 10,000 |
| Cadmium | <0.58 | <0.56 | <0.58 | <0.64 | <0.58 | <0.58 | <0.57 | - | <0.53 | <0.53 | <0.6 | 6.3 | 6.9 | <0.60 | <0.58 | <0.52 | <0.58 | <0.56 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 30 | 30 | 80 | 80 | 80 | 80 | 800 |
| Chromium | 240 | 1,300 | 1,800 | 38 | <12 | 3,200 | <11 | - | 18 | 240 | 32 | 210 | 180 | 180 | 28 | 380 | 1,000 | 18 | - | 210 | 2,100 | - | 21,000 | 440 | 15,000 | 3,000 | 4,400 | 1,300 | 310 | 450 | 440 | <14 | <10 | 1,000 | 1,000 | 2,500 | 2,500 | 5,000 | 5,000 | 10,000 |
| Lead | 28 | 18 | 23 | 24 | <12 | 280 | <11 | - | <11 | 120 | <12 | 140 | 140 | 40 | <12 | 1,200 | 28 | <11 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 300 | 300 | 600 | 600 | 600 | 600 | 6,000 |
| Mercury | <0.036 | <0.035 | <0.036 | 0.063 | <0.037 | 0.046 | <0.037 | - | <0.034 | 0.051 | <0.037 | 0.077 | 0.13 | 0.088 | <0.038 | <0.035 | <0.038 | <0.036 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 20 | 20 | 60 | 60 | 60 | 60 | 600 |
| Selenium | <12 | <11 | <12 | <13 | <12 | <12 | <11 | - | <11 | <11 | <12 | <12 | <11 | <14 | <12 | <10 | <12 | <11 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 400 | 400 | 2,500 | 2,500 | 2,500 | 2,500 | 10,000 |
| Silver | <5.8 | <5.8 | <5.8 | <6.4 | <5.8 | <5.8 | <5.7 | - | <5.3 | <5.3 | <6 | <5.9 | <5.5 | <6.0 | <5.8 | <5.2 | <5.8 | <5.6 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 100 | 100 | 200 | 200 | 200 | 200 | 2,000 |
| HEXAVALENT CHROMIUM [illegible] | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Hexavalent Chromium | 0.17 | 59 | 1,300 | <0.12 | 1.5 | 8.8 | <0.11 | - | 0.11 | 0.12 | <0.11 | 1.1 | 0.12 | <0.13 | <0.12 | 0.44 | 38 | <0.11 | 1.8 | <0.13 | - | <0.13 | <0.33 | <0.17 | 3.2 | 2.5 | 1.3 | 0.44 | 4.5 | 4.5 | 11 | 5.8 | 1.2 | 200 | 200 | 600 | 600 | 1,500 | 1,000 | 10,000 |

NOTES:
- = not analyzed
NA = No standard promulgated
mg/kg = milligrams per kilogram (parts per million)
ug/kg = micrograms per kilogram (parts per billion)
Bold values exceed the lowest applicable MCP Method 1 Soil Standard