



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 1
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BOSTON, MASSACHUSETTS 02114-2023

CONTAINS ENFORCEMENT-SENSITIVE INFORMATION

MEMORANDUM

DATE: JUN 14 2007

SUBJ: Request for a Removal Action at the Murphy Property, 263 Salem Street Site, Woburn, Middlesex County, Massachusetts - **Action Memorandum**

FROM: Ted Bazenas, On-Scene Coordinator
Emergency Response and Removal Section II *TB*

THRU: Steven R. Novick, Chief *SRN 6/6/07*
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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 proposed removal action at the Murphy Property, 263 Salem Street Site, (the Site), which is located at 263 Salem Street in Woburn, Middlesex County, Massachusetts. Hazardous substances present in soil, tanks and drums at the Site, 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. There are no nationally significant or precedent-setting issues associated with this Site, and there has been no use of the OSC's \$200,000 warrant authority.

Enforcement activities for the Site are ongoing. Investigations regarding past ownership and operations issues have not been fully resolved at this time. The actions proposed in this Action Memorandum may be overtaken by responsible parties before completion of the fund lead activities.

II. SITE CONDITIONS AND BACKGROUND

CERCLIS ID# : MAN000105449
SITE ID# : 01DL
CATEGORY : Time Critical

A. Site Description

1. Removal site evaluation

The Murphy Property, 263 Salem Street Site occupies approximately one acre in a primarily commercial area of Woburn Massachusetts. It is an inactive, privately owned waste oil hauling and storage facility. The total storage capacity at the property is approximately 123,000 gallons. The property owner of record is deceased; the executrix of the estate is Joan Murphy, the spouse of the deceased owner. An attorney is representing the interests of the estate and the executrix.

On 25 July, 2006, the EPA On-Scene Coordinator, WestonSolutions Inc. START contractor personnel, and Massachusetts Department of Environmental Protection (MassDEP) representatives conducted an on-site reconnaissance of the property.

On 23 August, 2006, EPA and contractor personnel returned to the Site to complete a Preliminary Investigation/Site Assessment (PA/SI), including the collection of samples of surface soils and the contents (if any) of bulk storage tanks. A total of 53 surface soil samples were collected from 50 sample stations; a total of 10 tank or drum samples were collected from 9 sample locations. Samples were submitted to the EPA Northeast Regional Laboratory for metals, volatile organic compounds, and polychlorinated biphenyl compounds analyses. Split samples were provided to the potentially responsible party.

Analytical results indicate the presence of elevated levels of PCBs up to 10,650 parts per million (ppm) and lead up to 37,000 ppm in surface soils and containers at the Site. The PA/SI closure letter dated 29 December, 2006 recommended a Time-Critical Removal Action at this Site.

2. Physical location

The property is located at 263 Salem Street, Middlesex County, Woburn, Massachusetts.

The coordinates are:

Latitude: 42° 29' 23.81"

Longitude: 71° 07' 50.06"

The Site is bordered to the northwest by Salem Street; to the northeast by a private access road; to the southwest by undeveloped woodland /wetlands; and to the southeast by an active commercial property.

3. Site characteristics

The Site occupies approximately one acre of land in a mixed, but primarily commercial area. A former waste oil collection and storage facility, it has not been in operation since

approximately 1987. A two story residence on the property appears to have been more recently occupied. Currently, the property is inactive and unoccupied.

The structures on the property include a two-story residence and a separate workshop/garage behind the residence. There are eight bulk storage containers, ranging in size from one 75,000 gallon bunker to several 1000 gallon above-ground or partially buried storage tanks. The total storage capacity is approximately 123,000 gallons. However, it is estimated that less than 1000 gallons of liquid remain in the storage tanks, and much of that is water.

Approximately 10,000 people live within one mile of the Site. Access to the Site is unrestricted; there are no fences, gates or other barriers to trespassing. Also within one mile of the Site are located two public water supply wells, five public schools and two private pre-schools. The Aberjona River is within 700 feet of the property and is likely to receive surface water runoff and contaminated groundwater from the Site.

