



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 1 – NEW ENGLAND
5 POST OFFICE SQUARE – SUITE 100
BOSTON, MASSACHUSETTS 02109-3912

MEMORANDUM

DATE: September 2, 2010

SUBJ: Approval and Funding for a Removal Action at the Walton & Lonsbury Site, Attleboro, Bristol County, Massachusetts - **Action Memorandum and Exemption from the Statutory \$2,000,000 and 12-month Limits on Removal Actions.**

FROM: Elise I. Jakabházy, On-Scene Coordinator
Emergency Response & Removal Section I *EIJ*

THRU: David McIntyre, Chief *D.McI.*
Emergency Response & Removal Section I

Arthur V. Johnson III, Chief *AVJ*
Emergency Planning & Response Branch

TO: James T. Owens III, Director
Office of Site Remediation and Restoration

I. PURPOSE

The purpose of this Action Memorandum is to request and document approval of the selected removal action described herein for the Walton & Lonsbury Site, Attleboro, Bristol County, Massachusetts. Hazardous substances present in the soil, if not addressed by implementing the response actions selected in this Action Memorandum, will continue to pose a threat to human health and the environment. This Action Memorandum also requests and documents the approval of an "emergency" exemption from the \$2 million and 12-month statutory limits for removal actions under the National Contingency Plan. There are no nationally significant or precedent-setting issues associated with this Site, and there has been no use of the OSC's \$50,000/\$250,000 delegation and warrant authority.

II. SITE CONDITIONS AND BACKGROUND

CERCLIS ID#: MAD001197755
SITE ID#: 01GM
CATEGORY: Time-Critical

A. Site Description

1. Removal Site Evaluation

The Walton & Lonsbury (W&L) Site (the Site), located at 78 North Avenue, Attleboro, Bristol County, Massachusetts, is owned by Walhard Realty Trust and consists of a 13,500 square-foot chromium plating facility, formerly operated by Walton & Lonsbury, Inc. on a 2.72-acre lot. It is identified as Map 89, Lots 2D, 4 and 5.

The Site is zoned for industrial use, and while in operation it was used as a specialty parts industrial plating facility, with the unique ability to chrome-plate very large and/or long objects (e.g., pistons for large hydraulic equipment, rollers for paper mills).

Electroplating operations have been conducted at the Site since 1940; W&L operated chromium plating operations at the Site until it ceased operations in 2007. Copper plating was also conducted at the facility until the building was remodeled in the late 1950s. Facility operations included parts degreasing using solvents, hard chrome plating, stripping with acids, aqueous rinsing, grinding, and polishing.

Chemical usage at the Site has included trichloroethylene (TCE), 1,1,1-trichloroethane (TCA), chromic oxide, hydrochloric acid, sulfuric acid, phosphoric acid, cyanide, paint thinner, aluminum oxide, sodium hydroxide, sodium bisulfate, sodium hydrosulfate, and lead sulfate. Wastes generated at the Site include hydrochloric acid, chromium hydroxide sludge, chromic acid wastewater, chromic acid contaminated solids, TCE, TCA, aluminum oxide dust, and cyanide plating bath solution.

From 1940 until 1970, wastewater and waste streams generated at the Site direct discharged via an underground pipe from the plating room into the wetlands located on the southern portion of the property. In 1970, W&L abandoned and plugged its underground pipe and installed a wastewater treatment facility on Site to treat its electroplating wastes (primarily chromium hydroxide sludge) which were then discharged to a surface impoundment and lagoon for dewatering. The effluent from the dewatering impoundment and lagoon was then discharged into the wetland area via a storm water trench located on the west side of the property.

The impoundment and lagoon were excavated using only a visual criteria, and were closed and capped in 1985-1986. Environmental sampling in 2001, with supporting samples taken by EPA in 2010 during the Preliminary Assessment/Site Investigation (PA/SI), show that some contamination was left in place and continues to contribute to the sub-surface soil and groundwater impacts.

In the late 1980s, the wastewater treatment system was converted to a closed-loop for process water, while chromium hydroxide sludge was accumulated and shipped off-site for disposal (approximately 4,000 gallons of sludge was shipped off-Site every 90 days). Employee interviews have clarified, however, that the closed-loop system was constantly compromised. Each weekend, the facility would shut down, and on Monday morning, there was usually a large quantity of water in the system (in excess of the capacity of the holding bays in the wastewater treatment room), and this water would slowly discharge through a hole in the wall and into a rip-rap stone area on the west side of the facility. This water would either flow through the rock towards the wetlands,

and/or be absorbed into the groundwater. This process water was sometimes contaminated, however, when acid would cause one of the heating coils to crack, allowing for chromic acid infiltration into the “clean” closed-loop system.

Lead is also a contaminant of concern. Lead was used for a variety of operational processes in the chrome-plating operations. A small lead smelter and exhaust hood are found in the mechanic’s shop in the south-west corner of the facility, and it was used to make a variety of plumbing pieces involved in the plating process. The lead bends, curves and pieces would eventually melt away in the 140° F chromic acid tanks, and contribute to the waste stream from the plating process.

The employee lunch room once was the site of the W&L copper plating operations. There appears to be evidence of a former trench emanating from this side of the building, out to the west with discharge to where the historic storm-water/surface water used to exist (before it was buried when the lagoon and impoundment were installed).

An abandoned dry-well located on the south side of the facility was also identified as a possible source of volatile organic compound (VOC) contamination in the sub-surface. It has been reported to have been used for the disposal of waste TCE, and is considered to be a potential source area for TCE, TCA and other VOCs.

On the west side of the building, two 275-gallon above-ground storage tanks (ASTs) of TCE & TCA used to be situated near the facility’s stack. The ASTs supplied the internal degreasing operations. TCE was used on Site from an unknown period of time until prior to 1983, at which time TCA was determined a more environmentally permissible alternative. From 1983–1994, TCA was then used for parts degreasing. Based upon hazardous waste reports for 1988, 1989, and 1991, the average annual usage of TCA was 147 gallons. According to the consultant reports, as well as interviews of past employees, several overflow spills are known to have occurred during the early 1980s.

The electrical room roof area on the south side of the facility is located immediately below the exhaust ducts from the chromium plating tanks. Over the years of operation (prior to installation of air emissions controls in 1997), chromium residue accumulated on the roof. During storm events, runoff from the roof picked up dissolved chromium and discharged to the ground surface adjacent to the facility building.

Owing to the configuration of the plating area floor trenches, inspection of the integrity of the walls and trenches has not been feasible. Given the condition of the visible floor areas near the plating tanks, it is believed that the concrete trenches are extremely porous and impacted by the strongly acidic and corrosive (pH of <1) properties of the chromic acid used in the plating process. Employees have explained, photographs have documented, and there is much evidence that the condition of the trenches has contributed to contamination below the foundation of the building. Environmental samples taken along side the tanks demonstrate that there are extremely high concentrations of total chromium, as well as very toxic hexavalent chromium.

In 2007, when W&L closed its operations, there were four active plating tanks (out of six that were in operation when the dry scrubber air handling systems were installed in 1997). These tanks have capacities of 740 gallons, 680 gallons, 1,440 gallons and 1,210 gallons.

During the August 2010 PA/SI chromic acid and significant quantities of chromic acid sludge were found to still be in the tanks, despite an emergency removal of materials performed by MassDEP from January 25–February 18, 2008.

2. Physical Location

The Site is located at 78 North Avenue in Attleboro, Bristol County, Massachusetts. The geographical coordinates, as measured from the approximate center of the property, are 41° 57' 26" north latitude and 71° 17' 51" west longitude.

The Site is bounded by Walton Street to the north with industrial and residential properties beyond; North Avenue to the east with residential properties beyond; industrial properties to the west; and wetlands and residential properties to the south.

Though the Site is the first property in a small industrial park that extends due west from the Site, this industrial zone is surrounded by not only a residential neighborhood, but is also situated directly across the street from the City of Attleboro's largest recreational facility, the Hayward Recreation Center (an open-space recreation zone that includes Spatcher Pool & Bathhouse; playground equipment; two baseball fields; and two football fields).

According to the United States Census data for 2000, approximately 8,136 people live within a 1 mile radius (with 2,246 living within a ½ mile, and 829 living within ¼ mile). Based upon the EPA Region 1's Environmental Justice Mapping Tool, the Site is not located within an environmental justice area.

3. Site Characteristics

This Site is considered a Resource Conservation and Recovery Act (RCRA) Corrective Action Site. North of the building is a paved parking area, to the west is a gravel and concrete driveway and areas east and south of the building are covered with grass. Topography slopes gradually downward to the southeast toward the wetland, which is known to be contaminated with metals and VOCs.

The wetlands (conservation land) consist of several parcels not solely owned by Walhard Realty Trust which include property owned by: Massachusetts Electric; the City of Attleboro; and the Commonwealth of Massachusetts (Department of Transportation). There are also several other contaminated residential properties located on Paulette Lane and North Avenue. A majority of this contamination occurred during the era between 1940–1970 from direct discharge of plating and degreasing wastes to the wetland through a wastewater pipe (though it is strongly suspected that the post 1970s wastewater treatment operations were unsatisfactory, and additional contamination contributed to contamination throughout the neighborhood due to an un-lined, porous concrete wastewater diversion channel in combination with poor environmental operations/practices and one or more leaking tanks).

The residential properties along Paulette Lane and North Avenue to the east of the Site are bounded to their east by Bliss Brook, which eventually discharges to the 10-Mile River. A professional engineer's Conceptual Site Model, developed in 2001, attributes the chromium and VOC contamination in these backyards to potential historical sources and possible release mechanisms all

emanating from the W&L facility through a combination of groundwater contamination and recharge combined with air emission deposition.

All nearby residents receive city-supplied water, therefore there are no impacted drinking water supply wells (although there still exists one agricultural well that is physically covered with a plate, but not adequately or properly closed).

Geology & Hydro-Geology:

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 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, and located approximately 3.1 miles east of the Site. The depth to groundwater at the Site was measured during a 2004 sampling event in seven groundwater monitoring wells located on the W&L property and in the Paulette Lane and North A venue 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

4. Release or Threatened Release into the Environment of a Hazardous Substance, or Pollutant or Contaminant:

Chromium VI (Cr-VI), and chromium compounds (i.e., total chromium) are hazardous substances as defined by Section 101(14) of CERCLA, 42 U.S.C. §9601(14). In 2001, Cr-VI and total chromium are present in levels as high as 81,800 mg/Kg (i.e., parts per million, "ppm") in the wetlands (near the location of the 1940-1970-era facility waste discharge outfall); and in 2010 are present as high as 42,000 ppm in the facility. Historic and current data shows Cr-VI and total chromium throughout the industrial land, wetlands/conservation land, and residential properties. Therefore, a release into the environment of hazardous substances has already occurred, and impacted source soils continue

to contribute to the residential and wetland contamination. (Additional investigatory sampling concurrent to the Removal Action will be conducted in the wetlands behind W&L and at the homes on Paulette Lane and North Avenue; allowing for EPA to refine the current extent of contamination volumes needed for excavation.)

