UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 1
JOHN F. KENNEDY FEDERAL BUILDING
BOSTON, MASSACHUSETTS 02203-0001

Enforcement Confidential Materials Attached

MEMORANDUM

DATE:

SUBJ: Request for a Removal Action at Bargaineer Center, Superfund Site, Brockton, Plymouth County, Massachusetts -- **ACTION MEMORANDUM.**

FROM: Athanasios Hatzopoulos, On-Scene Coordinator (OSC)

TO: Patricia L. Meaney, 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 Bargaineer Center Superfund Site (the Site), which is located in Plymouth County, Brockton, Massachusetts. Hazardous substances, pollutants and contaminants present in drums and in the soils, if not addressed by implementing the response actions selected in this Action Memorandum, will continue to pose a threat of release to 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 $50,000 warrant authority.

II. SITE CONDITIONS AND BACKGROUND

CERCLIS Identifier: MA0002326502
SITE Identifier: 015W
Category of Removal: Time Critical

A. Site Description

1. Removal Action Evaluation

In late 1996, the City of Brockton applied to EPA-New England's, Brownfields Program for assistance in conducting an environmental site assessment at a property located at 70 East Battles Street in Brockton, MA, known as the Bargaineer Center Site.

In October 1997, the Brownfields program conducted a Brownfields Targeted Site Assessment (BTSA) to characterize known or suspected source areas for the potential presence of oil and/or hazardous materials. The BTSA revealed that several areas of the Site are contaminated with elevated levels of polycyclic aromatic hydrocarbon compounds (PAHs), polychorinated biphenyls (PCBs), asbestos, and metals. The contaminants in the soil are: 1) PAHs: benzo(a)anthracene, benzo(b)fluoranthene, benzo(k)fluoranthene, benzo(a)pyrene, chrysene, dibenzo(a,h)anthracene, indeno(1,2,3-cd)pyrene.; 2) PCBs: Aroclors1260, 1254 and 1016; 3) friable asbestos present in materials, most notably in the form of pipe and boiler insulation, debris, and insulation located in conduits; 4) metals: arsenic, lead. Two underground storage tanks (approximate capacity 6,000 gallons) were also tested. The analysis revealed the presence of PCBs. The BTSA also reported that several drums and other containers with unknown contents are scattered throughout the Site. The BTSA was concluded and the results are documented in the report entitled Bargaineer Center Site, Brownfields Targeted Site Assessment MA DEP RTN No. 4-0685 dated March 3, 1998 (Draft).

The concentration of substances detected at the Site are above the Massachusetts Department of Environmental Protection's (MADEP) Soil Category Standards. In October, 1997, based on observations during the BTSA, the Brownfields program referred the Site to the Emergency Planning and Response Branch (EPRB) for further investigation.

On November 4, 1997, the EPRB conducted a Preliminary Assessment/Site Investigation (PA/SI). The PA/SI included sampling the contents of the drums and buckets for VOCs, PCBs, pesticides, metals, cyanide, PAHs, flashpoint, pH, and oil identification as well as sampling the soils for PCBs . Based on this investigation, EPA documented that the drums and buckets contain flammable substances, several areas of the Site soils are contaminated with lead and PCBs, and chrysotile asbestos is present in the former boiler room building and throughout the Site. The results of the PA/SI are documented in the report entitled Removal Program Preliminary Assessment/Site Investigation for the Bargaineer Center Site, Brockton, Massachusetts, dated January 1998.

The PA/SI was concluded and based on Site conditions and preliminary analytical results, a time critical removal action was recommended in a closure memorandum dated January 23, 1998. However, due to limited funding levels, sites that held a greater priority in terms of risk or endangerment were addressed. Funding became available, and the ability to address conditions at this Site is now possible.

2. Physical Location

The Bargaineer Center Site is located in a residential/commercial area at 70 Battles Street, Brockton, MA, (Long. 71° 00' 99"W, Lat. 42° 05' 89"N). According to the Brockton Assessors Office, the Site is listed as plots 164-1(North Montello Street) and 164-2 (245 North Montello Street). The Site is bounded to the north by two vacant properties owned by the City, to the south by a paper recycling transfer station, to the east by Trout Brook and Tukis Park, and to the west by Massachusetts Bay Transportation Authority (MBTA) owned property and the MBTA rail line. The residential population within a one-half mile is estimated to be greater than 1,000 persons. The nearest residence is approximately 150 feet west of the Site. Saint Edwards, a parochial elementary school, is located approximately 400 feet west of the Site across Montello Street.