According to the EPA Region 1 Environmental Justice Mapping Tool, the Site is not in an environmental justice area.

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

EPA collected soil samples at the site on 23 August, 2006. Laboratory analysis indicates that polychlorinated biphenyls (PCBs) have been found in surface soils and bulk containers at levels as high as 10,650 parts per million (ppm) in surface soil; in addition, levels of lead as high as 37,000 ppm were found in surface soils. The Massachusetts Contingency Plan (MCP) identifies soil direct contact threat concentration limits for PCBs as 2 ppm, and for lead as 300ppm.

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

By letter dated 05 May, 2006, the Site was referred to EPA by the MassDEP. EPA has had no previous activity at this Site.

2. Current actions

EPA completed a PA/SI report in November of 2006. A PA/SI closure memorandum was signed on 29 December, 2006 and recommended a Time Critical-Removal Action based on PCB levels in the surface soil up to 10650 ppm and lead levels in surface soil up to 220ppm.

There are no other current EPA actions at this Site.

C. State and Local Authorities' Roles

1. State and local actions to date

Pursuant to the MCP, the MassDEP has issued several Notice of Responsibility (NOR) letters to the estate of the deceased owner. The NORs include the State's determination that the site poses a Threat of Release and could pose an Imminent Hazard, based on both historical data and the EPA data in the PA/SI report. The NORs also directed that an Immediate Response Action be undertaken by the responsible party. The responsible party did not reply to the NOR or to the request to undertake response actions.

By letter dated 05 May, 2006, the MassDEP has referred this Site to EPA for consideration and cleanup, if warranted.

2. Potential for continued State/local response

The MassDEP has indicated that there may be funds available to contribute to the non-hazardous substance (oil) cleanup at the Site. The OSC and the enforcement coordinator will work with MassDEP to define appropriate tasks to be funded by the state. These tasks may include disposal of uncontaminated oils and/or empty above-ground storage tanks.

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

A. Threats to Public Health or Welfare

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)];

Elevated levels of PCBs (up to 10,650 ppm) and lead (up to 37,000 ppm) have been identified in surface soils at the Site. Access to surface soils is unrestricted. There are five public schools within one mile of the Site.

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

Two public drinking water wells are located within one mile of the Site. The Aberjona River, a potential drinking water source, is approximately 700 feet from the Site. Migration of PCBs and lead by mass transport (erosion) may impact the Aberjona River or the drinking water wells via surface water runoff, storm water drainage discharge, or contaminated groundwater.

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 several above ground storage tanks at the Site ranging in size from one 75,000 gallon bunker to several 55 gallon drums. PCB contamination has been identified in the contents of at least two bulk storage containers. Total bulk storage capacity at the Site exceeds 120,000 gallons. However, it is estimated that less than 1000 gallons of liquid remain in the storage tanks, and much of that is water.

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)];

Elevated levels of PCBs (up to 10,650 ppm) and lead (up to 37,000 ppm) have been identified in surface soils at the Site. PCBs resist degradation and will persist in the environment for many years. Migration of PCBs and lead by mass transport (erosion) may impact off-site areas via surface water runoff, storm water drainage discharge.

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

By letter dated 05 May, 2006, the MassDEP has referred this Site to EPA for consideration due to the large number of other sites that MassDEP is managing.

Polychlorinated biphenyls

PCBs are a group of synthetic organic chemicals that can cause a number of different harmful effects. PCBs do not readily break down after release to the environment and therefore persist for very long periods of time. People who live near hazardous waste sites may be exposed to PCBs by consuming PCB-contaminated fish or game animals, by breathing PCBs in the air, by drinking contaminated well water, or by direct skin contact with PCB-contaminated soils. Children who live near contaminated sites may accidentally ingest some PCBs by hand-to-mouth behavior, such as putting dirty hands or soil-covered objects into their mouths, or eating without washing their hands.

