



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION I

Enforcement Confidential Materials Attached

MEMORANDUM

DATE: September 13, 2011

SUBJ: Request for a Ceiling Increase of Funds to Continue the Removal Action at the Former Bendix Property Site,
Greenfield, Massachusetts - **Action Memorandum Addendum**

FROM: Athanasios Hatzopoulos, On-Scene Coordinator (OSC) *[Signature]*
Emergency Response and Removal Section II

THRU: Steven R. Novick, Chief *[Signature]*
Emergency Response and Removal Section II
Arthur V. Johnson, III, Branch Chief *[Signature]*
Emergency Planning & Response Branch

TO: James T. Owens, III, Director *[Signature]*
Office of Site Remediation and Restoration

I. PURPOSE

The purpose of this Action Memorandum Addendum is to request and document approval for a ceiling increase of funds to continue the removal action at the Former Bendix Property Site, (the Site), which is located at 180 Laurel Street, Greenfield, Franklin County, Massachusetts.

During the current removal activities at the Site, a greater volume of chromium contaminated powder was encountered from previously inaccessible areas. This additional material requires removal.

Hazardous substances, primarily, chromium contaminated powder present throughout 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 has been no use of the OSC's \$200,000 warrant authority.

II. SITE CONDITIONS AND BACKGROUND

CERCLIS ID# : MAD041490673
SITE ID# : 01GR
CATEGORY : Time Critical

A. Background

Information presented below is new or changed information about the Site. For previously established information about the Site background, removal site evaluation, and state and local authorities, please see the original Action Memorandum dated December 20, 2010.

B. Current Situation

EPA, the Emergency Rapid Response Services (ERRS) contractor, and EPA's Superfund Technical Assessment and Response Team (START) contractor mobilized to the Site on April 13, 2011 to initiate removal activities. Up until August 25, 2011, the following removal activities have been accomplished:

- Completed the asbestos removal activities. Approximately 165,200 pounds of visible asbestos and ACM has been disposed from the Site.
- Consolidated all of the chromium contaminated powder and powder debris from the building's interior and exterior grounds of the Site. The powder and debris from the exterior grounds, approximately 650 tons, has been disposed off site. The remaining powder and debris is material that was consolidated from inside the building. It is currently secured inside the building and it's ready for transportation and disposal.
- Consolidated, over packed and staged for disposal all of the waste liquids, polychlorinated biphenyl (PCB) containing capacitors, lead batteries, and elemental mercury discovered during the Removal Action.

Because additional funding was needed to consolidate and remove the additional powder, debris, and other hazardous wastes discovered during the removal action, on August 25, 2011, the EPAOSC temporarily shut down all work activities and demobilized equipment and personnel from the Site. The demobilization was temporary until additional funding was secured.

C. State and Local Authorities' Roles

MassDEP will continue to be involved with the Site.

The Town of Greenfield has found a company that will collect and recycle all of the asbestos-free wood pallets, and other non hazardous debris from the Site.

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

Based on Site conditions and information available on the hazardous substances present, the Site poses the following threats to public health, welfare, or 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)];

People work and live adjacent to the Site. The Site abuts residential and industrial properties. According to the 2000 census 2,420 people live within one mile radius. Within one mile are also a public school, and two nursing homes. The remaining wastes (chromium contaminated powder, waste liquids, PCB capacitors, lead batteries and elemental mercury) are currently staged for transportation and disposal, inside the building. They pose a contact threat to those who may enter the building.

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)];

Approximately 700 tons of chromium contaminated powder, in addition to drums containing waste liquids, PCB capacitors, lead batteries, and elemental mercury are currently staged for transportation and disposal, inside the building. This material is subject to temperature extremes which increases the likelihood of their release. Individuals who enter the Site may be exposed to these hazardous substances by direct contact. In the event of a fire or explosion, the potential for release of hazardous substances would be increased.

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

As indicated above, wind can cause chromium powder to migrate to the surrounding community. The drums can rupture and release their contents from exposure to the elements.

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

The building is abandoned and lacks functioning fire suppression equipment. In case of a fire, the wastes currently inside the building will become airborne and migrate to the surrounding areas.

The availability of other appropriate Federal or State response mechanisms to respond to the release [§300.415(b)(2)(vii)] MassDEP has indicated that due to other program priorities and staffing limitations, they do not have the resources currently available to address the Site.

