




UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
WASHINGTON, D.C. 20460

OFFICE OF  
SOLID WASTE AND EMERGENCY  
RESPONSE

**MEMORANDUM**

SEP 22 2011

**SUBJECT:** Region 1 Request for a Removal Action Ceiling Increase and a Change in the Scope of Response at the Walton & Lonsbury Site, Attleboro, Bristol County, MA

**FROM:** Dana Tulis, Deputy Director   
Office of Emergency Management

**TO:** Mathy Stanislaus  
Assistant Administrator

This memorandum requests your approval on the attached Action Memorandum from Region 1. The purpose of the Walton & Lonsbury Action Memorandum is to request approval for an increase in the current ceiling of \$5,946,000, which is necessary to sustain removal activities and mitigate the continued release of hazardous substances from the site. The total project ceiling, if approved, will be \$12,319,719, and an estimated \$8,436,171 comes from the Regional Removal Allowance. The Action Memorandum also requests a change in the scope of work based on an increased understanding of the extent and magnitude of the contamination.

Initially, Region 1 anticipated a relatively limited removal, consisting of demolition of the plating facility and clean-up of a few acres behind the facility. Through additional site characterization work, Region 1 has since learned that the hexavalent chromium contamination of adjacent surface water is much more significant than previously believed (e.g., 1900 ppm, when the standard is 30 ppm) and that there is significant exposure potential for neighborhood children who play in the water as well as contamination of residential properties. Region 1 is involved in extensive, on-going community involvement activities for this site. These activities have included two public meetings, a neighborhood-only meeting, and a special meeting for residents in the residential facility for low-income elderly. They also have developed five fact sheets and maintain an active and involved presence at the site 10 hours per day, six days per week.

I recommend that you approve the Region 1 Action Memorandum for the Walton & Lonsbury site. The site continues to pose a threat to public health and the environment and meets the National Oil and Hazardous Substances Pollution Contingency Plan (NCP) section 300.415(b) criteria for removal actions and the Section 5 criteria for an Exemption from Statutory Limits. Please indicate your decision by signing below and on page 18 of the Action Memorandum.

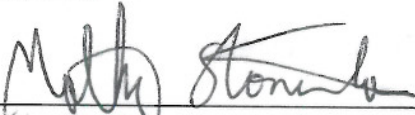
Disapproval:



\_\_\_\_\_  
Mathy Stanislaus  
Assistant Administrator

\_\_\_\_\_  
Date

Approval:



\_\_\_\_\_  
Mathy Stanislaus  
Assistant Administrator

\_\_\_\_\_  
Date

9/22/11

Attachments



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

**MEMORANDUM**

**DATE:** September 8, 2011

**SUBJ:** Request for a Removal Action Ceiling Increase and a Change in the Scope of Response at the Walton & Lonsbury Site, Attleboro, Bristol County, Massachusetts

**FROM:** James T. Owens III, Director  
Office of Site Remediation and Restoration *FOR JTO*

**THRU:** Dana Tulis, Deputy Director  
Office of Emergency Management

**TO:** Mathy Stanislaus, Assistant Administrator  
Office of Solid Waste and Emergency Response

**I. PURPOSE**

The purpose of this Action Memorandum is to request and document approval of the proposed removal action change in scope and ceiling increase for the Walton & Lonsbury Site, Attleboro, Bristol County, Massachusetts. An exemption of the \$2 million and 12-month statutory limits for removal actions was approved on September 2, 2010 (See Attachment #1). The Site continues to pose a threat to public health and the environment and meets the National Oil and Hazardous Substances Pollution Contingency Plan (NCP) section 300.415(b) criteria for removal actions and the section 300.415(b)(5) criteria for an Exemption from Statutory Limits. A change in the scope of response is necessary to mitigate the risks associated with the current threats to public health and the environment.

An increase in the ceiling is necessary to sustain removal activities and mitigate the continued release of hazardous substances from the Site. A Change in the Scope of Response is supported by the current understanding of the extent and magnitude of contamination and is appropriate and consistent with any prospective remedial action.

Site conditions indicate that a continuation of current removal activities is necessary to address hazardous materials pursuant to Section 104 of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). The current ceiling is \$5,946,000, of which \$4,490,000 has been obligated through the Emergency and Rapid Response Services (ERRS) contract, and \$803,776 has been obligated through the Superfund Technical Assessment and Response Team (START) contract as of August 1, 2011. 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

*Please refer to the Action Memorandum dated September 2, 2010 for a more complete history and explanation of the Site.*

The Walton & Lonsbury (W&L) Site (the "Site") consists of:

- the W&L facility property, which is a 2.72-acre lot that, prior to its demolition by EPA during the present removal action, housed a 13,500 square-foot chromium plating facility;
- the surface-water-impacted wetlands (approximately 7 acres) south of the facility; and
- the groundwater-impacted residential properties and associated wetlands on the east side of North Avenue.

Hard chromium electroplating operations were conducted from 1940 until W&L ceased operations in December 2007. Facility operations also included parts-degreasing (using solvents), stripping with acids, aqueous rinsing, grinding, and polishing.

Waste generated from the chemical usage included: solvents such as trichloroethylene (TCE), 1,1,1-trichloroethane (TCA); metal-containing products such as chromic oxide, aluminum oxide, sodium hydroxide, sodium bisulfate, sodium hydrosulfate, and lead sulfate; acids such as hydrochloric acid, sulfuric acid, phosphoric acid and a limited use of cyanide (until the 1950s). Discharges from the facility have extensively contaminated the top 2 to 3 feet of the 7 acres of wetland to the south; and have created a groundwater plume of heavy metals including chromium (VI) travelling roughly east-southeast, where it surfaces behind residences at the end of Paulette Lane and enters Bliss Brook. During the August 2010 Preliminary Assessment and Site Investigation (PA/SI) chromic acid and significant quantities of chromic acid sludge were found in the tanks. Since August 2010 PA/SI (Site Investigation #1, SI-01), the building has been demolished and the debris, the plating tanks, and associated chromic acid sludge properly disposed of.

