



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION I

Enforcement Confidential Materials Attached

MEMORANDUM

DATE: December 20, 2010

SUBJ: Request for a Removal Action at the Former Bendix Property Site,
Greenfield, Massachusetts - **Action Memorandum**

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

THRU: Steven R. Novick, Chief
Emergency Response and Removal Section II

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

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

I. PURPOSE

The purpose of this Action Memorandum is to request and document approval of the proposed removal action at the Former Bendix Property Site, (the Site), which is located at 180 Laurel Street, Greenfield, Franklin County, Massachusetts. Hazardous substances, primarily, friable asbestos, asbestos-containing material (ACM), chromium, and volatile organic compounds (VOCs) 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. Site Description

1. Removal site evaluation

Due to the conditions and potential threat of release of the hazardous materials from the Site, on July 20, 2010, the EPA Brownfields Program referred the Site to the Emergency Planning and Response Branch (EPRB) for further investigation.

On October 14, 2010, EPA OSC, Athanasios Hatzopoulos conducted a reconnaissance to identify and determine if the Site met the National Contingency Plan (NCP) criteria. Present from the Town of Greenfield (the Town) were Eric Twarog, Director of Planning and Economic Development, Bob Pyers, Assistant to the Mayor for Economic Development and Marketing, the Town of Greenfield Fire Department, and Ben Fish from the Massachusetts Department of Environmental Protection (MassDEP). During the reconnaissance, the OSC noted the following: abandoned building that lacks fire suppression; widespread possible asbestos contamination within the building; approximately 350 metal and plastic various size containers across the Site grounds; evidence of trespassers; and high potential for a fire due to the excessive stockpiled wooden pallets within the building as well as the Site grounds. After the reconnaissance, the OSC decided that the Site conditions warrant that a further investigation be conducted as soon as possible.

On November 4, 2010, the EPRB and its Technical Assessment and Response Team, Weston Solutions, Inc., conducted a Preliminary Assessment and Site Investigation (PA/SI). The PA/SI included a walkthrough of the entire Site, photo documenting the Site conditions and collecting solid and liquid samples to be analyzed for asbestos content, volatile and semivolatile organic compounds (VOCs and SVOCs), inorganic contaminants, corrosivity, flammability, and polychlorinated biphenyls (PCBs). The hazardous substances pollutants or contaminants found within the media collected are as follows but not limited to:

MEDIA	HAZARDOUS SUBSTANCES OR POLLUTANTS OR CONTAMINANTS	MAXIMUM CONCENTRATION	APPLICABLE MassDEP SOIL CLEANUP STANDARDS MCP S-1
Pipe insulation from the overhead water and heat piping systems that has disintegrated and fallen on the floors	Friable asbestos (amosite and chrysotile)	>1%	
Liquids in drums located on the exterior grounds of the Site	Volatile organic compounds (VOCs)		
	Acetone	67 mg/Kg	6 mg/Kg
	Toluene	150 mg/Kg	30 mg/Kg
	Methyl Tert Butyl Ether	69 mg/Kg	.1 mg/Kg
White powder in cubic yard bags	Inorganic contaminants (chromium)	370 mg/Kg	30 mg/Kg

The results of the PA/SI are documented in the report entitled Removal Program Preliminary Assessment/Site Investigation for the Former Bendix Property Site, Greenfield, MA., submitted

by Weston Solutions, Inc. Region I Superfund Technical Assessment and Response Team III
December 2010.

On November 18 and 19, 2010, the MassDEP and the Town of Greenfield, by mail, formally requested EPA to have the EPRB conduct a removal action due to the concerns listed above.

The PA/SI was concluded and based on Site conditions and analytical results, a time critical removal action was recommended in a closure memorandum dated December 15, 2010.

2. Physical location

The Former Bendix Property Site is located at 180 Laurel Street, Greenfield, Franklin County, Massachusetts (Longitude/Latitude 42° 34' 36.85"N, 72° 37' 4.71"W). The Site is more fully described as Map R41 Lot 2 in the Town of Greenfield Tax Assessor's Office. The Site is in a residential area and is zoned "GI-General Industrial." Residential properties and a public storage building abut it to the north, interstate 91 to the west, a cemetery and residences to the south, and woodlands followed by residential properties are located east.

3. Site characteristics

The Site is an abandoned industrial facility that was primarily used for metalworking, including the milling and grinding of steel drill bits and taps. The Treadwell Tool Co. built the facility in 1961. In 1982, Bendix Corp., a predecessor to Honeywell International Inc. (Honeywell), purchased the property and sold it to B.C. Acquisition, a subsidiary of Besly Products, in 1984. Besly Products merged with Allied Signal Inc., which is known as Honeywell International, Inc., (Honeywell). Besly Products operated the Site from 1984 to 1998, when it was sold to Repal Inc., a wood pallet storage and processing company. In June of 2008 the Town took the property for back taxes.