Other hazardous substances as defined by Section 101(14) of CERCLA that have been released at W&L and abutting properties and are shown in the tables below with the highest concentrations detected compared to the remediation standards identified in the MCP.

| AUGUST 2010 - SOIL SAMPLE RESULTS <i>(TARGETED SAMPLING IN NEW LOCATIONS - TO ADDRESS HISTORIC DATA GAPS)</i> | | |
|---|--|---|
| Hazardous Substance | Highest Concentrations Detected | MCP Soil Remediation Standards for S-1¹ |
| METALS OF CONCERN | | |
| Chromium ² | 42,000 mg/Kg | 30 mg/Kg |
| Lead | 4,200 mg/Kg | 300 mg/Kg |
| Chromium, Hexavalent | 470 mg/Kg | 30 mg/Kg |
| POLYCYCLIC AROMATIC HYDROCARBONS (PAHS) OF CONCERN | | |
| Benzo(a)anthracene | 11.0 mg/Kg | 7 mg/Kg |
| Benzo(a)pyrene | 9.7 mg/Kg | 2 mg/Kg |
| Benzo(b)fluoranthene | 9.1 mg/Kg | 7 mg/Kg |
| Dibenz(a,h)anthracene | 1.0 mg/Kg | 0.7 mg/Kg |

| HISTORIC SOIL DATA FOR METALS | | |
|--------------------------------------|--|---|
| Hazardous Substance (METAL) | Highest Concentrations Detected | MCP Soil Remediation Standards for S-1 |
| Chromium | 81,800 mg/Kg | 30 mg/Kg |
| Lead | 10,500 mg/Kg | 300 mg/Kg |
| Chromium, Hexavalent | 1,200 mg/Kg | 30 mg/Kg |

¹ [The Soil Category S-1 standards](http://www.mass.gov/dep/cleanup/laws/prop_s1.htm) are based on a residential exposure scenario in which the potential receptor may come into contact with the contaminated soil in their yard while playing or gardening. The evaluation also includes the ingestion of home-grown fruits and vegetables from a small garden.
http://www.mass.gov/dep/cleanup/laws/prop_s1.htm

² [MCP Method 1: SOIL CATEGORY S-1 STANDARDS](http://www.mass.gov/dep/cleanup/laws/0975_6a.htm) defines that the Total Chromium standard is applicable in the absence of species-specific data for Chromium III (Cr-III) and Cr-VI.
http://www.mass.gov/dep/cleanup/laws/0975_6a.htm

| HISTORIC DATA IN GROUNDWATER PLUME(S) | | | |
|--|--|-------------------------------------|-------------------------|
| Hazardous Substance | Highest Concentrations Detected | MCP GW Remediation Standards | |
| | | GW-2³ | GW-3⁴ |
| METALS OF CONCERN | | | |
| Chromium | 4,800 mg/L | 2 mg/L | 200 mg/L |
| Lead | 10,500 mg/L | 300 mg/L | 300 mg/L |
| Chromium, Hexavalent | 2,600 mg/L | 1 mg/L | 200 mg/L |
| VOCS of CONCERN | | | |
| Trichloroethylene (TCE) | 2,900 µg/L | 300 µg/L | 20,000 µg/L |
| 1,1-dichloroethene (DCE) | 140 µg/L | 1 µg/L | 50,000 µg/L |
| vinyl chloride | 170 µg/L | 2 µg/L | 40,000 µg/L |
| 1,1,1-trichloroethane (TCA) | 22,000 µg/L | 4000 µg/L | 20,000 µg/L |

The presumed migration route(s) for contaminants of concern were summarized in the October 29, 2001 Conceptual Model by Resource Controls (See Attachment I).

In addition to the known contamination listed above (and because W&L was a hard chrome plating facility of an era that traditionally generated or contained additional contaminants of concern not previously evaluated); EPA has begun additional site investigations to determine other pollutants or hazards, including (but not limited to): cyanides, PCBs, and asbestos. Sample results are forthcoming, and a formal asbestos survey of the entire facility is scheduled to be performed the week of September 27, 2010.

In the event that PCBs are identified at the Site and exceed or have the potential to exceed default standards and cleanup levels considered protective of public health including: EPA's PCB Cleanup and Disposal Regulations, 40 CFR Section 761.61, (1 ppm for unrestricted use, and 10 to 100 ppm with a compliant cap); the preliminary remediation goals (1 ppm for residential areas, 10 to 25 ppm for industrial use) specified in EPA OSWER Directive 9355.4-01; and the Massachusetts Contingency Plan Method 1 default standard of 2 ppm for both residential and industrial soils.

³ [The MCP GW-2 groundwater standards](http://www.mass.gov/dep/cleanup/laws/gw2.htm) (310 CMR 40.0974(2)) apply to groundwater that is considered both shallow and where there is currently a structure built on the land above the groundwater. These standards are intended to address the potential migration of volatile oil or hazardous material from groundwater into the indoor air. Both GW-2 and GW-3 standards apply. <http://www.mass.gov/dep/cleanup/laws/gw2.htm>

⁴ [The MCP GW-3 groundwater standards](http://www.mass.gov/dep/cleanup/laws/gw3.htm) (310 CMR 40.0974(2)) apply to all groundwater in the Commonwealth. These standards are intended to address the adverse ecological effects that could result from discharge of oil or hazardous material to surface water. Both GW-2 and GW-3 standards apply. <http://www.mass.gov/dep/cleanup/laws/gw3.htm>

5. NPL Status

The site is not currently on the National Priorities List, and though it had received a preliminary score, it never received a final Hazardous Ranking System rating.

6. Maps, Pictures and Other Graphic Representations

ATTACHMENT I: Maps

- Site Diagram 2010
- 2001 - Trichloroethylene (TCE) Groundwater Isoconcentration Contour Plan
- 2001 - Total Dissolved Chromium Groundwater Isoconcentration Contour Plan
- 2001 - Delineation of Hotspots in Soils (On-Site and Off-Site)
- 2001 - Conceptual Site Model (Graphical Format)

B. Other Actions to Date

1. Previous Actions:

Prior to 1970, untreated wastewater from facility operations was discharged directly to a wetland located on the southern side of the property. The wetland (conservation land) 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 National Pollutant Discharge Elimination System (NPDES) Permit MAOOO1040.

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 Treatment, Storage and Disposal (TSD) facility.

In 1982, a Notice of Violation (NOV) was issued by the Massachusetts Department of Environmental Quality Engineering (i.e., MassDEP during its earlier incarnation) due to violations of interim status standards to its NPDES Permit. The NOV directed W&L to close the surface impoundments and install monitoring wells around surface impoundments. A second NOV was issued in 1983.

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 in response to EPA indicating its intent to close the surface impoundments, which would preclude the need for filing a Part B application.

In 1984, a RCRA Closure Plan was prepared for the lagoon and surface impoundment and submitted to the MassDEP. As a component of the closure program, all identifiable sludge was excavated from the lagoon and surface impoundment and transported to the licensed hazardous waste disposal facility of Stablex in Blainville, Quebec.

Both the surface impoundment and lagoon (and discharge pipes) were abandoned in place as part of the lagoon closure program conducted in 1985 and 1986. 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.

Following the promulgation of the 310 CMR 40.000, the 1988 Massachusetts Contingency Plan (MCP), W&L hired a consultant to conduct a *Phase I – Limited Site Investigation Report* (Phase I). The Phase I report was submitted to Massachusetts in 1989, and included: a detailed review of Site history to identify possible sources of VOCs and chromium; an inventory of materials used on Site; a review of available aerial photographs to identify past storage and/or disposal areas; a soil gas survey to identify sources of VOCs and approximate extent of the VOC plume in groundwater; installation of wells; and a magnetometer survey to locate any buried steel objects located on the site. 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 upon the data, W&L concluded that off-Site migration of contaminants was likely.

In 1990, W&L's consultants conducted a *Phase IIA – Preliminary Comprehensive Site Assessment Report* (Phase IIA) and in 1993 a *Phase IIB* was completed to fill data gaps from the Phase I investigation. The scope of this investigation included: a ground-penetrating radar survey of the property in the rear of the facility; installation of additional wells; sampling of wells; surface water sampling and analysis; sampling and analysis of the surficial soils adjacent to the plating room roof as well as in the down-gradient well area; and a more detailed investigation of potential contaminant migration pathways.

The Phase IIA analyzed 40 surface soil samples and 19 surface soil samples collected during the Phase IIB. Analysis 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 µg/L, 6.4 µg/L, and 24 µg/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 February 28, 1994, W&L provided the MassDEP a Notice, pursuant to 310 CMR 40.0172 that continued response actions were beyond its financial ability to perform.

A public meeting was held on July 21, 1994 for residents of the neighborhood of Walton & Lonsbury. Based upon sampling results along Paulette Lane and North Avenue, it was recommended that vegetative cover be maintained in the wetlands area behind one of the homes, and that children in the neighborhood be encouraged to play in alternate areas, such as grass covered yards.

In 1995, MassDEP issued a Notice of Responsibility (NOR) to W&L with respect to a release of No. 2 fuel oil from a leaking underground storage tank (UST). One 2,000-gallon No. 2 heating oil underground storage tank (UST) was removed from the Site. A release of oil to soils was observed during removal of the tank, and MassDEP 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 MassDEP 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 March 2001, MassDEP determined that the RAO was insufficient to delineate the extent of contamination associated with the leaking UST, and subsequently retracted their RTN and a Tier I Minor Permit Modification Transmittal was submitted to MassDEP. In May, W&L and MassDEP entered into an Administrative Consent Order (ACO) for the Site, which required semi-annual monitoring of groundwater and surface water at and near the Site.