Human exposure to PCBs at high levels may result in rashes or chlor-acne, changes in liver functions, and psychological changes such as depression or fatigue. Animal exposures have shown changes to the immune system, behavioral alterations, and impaired reproduction.¹

Approximately 10,000 people live within one mile of the Site. Access to the Site is unrestricted; there are no fences gates or other barriers to trespass. Also within one mile of the Site are located two public water supply wells, five public schools and two private pre-schools.

¹ Agency for Toxic Substances and Disease Registry (ATSDR), U.S. Department of Health and Human Services, Public Health Service, *Toxicological Profile for Polychlorinated Biphenyls*, November, 2000.

Lead

Lead is a toxic elemental metal that occurs naturally in the earth's crust. It is used in ammunition, medical equipment, paint, gasoline and solder. Lead is also found in many automotive products such as batteries and waste oil. Lead is not very soluble and persists in the environment. People who live near contaminated sites may be exposed by eating contaminated food, breathing contaminated dust, or drinking contaminated water. Children may also be exposed by playing in contaminated soil and accidentally ingesting lead by behavior such as putting dirty hands into their mouth or eating without washing their hands.

Lead can affect almost every organ and system in the human body. At high levels, lead may cause anemia, weakness in the hands and feet, and decreased reaction time. The most sensitive is the central nervous system, particularly in children. Lead also damages the kidneys and the reproductive system.²

As noted previously, there are five public schools and two private pre-schools within one mile of the Site. Approximately 190 people live within one quarter mile of the Site.

B. Threats to the Environment

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)];

Elevated levels of PCBs (up to 10,650 ppm) and lead (up to 37,000 ppm) have been identified in surface soils at the Site. Access to contaminated surface soils is unrestricted enabling direct contact exposure to wildlife and entry into the food chain.

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

The Aberjona River, a wetlands and riparian ecosystem, is approximately 700 feet from the Site. Migration of PCBs and lead by mass transport (erosion) may reach the Aberjona River via storm water drainage discharge and thereby impact this sensitive ecosystem.

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 several above ground storage tanks at the Site ranging in size from one 75,000 gallon bunker to several 55 gallon drums. PCB contamination has been identified in the contents of at least two bulk storage containers. Release from these containers would impact on site soils and could migrate by mass transport to the Aberjona River.

² Agency for Toxic Substances and Disease Registry (ATSDR), U.S. Department of Health and Human Services, Public Health Service, *Toxicological Profile for Lead*, July, 1999.

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)];

Elevated levels of PCBs (up to 10,650 ppm) and lead (up to 37,000 ppm) have been identified in surface soils at the Site. PCBs resist degradation and will persist in the environment for many years. Migration of PCBs and lead by mass transport (erosion) may impact the Aberjons River, a sensitive ecosystem.

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

By letter dated 05 May, 2006, the MassDEP has referred this Site to EPA for consideration due to the large number of other sites that MassDEP is managing.

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.³

V. PROPOSED ACTIONS AND ESTIMATED COSTS

A. Proposed Actions

1. Proposed action description -

To address the contaminants at this Site, EPA proposes the following actions:

- collect additional surface and subsurface soil samples for site characterization
- remove and dispose of PCB-contaminated oil in tanks and drums
- remove above-ground and partially buried storage tanks where deemed necessary to facilitate access to contaminated soils
- excavate and dispose of PCB- and lead-contaminated soil
- dispose of other hazardous materials as appropriate

³In accordance with OSWER Directive 9360.0-34, an endangerment determination is made based on relevant action levels, cleanup standards, risk management guidance, or other relevant information published and relied upon by the State of Massachusetts.

- repair response-related damage to the property (fill and grade excavation areas)

2. Community relations

The OSC will provide information to the community and the residents by establishing an Administrative Record in the local library, distributing press releases and site-specific information flyers, and conducting public availability meetings (as necessary).

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 OSC has coordinated with the Remedial Project Manager for a nearby NPL site to ensure that the actions taken at the Site would be consistent with and will not impede any future responses.

4. Description of alternative technologies

The OSC will research, evaluate and apply alternative technologies for site characterization and waste disposal, if the alternatives are cost-efficient, timely, and effective.

