UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
NEW ENGLAND - REGION I
1 CONGRESS STREET, SUITE 1100 - HBR
BOSTON, MA 02114-2023

Enforcement Confidential Materials Attached

MEMORANDUM

DATE: February 14, 2003

SUBJECT: Request for a Removal Action at the Wells G & H Site (Olympia Property), Woburn, Middlesex County, Massachusetts - **ACTION MEMORANDUM**

FROM: Frank Gardner, On-Scene Coordinator
Site Evaluation and Response Section II

THROUGH: Steven R. Novick, Chief
Site Evaluation and Response Section II

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

TO: Richard Cavagnero, Acting 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 Wells G&H Site (the site), which is located in Woburn, Middlesex County, Massachusetts. The Olympia Property source area (Olympia Property), the focus of this removal action, is a 21-acre property located at 60 Olympia Avenue and within the boundaries of the Wells G & H Superfund Site. Hazardous substances present in surface and subsurface soils, 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 warrant authority.

II. CONDITIONS AND BACKGROUND

CERCLIS Identifier: MAD980732168 Site Identifier: 0146
Category of Removal: Time-Critical

A. Site Description

1. Removal Site Evaluation

In a memorandum dated July 23, 2002 the remedial program notified the Emergency Planning and Response Branch (EPRB) of the presence of high levels of contaminants in surface soils and subsurface soils acting as an ongoing source of ground water contamination at this site and requested that a time critical removal action be undertaken. On August 14, 2002, EPA initiated a Preliminary Assessment/Site Investigation (PA/SI) which included walking the site with the remedial project manager, reviewing the site file, and meeting with the entire remedial case team. Recent data collected from the site by the remedial program and its contractors indicates significantly higher levels of polychlorinated biphenyls (PCBs) and trichloroethylene (TCE) than previously believed to exist at the Olympia Property in this area. The PA/SI was concluded, and a removal action was recommended in a closure memo dated October 11, 2002.

2. Physical Location

The Wells G & H Superfund Site covers approximately 330 acres in Woburn, Middlesex County, Massachusetts. The Site includes the aquifer and land mass area located within the zone of contribution to the City of Woburn's two municipal drinking water wells known as Wells G & H. The boundaries of the Site are Interstate 95 to the north, Interstate 93 to the east, the Boston and Maine Railroad to the west, and Salem Street to the south. The Olympia Property is one of the five primary source areas of contamination within the Federal Superfund Site. The other four source areas are the W.R Grace Co. Conn. property, the UniFirst Corporation property, the New England Plastics property, and the Wildwood Conservation Corporation property. The 21-acre Olympia Property is located within the boundaries of the Superfund Site at 60 Olympia Avenue. The property is listed on Book 1000, Page 49, Document Number 684793 at the South Middlesex Registry of Deeds. Geographic coordinates for the Olympia Property are approximately 42.494719 N latitude and 71.130839 W longitude.

3. Site Characteristics

The Olympia Property is rectangular in shape with its long axis oriented approximately north-south with a 120-foot wide "panhandle" strip of land extending approximately 400 feet to the south from the southwest corner of the lot. The Aberjona River flows north to south through the Olympia Property and splits the property. The property on the east side of the river is occupied by a one-story commercial building used as a trucking terminal. The portion of the property to the west of the river consists of undeveloped woodland and wetland areas. It is this western portion of the property that was the location of a former drum disposal area.

Vehicular access to the site is from the south via a dirt road leading from Salem Street. A locking gate on this dirt road prevents unauthorized vehicles from entering the site.

However, pedestrian access to the site is not restricted. The property has a history of unauthorized access for dirt bike riding and homeless encampments. Land use is mixed with a number of residences, busy commercial areas, and industrial facilities located within 1/4 mile. Three schools and day care centers are located within one mile. The City of Woburn has plans to construct a park and soccer fields along the Aberjona River and adjacent to the Olympia Property.