In 1996, as required under the ACO, W&L consultants conducted scheduled sampling and analysis, and reported that chromium concentrations in surface waters had increased; and that surface water was ponded in the back yards of several nearby residences. Based upon this information, MassDEP requested that an assessment-only IRA be performed. In June 1996, a report was submitted to MassDEP that documented surface water sample collection efforts from five locations and analysis results for dissolved lead, total chromium, hexavalent chromium, and purgeable volatile

halocarbons. Results reported concentrations of chromium and hexavalent chromium above detection limits in four of the five samples, prompting W&L to complete and submit a Release Abatement Measure (RAM) Plan, and continuing semi-annual groundwater and surface water monitoring.

The RAM objectives were to attain compliance with National Emission Standards for Chromium Emissions from Hard and Decorative Chromium Electroplating and Chromium Anodizing Tanks (40 CFR 63.340 et. seq., as then amended), and to implement measures to abate the threat to human health and the environment from chromium contaminated groundwater. A dry scrubber was installed at the Site at the end of 1997 and started up in early 1998. Due to financial issues, one of the two plating rooms (the smaller of the two) was taken off-line and only the 6 tanks in the main plating room were left in use and attached to the dry scrubber system.

In 1997, MassDEP issued a Notice of Responsibility (NOR) to W&L in association with a transformer failure on its property, which was discovered on May 6, 1997. The three PCB-contaminated transformers, located behind the facility, were owned by the electric utility that services the Attleboro area, Massachusetts Electric (subsidiary of National Grid). The utility, as Responsible Party, conducted response actions and conducted a Utility-Related Abatement Measure (URAM).

In 1999, MassDEP issued a Tier IA Classification and Permit Statement to the facility.

In May 1999, W&L submitted a *Revised Draft Release Abatement Measure Plan* to MassDEP. Despite the dry scrubber and the goal to control air emissions from the facility, residential concerns about air quality and associated environmental hazards due to the possible partitioning of VOCs into the indoor air from the VOC groundwater plume into their homes. Consequently, W&L submitted a draft RAM plan to modify the existing RAM Plan for the Site. During October 1999, MassDEP submitted a Request for Immediate Response Action (IRA) and Interim Deadline Letter to Walton & Lonsbury, Inc. to address the presence of elevated concentrations of VOCs in groundwater upgradient of residential properties.

In 2000, MassDEP issued a Tier IA Permit Extension for the Site, requiring W&L to submit a Phase II Comprehensive Site Assessment and a Phase III Remedial Action Plan.

On June 20, 2000, An IRA Status report and Modification was submitted to MassDEP. The report summarized work performed, including installation of five monitoring wells within 30 horizontal feet of private residences located at 51, 52, 60, 69 and 73 North Avenue. 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 and 73 North Avenue (52 North Avenue denied access), were collected as part of the IRA. Laboratory analysis of the indoor air samples indicated the presence of TCA concentrations ranging from $1.03 \mu\text{g}/\text{m}^3$ to $3.72 \mu\text{g}/\text{m}^3$; TCE at concentrations ranging from $4.39 \mu\text{g}/\text{m}^3$ to $4.69 \mu\text{g}/\text{m}^3$; and PCE concentrations ranging from below detection limits to $4.86 \mu\text{g}/\text{m}^3$; Vinyl chloride, 1, 1-DCA and TCE were detected in the groundwater sample collected from one of the wells above the GW-2 standard. Based on the indoor air sample analytical results, sub-slab ventilation systems were recommended for residences at 51, 60, 69 and 71 North Avenue.

In 2001, W&L submitted the Phase IIC – Interim Comprehensive Site Assessment Report to address current conditions at the Site, as well as the sampling and analytical results at the residential properties in the area. During the supporting sampling phase, elevated concentrations of chromium were detected in backyards and wetland areas (Bliss Brook) along Paulette Lane and North Avenue (i.e., 37 Paulette Lane, and 65 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. Laboratory analysis detected concentrations of TCE above the MassDEP background concentrations. Therefore, W & L concluded that based on the data a Critical Exposure Pathway might exist, but additional air sampling needed to be completed. An IRA Plan Modification was submitted to MassDEP 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 June 2001, an IRA Status Report summarizing the results of the air sampling and groundwater sampling was submitted to MA DEP by W & L's environmental consultant. A total of thirty monitoring wells and temporary groundwater sampling locations on the Site, Paulette Lane residences and North Avenue residences were sampled. 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.

Following each of the 2001 sampling events, public meetings were conducted by Walton & Lonsbury, their contractors, and the City of Attleboro's Health Department where residents were provided with summary data, compiled by W&L's contractors. Impacted residents were explained why sub-slab ventilation systems were recommended for their impacted homes along Paulette Lane and North Avenue.

In 2004, the MassDEP requested that EPA's RCRA Corrective Action program use its contractors to evaluate historic data and perform additional sampling (especially in surface water). During that study, 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.

From 2002 – 2007, Walton & Lonsbury, Inc. struggled to find its market-share of the chrome-plating business, and were unable to earn enough funds to maintain their environmental commitments. In June 2006, the President of W&L passed away, and the company lingered on but eventually had to cease operations and close its doors following a series of break-ins, robbing it of most all of its operational copper piping. With the business closed, and no hopes for converting the building to another industrial use, the facility sold off key operational assets to pay final monies owed to its employees and creditors.

In 2008, the MassDEP and the EPA RCRA Corrective Action program met again to discuss their mutual concerns regarding the W&L plume(s) and the potential for soil vapor intrusion from VOCs into the homes along Paulette Lane and North Avenue. EPA and MassDEP worked together and in

November 2008 developed a Sampling and Analysis Plan for air sampling residential basements as well as potential vapors sub-basement slab (sub-slab).

In December 2008 and then again in March 2009, EPA's New England Regional Laboratory had its Air Monitoring Team work with homeowners to perform air sampling. Considering the results of previous indoor air and groundwater sampling, two homes were selected by MassDEP for further sampling. At 69 North Avenue indoor air and sub-slab soil gas samples were collected from the basement area. The home located at 73 North Avenue has a radon mitigation system in operation, therefore only an indoor air sample was collected from the basement area to help determine if the system is effectively removing contaminated soil gas from underneath the home.

In 2008, data collected at 69 North Avenue showed contaminants of concern were present below the basement slab and trichloroethylene was detected in the basement indoor air slightly above the MassDEP MCP No Significant Risk Excess Lifetime Cancer Risk Level 1×10^{-6} . Since the home located at 73 North Avenue had a previously-existing radon mitigation system in operation, so no sub-slab samples were collected; instead a sample from the system's vent pipe was collected. The grab sample collected from the system's vent pipe detected TCA above the reporting limits (2.0 ppb/v).

In March 2009, indoor air sampling was performed in the basement, and another sample was taken at the radon mitigation system from 73 North Ave. The only compounds of concern detected above the reporting limits were TCE, TCA and 1,1-dichloroethene at 0.64 ppb/v, 0.94 ppb/v and 0.10 ppb/v, respectively. The grab sample collected from the system's vent pipe did show levels slightly higher than what were detected inside the home. The data collected at 69 North Avenue showed only trichloroethylene was detected in the basement indoor air slightly above the MA DEP MCP No Significant Risk Excess Lifetime Cancer Risk Level 1×10^{-6} . While the basement was relatively well sealed, MassDEP and EPA found that there was no concrete surrounding the sewer pipe where it enters the basement, thus an open pathway for soil gases to migrate into the home existed.

Due to continued freezing temperatures as well as evidence of repeated vandalism (windows smashed, doors kicked in, missing equipment), the MassDEP used a bulk of the remaining monies left in its RCRA Closure & Remediation Trust Funds to perform an emergency removal action. MassDEP hired a contractor who mobilized to the site on January 25 through February 18, 2008 to empty and over-pack the contents of various containers, totes, drums, bags. In addition, all of the liquid waste from the wastewater treatment system as well as most of the liquid waste from plating tanks was also siphoned off and disposed of in accordance with State and Federal regulations. This emergency action, however, was not a complete removal – and some liquid waste and all of the sludge in the plating tanks still remains on site. Also, all the liquid around the tanks and in the sump system are still in need of removal.

In December 2009, MassDEP hired a contractor to empty and then seal the basement at 69 North Avenue (including the exposed soil at the sewer pipe); then a sub-slab ventilation system was installed and checked by MassDEP personnel.

2. Current Actions

EPA conducted a targeted PA/SI from August 5-12, 2010 at the Walhard Realty Trust-owned property (former W&L facility) to fill in some environmental data gaps from the previous sampling rounds (1984–2004 and residential indoor air quality sampling 2008-2010).

Access agreements have also been sent to Massachusetts Electric, the Commonwealth of Massachusetts' Department of Transportation, and the City of Attleboro in order for EPA and our contractors to perform additional site investigation activities (once the Removal Action has begun). Furthermore, all of the previously-impacted homes along Paulette Lane and North Avenue have also been sent access agreements; and the back yards of these properties abutting Bliss Brook will be sampled.

MassDEP is using the last of the remaining RCRA Closure & Remediation Trust Funds to: continue sampling homes potentially impacted from the VOC plume; and install sub-slab treatment systems in those homes found to have soil vapor intrusion in their basements.

C. State and Local Authorities' Roles

1. State and Local Actions to Date

Please see the detailed account of the State's previous actions to date in *Section B.2. 1 Other Actions to Date* of this Action Memorandum.

The City of Attleboro Health Department has been involved with this Site for years: its Medical Doctor (M.D.) / Health Officer also came by the Site during the PA/SI to discuss past health issues; and its Health Agent has been involved with the facility and residential concerns for several decades.

The Walhard Realty Trust has continued to pay its City taxes through leasing its parking lot and some of the land on the west side of its facility to the industrial abutter, therefore the City of Attleboro holds no tax lien on the property.

2. Potential for Continued State/Local Response

Neither the State of Massachusetts nor the City of Attleboro has the funding and/or resources to commit to conducting the Removal Action, at this time.

The MassDEP RCRA program office will remain active at the Site through its work with the residential properties soil vapor intrusion studies and the subsequent and appropriate basement sealing / sub-slab installation on homes found to be adversely impacted by the VOC plume. MassDEP intends to play a role during the removal process, and will provide technical support and assistance (specifically, a representative of MassDEP has offered assistance and unique knowledge of RCRA waste disposal and the Massachusetts Contingency Plan requirements).

Once EPA has completed this proposed Removal Action, MassDEP will continue to be the lead agency for any long-term regulatory oversight of this Site, while the City of Attleboro Board of Health will continue to monitor health effects in the impacted neighborhood.

Should Institutional Controls be required and placed on the property/properties, the City of Attleboro (with MassDEP's technical assistance) will remain the lead agencies for ensuring that these are enforced.

