



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

**CONTAINS ENFORCEMENT-SENSITIVE INFORMATION**

**MEMORANDUM**

**DATE:** June 2, 2015

**SUBJ:** Request for a Removal Action Ceiling Increase & 12 Month Exemption  
Fay Street Site, Lowell, Middlesex County, Massachusetts  
**Action Memorandum Amendment – Ceiling Increase**

**FROM:** Elsbeth Hearn, Federal On-Scene Coordinator  
Emergency Response and Removal Section I

*Elsbeth Hearn*

**THRU:** Edward Bzenas, Chief  
Emergency Response and Removal Section I

*EB*

Carol Tucker, Chief  
Emergency Planning & Response Branch

**TO:** Nancy Barmakian, Acting Director  
Office of Site Remediation and Restoration

**I. PURPOSE**

The purpose of this Action Memorandum Amendment is to request and document approval of a ceiling increase at the Fay Street Site (the Site), which consists of properties at and adjacent to 86 Fay Street in Lowell, Middlesex County, Massachusetts. Hazardous substances present at the ground surface, if not addressed, will continue to pose a threat to human health and the environment.

The initial estimate of contaminated soil in the Action Memorandum dated 14 April 2014 was based solely on a preliminary site investigation performed in July 2013. This assessment delineated approximately half of the amount of contaminated soil that the Action Memorandum Ceiling Increase dated 14 August 2014 included. The current request for a ceiling increase includes funding for a portion of the O'Donnell Park property where additional sampling investigations identified lead (Pb) contamination of up to 1,200 ppm in the surface soil. The O'Donnell Park property consists of a ball field, open space, Butler Middle School, and Shaughnessy Elementary School (both part of the Lowell Public School System).

The proposed ceiling is \$1,699,990 of which \$1,323,946 has been obligated to the Emergency and Rapid Response Services (ERRS) contract, and \$178,500 has been obligated to the Superfund



Technical Assessment and Response Team (START) contract. There are no nationally significant or precedent-setting issues associated with this Site, and there has been no use of the OSC's delegation and warrant authority.

## II. SITE CONDITIONS AND BACKGROUND

**CERCLIS ID# :** MAN000106163  
**SITE ID# :** 01 LH  
**CATEGORY :** Time-Critical

### A. Site Description

#### 1. Removal site evaluation

*Please refer to the Action Memorandums dated April 14, 2014 and August 14, 2014 for a detailed history and description of EPA actions at the Fay Street Site.*

The Fay Street Site consists of a Brownfields Site at 86 Fay Street, adjacent properties including 74 & 78 Fay Street, and a condominium complex at 106 Lundburg Street, and a portion of the O'Donnell Park property. Historic data indicate that these properties were the dumping location for ash and debris from the Middlesex North Agricultural Fairgrounds and surrounding residences during the late 19<sup>th</sup> and beginning of 20<sup>th</sup> centuries.

#### 2. Physical location

The Fay Street Site, defined during the EPA Site Investigation consists of residential & city-owned properties adjacent to 86 Fay Street. The geographic coordinates as measured from the center of 86 Fay Street are 42 degrees 37 minutes 26.3 seconds north latitude and 71 degrees 18 minutes and 10.2 seconds west longitude.

#### 3. Site characteristics

*Please refer to the Action Memorandums dated April 14, 2014 and August 14, 2014 for a detailed description of site characteristics.*

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

*Please refer to the Action Memorandums dated April 14, 2014 and August 14, 2014 for more information regarding initial hazardous substance and contaminant data.*

An April 2015 extent of contamination survey at the O'Donnell Park field indicated that the contaminated fill does not end at the limit of the 86 Fay Street property. A portion of the open space in the O'Donnell park lot (portion directly north of 86 Fay Street) has confirmed lead concentration of up to 1,200 ppm in the top three feet of soil and an overall lead contamination average above the Massachusetts Contingency Plan Unrestricted Residential Use S-1 Standard. Lead is a hazardous substance as defined by Section 101(14) of CERCLA, 42 U.S.C. Section 9601(14). Other hazardous substances have been present in the soil including arsenic, cadmium, and PAHs, but the presence of these correlate with the presence of lead which is the driving contaminant at this site.

*Table 1: Fay Street Site – "Open Space" in O'Donnell Park mg/kg (ppm)*

| Field Screening Results                 | Lead (ppm) |
|---|------------|
| Maximum (lab result)                    | 1200       |
| Number of Samples/ % > Residential RML  | 5/30%      |
| Number of Samples/ % > MassDEP S-1      | 9/53%      |
| Regional RML – Industrial/Commercial    | 800        |
| Regional RML – Residential              | 400        |
| MassDEP, Unrestricted Residential S-1   | 200        |
| EPA/ATSDR, Unrestricted Residential Use | --         |

**5. NPL status**

The Site is not currently on the National Priorities List, and has not received a Hazardous Ranking System rating.