5. Applicable or relevant and appropriate requirements (ARARs)

Federal ARARs:

29 CFR Parts 1910, 1926, and 1904: OSHA Health and Safety Regulations

40 CFR Part 262 Standards Applicable to Generators of Hazardous Waste:

Subpart B - The Manifest

262.20 : General requirements for manifesting

262.21 : Acquisition of manifests

262.22 : Number of copies of manifests

262.23 : Use of the manifest

Subpart C - Pre-Transport Requirements

262.30 : Packaging

262.31 : Labeling

262.32 : Marking

Subpart D - Recordkeeping and Reporting

262.40 : Recordkeeping

40 CFR Part 264 Standards for Owners and Operators of Hazardous Waste Treatment, Storage, and Disposal Facilities:

Subpart I - Use and Management of Containers

264.171 : Condition of containers

264.172 : Compatibility of waste with containers

264.173 : Management of containers

264.174 : Inspections

264.175 : Containment

264.176 : Special requirements for ignitable or reactive waste

264.177 : Special requirements for incompatible wastes

40 CFR Part 264 Hazardous Waste Regulations - RCRA Subtitle C:
 268-270 : Hazardous and Solid Waste Amendments Land Disposal Restrictions Rule

40 CFR Part 300.440 Procedures for Planning and Implementing Off-Site Response Actions (Off-Site Rule)

40 CFR Part 761.60 and Parts 761.202-218 : TSCA requirements for disposal of PCBs

49 CFR Parts 171-179 : Department of Transportation Regulations for Transport of Hazardous Materials

State ARARs:

In addition to the Massachusetts Contingency Plan, the OSC will coordinate with State officials to identify other State ARARs. 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

The project is expected to begin in June, 2007 and be completed in September, 2007, pending completion of PRP search and other enforcement activities.

B. Estimated Costs

COST CATEGORY		CEILING
<i>REGIONAL REMOVAL ALLOWANCE COSTS:</i>		
ERRS Contractor		\$750,000.00
Interagency Agreement		\$ 0.00
<i>OTHER EXTRAMURAL COSTS NOT FUNDED FROM THE REGIONAL ALLOWANCE:</i>		
START Contractor		\$250,000.00
Extramural Subtotal		\$1,000,000.00
Extramural Contingency	15%	\$150,000.00
TOTAL, REMOVAL ACTION CEILING		\$1,150,000.00

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

Due to the longevity of PCBs in the environment, delayed action will increase public health risks from potential human exposures. Surface soils contaminated with PCBs and lead will continue to erode, potentially transporting contaminants from the Site to surface water. Access to the property is unrestricted; inactivity and abandonment have caused the Site to become an attractive nuisance, inviting trespass and vandalism.

VII. OUTSTANDING POLICY ISSUES

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

VIII. 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 \$1,150,000 (extramural costs) + \$100,000(EPA intramural costs) = \$1,250,000 X 1.33 (regional indirect rate) = **\$1,662,500**⁴.

IX. RECOMMENDATION

This decision document represents the selected removal action for the Murphy Property, 263 Salem Street Site in Woburn, MA, 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)];

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

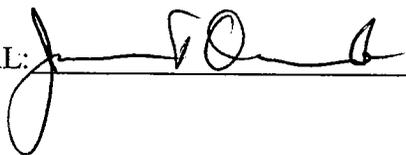
Hazardous substances or pollutants or contaminants in drums, barrels, tanks, or other bulk storage containers, that may pose a threat of release [§300.415(b)(2)(iii)];

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)];

⁴Direct Costs include direct extramural costs \$ 1,150,000 and direct intramural costs \$100,000. Indirect costs are calculated based on an estimated indirect cost rate expressed as a percentage of site specific costs [33% x \$1,250,000, consistent with the full accounting methodology effective October 2, 2000. These estimates do not include pre-judgement interest, do not take into account other enforcement costs, (continued on next page) 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.

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 removal action project ceiling if approved will be \$1,150,000.

APPROVAL:  _____

DATE: 8/13/07

DISAPPROVAL: _____

DATE: _____