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

Hazardous substances that pose a threat of release include, but are not limited to, the following:

- trichloroethylene (TCE) up to 110 mg/kg and
- polychlorinated biphenyls (PCBs) up to 33 mg/kg.

TCE-contaminated soils are present in the subsurface at approximately eight to twenty feet below grade in the former drum disposal area. These soils have contaminated ground water and continue to act as an ongoing source of ground water contamination. The associated ground water plume has contributed to the contamination of the aquifer that serves Wells G & H. In addition, PCBs (Aroclor 1260) are present in exposed surface soils in the former drum disposal area. The site-specific risk-based cleanup levels for these constituents in soil are.0127 mg/kg for TCE and 1.04 mg/kg for PCBs.[1]

5. NPL Status

The site was proposed for listing on the National Priorities List in December 1982. Final listing on the NPL occurred in September 1983. EPA is the lead agency for this site.

B. Other Actions to Date

Between 1981 and 1989, EPA and several potentially-responsible parties (PRPs) conducted a series of investigations to determine the nature and extent of contamination. The results of these studies indicated a broad area of ground water contamination with multiple source areas surrounding Wells G & H. EPA issued a Record of Decision (ROD) on September 14, 1989 which called for cleanup of all five source area properties including extraction and treatment of contaminated ground water at these properties.

Over the past decade, construction of the selected remedy has been largely completed by PRPs at the other four source areas under a 1991 Consent Decree. Over 200 million gallons of ground water have been pumped and treated, and over 4000 pounds of volatile organic contaminants have been removed. Groundwater pump and treat systems are in their tenth year of operation at two

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[1]Clement Associates, Inc., for Ebasco Services Incorporated (under EPA Contract 68-01-7250), *Endangerment Assessment for the Wells G&H Site*, December 1988.

separate properties. A combined pump and treat/air sparging/soil vapor extraction system is in its fifth year of operation at a third property. Another soil vapor extraction system successfully remediated soil at the fourth property. The need for implementing groundwater remediation at that property is being assessed in light of the success of the soil vapor extraction.

Other than the removal of the drums in 1986-1987, no cleanup actions have been conducted to date at the Olympia Property. The owners of the Olympia Property are a non-settling party that did not enter into the 1991 Consent Decree. The remedial program is currently working on the pre-remedial design, but federal funding is not currently available to implement the cleanup. The absence of cleanup actions at this source area prevents the overall site from attaining post-ROD milestones. EPA performed extensive sampling and analysis of soil and groundwater during the spring of 2002. These recent data indicate that contaminant levels are significantly higher than those documented during the Remedial Investigation in the late 1980's. This will be the third removal action conducted at the site.

C. State and Local Authorities' Roles

The Massachusetts Department of Environmental Protection (DEP) was a party to the 1991 Consent Decree. Although EPA is the lead Agency for the NPL Site, the DEP maintains an active role in review of the Federal-lead activities. DEP has classified the site as "adequately regulated" under the Massachusetts Contingency Plan. The DEP is currently overseeing a petroleum spill remedial activity on the trucking terminal portion of the Olympia Property. The City of Woburn is a property owner within the NPL site and is party to the Consent Decree.

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

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 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)].

PCBs are present in exposed surface soils. Although a gate limits vehicular access, pedestrian access to the site is unrestricted. The site has a history of unauthorized dirt bike use and homeless encampments. Those who enter the site may be at risk of direct contact exposure to PCBs.

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

The TCE-contaminated soils at the Olympia Property comprise one of the five sources contaminating the drinking water aquifer that serves Wells G & H. No cleanup efforts have yet been undertaken to address the Olympia soils. Instead, these soils continue to act as an ongoing source of ground water contamination to this drinking water aquifer.

"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)].

The PCB-contaminated surface soils are devoid of vegetation and exposed to the elements. These conditions make the PCBs accessible to receptors and potentially subject to migration via wind or runoff.

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

Neither state nor local authorities have the resources to remove the PCB- and TCE-contaminated soils from the site.