Through excavation activities, additional sample activities, and historical Site research performed between October and June 2011, more information on the fate and transport of contamination via surface water and groundwater has emerged. During excavation, EPA discovered a pipe containing contaminated (solid) materials extending from the former chromium plating room southwest towards the wetlands. Further research indicated that an unnamed stream once flowed south through the Site towards the wetlands north of Deanville Road. The pipe from the chromium plating facility ends at the approximate edge of the former unnamed stream. Furthermore, aerial photographs show the streambed of the former unnamed stream had been enlarged and converted into a dewatering impoundment and lagoon in the 1970s. An industrial water supply well was also discovered behind the facility. When interviewed, a former factory employee explained that this well had been discontinued when the pump began drawing "red" water (i.e., indicating that the groundwater was contaminated by chromium waste). The well has not been properly abandoned and remains a potential pathway to groundwater for chromium contamination still saturating surface soils.

## **2. Physical Location**

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

The seven acres of wetland contaminated by surface flow extend from the facility about one half mile to the south, and the residential area contaminated by groundwater flow is approximately one quarter mile to the southeast. The latter area includes Bliss Brook, which flows in a southerly direction.

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

## **3. Site Characteristics**

The W&L facility had been built on leveled fill roughly 10 feet higher than the adjacent wetlands which, as mentioned above, span 7 acres to the south across multiple industrial and residential parcels. At the south end of these wetlands, the ground surface inclines gradually up several feet to the rear of the residential properties along Deanville Road. In the western section of these wetlands about half way between the facility property and Deanville Road is an established homeless camp built atop a vegetated plateau a few feet higher than the wetland elevation that transitions into a steep incline supporting the Interstate-295 highway ramp. Previous attempts by local authorities to disperse this camp have been unsuccessful. To the east, the wetlands are bordered by North Avenue (situated approximately 9 feet above the wetland elevation) and by several residential properties on North Ave. These houses are situated on fill approximately 10 feet above the wetland elevation, but portions of the yards are less than two feet above the wetland. A storm water drain intended to drain the wetlands runs under Deanville Road, but was inadvertently rendered inoperable by the city during sewer line construction activities about 10 years ago.

There are several other contaminated residential properties located on Paulette Lane and North Avenue up to (and potentially including) Deanville Road.

The residential properties along Paulette Lane and North Avenue to the east of the Site are bounded to the east by Bliss Brook, which discharges to the 10-Mile River 0.4 miles downstream. The residential houses along Paulette Lane and North Avenue abutting Bliss Brook are situated on land four to eleven feet higher than the adjacent wetlands. Three of the lawns associated with the adjacent houses merge with the contaminated wetlands with no clear dividing line, and networks of walking paths extend to the edge of Bliss Brook (approximately 200 to 300 feet east of the residential homes) and standing backwater in the wetlands. The storm water runoff from the Paulette Lane cul-de-sac is captured in a storm water basin and directed through an underground pipe into the wetlands.



Nearby residents down-gradient of the Site receive city-supplied water, therefore there are no suspicions of impacted drinking water supply wells. There still exists one agricultural well that is physically covered with a plate, which will be properly closed as part of this time-critical removal action.

Surface water within one mile of the facility includes wetlands located south of the W&L property; wetlands and Bliss Brook, located approximately 730 feet to the east behind residential properties; the Ten Mile River, located approximately 1,800 feet to the south-southwest; the Bungay River, approximately 2,300 feet to the south; and Manchester Pond, approximately 4,450 feet to the southwest.

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. A recent hydrogeological study has indicated that groundwater flows approximately 3 to 30 feet per year.

#### **4. Release or threatened release into the environment of a hazardous substance, pollutant, or contaminant**

The CERCLA hazardous substance contamination presents a continuous threat to human health, welfare and the environment. EPA has conducted five Site investigations since 2010 to determine the extent and magnitude of the contamination (Appendix A, Map # 1). Precipitation events facilitate the migration of groundwater and surface water contamination towards residential properties (See Appendix A, Map # 2 and Map #3). This continued release of hazardous substances is evident through historic and current sampling investigations. These are discussed below.

***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)***

Historic and current data show hexavalent chromium (Cr-VI) and total chromium throughout the industrial land, wetlands/conservation land, and residential properties. Surface water and groundwater continue to move the chemicals from the source of contamination in the soil around the chromium plating tanks towards residential properties. This release of hazardous chemicals through surface water and groundwater will continue until the contaminant source is eliminated.

Results from the second Site Investigation (SI) conducted in October 2010 in the residential neighborhood along Paulette Lane and North Avenue (SI-02) are included in Table 1. A concentration of 1,900 mg/kg (i.e., parts per million “ppm”) chromium (VI) was located at the surface next to a bench along a trail to Bliss Brook. A sample taken near the surface of the lawn in the same residential backyard indicated that 210 ppm of chromium (VI) was also present. The Massachusetts residential soil clean-up level was established by MassDEP, using the Massachusetts

Contingency Plan (MCP) as Soil Classification Standard (S-1)<sup>1</sup> for chromium (VI) is 30 ppm. A total of 23 samples exceeded this standard in SI-02. Samples collected from the surface soils on residential properties, particularly on well-used walking trails to Bliss Brook, showed concentrations of up to 67,700 ppm chromium(III). The MCP S-1 Standard for speciated chromium (III) is 1,000 ppm. Although some of the contamination is located in the surface soils in the wetlands and along Bliss Brook, many of the children and adults in the neighborhood consistently use the wetlands recreationally.