III. THREATS TO PUBLIC HEALTH OR WELFARE OR THE ENVIRONMENT, AND STATUTORY AND REGULATORY AUTHORITIES

As described below, the conditions at various properties located within the Site meet the general criteria for a removal action, as set forth in 40 C.F.R. §300.415(b)(1), in that “there is a threat to public health or welfare of the United States or the environment”, and in consideration of the factors set forth in 40 C.F.R. §300.415(b)(2) as described below.

Actual or potential exposure to nearby human populations, animals, or the food chain from hazardous substances or pollutants or contaminants; [§300.415(b)(2)(i)];

- The contamination on the ground surface (metals), in combination with the sub-surface contamination and resulting groundwater plumes (metals, VOCs) have caused actual and potential exposures to the nearby human populations, animals, and food chain living along Paulette Lane, North Avenue and Bliss Brook. Contaminants include total chromium, hexavalent chromium, lead and VOCs.

Actual or potential contamination of drinking water supplies or sensitive ecosystems [§300.415(b)(2)(ii)];

- Currently, there is one agricultural well on a residential property (formerly a farm) across the street from the Site. During the 2001 public meeting, this well had been reported by W&L consultants as “now closed”; but it is merely covered and since it is not filled and sealed, it remains a direct source of groundwater contaminated with chromium and VOCs. Though the well is not currently in use, the residents could open the well at any time for direct irrigation to their gardens. (This well will be closed as part of the Removal Action).
- The Brookside Apartments at 41 North Avenue is an affordable housing complex for senior citizens. Bliss Brook runs directly behind this complex, and hexavalent chromium was found up to 7 times in excess of the MCP Groundwater Standards for Surface Water Protection (GS-3) in 1999 and 2000.
- Small children reside at all but one of the addresses along Paulette Lane and North Avenue that have been impacted with surface soil contamination (caused by Bliss Brook's seasonal overflows and likely deposition of contaminants from the W&L Site).

Hazardous substances or pollutants or contaminants in drums, barrels, tanks, or other bulk storage containers, that may pose a threat of release [§300.415(b)(2)(iii)];

- There are eight plating tanks that remain in the facility on Site. Of those eight, all six tanks in the main plating room still contain either chromic acid/plating waste sludge and/or chromic acid/plating waste sludge with liquid chromic acid. These tanks are large, uncovered, and range

from 4 feet – 10 feet below floor level. The main plating room has only a few windows, all of which are covered, and the room is completely devoid of light. Should trespassers (of which there are many, as documented by the police and the caretakers of the property) willingly try to explore the tank(s), and/or accidentally fall in, the pH of the material is <1 (as measured by EPA's laboratory after a 200 fold dilution). These tanks remain an extreme hazard at the Site.

- Behind the six plating tanks in the main plating room, there are two sumps that are full of chromic acid. One appears to be from the floor waste that was diverted during plating operations, and one appears to be from the condensate from the air scrubbers (the condensate was reported to be pumped back into the tanks during operations as part of W&L's efforts to minimize waste generation from the Site). These sumps are not small, and trespassers could easily walk into these if they are exploring the room. The chromic acid is extremely caustic, and remains an extreme hazard at the Site.
- There are also three vats with product still on the plating room floor. All contain caustic solutions. One is alkaline, and two are acidic. All three could cause serious injury to trespassers who reach inside.

High levels of hazardous substances or pollutants or contaminants in soils largely at or near the surface, that may migrate [§300.415(b)(2)(iv)];

- Total chromium, hexavalent chromium, lead, and other contaminants have all been found on Site (and in the impacted neighborhood) at or near the surface; the existing groundwater plumes prove that these sources are continuing to contribute to the contamination migrating from the Site.
- The plating tanks, the compromised building materials under and around the plating tanks, and the soils directly below the plating room floors all have high levels of total chromium and/or hexavalent chromium. Since the building is abandoned and unheated, it continues to degrade. Since the roof structure had already been compromised due to the corrosive chromic acid vapors during the plating process, now rain water is starting to infiltrate into the building. The rain water and the ensuing saturation of waste above the water table will continue to cause these contaminants of concern to leach and migrate into the groundwater. Contaminated groundwater migrating from this Site has already been shown to recharge into Bliss Brook in and along the residential neighborhood.

Weather conditions that may cause hazardous substances or pollutants or contaminants to migrate or be released [§300.415(b)(2)(v)];

- The building has been abandoned for three years. During that period of abandonment, leaks have formed, and rainwater is now starting to infiltrate into the building. All rain that gets into the two former chrome plating areas (and perhaps the one former copper plating area) will cause the metals and VOCs in the contaminated soils above the groundwater table to migrate into the groundwater and then off-Site; and/or will cause erosion channels through the source of contamination allowing contaminants in the building to migrate off-Site.

- For 30 years W&L direct discharged waste from its plating operations into the wetlands behind its property. These soils have been found to be contaminated with metals and VOCs. Every rain event causes not only the contaminated soils to saturate and leach into the groundwater, but also causes a rapid rise in the groundwater elevation allowing the groundwater to come in contact with the source contaminants. This hydrogeologic cycle continues throughout the seasons, causing more contamination to migrate away from the Site towards the residential neighborhood.
- Rain water also causes Bliss Brook to flood beyond its banks. Contamination has been shown in Bliss Brook during several sampling events, and the backyards of properties along Paulette Lane and North Avenue have been shown to have elevated concentrations of chromium as a result.
- Rain also increases the contaminant migration from the former lagoon and impoundment on the west side of the Site. Since these structures were not closed based upon excavating soils in conjunction with laboratory sampling and analyses (for confirmatory clearance, and all reports indicate that the contractor only used visual observations as guidance), it has been shown through testing that there still exists residual contamination that is still contributing to groundwater contamination. Despite being covered and closed (ostensibly removing rain water as an infiltration source) it is clear that the local unnamed stream (in combination with surface water from rain events) is captured and fed into a manhole on Walton Street, where it is then channeled directly into the area of the former lagoon and impoundment.

Threat of fire or explosion [§300.415(b)(2)(vi)];

- When the facility was abandoned in late 2007, the industrial facility to the west of the W&L property (W. Walsh Company, Inc.) continued to provide isolated heat and some electricity to the facility to maintain its fire suppression system. The facility was acutely aware of chromic acid and sludge that were still in the plating room; and at that time there were still drums, bags, and containers of hazardous materials in support of the wastewater treatment system and plating operations that were contained in the building.

In 2008, additional vandalism again robbed the facility of the critical copper piping necessary to maintain the fire suppression system. So, when the facility seemed to have no hope of being reused, all attempts at maintaining fire suppression were abandoned.

The building is a 1940s-era building with wood beams, wood ceilings and wood and plasterboard used throughout. Asbestos has been used in the original building, and in the two additions. The wall behind the plating room, though brick, was not built with an acid resistant brick. During the 2010 PA/SI, the sampling teams (in an effort to sample the brick for chromium contamination) were able to push through the brick with little to no effort. Chromic acid has severely compromised several areas of the concrete structure and reduced areas of the 12" thick foundation to rubble.

Though the steel beams, trusses and cranes (used for moving large metal objects in and out of the chrome plating tanks) remain structurally viable, the rest of the building could easily ignite (spreading asbestos, acid vapors, and lead fumes into the neighborhood and industrial park). A large structural fire at this facility would likely not only shut down traffic in the neighborhood, but (depending upon wind speed and direction) could also disrupt traffic along Interstates 295 and 95.

- Despite the daily working-week day inspections of the exterior of the facility, in combination with vigilant homeowners and industrial abutters who continue to notify the police of any noticeable irregularities; it seems that the W&L building continues to be an irresistible source of curiosity for trespassers, metal scrappers, looters, and artists. Trespassing has been documented on various “Urban Explorers” websites, and by the local Sun Chronicle newspaper that ran an article on January 24, 2010 about one of the more prolific urban explorers who has trespassed at W&L to take photographs (all of which were subsequently removed and/or re-labeled following a police inquiry). Only one photograph remains on the web, taken in the Maintenance shop with items rearranged on top of the lead smelting equipment.

On almost a weekly basis, the plywood is pried off some of the windows, evidence of attempts to pry open the doors can be seen, glass windows are smashed, and lots of evidence of additional vandalism is noted inside (potentially contaminated objects of all sizes are moved around the facility, and/or taken). The risk of a vandal (unintentionally), and/or an arsonist (intentionally) starting a structural fire is very real threat to the community and surrounding areas.

The availability of other appropriate Federal or State response mechanisms to respond to the release [§300.415(b)(2)(vii)];

- In a letter dated March 11, 2009 MassDEP has requested EPA’s assistance to address this Site.
- Currently, the MassDEP does not have available resources to address the demolition of this building, the removal of the tanks, the excavation and removal of the contamination, or the closure of the agricultural well at this time.

Other situations or factors that may pose threats to public health or welfare of the United States or the environment [§300.415(b)(2)(viii)].

- Vandals and trespassers remain a major source of concern at this Site. This has been discussed previously in detail.

Known hazardous substances of concern at the Site include, but are not limited to:

- **CHROMIUM** – Please see the online Agency for Toxic Substances and Disease Registry (ATSDR), U.S. Department of Health and Human Services, Public Health Service, *ToxFAQ Fact Sheet for Chromium, September 2008* <http://www.atsdr.cdc.gov/tfacts7.pdf>
- **LEAD** – Please see the online ATSDR *ToxFAQ Fact Sheet for Lead, August 2007* <http://www.atsdr.cdc.gov/tfacts13.pdf>
- **TCA** – Please see the online ATSDR *ToxFAQ Fact Sheet for 1,1,1-trichloroethane, July 2006* <http://www.atsdr.cdc.gov/tfacts70.pdf>

- **TCE** – Please see the online ATSDR *ToxFAQ Fact Sheet for Trichloroethylene, July 2003* <http://www.atsdr.cdc.gov/tfacts19.pdf>
- **VINYL CHLORIDE** – Please see the online ATSDR *ToxFAQ Fact Sheet for Vinyl Chloride, July 2006* <http://www.atsdr.cdc.gov/tfacts20.pdf>

Forthcoming sampling results will determine if the URAM performed by the electric utility in 1997 was successful, or if PCBs still exist on Site. If they are found to be present, please refer to the following ATSDR information:

- **PCB** - Please see the online ATSDR *ToxFAQ Fact Sheet for Polychlorinated biphenyls, February 2001* <http://www.atsdr.cdc.gov/tfacts17.pdf>

Forthcoming sample results will determine if the following substances of concern are present at the Site:

- **ASBESTOS** – Please see the online ATSDR *ToxFAQ Fact Sheet for Asbestos, September 2001* <http://www.atsdr.cdc.gov/tfacts61.html>
- **CYANIDE** – Please see the online ATSDR *ToxFAQ Fact Sheet for Cyanide, July 2006* <http://www.atsdr.cdc.gov/tfacts8.html>

Elevated levels of Copper were found throughout the Site, but the MCP has no standards for S-1 soils.