3. Site Characteristics and Operations History

Site Characteristics

The Site is a residential/commercial property comprised of approximately 10.72 acres with a roughly rectangular configuration. There is a gate at the entrance to the Site restricting only vehicular traffic. General public access is unrestricted as evidenced by the presence of sleeping mattresses and graffiti in the two brick structures that remain. One structure is the former mill boiler room which has several smaller rooms. The other is a brick smokestack . They are located on the western portion of the Site adjacent to the MBTA rail line. A fire in 1989 destroyed two other one-story brick structures, which occupied the southwestern corner of the property. Two concrete foundations (one filled with debris from the demolished building) remain where the buildings were formerly located. A small foundation associated with a former production water well is located in the southeast corner of the property near wetlands associated with nearby Trout Brook. An approximately 10-feet by 20-feet concrete basin (a former clarifier) is located on the eastern portion of the Site and is surrounded by overgrown vegetation. Areas near the existing building are generally level and partially paved. Several piles of demolition debris, metal cuttings, tree debris and construction materials are scattered throughout the entire Site. The eastern Site areas are characterized by a steep embankment which leads downward approximately 30 feet to Trout Brook.

Operations History

Historical information indicates that the Site was undeveloped prior to 1909. Early operations at the Site included shoe and textile manufacturing

by a number of companies in succession. During the 1940s and 1950s, storage of electrical transformers took place on the Site, reportedly by one of the last textile companies known to have operated at the Site. In the 1960s rocket launcher manufacturing operations were conducted at the Site. In 1972 the Battle Street Realty Trust, purchased the Site, and operations (later known as the Bargaineer Center) started involving scrap metal storage and recycling. During the 1980s all operations ceased. City officials stated that several fires occurred around that time within the central and southern buildings, and that the owners had been cited for both health and building code violations. On January 29, 1989, all of the Site buildings except the boiler room were destroyed by a fire. The City of Brockton foreclosed on the property in 1994. Currently the City stores tree stumps and brush on the property.

4. Release or Threatened Release into the Environment of a Hazardous Substance or Pollutant or Contaminant

Hazardous substances/waste at the Site include, but are not limited to, flammable liquids (VOCs), PCBs, lead, arsenic, asbestos, and PAHs (see table 1). The concentrations listed are the highest ones reported for that particular compound. The soil, drums and other substances that were sampled are exposed to the elements and are either at or near the soil surface.

TABLE 1

MEDIA	HAZARDOUS SUBSTANCE	CONCENTRATION IN DRY WEIGHT ppm	MADEP SOIL CATEGORY STANDARDS ppm	EPA CFR
soil	lead	1,280	300-600	
	arsenic	68.2	30	
soil	PCBs	438,000	2	
drums	flammables	61.9°		<140° CFR 261.21
drums	VOCs			
	ethylbenzene	29,400	80-2,500	
	toluene	273,000	90-2,500	
	xylenes	146,000	500-2,500	
soil	PAHs			
	benzo(a) anthracene	23.6	.7	
	benzo(b) fluoranthene	21.1	.7	
	benzo(k) fluoranthene	20.9	.7	
	chrysene	19.4	.7	
	dibenz(a,h) anthracene	6.4	.7 - .8	
	indeno(1,2,3-cd) pyrene	7.8	.7	
boiler, pipe insulation, floors, debris	chrysotile asbestos	15%		>1%

5.NPL Status

The Site is currently not listed on the National Priorities List. Information concerning this Site collected during the preliminary assessment/site investigation was developed in conjunction with the Technical Support and Site Assessment Section.

Information has also been shared with the State of Massachusetts Department of Environmental Protection.