**Table 1: Sample Result Distribution - Residential Site Investigation #2 (SI-02) Results**

Sample Depth	Total No. Samples Collected		No. of Samples with metal Exceedences		No. of Samples with Hexavalent Chromium (Cr-VI) Exceedences		Highest Concentration Hexavalent Chromium (Cr-VI)	Highest Concentration Total Chromium	Highest Concentration Lead
	Total Metals	Hex Chromium	≥S-1	≥UCL	≥S-1	≥UCL			
0-6 inch	234	55	8	21	14	0	1,900 ppm	67,700 ppm	1,500 ppm
1 foot	204	30	10	3	6	0	210 ppm	59,300 ppm	639 ppm
2 feet	202	36	8	1	3	0	110 ppm	32,800 ppm	554 ppm

- \* Soils were tested for Hexavalent Chromium only when the Total Chromium sample results exceeded S-1 values for Total Chromium.
- \* When speciated, the MCP S-1 Standard for chromium (III) is 1,000 ppm, and Chromium(VI) is 30 ppm.
- \* When speciated, the Upper Concentration Limit (UCL) for chromium (III) is 10,000 ppm, and chromium(VI) is 2,000 ppm.
- \* The MCP S-1 Standard for lead is 300 ppm and the UCL for lead is 3,000 ppm.

In December 2010, a third sampling event (SI-03) was performed on the impacted mixed-use parcels adjacent to 78 North Avenue. Sample results indicated that the surface water caused the contamination to migrate south via overland flow along the path of the historic unnamed stream towards Deanville Road. The speciated sample results indicate that soils behind the facility were contaminated with chromium (III) up to 56,700 ppm, chromium (VI) up to 690 ppm, and lead up to 13,200 ppm in the surface soils. MassDEP categorizes the soils sampled during SI-03 as S-3, as defined in the MCP.

<sup>1</sup> Soil shall be classified as either category S-1, S-2 or S-3. The site, receptor and exposure information identified in the Massachusetts Contingency Plan 310 CMR 40.0904 through 40.0929, considering both the current and reasonably foreseeable Site Activities and Uses identified in 310 CMR 40.

**Table 2: Sampling Result Distribution - Industrial Site Investigation #3 (SI-03) Results**

Sample Depth	Total No. Samples Collected		No. of Samples with metal Exceedences		No. of Samples with Hexavalent Chromium (Cr-VI) Exceedences		Highest Concentration Hexavalent Chromium (Cr-VI)	Highest Concentration Total Chromium	Highest Concentration Lead
	Total Metals	Cr-VI	≥S-3	≥UCL	≥S-3	≥UCL			
0-6 inch	52	38	15	5	3	0	570 ppm	56,700 ppm	13,200 ppm
1 foot	51	36	7	8	2	0	690 ppm	51,100 ppm	14,200 ppm
2 feet	50	35	8	2	1	0	320 ppm	16,700 ppm	2,340 ppm

- \* Soils were tested for Hexavalent Chromium only when the Total Chromium sample results exceeded S-1 values for Total Chromium.
- \* When speciated, the MCP S-3 Standard for chromium(III) is 5,000 ppm and chromium(VI) is 200 ppm.
- \* When speciated, the Upper Concentration Limit (UCL) for chromium (III) is 10,000 ppm and chromium(VI) is 2,000 ppm.
- \* The MCP S-3 Standard for lead is 300 ppm and the UCL for lead is 3,000 ppm.

Two additional Site Investigations (SI-04 and SI-05) have been conducted in the industrial and residential properties south of 78 North Avenue. Although official laboratory results have not been validated, preliminary field screening indicates that four of the five acres sampled are contaminated with metals. There is a shantytown (i.e., homeless individuals dwelling in make-shift structures, including associated paths and decorative art sculptures), walking paths, and extensive ATV tracks all within this contaminated area, as well as, a swing-set situated on a residential property adjacent to the contaminated area. Currently, a removal cannot be performed on these contaminated areas until the City of Attleboro repairs a broken storm-water culvert under Deanville Road. Storm-water remains stagnant in these wetlands due to this drainage issue and dewatering of the proposed excavation or engineered remedy for this contaminated area would be extremely difficult or not feasible due to an inability to adequately manage the water in the excavation area(s).

## 5. NPL Status

The Site is not currently on the National Priorities List (NPL). The EPA Region 1 pre-remedial program is currently evaluating the ranking potential, and preliminary indications are that the Site will be eligible for NPL consideration.



## **6. Maps, Pictures and Other Graphic Representations**

See Attachment #2: Map # 1 represents the locations of the Preliminary Assessment/Site Investigations (PASI) related to the removal action; Map # 2 represents surface metal contamination caused by groundwater flow; and Map # 3 represents the areas with surface metal contamination caused by surface water flow.

## **B. Other Actions to Date**

### **1. Previous Actions**

There have been no previous EPA removal actions at this Site. Please refer to the Action Memorandum dated September 2, 2010 for a more information on previous RCRA corrective actions.

### **2. Current Actions**

The EPA On-Scene Coordinator (OSC) performed an initial Site Investigation (SI) during August 2010, prior to the start of removal activities. An Action Memorandum was signed on September 2, 2010, and the time-critical removal activities began on October 18, 2010. A complete asbestos abatement was conducted prior to the demolition of the W&L building and all asbestos-contaminated material was disposed of at the Minerva Landfill, a licensed facility in Waynesburg, Ohio. The building was demolished, non-contaminated metal was recycled, and a monetary credit to the Site was received. The remaining demolition debris from the building was transported and disposed of at the EQ Northeast facility in Belleville, Michigan. The chromium plating tanks were removed and sent with adjacent contaminated soils to Enviro of Pennsylvania for disposal.