- **COPPER** - Please see the online Agency for Toxic Substances and Disease Registry (ATSDR), U.S. Department of Health and Human Services, Public Health Service, *ToxFAQ Fact Sheet for Copper, September 2004* <http://www.atsdr.cdc.gov/tfacts132.pdf>

IV. ENDANGERMENT DETERMINATION

Actual or threatened releases of hazardous substances from this Site, if not addressed by implementing the response action selected in this Action Memorandum, may present an imminent and substantial endangerment to public health, or welfare, or the environment.⁵

V. EXEMPTION FROM STATUTORY LIMITS

⁵ In accordance with OSWER Directive 9360.0-34, an endangerment determination is made based on “appropriate Superfund policy or guidance, or on collaboration with a trained risk assessor, which is outlined and discussed in Section III above. Appropriate sources include, but are not limited to, EPA relevant action level or clean-up standards, Agency for Toxic Substances and Disease Registry documents or personnel, or staff toxicologists.” EPA relied on the Massachusetts Contingency Plan’s (MCP) cumulative risk approach which compares site-specific information to a Cumulative Cancer Risk Limit (See 310 Code of Massachusetts Regulations (CMR) 40.0000).

CERCLA § 104(c) states that removal actions can exceed the 12-month and \$2 million statutory limits if conditions meet either the “emergency exemption” criteria or the “consistency exemption criteria. The consistency exemption requires that the proposed removal action be appropriate and consistent with the remedial action to be taken. As described below, conditions at the Site meet the criteria for the emergency exemption.

A. Emergency Exemption

Under CERCLA § 104(c)(1)(A), removal actions may exceed the 12-month and \$2 million statutory limits if:

1. There is an immediate risk to public health or welfare or the environment;
2. Continued response actions are immediately required to prevent, limit, or mitigate an emergency; and
3. Such assistance will not otherwise be provided on a timely basis.

1. There is an Immediate Risk to Public Health or Welfare or the Environment:

Unrestricted access to elevated level of hexavalent chromium, total chromium, lead, asbestos, various PAHs, cyanide and other contaminants of concern exists in soils at or near the surface, both on-Site and off-Site in the residential neighborhood and wetlands/conservation land behind the facility.

Environmental sampling and analysis to determine the extent of contamination that has migrated from the W&L facility at the residential properties (along Paulette Lane and North Avenue) and conservation lands (on municipal-, state- and utility-owned properties) remains on-going. Historic sampling and analyses have shown elevated concentrations of Site contaminants, oftentimes far in excess of the values established by either or both the Commonwealth of Massachusetts in their MCP, and the U.S. Government. Impacted residential properties include several families with young children who continue to play in the yards.

Failure to approve the 12-month and \$2 million exemption request for this removal action will result in the continued exposure of the public and the environment to these hazardous materials.

2. Continued Response Actions are Immediately Required to Prevent, Limit, or Mitigate an Emergency:

With the contamination impacting several properties, continued response actions are required to prevent, limit, or mitigate this substantial contact threat posed to the public. Response actions include, but are not limited to: demolition of the W&L facility; removal of the chrome plating tanks and vats; excavation of the contaminated soils that are above the water table (that continue to act as a source for further contaminant migration); a full characterization of the extent of, and then removal of) Site-related contamination in the neighborhood and conservation land; disposal of numerous waste streams in accordance with all state and federal regulations; and property restoration. In order to complete these actions, an exemption from the 12-month and \$2 million ceiling is required.

3. Assistance will not otherwise be provided on a timely basis.

The State of Massachusetts currently does not have the resources to abate the threat at this Site due to the complexity of the removal action as well as the number of properties impacted by the contamination. In a letter dated March 11, 2009 MassDEP has requested that EPA take the lead on any response efforts that involves an imminent hazard or significant risk. In addition, referral of this Site to the remedial program is not practicable, despite the projected expense of the removal, due to the time required for the remedial process.

VI. PROPOSED ACTIONS AND ESTIMATED COSTS

A. Proposed Actions

1. Proposed Action Description

The actions required to mitigate the threats outlined herein, are given below. At this time, EPA has initiated a search for potentially responsible party (PRP). Currently, there are no viable PRPs identified are able to perform this work. The proposed actions will protect public health, welfare, and the environment by removing the hazardous substances from accessible areas of the Site.

Walton & Lonsbury Facility:

- Conduct site walk with the Emergency Rapid Response Services (ERRS) contractor.
- Establish a site trailer, develop a staging area, and connect necessary utilities.
- Provide Health & Safety for site workers.
- Establish personnel and materiel decontamination areas.
- Prepare building for demolition:
 - conduct an asbestos removal in accordance with the asbestos survey;
 - remove mercury- and PCB-containing lighting fixtures, appurtenances, switches, ballast, and bulbs;
 - remove loose interior contents for disposal;
 - remove piping, process lines, drains, sumps;
 - remove electrical fittings and wires;
 - remove air scrubbers and equipment from behind facility;
 - recycle all metals and materiel that can be decontaminated; and
 - remove all remaining hazardous waste, oil, waste-oil and chemicals: (drum / over-pack / stage for disposal / stabilize, in accordance with all applicable, relevant and appropriate state and federal regulations).
- Demolish 78 North Avenue structure (to access the plating tanks and hazardous soils):
 - remove, to the extent practicable, interference for excavation such as shrubbery, trees, or other items as required; and

- stockpile and stage hazardous waste and non-hazardous waste streams for disposal (in accordance with all applicable, relevant and appropriate state and federal regulations);
 - Crush non-contaminated ABC materials for re-use during restoration.
 - Decontaminate wastes that can be recycled off-Site.
- Remove the eight remaining plating tanks using a crane or other mechanical device to remove the tanks intact (this will limit the amount of Level-B PPE and confined space entries that would be required to remove and decontaminate these tanks).
- Dismantle the eight tanks:
 - remove the plating sludge and liquids;
 - remove the plastic liner and the acid-resistant bricks;
 - decontaminate any metal that can be recycled; and
 - dispose of all other materials for disposal (in accordance with all applicable, relevant and appropriate state and federal regulations).
- Implement erosion control measures as determined necessary by the EPA OSC.
- Conduct air monitoring and implement dust control measures as appropriate.
- Excavate the foundation and contaminated soils (foundation in plating rooms are assumed to be contaminated, but will be sampled to verify):
 - Remove and dispose of contaminated foundations and soils as determined necessary by EPA (performance standards for this Removal Action are based upon cleanup standards established pursuant to the MCP; and as long as the site conditions meet the removal action criteria set forth in the National Contingency Plan, the extent of the removal action will achieve cleanup standards that will eliminate Imminent Hazard conditions and Significant Risk conditions as defined in the MCP).
- Conduct extent of contamination and confirmation sampling as determined necessary by the EPA OSC.
- Removal Action-generated waste streams will be consolidated, stabilized, packaged, documented and shipped off-site for disposal at EPA-approved facilities.
- If deemed feasible, EPA's ERT will develop and perform an in-situ treatment in areas that were excavated to reduce the highly toxic Cr-VI below the water table to a less toxic Cr-III. This process may be applied to (and downstream from) the former lagoon and impoundment area, and perhaps the wetlands area (in the general vicinity of the former direct discharge-clay pipe). Other in-situ treatment options may be performed, as necessary.
- Place visual markers throughout the excavation at the water table to delineate the remaining contaminated remaining soil beneath. If feasible, place an engineered barrier to prevent additional precipitation from leaching through source contamination (as determined by EPA OSC)

- Repair response related damages, including backfilling with clean fill material (including MCP approved ABC rubble), grading, and installing an appropriate final surface in areas affected by response related activities.

Residential Properties, Conservation Land, and Former Impoundment & Lagoon Areas:

- Sample and analyze soils from: properties along Bliss Brook; wooded area behind W&L facility; the areas near the former impoundment and lagoon; the wetland/ conservation land owned by Walhard Realty Trust, Massachusetts Electric, City of Attleboro and State of Massachusetts; and other areas identified by the EPA OSC.
- Document with each property owner the extent of removal and restoration activities to be accomplished and then document existing property conditions for subsequent restoration.
- Remove, to the extent practicable, interference for excavation such as shrubbery, trees, outbuildings, playground equipment, or other items as required.
- Coordinate all wetland work with the U.S. Army Corps of Engineers, U.S. Fish & Wildlife; and the City of Attleboro (Attleboro Conservation Commission, City Engineer, and Departments of Planning and Public Works).
- Conduct face-to-face meeting(s) with property owners and stakeholders to discuss the scope of this proposed Removal Action (distribute public information fact sheets, as necessary).
- Excavate impacted soils, stage contaminated soils, and then Removal Action-generated waste streams will be consolidated, stabilized, packaged, documented and shipped off-site for disposal at EPA-approved facilities.
- Sample and analyze Bliss Brook and other water bodies impacted by contaminant migration from the Site; and then perform appropriate soil/sediment removal(s) as necessary.
- Install sub-slab vapor-intrusion systems, as necessary, at the direction of the EPA OSC.
- Repair response-related damages, including backfilling with clean fill material, grading, and re-establishing vegetation in areas affected by response related activities.
- Demobilize all personnel and equipment from the Site.
- Refer the Site to MassDEP for any long-term remedial measures that may be required to address remaining Site risks.

2. Community relations

Upon approval of the Action Memorandum, the OSC will coordinate with the EPA's Office of Public Affairs Community Involvement staff to disseminate information regarding the project to the City and the impacted residents.

3. Contribution to remedial performance

The cleanup proposed in this Action Memorandum is designed to mitigate the threats to human health and the environment posed by the Site. The cleanup objectives have been established using state action levels and risk evaluations. The actions taken at the Site would be consistent with and will not impede any future responses. MassDEP will be responsible for any long-term regulatory oversight for this Site.

4. Description of alternative technologies

The use of alternative technologies with regard to disposal options will be further examined as the site work progresses. On-site field screening and analytical techniques may be utilized during the removal action.