Actions To-Date

1. Previous Actions

According to MADEP records, the Brockton Fire Department reported that oil was released from two concrete bunkers on the Site as a result of firefighting water run-off during the 1989 fire. The trustees of the Battle Street Realty Trust were issued a Notice of Responsibility (NOR) on February 10, 1989 by MADEP for the release/threat of oil. The owners refused to take responsibility, and MADEP authorized Jet-line Services to undertake emergency oil containment measures. Nineteen bags of oil-soaked sorbent and debris were subsequently taken from the Site as a result of containment efforts by Jet-line. No further details regarding the release were found; however, oil was observed in the bunkers during the BTSA activities.

In 1993, the Bargaineer Center Site was placed on the Massachusetts Contingency Plan (MCP) Transition Sites List. Based on its listing date, a Licenced Site Professional (LSP) Evaluation Opinion for the Site was scheduled to have been completed by August 2, 1996. To date, no MCP-related transmittals are known to have been completed.

2. Current Actions

MA DEP has indicated that, due to other ongoing projects and commitments, the State does not currently have the resources to address the Site and concurred with EPA that it was appropriate to initiate a response action. The State will provide assistance by coordinating with local officials and identifying State environmental regulations for consideration as applicable or relevant and appropriate (ARARs) to the proposed action.

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

Threats to Public Health or Welfare

The Bargaineer Center Site contains hazardous substances in the soils, flammable liquids in drums and other containers as well as debris that is scattered throughout the Site. The contaminants (see Table 1 for the highest concentrations) of concern are: PCBs, VOCs, PAHs, asbestos, and metals such as lead and arsenic.

PCBs- Exposure to PCBs pose a variety of health impacts. PCBs are classified as a B2 probable human carcinogen, are liver toxins and possibly cause peripheral neuropathy (nerve disease in extremities).

PCBs have been found to cause rashes (edema of face and hands, simple erythematous eruptions with pruritus, acute eczematous contact dermatitis, and chloracne) subcutaneous edema and hyperpigmentation of skin and mucous membranes; excessive secretions from the eyelids (hyperactive Meibomian glands; conjunctivitis; and edema of the eyelids); formation of keratin cysts in and hyperplasia of epithelial layer of hair follicles; increase in liver size (hepatic hypertrophy); decreases in number of red blood cells and hemoglobin; serum hyperlipidemia; and increases in numbers of white blood cells in the body (leukocytosis).

Various studies have found that exposure to PCBs may cause irregular menstrual cycles, and increased PCB serum levels may cause pathological pregnancies (toxemia of pregnancy, and abortions) stillbirths, underweight births, etc. Mother's milk contaminated with PCB's appears to be a source of exposure for infants. Developmental abnormalities have been observed in PCB-intoxicated infants.

PAHs- Several of the PAHs, including the ones in table1, have caused tumors in laboratory animals when they breathed these substances in the air, when they ate them, or when they had long periods of skin contact with them. Studies of people show that individuals exposed to breathing or skin contact for long periods to mixtures that contain PAHs and other compounds can also develop cancer.

The Department of Health and Human Services (DHHS) has determined that benzo(a)anthracene, benzo(b)fluoranthene, benzo(k)fluoranthene, dibenz(a,h)anthracene and indeno(1,2,3-c,d) are known animal carcinogens. EPA has also determined that they are probable human carcinogens.

LEAD- Lead is a probable human carcinogen, since it has been proven to cause kidney cancer in laboratory animals. Exposure to high levels of lead can cause brain and kidney damage. Lead exposure may increase blood pressure in middle-aged men and has been known to damage parts of the male reproductive system. Lead is also well known for its effects on young children, who are more likely to be exposed to lead due to hand-to-mouth activity. In children, lead exposure has been shown to decrease intelligence (IQ) scores, slow their growth, and cause hearing problems. If a pregnant woman is exposed to lead, it can be carried to the unborn child and cause premature birth, low birth weight, or even abortion.

ASBESTOS- Exposure to high levels of asbestos has caused workers who breathed in asbestos to develop a slow buildup of scar-like tissue in the lungs and in the membrane that surrounds the lungs. This scar-like tissue does not expand and contract like normal tissue and so breathing becomes difficult. Blood flow to the lung may also be decreased and this causes the heart to enlarge. This disease is called asbestosis. This is a serious disease and can eventually lead to disability or death to people exposed to high amounts of asbestos. The Agency for Toxic Substances and Disease Registry (ATSDR) all the mineral forms of asbestos to be known human cancer-causing substances with a prolonged latency of between 10 and 40 years between exposure and the onset of disease. The DHHS, EPA, and the International Agency for Research on Cancer have determined that asbestos is a human carcinogen.