In conjunction with the demolition activities on the building, the OSC conducted two additional SI's; one in the residential area adjacent to Bliss Brook (SI-02) and one in the area south of the building (SI-03). Excavation activities in the 2-acre area delineated during SI-03 began March 4, 2011. Field sample analysis in this area indicated that the contaminated soil continued two-acres southwest into the wetlands. A water treatment system was utilized for dewatering during contaminated soil excavation. The contaminated soils were then stockpiled on-site for off-site disposal (to date, approximately 2,100 tons of this soil has been transported off-site for disposal). It was determined that the contamination continued further southwest into the wetlands, and additional sampling investigations (SI-04 and SI-05) were required to determine the full extent of impacted soils. Refer to Attachment #2, Map # 1 for a depiction of SI locations.

Results from samples collected in the residential backyards on Paulette Lane indicated that there were extremely high levels of chromium (VI), chromium (III), and lead. A temporary fence was erected in November 2010 separating the impacted families from the contaminated areas, eliminating the immediate exposure pathway. During May 2011, an engineered design for restoration was developed by Engineers from Weston Solutions in consultation with the Army Corps of Engineers (USACE). The finalized design consists of a plan for the temporary redirection of Bliss Brook during excavation; contaminated soil excavation; an engineered cap to cover the excavation area, which will stop residents from coming in contact with contaminated groundwater by preventing it from resurfacing; drainage improvements on properties and the cul-de-sac adjacent to

the cap; as well as an in-situ groundwater system (if determined to be effective in this case) using existing (but chemically-manipulated) soils to reduce the toxic and soluble hexavalent chromium flowing through the area down to less toxic and less mobile trivalent chromium.

Time-Critical removal activities in the area outlined in SI-02 sampling event (residential neighborhood) began June 27, 2011 with tree-clearing and preliminary construction of equipment staging areas. Re-routing Bliss Brook, dewatering and treating contaminated groundwater from the areas of excavation, excavating and disposing of contaminated soils and constructing the engineered cap are all scheduled to occur from summer until winter 2011, if funded. The excavation and cap construction activities associated with the residential excavation and restoration will significantly impact residents in the immediate neighborhood, so a voluntary residential relocation was offered to the impacted residents. Two phases were offered: short term relocation during invasive site preparation activities and long term (up to one year) relocation for residents who will be directly impacted. Residents were offered temporary relocation to maintain their family's safety from the physical hazards presented by the heavy earthmoving equipment and to increase the efficiency of the response action. USACE is working as a consultant to EPA to assist with the logistics of these residential relocations.

EPA engineering consultants have been working to finalize an engineered cap design for the contaminated wetlands behind the residential properties in addition to a detailed restoration and grading plan for properties adjacent to the capped areas. The cap will consist of an intricate design that eliminates potential for human contact exposure to the remaining groundwater contamination.

## **C. State and Local Authorities' Role**

### **1. State and Local Actions to Date**

MassDEP is working to mitigate the vapor intrusion risks associated with the VOC plume beneath the Site, and is working with EPA on public relations and communication. MassDEP has conducted an initial round of sampling on indoor and sub-slab air quality down-gradient of the source area to determine appropriate actions for each impacted house. They installed additional groundwater monitoring wells to determine the extent of groundwater contamination, and a subsequent round of indoor air sampling is planned to further define extent of the plume impacts. The Massachusetts Department of Public Health (MA DPH), under their cooperative agreement with the federal Agency for Toxic Substances and Disease Registry (ATSDR), has been working closely with the OSC and the impacted residents to answer health and risk related questions. Agents from the MA DPH have attended public and private meetings with impacted residents and the general public.

Please refer to the Action Memorandum dated September 2, 2010 for a more information on previous state and local actions to date.

### **2. Potential for Continued State/Local Response**

The Mayor of Attleboro, City of Attleboro Health Department, Attleboro Conservation Commission, the Attleboro Public Works Department, and the Police and Fire Departments have consistently

been in contact with the OSC regarding removal activities. Representatives from the city have been in attendance at all public meetings.

The OSC has been in contact with the Attleboro Department of Public Works to discuss the lack of drainage in the wetlands in the southern part of the Site. As mentioned above, the wetlands do not drain through the storm-water culvert that had been damaged by previous sewer line construction (unrelated to the Site). This has caused a severe back-up of water in the clean excavation area and has the potential to re-contaminate the soil. Therefore, removal activities in the contaminated wetlands outlined in SI-04 and SI-05 cannot be initiated at this time regardless of the availability of funding. The City of Attleboro and the OSC are discussing the possibilities for alleviating this drainage issue.

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

#### ***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 of surface soils and sub-surface (metals), and the resulting groundwater plumes (metals, VOCs) have caused actual and potential exposures to the nearby human populations, animals, and food chain along Paulette Lane, North Avenue, and Bliss Brook. Contaminants include total chromium, hexavalent chromium, lead, and VOCs. Sampling shown high levels of metal contamination, in particular hexavalent chromium, located in surface soils in residential areas. A concentration of 1,900 ppm hexavalent chromium was found in a residential yard on a highly utilized path to the brook. Concentrations of up to 67,700 ppm total chromium were found in surface soils on another path in a residential yard.

#### ***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)]; and***

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

- Total chromium, hexavalent chromium, lead, and other contaminants have all been found on -site (and in the impacted residential properties) at or near the surface; the existing groundwater plumes prove that these sources are continuing to contribute to the contamination migrating from the facility (Refer to Attachment #2, Map #2 and Map # 3).
- There is a large amount of grossly contaminated soil adjacent to and below where the removed plating tanks had been located. Precipitation and high groundwater conditions will continue to cause the contaminants to leach and migrate from the Site to Bliss Brook.
- The two recent sampling investigations in the wetlands south of the former W & L facility have indicated that high concentrations of chromium and lead are present on the surface. Surface flow patterns in this area have changed at least once since 1961 (as is evident from an aerial

photograph from 1961). Part of the storm-water runoff from the adjacent Interstate-295 and from portions of North Avenue also impacts this area. The stream that results from the run-off can carry contamination past Deanville Road and south towards the Ten-Mile River.