**B. Other Actions to Date**

**1. Previous actions**

*Please refer to the Action Memorandums dated April 14, 2014 and August 14, 2014 for a detailed description of previous actions.*

All excavation activities proposed in the previous Action Memorandums were completed by December 2014 & restoration activities began in spring of 2015.

On April 20-22 2015, EPA completed an extent of contamination survey in the O'Donnell Park area.

## **2. Current actions**

EPA mobilized to the Fay Street Site on July 14, 2014. Removal activities were completed on portions of five properties at and adjacent to the 86 Fay Street property. Activities included excavation of contaminated soil, transportation and disposal of contaminated soil, vacuuming operations around trees to preserve the trees, and restoration activities that are ongoing through June 2015.

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

### **1. State and local actions to date**

*Please refer to the Action Memorandum dated April 14, 2014 for more information regarding state and local actions to date.*

The City of Lowell has provided EPA with access to the Brownfields property at 86 Fay Street to be used as a staging area for EPA removal activities and to connect the abutting properties into the completed soil cap. Access to the O'Donnell Park property for assessment and removal activities has also been approved by the City of Lowell.

### **2. Potential for continued State/local response**

Neither MassDEP nor the City of Lowell has the resources to conduct a removal action, but will continue to provide active support, public outreach, and a regulatory role.

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

*Please refer to the Action Memorandum dated April 14, 2014 for details regarding threats to public health or the environment, and statutory and regulatory authorities.*

## **IV. ENDANGERMENT DETERMINATION**

Actual or threatened releases of hazardous substances or pollutants or contaminants from this Site, if not addressed by implementing the response action selected in this Action Memorandum

Addendum, may present an imminent and substantial endangerment to public health, welfare, or the environment.<sup>1</sup>

## V. EXEMPTION FROM STATUTORY LIMITS

A 12-month exemption from statutory limits is requested to complete the work at the Fay Street Site in order to mitigate the immediate public health risks due to heavy metal exposure. Continued response actions are immediately required to reduce this risk and eliminate exposure to elementary school students, community members, and pets that frequent this area. It is advised that this project be completed during the summer months in order to eliminate the risk to school age children.

Continued response actions are necessary and appropriate to mitigate threats to public health and the environment. Response actions include, but are not limited to: Excavation of contaminated soil; transportation and disposal of contaminated material; dust monitoring for contaminated dust; property restoration & drainage control. This property was not previously known to be contaminated, but is now known to be a risk to the community. In order to complete these actions, an exemption from the 12-month statutory limit is required.

There are no other agencies that are financially able to mitigate the risks of this property. If EPA does not address the threat, high concentrations of heavy metals will continue to be present on a school property since no other agency can address the contamination on a timely basis.

## VI. PROPOSED ACTIONS AND ESTIMATED COSTS

### A. Proposed Actions

#### 1. Proposed action description

The response actions described in this memorandum directly address actual or potential release of hazardous substances, which may pose an imminent and substantial endangerment to public health, welfare, or the environment. Removal activities that have been modified or are considered critical include the following:

- Excavate contaminated soil and debris not to exceed three feet below ground

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<sup>1</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 Massachusetts Department of Environmental Protection standards for determining risk at the Site.

Surface (*new additional estimated volume of up to 2,800 tons at the open space area north of 86 Fay Street*).

- Perform dust monitoring, control, and mitigation measures as necessary.
- Backfill excavated areas & add additional clean fill to install a sufficient cap.
- Pre-treat hazardous substances if beneficial for off-site disposal options.
- Determine disposal options for contaminated material and dispose of hazardous substances at an EPA-approved off-site disposal facilities(s).
- Repair response-related damages including, but not limited to, replacing fences, securing property, re-establishing vegetation/landscape in areas that were impacted by removal activities, and installing erosion/runoff/drainage control measures as necessary.

This removal action will be conducted in a manner not inconsistent with the NCP.

*Please refer to the Action Memorandum dated April 14, 2014 for more detailed information on removal actions. All proposed actions in the original Action Memorandum are consistent with the actions proposed here.*

## **2. Community relations**

The OSC will continue to coordinate and communicate cleanup activities during the removal action with the State, local authorities and the EPA Community Involvement Coordinator(s).

## **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 actions taken at the Site would be consistent with and will not impede any future responses.