ARSENIC- Inorganic arsenic is a human poison. The DHHS has determined that arsenic is a known carcinogen. Breathing inorganic arsenic increases the risk of lung cancer. Ingesting inorganic arsenic increases the risk of skin cancer and tumors of the bladder, kidney, liver and lung.

VOCs- VOCs are flammable liquids.
A serious health concern with toluene is its effect on the brain. It can cause headaches, confusion, and memory loss. If one is exposed to a large amount of toluene in a short time such as, deliberately sniffing paint or glue, that person will feel first feel light headed. If exposure continues, the person can become dizzy, sleepy or unconscious or even die. Repeated breathing of toluene may permanently damage the brain, speech, vision, or hearing, loss of muscle control, loss of memory, poor balance, and decreased mental ability. Some of these changes may be permanent. If women deliberately breath in large amounts of toluene during pregnancy, their babies can have neurological problems and retarded growth and development.

People exposed to low levels of ethylbenzene in the air for short periods of time have complained of eye and throat irritation. Persons exposed to

higher levels have shown signs of more severe effects as decreased movement and dizziness.

Exposure to xylenes can be from inhalation, skin absorption, ingestion or skin and/or eye contact. Xylenes affect the brain. Xylenes symptoms can cause irritation to the eyes, skin, nose and throat. It can cause dizziness, excitement, drowziness, incoordination, staggering, corneal vacuolization, anorexia, nausea, vomiting, abdominal pin, and dermatitis. Xylenes at very high levels can cause unconsciousness and even death at very high levels.

IV. ENDANGERMENT DETERMINATION

Actual or threatened releases of hazardous substances at or 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.

"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 are passing by and work adjacent to the Site every business day. There is also evidence from graffiti and mattresses that people are using the Site as living quarters. The area of contamination is immediately across Saint Edwards, a parochial elementary school that is located approximately 400 feet west of the Site across Montello Street. The residential population within a one-half mile is estimated to be greater than 1,000 persons. The nearest residence is approximately 150 feet west of the Site. .

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

Several natural resource areas are located within a 500-foot radius of the Site. Trout Brook is located adjacent to eastern portions of the Site. It is designated as a perennial stream, and freshwater wetlands are located along stretches passing adjacent to the Site. Portions of Tukis Park, located within 500 feet of the Site boundary to the east of Trout Brook, are designated as protected open space area.

"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)];

Based on preliminary inspections there are drums and pails at the Site containing flammable liquids as well as electrical transformers leaking PCB dielectric fluid. If these above mentioned are not removed, the drums may catch fire and the transformers will continue to corrode impacted by the freeze/thaw cycles which could damage the component casings' structural integrity and cause PCB contaminated fluid to be released.

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

As indicated above, drums, pails and electrical components containing PCBs on Site may be subject to weathering (e.g., freeze/thaw cycles) which could impact the structural integrity of the casing resulting in a release of PCBs and VOCs into the environment. In addition, the contaminants in the soils (PCBs, PAHs, lead, arsenic) and the asbestos in the building are subject to migration via wind or erosion.

"The availability of other appropriate federal or state response mechanisms to respond to the release" [300.415(b)(2)(vii)];

MA DEP has indicated that due to other program priorities and staffing limitations, it does not have the resources currently available to address the Site.

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 Potentially Responsible Parties (PRPs) will not perform this work. The proposed actions will protect public health, welfare and the environment.

1) The Site will be secured 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.

2) An extent of contamination survey will be conducted to further characterize the Site and identify the various waste streams (i.e, drums, pails, asbestos, highly contaminated soil, leaking and intact electrical components, etc.).

3) Prevent contact with contaminated surface soils by implementing control measures that may include: a) limited excavation and offsite disposal of contaminated surface soils at EPA-approved disposal facilities; b) installation of a temporary cover system (cap) over the contaminated surface soils or a combination of the excavation and the installation of a cap; c)evaluate asbestos exposure to the environment and perform either removal or limited containment according to concentration levels.