- Due to improper grading along Paulette Lane (combined with a severely compromised storm-water catch basin and pipe), surface water run-off from the entire neighborhood ultimately flows (or is discharged) immediately behind the properties at the end of Paulette Lane, causing the soils to become saturated. During periods of heavy precipitation, the groundwater (already close to the surface) rises to the surface. This results in groundwater from the Site contaminating surface soils.

***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.

The Removal Program has requested a determination from the Superfund Remedial Program regarding possible listing on the NPL.

Currently, the MassDEP is conducting a vapor intrusion study in potentially impacted residential properties to determine the full extent of the solvent plume impacts, but does not have resources available to conduct the needed removal action at this Site.

***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)].***

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*
- **LEAD** – Please see the ATSDR *ToxFAQ Fact Sheet for Lead, August 2007*
- **TCA** – Please see the ATSDR *ToxFAQ Fact Sheet for 1,1,1-trichloroethane, July 2006*
- **TCE** – Please see the ATSDR *ToxFAQ Fact Sheet for Trichloroethylene, July 2003*

#### **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.<sup>2</sup>

#### **V. EXEMPTION FROM STATUTORY LIMITS**

Both the 12-month and the \$2 million exemptions were approved in the original Action Memorandum dated September 2, 2010 on the basis that they met the criteria for the CERCLA Section 104(c) emergency exemption. They also meet the criteria for the consistency 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.

##### **There is an Immediate Risk to Public Health or Welfare or the Environment:**

There is unrestricted access to elevated levels of hexavalent chromium, total chromium, lead, and other contaminants of concern in soils at or near the surface, both in the impacted industrial and residential properties, and in the wetlands/conservation land behind the facility.

Investigations to determine the extent and magnitude of contamination that has migrated from the W&L facility to the residential properties along Paulette Lane and North Avenue and conservation lands (on municipal-, state- and utility-owned properties) have largely been completed. Samples from the impacted residential properties show that there are concentrations of hexavalent chromium and total chromium far in excess of the values established by either or both the Commonwealth of Massachusetts' MCP and the U.S. Government. The contaminated areas include residential properties of several families with young children or grandchildren who, up until a temporary fence was installed around the contaminated area, played in the yards near and network of paths to Bliss Brook.

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<sup>2</sup> 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).

### **Continued Response Actions are Immediately Required to Prevent, Limit, or Mitigate an Emergency:**

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: excavation of the contaminated soils above the water table (that continue to act as a source for further contaminant migration); relocation of impacted residents where appropriate<sup>3</sup>; disposal of numerous waste streams in accordance with all state and federal regulations; and property restoration. In order to complete these actions, the Site will continue to need exemptions from the 12-month and \$2 million ceiling.

### **Assistance Will Not Otherwise be Provided on a Timely Basis.**

Neither the State of Massachusetts nor the City of Attleboro currently has the resources to abate the threat at this Site due to the complexity and cost of this time-critical removal action. In a letter dated March 11, 2009, MassDEP requested that EPA take the lead on response action to mitigate imminent hazards or significant risks.

#### **B. Consistency Exemption**

Continued excavation and removal of the contaminated source material at the Site is consistent with and will not interfere with likely remedial alternatives to address residual groundwater and wetlands area contamination. The continued removal action is also appropriate as it will mitigate the significant direct contact threat and reduce the further migration of contaminants.

## **VI. PROPOSED ACTIONS AND ESTIMATED COSTS**

### **A. Proposed Actions**

#### **1. Proposed Action Description**

Currently, no viable PRPs that are able to perform or assist with this work have been identified. The proposed actions will protect public health, welfare, and the environment. EPA and its contractors will continue, to the extent allowed by funding, with the removal activities delineated in the September 2, 2010 Action Memorandum (Refer to Attachment #1). However, the knowledge of the true extent and magnitude of the contamination gained since the start of this removal action has revealed the cost to address all known contamination to far exceed the capabilities of the Region's annual Advice of Allowance (AOA), i.e., the removal budget. A preliminary Hazardous Ranking System evaluation is currently being conducted by the EPA Region 1 Site Assessment Program and could have a major impact on any plans should the Site be deemed eligible to list on the NPL. Therefore, the Region will complete the current residential portion of the Site and then prepare for a temporary shut-down, as described below, while the NPL listing/Remedial Process and supplemental funding is being pursued.

First, to give perspective, a brief overview of projected costs for the different options is shown in the table below. For simplicity, only funds anticipated for the ERRS contractor, without contingencies figured in, are included.

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<sup>3</sup> In accordance with the EPA OSWER Directive 9230.0-97: Superfund Response Actions: Temporary Relocations Implementation Guidance



**TABLE 3: OVERVIEW OF OPTIONS & THEIR PROJECTED COSTS (FOR ERRS CONTRACTOR ONLY)**

OPTION	DESCRIPTION	ESTIMATED AOA NEEDED
1	To address <i>EVERYTHING listed in the following options</i> , including all contamination on the Site by excavation and disposal, install 2 groundwater injection systems (1 time injection) to reduce hexavalent chromium to trivalent chromium in the remaining plume, and subsequent site restoration.	\$11,920,000
2a	To do the minimum amount needed to temporarily close the Site until more funds are available, i.e., finish existing work on the residential area (removal, disposal, and capping), and disposal of contaminated soil stockpiled on the facility.	\$3,800,000
2b	To address gross contamination under the facility footprint that acts as a source for the groundwater plume, i.e., excavate, dispose, and restore.	\$2,100,000
2c	Install 2 groundwater injection systems (still being evaluated for effectiveness, as mentioned below) in residential and facility areas to break down hexavalent chromium plume.	\$1,220,000
3	To address Southernmost (from the facility) areas of wetland contaminated by surface runoff (not currently thought to be feasible, but would involve excavation to 2 feet of several acres, disposal, and restoration).	\$4,800,000

Option 1 is not under consideration due to its unaffordable cost relative to the Region's normal annual AOA of about \$9 million. Similarly, Option 3 may be beyond the ability of the removal program to fund, especially in light of projected declining AOA levels. Also, work in this area is not feasible unless and until the drainage culvert is repaired by the City of Attleboro. For that reason, we do not propose at this time that the Removal Program address the southernmost area of contamination.