As for reducing the threats posed by the migration of chrome contamination from the Site, EPA's Environmental Response Team (ERT) has recommended evaluating the use of a reductive biomobilization injection of a food-graded additive to convert the highly hazardous hexavalent chromium (Cr-VI) into the less toxic trivalent chromium (Cr-III). This (or another technique) could be performed once the source soils above the water table are excavated.

Also, based upon the State of Massachusetts' preference for reusing non-contaminated asphalt, brick and concrete (ABC) materials⁶, the ABC rubble from the site will be crushed and used as an acceptable fill during Site restoration.

5. Applicable or relevant and appropriate requirements (ARARs)

Pursuant to 40 C.F.R. 300.415(j), removal actions shall, to the extent practicable considering the exigencies of the situation, attain ARARs. Current ARARs identified, but not limited to, are listed below.

Federal ARARs:

40 CFR Section 122.26(c)(ii)(C) and 122.44(k) Clean Water Act NPDES Regulations (Stormwater Discharges)

40 C.F.R. Parts 260-262 and 264 Resource Conservation and Recovery Act, Subtitle C- Hazardous Waste Identification and Listing Regulations; Generator and Handler Requirements, Closure and Post-Closure - Massachusetts has been delegated the authority to administer these RCRA standards through its state hazardous waste management regulations. State regulations that have adopted these federal standards are listed below.

⁶ MassDEP Guide: Using or Processing Asphalt Pavement, Brick & Concrete Rubble
<http://www.mass.gov/dep/recycle/laws/abc.htm>

40 C.F.R. Part 61 Clean Air Act – Standards for controlling dust

If PCBs are found at in soils at the Site the following apply:

40 C.F.R. Section 761.61: TSCA requirements for cleanup and disposal of PCBs: TSCA requirements for disposal of PCBs

40 C.F.R. Section 761.79 TSCA Decontamination of Equipment Used

If work is conducted in federal jurisdictional wetlands:

40 C.F.R. Part 230, 231 and 33 C.F.R. Parts 320-323 Clean Water Act, Section 404(b)(1) Guidelines for Specification of Disposal Sites for Dredged or Fill Material – requires that EPA takes the least environmentally damaging practicable alternative to protecting wetland resources.

State ARARs:

310 CMR 40.0900 Procedures and Standards for the Characterization of the Risk of Harm to Health, Safety, Public Welfare and the Environment

310 CMR 30.100 Hazardous Waste Rules for Identification and Listing of Hazardous Wastes

310 CMR 30.300 Hazardous Waste Management Rules - Requirements for Generators

310 CMR 30.500 Hazardous Waste Management Rules - General standards for hazardous waste facilities

310 CMR 30.680 Hazardous Waste Rules - Containers

310 CMR 7.00 Air Pollution Control Regulations

If work is conducted in state jurisdiction wetlands or floodplain or in designated buffer zone:

310 CMR 10.00 Wetlands Protection Regulations – standards for work within state wetland resource areas (including vegetated wetlands and 100-year floodplain) or buffer zone (200 feet from a waterway and 100 feet from a wetland)

314 CMR 9.00 Water Quality Certification for Discharge of Dredged or Fill Material

The OSC will coordinate with State officials to identify additional State ARARs, if any. In accordance with the National Contingency Plan and EPA Guidance Documents, the OSC will determine the applicability and practicability of complying with each ARAR which is identified in a timely manner.

6. Project Schedule

Pending funding availability, the Removal Action is expected to commence in October or November 2010 and is expected to take between 18 – 36 months to complete.

B. Estimated Costs

| COST CATEGORY | | CEILING |
|---|-----|-----------------------|
| <i>REGIONAL REMOVAL ALLOWANCE COSTS:</i> | | |
| ERRS Contractor | | \$4,200,000.00 |
| Interagency Agreement | | \$ 0.00 |
| <i>OTHER EXTRAMURAL COSTS NOT FUNDED FROM THE REGIONAL ALLOWANCE:</i> | | |
| START Contractor | | \$600,000.00 |
| ERT's REAC Contractor | | \$120,000.00 |
| Analytical Costs (CLP, etc.) | | \$35,000.00 |
| Extramural Subtotal | | \$4,955,000.00 |
| Extramural Contingency | 20% | \$991,000.00 |
| TOTAL, REMOVAL ACTION CEILING | | \$5,946,000.00 |

VII. EXPECTED CHANGE IN THE SITUATION SHOULD ACTION BE DELAYED OR NOT TAKEN

A delayed removal action or the absence of a removal action described herein will cause conditions at the Site to remain unaddressed, and threats associated with the presence of hazardous substances will continue to pose a threat to human health and the environment.

VIII. OUTSTANDING POLICY ISSUES

There are no precedent-setting policy issues associated with this Site.

IX. ENFORCEMENT ... For Internal Distribution Only

See attached Enforcement Strategy.

The total EPA costs for this removal action based on full-time accounting practices that will be eligible for cost recovery are estimated to be \$5,946,000.00 (extramural costs) + \$500,000 (EPA intramural costs) = \$6,446,000.00 X 1.4541 (regional indirect rate) = \$9,373,129⁷.

⁷ Direct Costs include direct extramural costs \$[5,901,000.00] and direct intramural costs \$[500,000]. Indirect costs are calculated based on an estimated indirect cost rate expressed as a percentage of site specific costs [45.41% x \$6,401,000.00] consistent with the full accounting methodology effective October 2, 2000. These estimates do not include pre-judgment interest, do not take into account other enforcement costs, including

X. RECOMMENDATION

This decision document represents the selected Removal Action for the Walton & Lonsbury Site in Attleboro, Bristol County, Massachusetts, developed in accordance with CERCLA, as amended, and is not inconsistent with the National Contingency Plan. The basis for this decision will be documented in the administrative record to be established for the Site.

Conditions at the Site meet the NCP Section 300.415 (b) (2) criteria for a removal action due to the following:

- i. Actual or potential exposure to nearby human populations, animals, or the food chain from hazardous substances or pollutants or contaminants; [§300.415(b)(2)(i)];*
- ii. Actual or potential contamination of drinking water supplies or sensitive ecosystems [§300.415(b)(2)(ii)];*
- iii. Hazardous substances or pollutants or contaminants in drums, barrels, tanks, or other bulk storage containers, that may pose a threat of release [§300.415(b)(2)(iii)];*
- iv. High levels of hazardous substances or pollutants or contaminants in soils largely at or near the surface, that may migrate [§300.415(b)(2)(iv)];*
- v. Weather conditions that may cause hazardous substances or pollutants or contaminants to migrate or be released [§300.415(b)(2)(v)];*
- vi. Threat of fire or explosion [§300.415(b)(2)(vi)];*
- vii. The availability of other appropriate Federal or State response mechanisms to respond to the release [§300.415(b)(2)(vii)]; and*
- viii. Other situations or factors that may pose threats to public health or welfare of the United States or the environment [§300.415(b)(2)(viii)].*

Furthermore, site conditions meet the criteria for the CERCLA Section 104(c) emergency exemption from the 12-month and \$2 million limitations on removal actions. The removal action proposed in this Action Memorandum will abate, prevent, minimize, stabilize, mitigate and/or eliminate the release or threat of release of hazardous substances at the Walton & Lonsbury Site. I recommend your approval of the proposed removal action and the exemption from the 12-month and \$2,000,000 limitations. The total removal action project ceiling if approved will be \$5,901,000.

APPROVAL: 

DATE: 9/2/2010

DISAPPROVAL: _____

DATE: _____

Department of Justice costs, and may be adjusted during the course of a removal action. The estimates are for illustrative purposes only and their use is not intended to create any rights for responsible parties. Neither the lack of a total cost estimate nor deviation of actual total costs from this estimate will affect the United States' right to cost recovery.

ATTACHMENT I

Walton & Lonsbury Maps



EMMA_0910Walton & Lonsbury START Figure 2.mxd

Figure 2

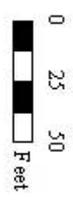
Site Diagram

Walton & Lonsbury
78 North Avenue
Attleboro, Massachusetts

EMA Region I
Superfund Technical Assessment and
Response Team (START) III
Contract No. EP-W-05-042
TDD Number: 09-06-0002
Created by: B. Mace
Created on: 16 August 2010
Modified by: B. Mace
Modified on: 18 August 2010