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 Addendum, may present an imminent and substantial endangerment to public health, or welfare, or the environment.

Chromium- Breathing high levels of chromium (VI) can cause irritation to the lining of the nose, nose ulcers, runny nose, and breathing problems, such as asthma, cough, shortness of

breath, or wheezing. The concentrations of chromium in air that can cause these effects may be different for different types of chromium compounds, with effects occurring at much lower concentrations for chromium (VI) compared to chromium (III).

Skin contact with certain chromium (VI) compounds can cause skin ulcers. Some people are extremely sensitive to chromium (VI) or chromium (III). Allergic reactions consisting of severe redness and swelling of the skin have been noted.

The U.S. Department of Health and Human Services (DHHS), the International Agency for Research on Cancer (IARC), and the EPA have determined that chromium (VI) compounds are known human carcinogens. In workers, inhalation of chromium (VI) has been shown to cause lung cancer. Chromium (VI) also causes lung cancer in animals. An increase in stomach tumors was observed in humans and animals exposed to chromium (VI) in drinking water.¹

Mercury- The nervous system is very sensitive to all forms of mercury. Methyl mercury and metallic mercury vapors are more harmful than other forms, because more mercury in these forms reaches the brain. Exposure to high levels of metallic, inorganic, or organic mercury can permanently damage the brain, kidneys, and developing fetus. Effects on brain functioning may result in irritability, shyness, tremors, changes in vision or hearing, and memory problems. Short-term exposure to high levels of metallic mercury vapors may cause effects including lung damage, nausea, vomiting, diarrhea, increases in blood pressure or heart rate, skin rashes, and eye irritation. The EPA has determined that mercuric chloride and methyl mercury are possible human carcinogens.²

Polychlorinated Biphenyls (PCBs)- The most commonly observed health effects in people exposed to large amounts of PCBs are skin conditions such as acne and rashes. Studies in exposed workers have shown changes in blood and urine that may indicate liver damage. Few studies of workers indicate that PCBs were associated with certain kinds of cancer in humans, such as cancer of the liver and biliary tract. The Department of Health and Human Services (DHHS) has concluded that PCBs may reasonably be anticipated to be carcinogens. The EPA and the International Agency for Research on Cancer (IARC) have determined that PCBs are probably carcinogenic to humans.³

Lead- Lead can affect almost every organ and system in the body. The main target for lead toxicity is the nervous system, both in adults and children. Long-term exposure of adults can result in decreased performance in some tests that measure functions of the nervous system. It may also cause weakness in fingers, wrists, or ankles. Lead exposure also causes small increases in blood pressure, particularly in middle-aged and older people and can cause anemia. Exposure

¹ Agency for Toxic Substances and Disease Registry (ATSDR). *Tox FAQs Fact Sheet for Chromium*, September 2008. Toxicological Profile for Chromium. (Draft for Public Comment). Atlanta, GA: U.S. Department of Health and Human Services, Public Health Service

² Agency for Toxic Substances and Disease Registry (ATSDR). *Tox FAQs Fact Sheet for Mercury*, April 1998. Toxicological Profile for Mercury. Atlanta, GA: U.S. Department of Health and Human Services, Public Health Service

³ Agency for Toxic Substances and Disease Registry (ATSDR). *Tox FAQs Fact Sheet for Polychlorinated Biphenyls*, February 2001. Toxicological Profile for Polychlorinated Biphenyls. Atlanta, GA: U.S. Department of Health and Human Services, Public Health Service

to high lead levels can severely damage the brain and kidneys in adults or children and ultimately cause death. In pregnant women, high levels of exposure to lead may cause miscarriage. High level exposure in men can damage the organs responsible for sperm production.

The Department of Health and Human Services (DHHS) has determined that lead and lead compounds are reasonably anticipated to be human carcinogens and the EPA has determined that lead is a probable human carcinogen. The International Agency for Research on Cancer (IARC) has determined that inorganic lead is probably carcinogenic to humans and that there is insufficient information to determine whether organic lead compounds will cause cancer in humans.⁴

Volatile organic compounds (VOCs)-The VOCs detected include compounds such as but not limited to: acetone, toluene, and methyl tert butyl ether.

Acetone- Exposure to acetone results mostly from breathing air, drinking water, or coming in contact with products or soil that contain acetone. Exposure to moderate-to-high amounts of acetone can irritate the eyes and respiratory system, and make one dizzy. Very high exposure may cause one to lose consciousness⁵.