The Region proposes that we implement Options 2a, 2b, and 2c over a time span of 2 – 3 years. This would eliminate exposure and the threat of future exposure to the residents through removal of the significant source of gross contamination which remains under the facility's footprint, and by managing the plume of hexavalent chromium still in transit under the impacted properties. Ongoing or additional actions include:

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

The gravity-fed in-situ groundwater treatment system, known as In-Situ Redux Manipulation (ISRM), is currently in the design phase and will be implemented if determined feasible by EPA's Environmental Response Team (ERT), i.e., if the system is able to create a reductive zone by converting the hexavalent chromium plume into the less toxic trivalent chromium, essentially stopping the movement of the remaining contaminants in the groundwater. Installation of this ISRM system will be implemented during 2012 if funding is available.

- Continue to 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, as necessary to facilitate excavation and cap construction, shrubbery, trees, outbuildings, playground equipment, or other items.
- Coordinate all wetland work with USACE, U.S. Fish & Wildlife; and the City of Attleboro (Attleboro Conservation Commission, City Engineer, and Departments of Planning and Public Works).
- Conduct meeting(s) with property owners and stakeholders to discuss the scope of the proposed Removal Action and distribute public information fact sheets, as necessary.
- Relocate impacted residents when appropriate to maintain the safety of residents and efficiency of response actions.
- Operate and maintain water treatment system in accordance with ARARs.
- Excavate, or consolidate/stabilize and cap contaminated soil in-situ to meet MCP criteria for direct contact exposure-based soil concentrations. Stage excavated soil, then consolidate, stabilize, package, document and ship that soil off-site for disposal at EPA-approved facilities.
- Characterize Bliss Brook and other water bodies impacted by contaminant migration from the Site; and perform appropriate contamination mitigation activities as appropriate.
- EPA's ERT in conjunction with EPA's engineering consultants will design and implement an in-situ treatment of contaminated groundwater and soil to prevent recontamination of the capped area downstream of the residential neighborhood.
- Install sub-slab vapor-intrusion systems, if necessary, as directed by 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 state-initiated remedial measures that may be required to address remaining Site ecological and human health risks.

**Walton & Lonsbury Facility:**

- Excavate and appropriately disposal of contaminated soils and debris.
- Consolidate, stabilize, package, and document the removal action generated waste and shipped off-site for disposal at EPA-approved facilities.
- Close the production well located behind the demolished Walton & Lonsbury facility to eliminate this contaminant pathway to the groundwater.
- If determined to be effective, install an in-situ groundwater treatment system along fence near North Avenue.
- Repair response-related damages
- Evaluate extent-of-contamination and confirmation sampling results as determined necessary by the EPA OSC.
- Maintain Site security.
- Demobilize all personnel and equipment from the Site.

## **2. 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.

## **3. 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 (Storm-water 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.
- 40 C.F.R. Part 61 Clean Air Act – Standards for controlling dust
- *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)
- 310 CMR 40.0040 Discharge of Remedial Wastewater. Specifically 310 CMR 40.0043 and 310 CMR 40.0045 Remedial Wastewater Discharges to Surface Water and Remedial Wastewater Discharges to the Ground Surface and/or Groundwater.
- 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.

#### 4. Project Schedule

Removal activities are slated to be completed within 12 – 25 months from approval of this Action Memorandum, or whenever funding becomes available to continue.

#### B. Estimated Costs

This Action Memo requests a ceiling increase to address only Option 2a above.

Future ceiling increases to enable implementation of Options 2b and 2c are anticipated.

COST CATEGORY	ORIGINAL 9/2/10 AM CEILING	INCREASE	NEW CEILING
<b>REGIONAL EXTRAMURAL REMOVAL ALLOWANCE COSTS:</b>			
ERRS Contractor	\$4,200,000	\$3,930,171	\$8,130,171
* US Army Corps of Engineers	\$0	\$300,000	\$300,000
* US Coast Guard – AST	\$0	\$6,000	\$6,000
<b>OTHER EXTRAMURAL COSTS NOT FUNDED FROM THE REGIONAL ALLOWANCE:</b>			
START Contractor	\$600,000	\$730,776	\$1,330,776
Engineering Services	\$0	\$344,486	\$344,486
ERT & Contractor	\$120,000	\$0	\$120,000
Analytical Costs	\$35,000	\$0	\$35,000
<b>SUB-TOTAL OF EXTRAMURAL COSTS</b>	<b>\$4,955,000</b>	<b>\$5,311,433</b>	<b>\$10,266,433</b>
Extramural Contingency 20%	\$991,000	\$1,062,287	\$2,053,287
<b>TOTAL, REMOVAL ACTION CEILING</b>	<b>\$5,946,000</b>	<b>\$6,373,719</b>	<b>\$12,319,719</b>

#### IX. ENFORCEMENT (See Confidential Enforcement Addendum)

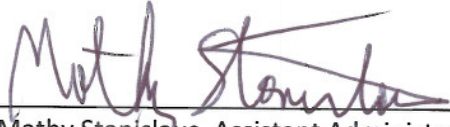
Region 1 Emergency Planning and Response Branch anticipates that this will be a fund-lead response. The On-Scene Coordinator will continue to coordinate with the EPA Region 1 Office of Environmental Stewardship on enforcement strategy. See attached Enforcement Addendum for detailed enforcement strategy information. The total EPA costs for this removal action based on full-cost accounting practices that will be eligible for cost recovery are estimated to be \$19,368,204.<sup>4</sup>

<sup>4</sup> Direct Costs include direct extramural costs [\$12,319,719] and direct intramural costs \$[1,000,000]. Indirect costs are calculated based on an estimated indirect cost rate expressed as a percentage of site specific costs [45.41% x \$12,319,719] 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 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.