The control measures will be determined based on the extent of surface soil contamination.

4) Drums, containers and/or debris contaminated with or containing hazardous substances will be sampled and repackaged as needed, categorized, staged, manifested, and shipped off-site for appropriate re-use or disposal at EPA-approved facilities.

Staged hazardous waste may be solidified on-site to meet disposal criteria. All wastes will be staged in a secure area on-site while awaiting shipment to CERCLA off-site disposal facilities.

Depending on anticipated storage duration prior to shipment for ultimate disposal, the OSC will determine whether waste will be

staged on-Site or shipped to a properly permitted temporary storage facility. Waste staging options will be evaluated based on cost.

Where practicable, final disposal of waste from the Site will utilize an alternative technology to land filling. 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. Contribution to Remedial Performance

Performing this removal action will serve to protect public health and the environment by eliminating the potential for further release of hazardous substances found at the Site. Removal of the waste from the Site is consistent with source term objectives, preventing further contamination of groundwater and wetlands and would contribute and be consistent with the performance of any remedial action that may be undertaken at a later date.

3. Applicable or Relevant and Appropriate Regulations

The cleanup standards, standards of control, and other substantive requirements that have been identified to-date, are listed below, and are applicable within the confines of EPA Publication 540/P-91/011, "Superfund Removal Procedures: Guidance on the Consideration of ARARs During Removal Actions."

The OSC will coordinate with State officials to identify additional State ARARs, if any, and determine which are appropriate and practicable with respect to the exigencies of this project.

Federal

Resource Conservation and Recovery Act (RCRA)

40 CFR 260-272: Hazardous Waste Management System

Toxic Substances Control Act (TSCA)

40 CFR 761: Polychlorinated Biphenyls (PCBs) Manufacturing, Processing, Distribution in Commerce, and use Prohibitions.

State

Hazardous Waste Management Regulations

B. Estimated Costs and Schedule

The OSC's (independent government) estimate of the cost associated with carrying out the proposed actions outlined above are given below. The action is anticipated to be complete within one year.

Extramural Costs:

Regional Allowance Costs	
ERCS	$ 635,000
Other Extramural Costs	
START	$ 95,000
Subtotal	$ 730,000
Extramural Cost Contingency (25% Rounded up to the nearest thousand)	$ 182,500
TOTAL, EXTRAMURAL COSTS	$ 912,500

Intramural Costs:

Direct and Indirect	$150,000
Total Project Ceiling	**$1,062,500**

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

In the absence of the removal action described herein, conditions at the Bargaineer Center Site can be expected to remain unaddressed, and threats associated with the hazardous substances will continue to pose a threat of further release.

VII. OUTSTANDING POLICY ISSUES

The Bargaineer Center Site is one of the Region's Targeted Site Assessment sites under the Brownfields Program. Conditions at the Site now warrant a removal action. Through a cooperative effort between the Removal Program and the Brownfields Program, EPA-New England can protect human health and the environment while helping to make it possible for reuse and redevelopment of this property, which is a high priority for the City of Brockton. This Site at which a removal action will be conducted will continue to should serve as a model on how the programs can work cooperatively in addressing contamination and enabling reuse of abandoned, blighted properties.

VIII. ENFORCEMENT

ATTACHED TO THIS DOCUMENT - FOR INTERNAL DISTRIBUTION ONLY

IX. RECOMMENDATION

This decision document represents the selected removal action for the Bargaineer Center Site, 70 East Battles Street, Brockton, MA. It was developed in accordance with CERCLA, as amended, and is not inconsistent with the National Contingency Plan (NCP). The basis for this decision will be documented in the Administrative Record to be established for this Site.

Because conditions at the Bargaineer Center Site meet the criteria set out in the NCP due to the presence of:

"Actual or potential exposure to nearby human populations, animals, or the food chainfrom 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)];

"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 you approve $1,062,500.00 to initiate the removal action proposed above, of which as much as $793,750.00 is from the EPA-New England removal allowance.

APPROVAL: Patricia Meaney DATE: 9/25/98

DISAPPROVAL:_____ DATE:_____