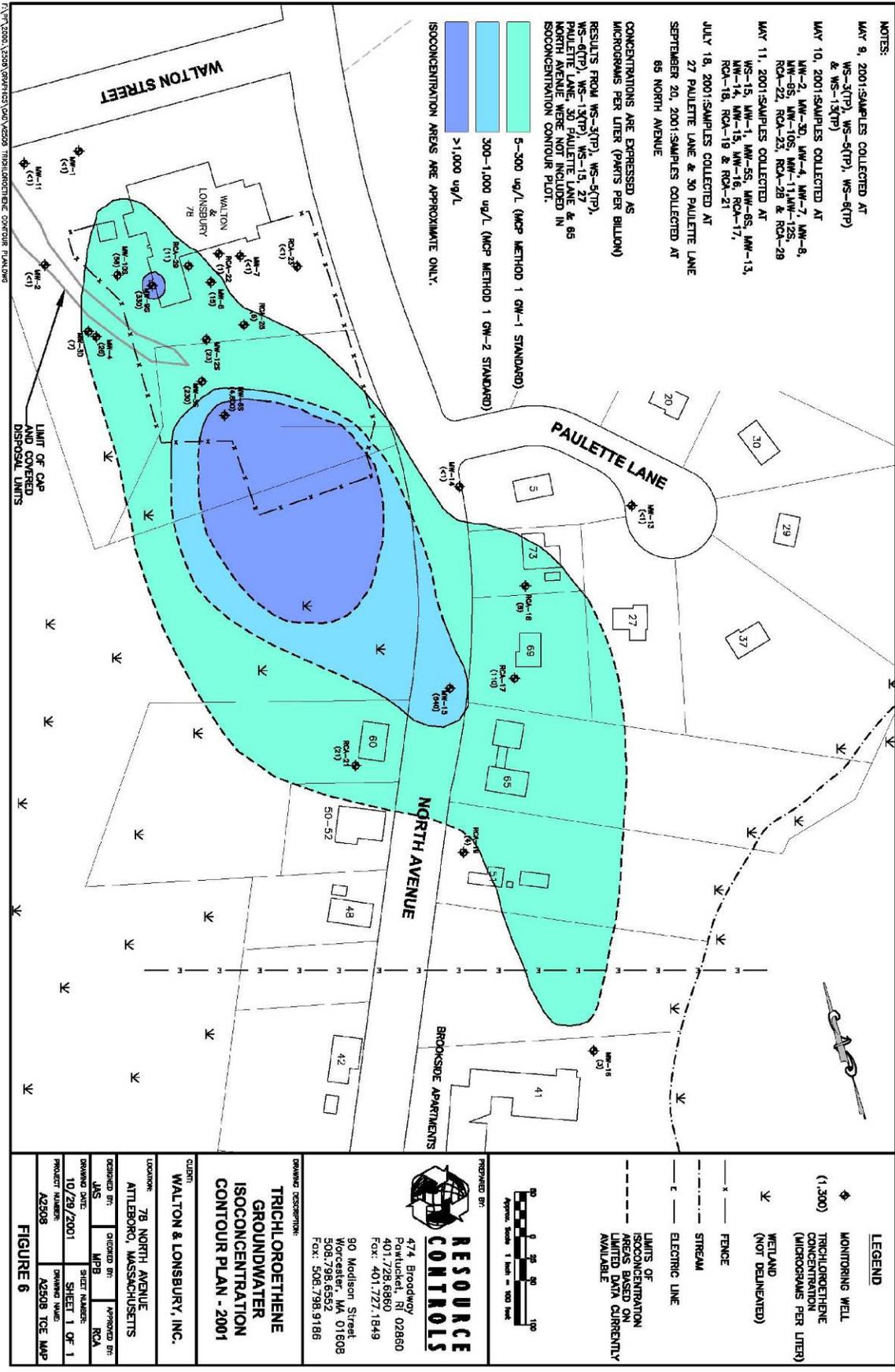
LEGEND

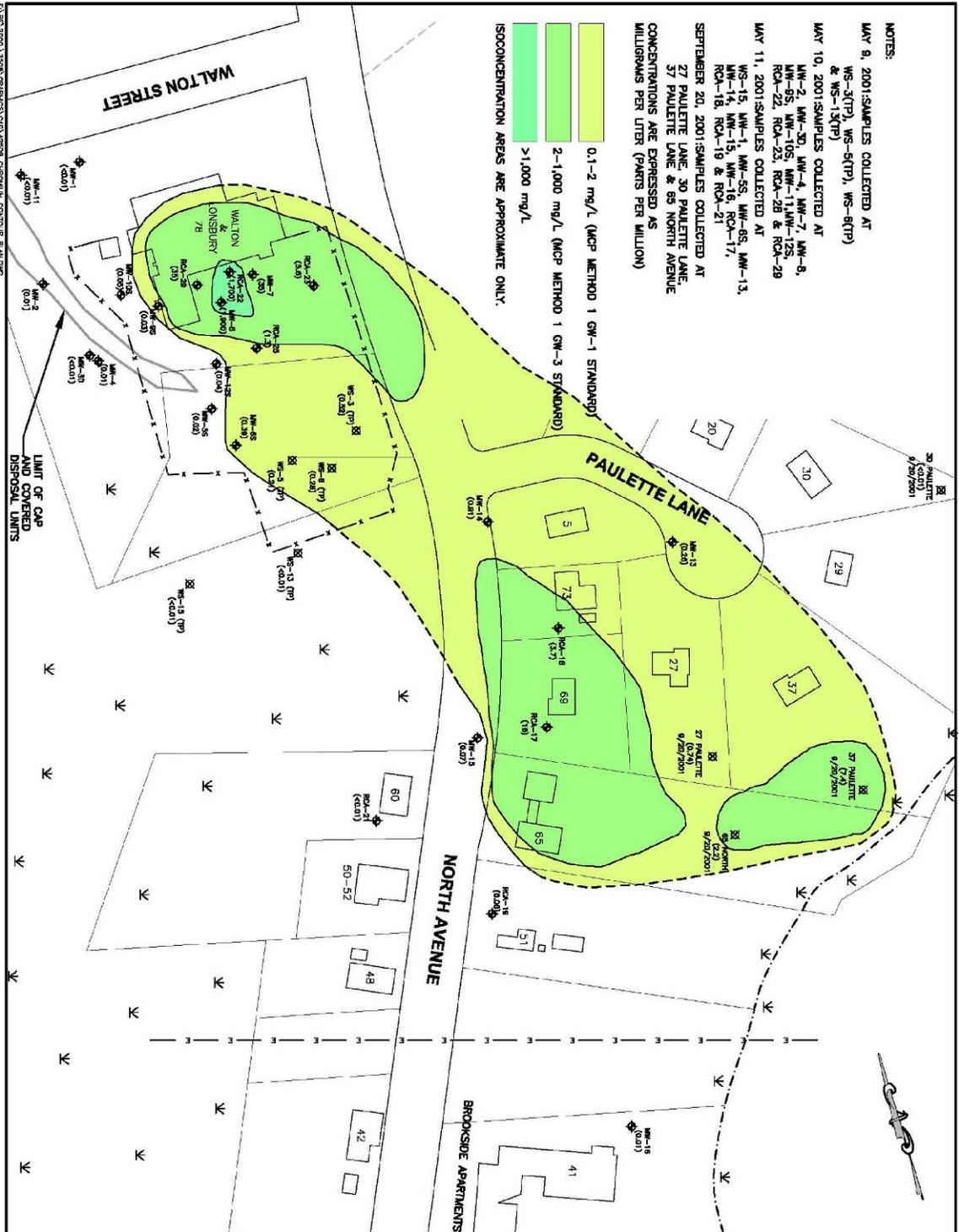
-  Site Boundary
-  Leased Portion of Site



Data Sources:
Imagery: Massachusetts Geographic
Information System (MassGIS)
Topos: MicroPath
All other data: START







NOTES:

MAY 9, 2001: SAMPLES COLLECTED AT
 WS-3(TP), WS-6(TP), WS-6(TP)
 & WS-13(TP)

MAY 10, 2001: SAMPLES COLLECTED AT
 MW-2, MW-30, MW-4, MW-7, MW-8,
 MW-55, MW-105, MW-11, MW-125,
 RCA-22, RCA-23, RCA-28 & RCA-29

MAY 11, 2001: SAMPLES COLLECTED AT
 WS-15, MW-1, MW-55, MW-65, MW-13,
 MW-14, MW-15, MW-16, RCA-17,
 RCA-18, RCA-19 & RCA-21

SEPTEMBER 20, 2001: SAMPLES COLLECTED AT
 27 PALETTE LANE, 30 PALETTE LANE,
 37 PALETTE LANE & 85 NORTH AVENUE.
 CONCENTRATIONS ARE EXPRESSED AS
 MILLIGRAMS PER LITER (PARTS PER MILLION)

0.1-2 mg/L (MCP METHOD 1 GW-1 STANDARD)

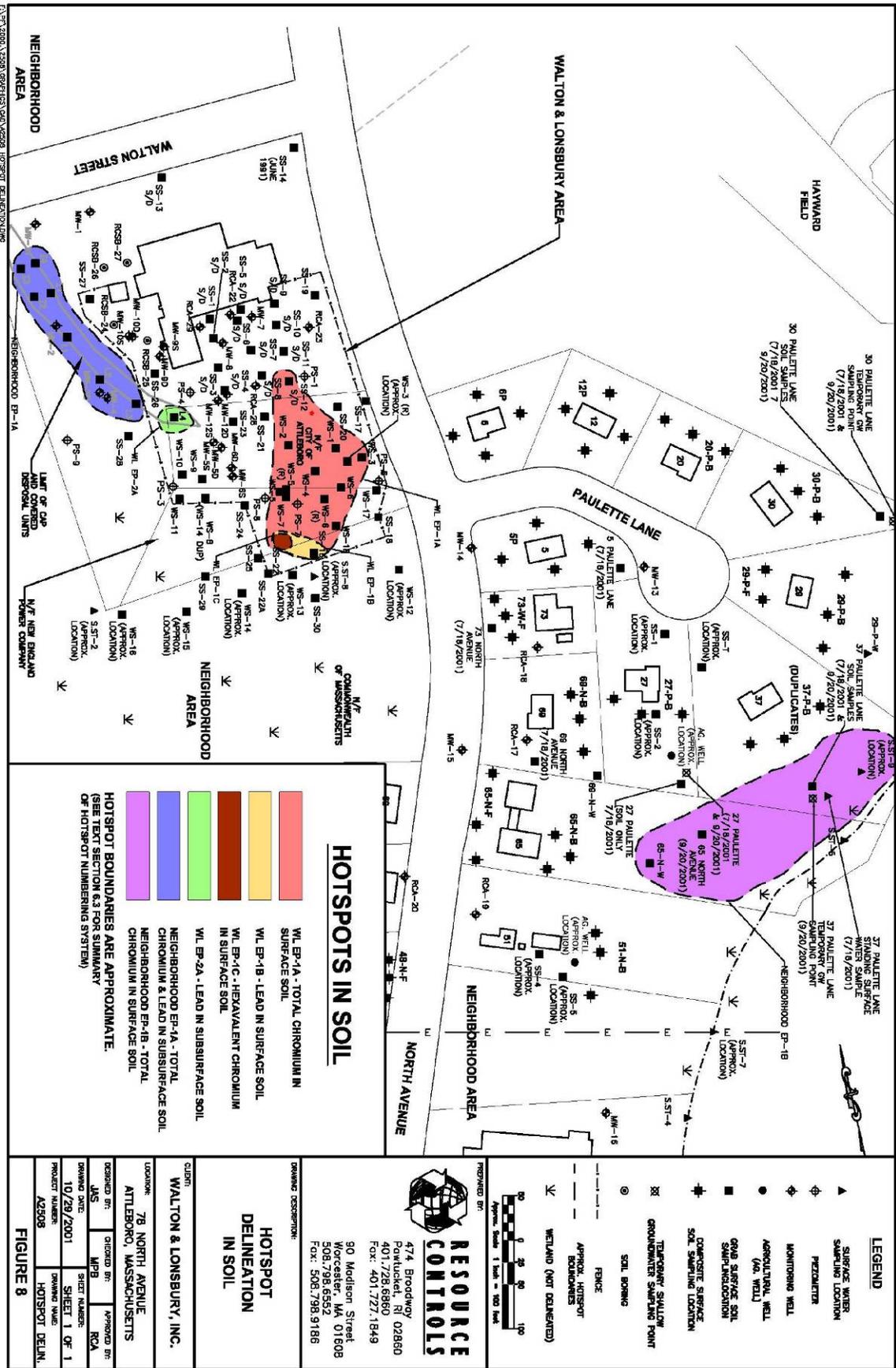
2-1,000 mg/L (MCP METHOD 1 GW-3 STANDARD)