**X. RECOMMENDATION**

This decision document represents the selected removal action for the Walton & Lonsbury Site in Attleboro, Massachusetts developed in accordance with CERCLA, as amended, and not inconsistent with the National Contingency Plan (NCP). This decision is based on the administrative record for the Site. Conditions at the Site continue to meet the NCP Section 300.415(b) criteria for a removal action and the CERCLA 104(c) emergency exemption from the 12-month and \$2 million limitations. They also meet the CERCLA 104(c) consistency exemption to the limitations. I recommend your approval of the proposed removal action, ceiling increase, and 12-month and \$2 million exemptions. The total project ceiling, if approved, will be \$12,319,719 and an estimated \$8,436,171 comes from the Regional Removal Allowance.

Approval:

  
Mathy Stanislaus, Assistant Administrator  
Office of Solid Waste and Emergency Response

Date:

9/22/11

Disapproval:

\_\_\_\_\_  
Mathy Stanislaus, Assistant Administrator  
Office of Solid Waste and Emergency Response

Date: \_\_\_\_\_

Attachments:

*Attachment #1:*

*Walton & Lonsbury Action Memorandum & Confidential Enforcement Strategy - Dated September 2, 2010*

*Attachment #2:*

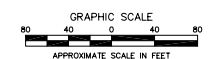
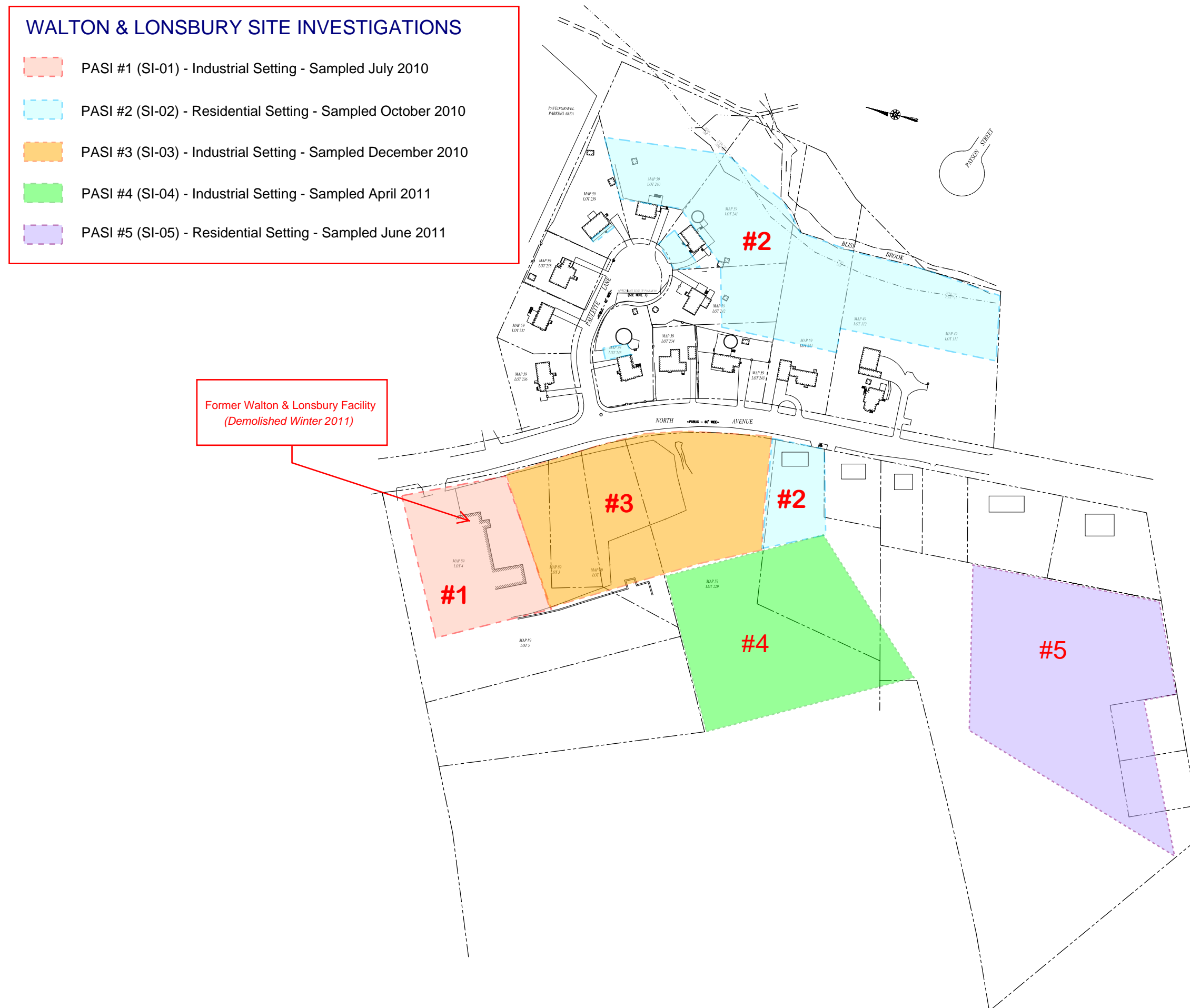
*Site Maps 1 - 3*