The Site currently consists of a single parcel of land totaling 17.3 acres and is accessed via a paved driveway at the end of Laurel Street. The Site is partially fenced, inactive and has been abandoned for approximately 10 years. The land is developed with two buildings. The first is an approximately 94,000 square-foot (sq ft) single-story, slab on grade concrete block industrial building that is located along the south-central region of the Site. This building is in a dilapidated state and has a structurally poor roof, with many openings from years of neglect. The second building is an approximately 700 sq ft concrete block garage-style building. It is currently used by Honeywell to operate a groundwater pump and treatment system to control the migration of trichloroethene (TCE) contaminated groundwater. The TCE-contaminated groundwater resulted from many years of the former operators disposing spent TCE and other grinding fluids in a drywell.

Approximately 85% of the 94,000 sq ft building is filled with various materials including wood pallets (stacked from 5 to 15 ft high or to ceiling height), other bins containing building debris and/or plastic LEGOS, machinery, drums and various other size containers, and numerous ½ cubic yard plastic bags containing talcum powder. The Greenfield Fire Department through laboratory testing identified the powder as talcum powder. The buildings inoperative heat and

water piping system is currently on the ceiling and walls, and is wrapped by asbestos containing insulating wrap. Because of the deterioration of the roof, severe water damage was observed throughout the entire building. This has caused a great deal of the pipe wrap to fall on the floors and cross-contaminate whatever material exists directly underneath. Approximately 380 discarded metal and/or plastic 55 gallon drums, and other various sizes containers, exist throughout the entire (interior/exterior) grounds of the Site.

General public access is unrestricted as evidenced by the presence of burned debris piles within the building, and graffiti inside and outside of the building. The Greenfield Fire Department stated that in the past, they have had three fires within the building.

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

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

Hazardous substances involved in the release or threat of release at the Site include, but are not limited to: friable asbestos and ACM within the building, chromium contamination within the cubic yard bags containing the white talcum like powder, and VOCs in drums. The areas that were sampled are exposed to the elements. Friable asbestos and chromium may pose a health threat to anyone walking on, traveling by, or living near the Site. Because the building roof has openings, the threat of release of the friable asbestos and chromium to adjacent areas and other receptors exists, particularly during adverse weather conditions. In addition, the building is abandoned and lacks a functioning fire suppression system. In the event of a fire, aforementioned substances will become airborne and migrate to the surrounding areas. The VOCs were detected in drums that are abandoned on the exterior grounds of the Site. The Site currently has a partial fence around its perimeter. However, the Town officials have stated that the Site is being accessed by unauthorized individuals.

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

EPA has not conducted previous removal actions at the Site. However, the EPA's Brownfields program had funded a Phase I Environmental Site Assessment that was performed by Weston & Sampson Engineers, Inc, in March 2010.

C. State and Local Authorities' Roles

1. State and local actions to date

The MassDEP has been involved with the Site since the early 80s. Governed by the Massachusetts General Laws Chapter 21E, Besly Products in 1983/1984, conducted soil and groundwater investigations resulting in the detection of TCE in the soil and groundwater. The source of the TCE contamination appeared to be the disposal of TCE in the drywell as well as from the activities involving a TCE aboveground storage tank (AST). The AST, drywell and 742 tons of contaminated soils were excavated and disposed of in 1984. Subsequently, subsurface investigations were performed from 1984 to 1991, and in 1991 a groundwater pump and treatment system was installed to control the migration of TCE-contaminated groundwater, which had reached 3,200 feet down gradient at one point in time.

In April 2000, Honeywell filed a Class C Remediation Action Outcome (RAO) Statement with the MassDEP. In addition Honeywell filed a Remedial Action Plan, for the groundwater recovery and treatment system, including the semi-annual sampling of groundwater and surface water. Currently, Honeywell is conducting pump and treat activities on the TCE contaminated groundwater.

2. Potential for continued State/local response

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 debris from the Site.

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

The presence of friable asbestos and chromium in the building constitutes a potential threat to public health. The roof is in poor structural condition and portions of it are missing. Currently there is a high potential for release of asbestos fibers and chromium powder by air suspension, especially during dry periods. Exposure to cycles of wetting and drying will hasten degradation, and thereby the potential to become airborne exists. The building is abandoned and lacks functioning fire suppression equipment. In case of a fire, asbestos and chromium will become airborne and migrate to the surrounding areas.

The drums are located on the exterior grounds of the Site and inside the building. They are unsecured and are exposed to the elements.

General public access is unrestricted as evidenced by the presence of burned debris piles within the building in addition to mattresses inside the building, and graffiti inside and outside of the building. The abandoned Site may act as an attractive nuisance, bringing unauthorized individuals in close contact with the hazardous substance present.

At this time, neither the state or local authorities have the resources to address the conditions at the Site.

A. Threats to Public Health or Welfare

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. There is also evidence of trespassing such as the graffiti on the inside and outside walls of the buildings in addition to mattresses on the inside of the building. The Site abuts residential 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.