## **4. Description of alternative technologies**

In the summer of 2014, a specialized vacuum truck was used to remove contaminated soil from around a century old silver maple tree. This alternative technology ultimately saved the tree while simultaneously removing the contaminated soil. Three other mature trees were saved in the same manner.

Because the soil from the site passed leaching tests (TCLP), most was re-used as daily cover at local landfills rather than disposal in a hazardous waste landfill. This practice will continue to be first consideration as soil is removed during the next phase of the project.

Another potential alternative technology option for the next phase of this project is to construct a rain garden to control drainage. This type of drainage control will be necessary because the proposed combination of removing soil and filling with clean soil will change the grade and drainage of the property.

## 5. Applicable or relevant and appropriate requirements (ARARs)

### Federal ARARs:

Resource Conservation and Recovery Act, Subtitle C, 40 CFR Parts 260-262 and 264: Hazardous Waste Identification and Listing Regulations; Generator and Handler Requirements, Closure and Post-Closure.

40 CFR Part 61: Clean Air Act standards for controlling dust

40 CFR Sections 122.26(c)(ii)(C) and 122.44(k): Clean Water Act NPDES regulations for storm water control and management

### State ARARs:

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.

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 7.00: Air Pollution Control Regulations

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

All work is expected to be completed within twenty-four months of the initial mobilization date of July 17, 2014. The removal actions at O'Donnell Park is proposed to be completed prior to the start of the fall 2015 school year.

**B. Estimated Costs**

| COST CATEGORY   | CURRENT CEILING       | COSTS TO DATE         | PROPOSED INCREASE   | PROPOSED CEILING      |
|---|-----------------------|-----------------------|---------------------|-----------------------|
| <i>REGIONAL REMOVAL ALLOWANCE COSTS:</i>                              |                       |                       |                     |                       |
| ERRS Contractor   | \$760,000.00          | \$760,000.00          | \$563,946.00        | \$1,323,946.00        |
| <i>OTHER EXTRAMURAL COSTS NOT FUNDED FROM THE REGIONAL ALLOWANCE:</i> |                       |                       |                     |                       |
| START Contractor  | \$118,000.00          | \$118,000.00          | \$60,500.00         | \$178,500.00          |
| Engineering Services  | \$30,000.00           | \$25,000.00           | \$13,000.00         | \$43,000.00           |
| Extramural Subtotal   | \$908,000.00          | \$903,000.00          | \$637,446.00        | \$1,545,446.00        |
| Extramural Contingency (15%, 10%, respectively)                       | \$136,000.00          | \$136,000.00          | \$18,544.00         | \$154,544.00          |
| <b>TOTAL, REMOVAL ACTION CEILING</b>                                  | <b>\$1,044,000.00</b> | <b>\$1,039,000.00</b> | <b>\$655,990.00</b> | <b>\$1,699,990.00</b> |

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

Delayed action will increase public health risks due to increased exposure to heavy metals. Without the removal action described herein, conditions at the Site will remain unaddressed, and threats associated with the hazardous substances will persist. If this request for ceiling increase and 12 month exemption is not approved, this the O'Donnell Park property will remain contaminated with high concentrations of lead in the soil. The contaminated area is frequented by students walking to school and community members walking their dogs.

**VIII. OUTSTANDING POLICY ISSUES**

There is 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 \$1,699,990.60(extramural costs) + \$60,000 (EPA intramural costs) + (\$1,699,990.60 X 59.42%) (regional indirect rate) = **\$2,770,124.66<sup>2</sup>**.

## X. RECOMMENDATION

This decision document represents the selected removal action for the Fay Street Site in Lowell, 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:

*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)];*

*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)];*

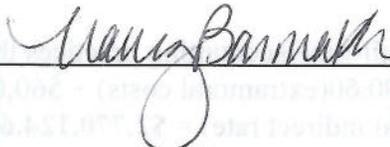
*Weather conditions that may cause hazardous substances or pollutants or contaminants to migrate or be released [§300.415(b)(2)(v)];*

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

I recommend that you approve the proposed removal action. The total extramural removal action project ceiling if approved will be \$1,699,990.60.

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<sup>2</sup>Direct Costs include direct extramural costs \$1,699,990.60 and direct intramural costs \$60,000. Indirect costs are calculated based on an estimated indirect cost rate expressed as a percentage of site specific costs 59.42% x \$699,990.60, consistent with the full accounting methodology effective October 1, 2013. 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.

APPROVAL:  DATE: 06/08/15

DISAPPROVAL: \_\_\_\_\_ DATE: \_\_\_\_\_