*Attachment #3:*

*Confidential Enforcement Strategy Addendum – Dated August 25, 2011*



## MAP #1 - Locations of Preliminary Assessments / Site Investigations (PASI) Related to the Walton & Lonsbury Time-Critical Removal Action



**Request for a Removal Action Ceiling Increase and a Change in the Scope of Response at the Walton & Lonsbury Site, Attleboro, Bristol County, MA**

MAP #2 - Surface Metals Contamination Caused by Groundwater Flow From the Former Walton & Lonsbury Facility

WALTON & LONSBURY  
TIME CRITICAL REMOVAL ACTION  
DIRECTION OF GROUNDWATER FLOW

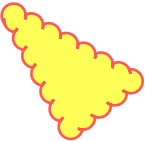
SURFACE CONTAMINATION (METALS)  
CAUSED BY GROUNDWATER FLOW  
(Hexavalent Chromium, Chromium & Lead)

Identified During PASI #2, October 2010




Former Walton & Lonsbury Facility  
(Demolished Winter 2011)

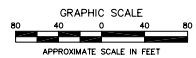
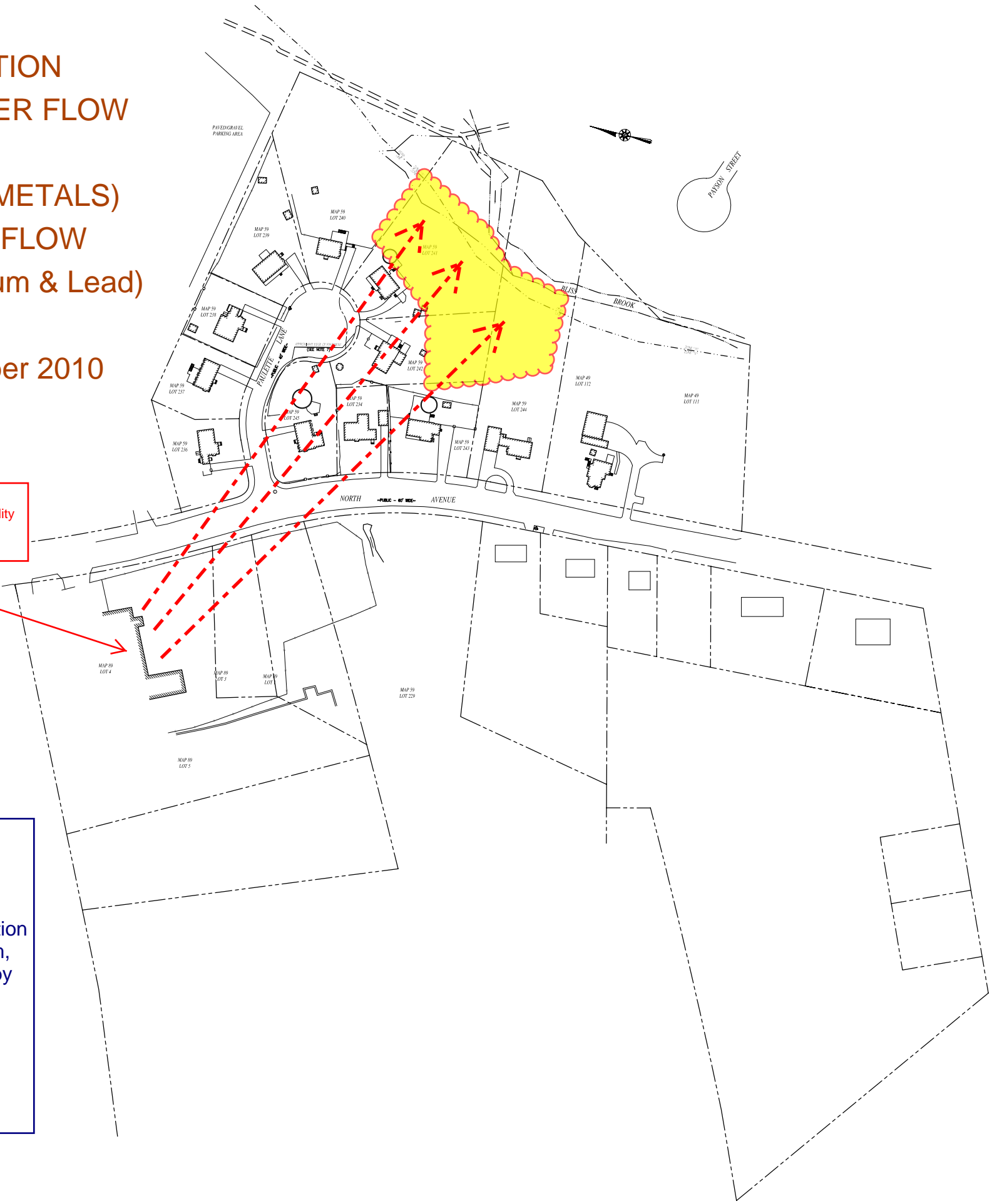
**LEGEND**



= Area of Residential Contamination (Metals - Hexavalent Chromium, Chromium and Lead) Caused by Groundwater Flow



= Direction of Groundwater Flow



# MAP #3 - Surface Metals Contamination Caused by Surface Water (Overland) Flow from the Former Walton & Lonsbury Facility

WALTON & LONSBURY  
TIME CRITICAL REMOVAL ACTION  
DIRECTION OF SURFACE WATER FLOW

SURFACE CONTAMINATION (METALS)  
CAUSED BY SURFACE MIGRATION  
(Chromium, Lead & Hexavalent Chromium)

Identified During PASIs #1, 3, 4 & 5  
June 2010 - June 2011