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 380 drums and various other containers are located on the exterior grounds of the Site and in the building. At this time the drums/containers are not secured and are exposed to the environment. They are 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 friable asbestos and chromium 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, friable asbestos and chromium from the interior of 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

Asbestos- Asbestos fibers may enter the body by inhalation or ingestion. Breathing asbestos can cause asbestosis, a buildup of scar-like tissue in the lungs and in the membrane that surrounds the lungs. Symptoms of asbestosis include shortness of breath, coughing, and sometimes heart enlargement. Asbestosis is a serious disease that can lead to disability or death. Asbestos is also a known human carcinogen. Inhalation of high levels of asbestos can cause cancer of the lungs

tissue itself and mesothelioma, a cancer of the membrane that surrounds the lung and other internal organs.¹

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.²

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 consciousness³.

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 kidneys⁴.

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

¹ Agency for Toxic Substances and Disease Registry (ATSDR), U.S. Department of Health and Human Services, Public Health Service, *Tox FAQs Fact Sheet for Asbestos*, September 1996

² 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

³ Agency for Toxic Substances and Disease Registry (ATSDR), *Tox FAQs Fact Sheet for Acetone*, September 1995

⁴ Agency for Toxic Substances and Disease Registry (ATSDR), *Tox FAQs Fact Sheet for Toluene*, February 2001

cars, or working in gas stations have reported having headaches, nausea, dizziness, and mental confusion⁵.

V. PROPOSED ACTIONS AND ESTIMATED COSTS

A. Proposed Actions

1. Proposed action description

The actions required to mitigate the threats outlined herein, are given below. At this time, indications are that the PRP will not perform this work. The proposed actions will protect public health, welfare and the environment.

- Conduct a Site walk with the Emergency Rapid Response contractor (ERRS).
- Secure the Site to prevent unauthorized access. Site security will be provided during non-working hours to ensure adequate Site surveillance until the waste is transported off site. Should an extended period of storage be required, some other means of securing the Site may be implemented.
- Evaluate the structural integrity of the roof to determine stability and potential for collapse.
- Stabilize any roof areas that are structurally unsafe to enable contractor personnel to conduct the removal action.
- Conduct the removal and disposal of asbestos and asbestos contaminated material. The process shall include provisions for onsite decontamination of larger debris, and segregation of asbestos-free debris from inside the building. Asbestos waste will be documented, and shipped off site for disposal at EPA-approved facilities.
- Perform additional sampling on the talcum powder bags to verify the extent of chromium contamination. Collect and dispose to EPA approved facilities any material that contains chromium at levels exceeding the MassDEP's applicable MCPS-1 removal standards.
- Collect and stage all of the drums/containers that exist throughout the Site. Inspect their contents and conduct hazardous categorization. Containerize and ship offsite any hazardous materials found, to EPA-approved facilities.
- Conduct a visual inspection of the building for mercury containing switches. Containerize and ship offsite, any mercury found to EPA-approved facilities.

Where practicable, final disposal of waste from the Site will utilize an alternative

⁵ Agency for Toxic Substances and Disease Registry (ATSDR), *Tox FAQs Fact Sheet for MTBE*, September 1997

technology to landfilling. The specific treatment and disposal technology will depend on factors such as the quantity and hazardous characteristics, as well as the availability of alternate technologies.

2. Community relations

Upon approval of the Action Memorandum, the OSC will coordinate with the EPA Community Involvement Office to disseminate information regarding the project to the impacted residents. Initiate and maintain an 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 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 6 months from the day of its commencement.

B. Estimated Costs

COST CATEGORY		CEILING
<i>REGIONAL REMOVAL ALLOWANCE COSTS:</i>		
ERRS Contractor		\$600,000.00
<i>OTHER EXTRAMURAL COSTS NOT FUNDED FROM THE REGIONAL ALLOWANCE:</i>		
START Contractor		\$ 100,000.00
Extramural Subtotal		\$700,000.00
Extramural Contingency	10%	\$ 70,000.00
TOTAL, REMOVAL ACTION CEILING		\$770,000.00

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 \$770,000 (extramural costs) + \$75,000 (EPA intramural costs) = \$845,000 X 1.3151 (regional indirect rate) = \$1,111,259⁶.

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)];

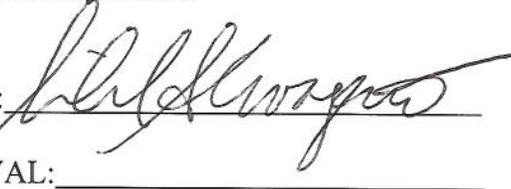
Weather conditions that may cause hazardous substances or pollutants or contaminants to migrate or be released [§300.415(b)(2)(v)];

⁶Direct Costs include direct extramural costs \$770,000 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 [31.51% x \$845,000], 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.

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 \$770,000. Of this total, no more than \$670,000 comes from the Regional removal allowance.

APPROVAL:  _____

DATE: 2-22-2011

DISAPPROVAL: _____

DATE: _____