The PCB-contaminated surface soils at the Olympia Property pose a direct contact threat to local residents and others who may enter the site. According to 2000 census data, 768 people live within a ½-mile radius of the site, and 6,891 people live within a 1-mile radius. The TCE-contaminated soils continue to act as an ongoing source of ground water contamination to a drinking water aquifer. In contrast to the other four source areas which have already been largely addressed, no cleanup efforts have yet been undertaken to address the Olympia soils. New sampling data collected from the site indicate that TCE levels at the Olympia Property are significantly higher than previously known.

Trichloroethylene (TCE), when inhaled, may cause headaches, lung irritation, dizziness, poor coordination, and difficulty concentrating in the short term. Long term exposure can cause nerve, lung, kidney, and liver damage. Ingestion of TCE over long periods of time may also cause impaired immune system function and impaired fetal development in pregnant women, although the extent of some of these effects is not yet clear. Dermal contact with TCE may cause skin rashes. In addition, TCE is believed to be carcinogenic.[2] PCBs are known to cause acne-like lesions and rashes known as chloracne. They may also cause developmental and reproductive problems. PCBs are probable human carcinogens, suspected of causing liver cancer.[3]

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[2]Agency for Toxic Substances and Disease Registry (ATSDR), U.S. Department of Health and Human Services, Public Health Service, *Toxicological Profile for Trichloroethylene* , September 1997.

[3]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.

B. Threats to the Environment

The site poses the following threat to the environment:

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

Ground water at the site recharges the Aberjona River, which runs through the center of the Olympia Property. TCE-contaminated ground water may therefore flow into the river and the associated wetland via recharge. PCBs in surface soils are accessible to biological receptors and pose a threat of bioaccumulating in the food chain. Animals identified as possible receptors in this wetland ecosystem include birds such as american woodcock, herons, and mallards, mammals such as raccoons, muskrat, beavers and shrews, and various fish and aquatic invertebrates.[4] The Aberjona River is part of the Mystic River watershed and flows into the Mystic Lakes, which discharge into the Mystic River approximately 6 miles downstream and south of the site. One of the most ecological diverse and valuable wetlands associated with the Aberjona River is the 38-acre Wells G & H wetland, of which the Olympia Property is part.

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.

V. PROPOSED ACTIONS AND ESTIMATED COSTS

A. Proposed Actions

1. Proposed Action Description

EPA is currently negotiating with the PRP for the Olympia Property with the goal of having the PRP conduct the removal action under an Administrative Order on Consent. In the event that these negotiations do not lead to a PRP-lead action, EPA is prepared to undertake the work on a fund-lead basis, provided that adequate funds are available. In either case, the removal action will protect public health, welfare and the environment from the threats identified in Section III by eliminating a source of ongoing TCE contamination to ground water and removing surface soils contaminated with PCBs from the site.

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[4]Clement Associates, Inc., for Ebasco Services Incorporated (under EPA Contract 68-01-7250), *Endangerment Assessment for the Wells G & H Site*, December 1988.

Removal activities are anticipated to include the following: (1) conducting a site walk with the cleanup contractor, (2) making improvements to the site access road to allow mobilization of heavy equipment, (3) conducting additional sampling as needed to further define the extent of contamination, (4) excavating PCB-contaminated surface soils, (5) addressing TCE-contaminated subsurface soils through a combination of treatment and/or excavation and/or capping in place, (6) disposing of waste streams at approved off-site disposal facilities, and (7) restoring disturbed areas of the site to vegetative cover. If subsurface soils are excavated as part of this removal action, it is anticipated that sheet piling would be needed to ensure a safe excavation and a dewatering/carbon treatment system would be needed to handle VOC-contaminated ground water infiltrating the excavation.