Toluene-Toluene may affect the nervous system. Low to moderate levels can cause tiredness, confusion, weakness, drunken-type actions, memory loss, nausea, loss of appetite, and hearing and color vision loss. These symptoms usually disappear when exposure is stopped. Inhaling high levels of toluene in a short time can make one feel light-headed, dizzy, or sleepy. It can also cause unconsciousness, and even death. High levels of toluene may affect the kidneys⁶.

Methyl tert butyl ether (MTBE)- Breathing small amounts of MTBE for short periods may cause nose and throat irritation. Some people exposed to MTBE while pumping gasoline, driving their cars, or working in gas stations have reported having headaches, nausea, dizziness, and mental confusion⁷.

V. PROPOSED ACTIONS AND ESTIMATED COSTS

A. Proposed Actions

1. Proposed action description

- Continue to secure the Site to prevent unauthorized access.

⁴ Agency for Toxic Substances and Disease Registry (ATSDR). *Tox FAQs Fact Sheet for Lead*, August 2007. Toxicological Profile for Lead. Atlanta, GA: U.S. Department of Health and Human Services, Public Health Service

⁵ Agency for Toxic Substances and Disease Registry (ATSDR). *Tox FAQs Fact Sheet for Acetone*, September 1995

⁶ Agency for Toxic Substances and Disease Registry (ATSDR). *Tox FAQs Fact Sheet for Toluene*, February 2001

⁷ Agency for Toxic Substances and Disease Registry (ATSDR). *Tox FAQs Fact Sheet for MTBE*, September 1997

- Continue the transportation and disposal the remaining wastes streams that are currently staged inside the building (chromium contaminated powder, waste liquids, PCB capacitors, lead batteries, and elemental mercury). All waste will be transported to EPA approved disposal facilities.
- Repair any response related damages.
- Demobilize all personnel and equipment from the Site.

2. Community relations

Upon approval of the Action Memorandum Addendum, the OSC will coordinate with the EPA Community Involvement Office to disseminate information regarding the remaining project elements to the impacted residents. Maintain the EPA OSC web site on the progress of the Removal Action. EPA will continue to work closely with the Town, and state officials as the project progresses.

3. Contribution to remedial performance

The cleanup proposed in this Action Memorandum Addendum 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

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

5. Applicable or relevant and appropriate requirements (ARARs)

Federal ARARs will be met to the extent practicable considering the exigencies of the situation. The OSC will coordinate with State officials to identify State ARARs, if any, and will meet, to the extent practicable, each ARAR identified in a timely manner.

6. Project schedule

Duration of the removal action activities shall be changed to from the original 6 months to 12 months from the day of its commencement.

B. Estimated Costs

COST CATEGORY	CURRENT CEILING	PROPOSED INCREASE	PROPOSED CEILING
<i>REGIONAL REMOVAL ALLOWANCE COSTS:</i>			
ERRS Contractor	\$600,000.00	\$200,000.00	\$800,000.00
Interagency Agreement	\$0.00	\$0.00	\$0.00
<i>OTHER EXTRAMURAL COSTS NOT FUNDED FROM THE REGIONAL ALLOWANCE:</i>			
START Contractor	\$100,000.00	\$00.00	\$100,000.00
Extramural Subtotal	\$700,000.00	\$200,000.00	\$900,000.00
Extramural Contingency (10%)	\$70,000.00	\$00.00	\$70,000.00
TOTAL, REMOVAL ACTION CEILING	\$770,000.00	\$200,000.00	\$970,000.00

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

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

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 \$970,000 (extramural costs) + \$75,000 (EPA intramural costs) = \$1,045,000 x 1.3284 (regional indirect rate) = \$1,388,178⁸.

⁸Direct Costs include direct extramural costs \$970,000 and direct intramural costs \$75,000. Indirect costs are calculated based on an estimated indirect cost rate expressed as a percentage of site specific costs [32.84% x \$1,045,000], 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.

IX. RECOMMENDATION

This decision document represents the selected removal action for the Former Bendix Property Site in Greenfield, MA, developed in accordance with CERCLA, as amended, and 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 as 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);

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)];

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

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

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 \$970,000. Of this total, no more than \$800,000 comes from the Regional removal allowance.

APPROVAL:  _____

DATE: 9/15/11

DISAPPROVAL: _____

DATE: _____