>1,000 mg/L

ISOCONCENTRATION AREAS ARE APPROXIMATE ONLY.

| | | |
|--|---|--|
| <p>LEGEND</p> <p>◆ MONITORING WELL</p> <p>(1,300) DISSOLVED TOTAL CHROMIUM CONCENTRATION (MICROGRAMS PER LITER)</p> <p>W WETLAND (NOT DELINEATED)</p> <p>X FENCE</p> <p>— STREAM</p> <p>— ELECTRIC LINE</p> <p>--- LIMITS OF ISOCONCENTRATION AREAS BASED ON LIMITED DATA CURRENTLY AVAILABLE</p> | | <p>PROPOSED BY:</p> <p>RESOURCE CONTROLS</p> <p>474 Broadway Pawtucket, RI 02860 Fax: 401.727.1849</p> <p>90 Madison Street Worcester, MA 01608 Fax: 508.798.9186</p> |
| <p>CLIENT:</p> <p>WALTON & LONSBURY, INC.</p> | | <p>DRAWING DESCRIPTION:</p> <p>TOTAL DISSOLVED CHROMIUM GROUNDWATER ISOCONCENTRATION CONTOUR PLAN - 2001</p> |
| <p>LOCATION:</p> <p>78 NORTH AVENUE ATTLEBORO, MASSACHUSETTS</p> | | |
| <p>DRAWN BY:</p> <p>JMS</p> | <p>CHECKED BY:</p> <p>MPB</p> | <p>DATE:</p> <p>10/29/2001</p> |
| <p>PROJECT NUMBER:</p> <p>A2305</p> | <p>SHEET NUMBER:</p> <p>A2305 CR MAP</p> | |

FIGURE 7



HOTSPOTS IN SOIL

- WL EP-14 - TOTAL CHROMIUM IN SURFACE SOIL
- WL EP-18 - LEAD IN SURFACE SOIL
- WL EP-1C - HEXAVALENT CHROMIUM IN SURFACE SOIL
- WL EP-2A - LEAD IN SUBSURFACE SOIL
- NEIGHBORHOOD EP-1A - TOTAL CHROMIUM & LEAD IN SUBSURFACE SOIL
- NEIGHBORHOOD EP-1B - TOTAL CHROMIUM IN SURFACE SOIL

HOTSPOT BOUNDARIES ARE APPROXIMATE. SEE TEXT SECTION FOR SUMMARY OF HOTSPOT NUMBERING SYSTEM.

LEGEND

- SURFACE WATER SAMPLING LOCATION
- PRECIPITATOR
- MONITORING WELL
- AGRICULTURAL WELL (AG WELL)
- GROUND SURFACE SOIL SAMPLING LOCATION
- COMPOSITE SURFACE SOIL SAMPLING LOCATION
- THERMOPHILIC SULFUR BACTERIA SAMPLING POINT
- SOIL BORING
- FENCE
- APPROX. HOTSPOT BOUNDARIES
- WETLAND (NOT DELINEATED)



RESOURCE CONTROLS

474 Broadway
Providence, RI 02860
401/726-0999
Fax: 401/721-1849

90 Madison Street
Worcester, MA 01608
508.798.6552
Fax: 508.798.9186

HOTSPOT DELINEATION IN SOIL

DRAWING DESCRIPTION:

CLIENT: WALTON & LONSBURY, INC.

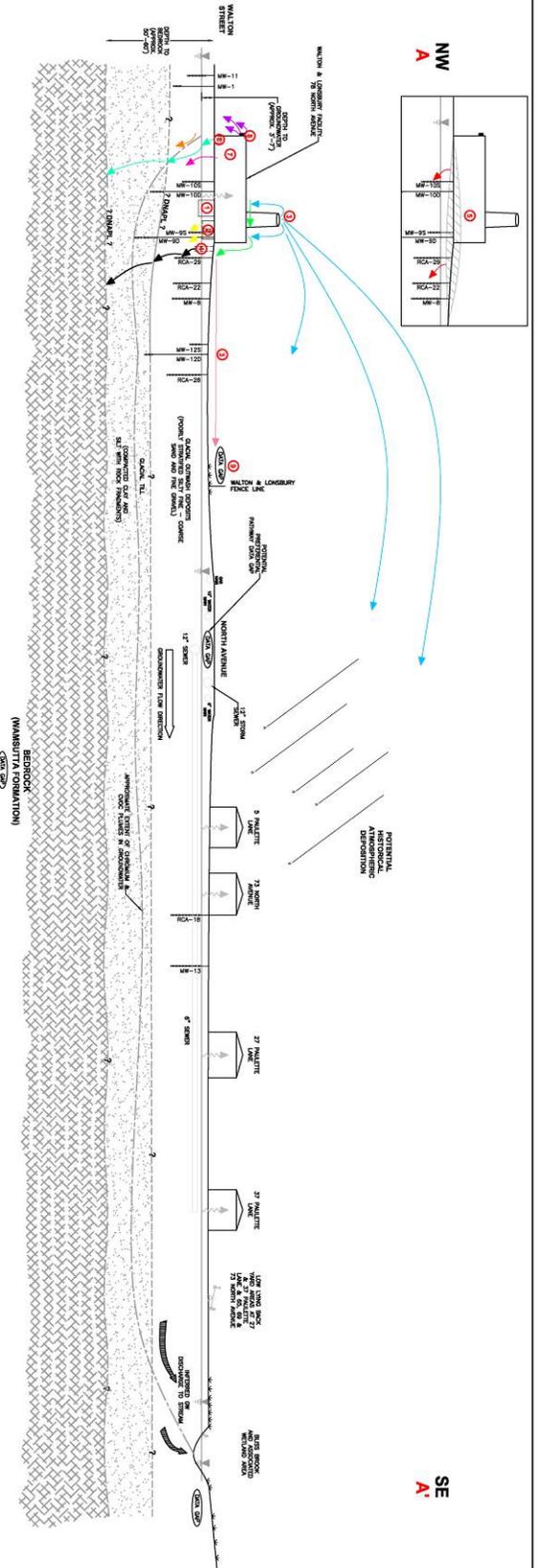
LOCATION: 78 NORTH AVENUE ATTLEBORO, MASSACHUSETTS

DESIGNED BY: JVS CHECKED BY: MFB APPROVED BY: RCA

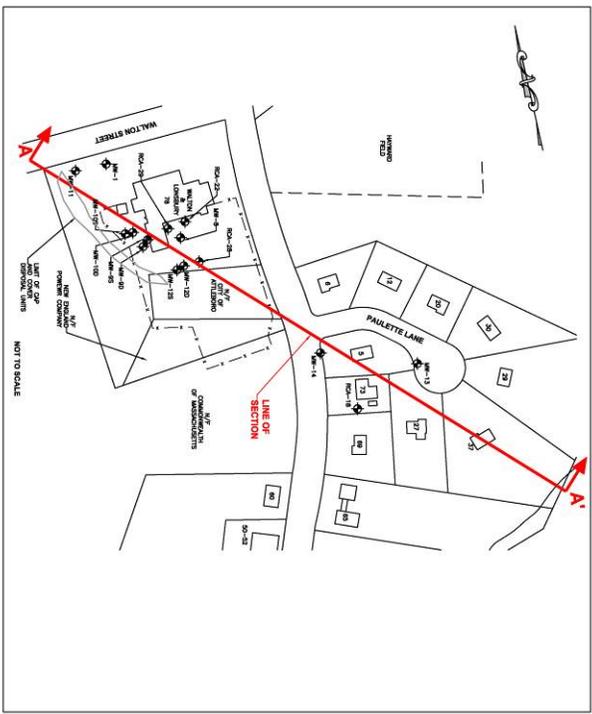
DRAWING DATE: 10/28/2001 SHEET NUMBER: SHEET 1 OF 1

PROJECT NUMBER: A2505 DRAWING NAME: HOTSPOT DELIN.

FIGURE 8



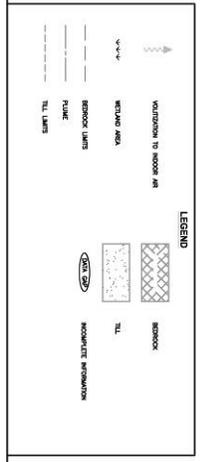
REDUCED VERSION OF SITE PLAN SHOWING
LINE OF SECTION FOR CONCEPTUAL SITE MODEL



CONCEPTUAL SITE MODEL (GRAPHICAL FORMAT)

POTENTIAL HISTORICAL SOURCES / POSSIBLE RELEASE MECHANISMS

- 1 EXPOSED SOIL, SOIL USE
- 2 UPPI LAYERS
- 3 DOMESTIC SEWER, SEWERAGE
- 4 LEAK FROM PAVING SOLUTION SAMPLES & HYDROLOGY
- 5 POTENTIAL, UNPOLLUTATED THROUGH IN AIR
- 6 POTENTIAL, UNPOLLUTATED THROUGH IN AIR
- 7 POTENTIAL, UNPOLLUTATED THROUGH IN AIR
- 8 POTENTIAL, UNPOLLUTATED THROUGH IN AIR
- 9 POTENTIAL, UNPOLLUTATED THROUGH IN AIR
- 10 POTENTIAL, UNPOLLUTATED THROUGH IN AIR



| | | |
|---|--|--|
| RESOURCE CONTROLS The above address is for use in environmental monitoring only. OCTOBER 28, 2001 PROJECT NUMBER: 42000 SHEET NUMBER: 1 OF TOTAL 1 DRAWING TITLE: CONCEPTUAL SITE MODEL (GRAPHIC FORMAT) DRAWN BY: JEFFREY A. SAM DESIGNED BY: BARRETT L. SMITH CHECKED BY: MICHAEL P. BINGHAM, LSP APPROVED BY: ROBERT C. ATWOOD, LSP PROJECT MANAGER: PATRICK D. CONCORAN, LSP | PREPARED FOR: WALTON & LONSBURY, INC. PROJECT INFORMATION: 78 NORTH AVENUE ATTLEBORO, MASSACHUSETTS | NO. REVISION DESCRIPTION DRN BY: CHK BY: DATE |
| | GRAPHIC SCALE - HORIZONTAL GRAPHIC SCALE - VERTICAL 1" = 100' | NO. REVISION DESCRIPTION DRN BY: CHK BY: DATE |