2. Contribution to Remedial Performance

Performing this removal action will contribute to remedial performance and protect public health and the environment by removing an ongoing source of ground water contamination and eliminating the potential for exposure to hazardous substances in exposed surface soils. The lack of cleanup activities to date at the Olympia Property has prevented the Wells G & H site from attaining Superfund milestones since the ROD was issued in 1989, even though cleanup is well underway at the other four source areas. This removal action will enable the entire site to move forward in attaining the post-ROD milestones.

3. Description of Alternative Technologies

EPA plans to utilize alternative on-site field screening and analytical techniques for determining the extent of contamination and for measuring the effectiveness of the removal action. The use of alternative treatment technologies with regard to the TCE-contaminated subsurface soils will also be examined as site work progresses.

4. 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."

FEDERAL; ACTION-SPECIFIC

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

40 CFR Part 268 Hazardous and Solid Waste Amendments Land Disposal Restrictions Rule

Subpart C - Prohibitions on Land Disposal
268.34 : Waste specific prohibitions - toxicity characteristic metal wastes

Subpart D - Treatment Standards

Subpart F - Prohibitions on Storage
268.50 : Prohibitions on storage of restricted wastes

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

The OSC has requested in writing that the State of Massachusetts identify additional state ARARS for consideration by the OSC. Additional ARARs may be identified as the removal action progresses. In accordance with the National Contingency Plan and the EPA Guidance documents, the OSC will determine the practicability of complying with all identified ARARs.

5. Community Relations

The Wells G & H site is well known to the local community. As it has throughout the remedial process, EPA will remain highly involved with the community throughout the removal action. EPA will coordinate closely with state and local authorities on community relations activities such as press releases, fact sheets, and/or public meetings.

B. Estimated Costs and Schedule

The OSC has prepared an independent government estimate of the cost associated with carrying out the proposed actions outlined above. A summary of this estimate is given below. The action is anticipated to be complete within twelve months.

Regional Removal Allowance Costs	
ERRS[5] Contractor	$ 1,500,000[6]
Other Extramural Costs Not Funded from the Regional Allowance	
START[7] Contractor, including muliplier costs	$ 100,000
Subtotal, Extramural Costs	$ 1,600,000
10% Extramural Costs Contingency	$ 160,000
TOTAL EXTRAMURAL PROJECT CEILING	**$ 1,760,000**

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 site can be expected to remain unaddressed, and threats associated with the abandoned hazardous substances will persist.

VII. OUTSTANDING POLICY ISSUES

There are no known policy issues that are outstanding with respect to this removal action.

VIII. ENFORCEMENT

The total estimated EPA costs for the removal would be:

$1,760,000 (extramural costs) + $100,000 (EPA's direct intramural costs) = $1,860,000
$1,860,000 x 1.2702 (regional indirect rate) = $2,362,572

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[5]Emergency Rapid Response Services

[6]This is only a tentative cost estimate. This estimate will be refined as various cleanup options for the TCE-contaminated soils are addressed, and the removal plans are further refined.

[7]Superfund Technical Assessment and Response Team

The total EPA costs for this removal action based on full-cost accounting practices that will be eligible for costs recovery are estimated to be $2,362,572.[8]

ATTACHED TO THIS DOCUMENT - FOR INTERNAL DISTRIBUTION ONLY

IX. RECOMMENDATION

This decision document represents the selected removal action for the Wells G & H Site - Olympia Property in Woburn, Massachusetts, developed in accordance with CERCLA, as amended, and 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.

Conditions at the site meet the NCP Section 300.415(b)(2) criteria for a removal 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)],

"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)], and

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

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[8]Direct Costs include direct extramural costs and direct intramural costs. Indirect costs are calculated based on an estimate indirect cost rate expressed as a percentage of site-specific direct costs, consistent with the full cost accounting methodology effective October 2, 2000. These estimates do not include pre-judgement 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.

I recommend you approve $1,760,000.00 to initiate the removal action proposed above, of which as much as $1,660,000.00 is from the EPA removal allowance.

APPROVAL: _____

DATE: 3-3-03

DISAPPROVAL: _____

DATE: _____