

U.S. ENVIRONMENTAL PROTECTION AGENCY
POLLUTION/SITUATION REPORT
Woodbury Coal Tar - Removal Polrep



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Region I

Subject: POLREP #2
Progress
Woodbury Coal Tar
01HB
Salem, MA
Latitude: 42.5273590 Longitude: -70.8933580

To:
From: Richard Haworth, On-Scene Coordinator
Date: 8/3/2011
Reporting Period: 4 June 11 - 4 Aug 11

1. Introduction

1.1 Background

Site Number:	01HB	Contract Number:	EP-W-08-061
D.O. Number:	0030	Action Memo Date:	4/13/2011
Response Authority:	CERCLA	Response Type:	Time-Critical
Response Lead:	EPA	Incident Category:	Removal Action
NPL Status:	Non NPL	Operable Unit:	
Mobilization Date:	5/13/2011	Start Date:	5/13/2011
Demob Date:		Completion Date:	
CERCLIS ID:	MAN000106037	RCRIS ID:	
ERNS No.:		State Notification:	Yes
FPN#:		Reimbursable Account #:	

1.1.1 Incident Category

On-shore, non-transportation, fund-lead, CERCLA time-critical removal action.

1.1.2 Site Description

Woodbury Court is a short, narrow, dead end road descending south off Northey Street at a right angle. Twelve Woodbury Court is at the dead end of the road. It is the only empty lot on a street where homes are otherwise spaced closely together on small lots. It is located at the southern end of the site. Brush along the perimeter provides a deterrent, but does not prevent access along the west and south side. Access is not restricted from Woodbury Court. The property is generally level entering from Woodbury Court, but eventually slopes upward to a common property line with Gonyea Park where there is a weathered stockade fence.

Gonyea Park is accessed from Northey Street. Limited parking is available on Northey Street for perhaps six cars. It is an L-shaped property that is generally level. On the south side, a stockade fence runs along the property line with 12 Woodbury Court. However on the east side, the fence is at the top of a slope. The Gonyea Park parcel continues downward to the houses on Woodbury Court creating the unusual situation where the property line is literally at the edge of two houses on Woodbury Court. The Park property between the fence at the top of the slope and the two houses on Woodbury Court is used as the back yard for these two residences.

There are no structures at Gonyea Park other than a children's play set towards the north end of the parcel/site, close to the parking area. The parcel is planted with grass, and is free of trees or shrubs except along the south and west perimeter. There is a retaining wall on the west side of the Park/Site, creating an estimated 15-foot vertical drop down to Rt 107. Access is unrestricted from Northey Street.

The combined area of Gonyea Park and the Woodbury Court residential properties is approximately 0.91 acres. There are several closely spaced residential dwellings on Northey Street. The apartment complex to the south has dozens of units. There are approximately 1,850 people within one-quarter mile of the site.

The site is not currently on the National Priorities List (NPL), and has not received a Hazardous Ranking System rating.

1.1.2.1 Location

Twelve Woodbury Court, Salem, Massachusetts has been selected as the site address, as this is the location where contamination was first discovered. The coordinates for this address are approximately 42.53E north latitude, 70.89E west longitude. A complete list of properties to be addressed by this removal action will not be available until the extent of contamination has been fully defined. The site is bounded to the west by Route 107 (Bridge Street Bypass) and residential property on all other sides.

1.1.2.2 Description of Threat

Actual or potential exposure to nearby human populations, animals, or the food chain from hazardous substances or pollutants or contaminants.

High levels of hazardous substances or pollutants or contaminants in soils largely at or near the surface that may migrate.

1.1.3 Preliminary Removal Assessment/Removal Site Inspection Results

The investigation was begun in July 2010, and consisted of collecting surface and subsurface soil samples to a maximum depth of three feet. In addition, the concentration of total volatile organic compounds (soil gas) was measured at each sample station in the field using a direct reading instrument. The three points with the highest concentrations nearest to adjacent residential properties were sent to a laboratory to identify the specific compounds present, and the concentration of each. An evaluation by DEP personnel revealed vapor intrusion is not an immediate concern, however DEP plans to carry out confirmation sampling under residences and paved areas.

Based on the lab results of tests run on soil, a second round of sampling was scheduled for the first week of January 2011 to better define the extent of contamination at Gonyea Park and 12 Woodbury Court, determine if other adjacent residential properties were impacted, and identify how much of the chromium detected present in the first round of sampling is trivalent chromium, and how much is the more toxic, hexavalent chromium. Analysis revealed that the chromium present at this site is the less toxic trivalent form.

Data generated from both sample events shows that one or more hazardous substances are present at a concentration above Massachusetts' standards at 45 of 48 sample locations. On the land used as Gonyea Park, at least one state standard is exceeded at 40% of the surface samples analyzed; at one foot, 73%; two feet, 81%; and at three feet, 66%. In addition, while they do not exceed state standards, dozens of other hazardous substances have also been identified in soil at the site.

A Closure Memorandum dated 16 March 2011 formally documents the conclusion of the removal evaluation of this Site. It recommends that a removal action is appropriate because conditions at this Site meet the criteria in the National Contingency Plan (NCP) for initiating a removal action.

2. Current Activities

2.1 Operations Section

2.1.1 Narrative

Excavation began on 23 June 11 and was temporarily discontinued on 28 July 11 pending the removal of the existing stockpile and landscaping at residential properties. Shipment of an estimated 2500 tons is scheduled to begin 8 August 11.

Air monitoring has been performed at twelve locations on the perimeter of the site each day when soil is excavated and it is not raining. Results reveal that concentrations of contaminants are significantly lower than the established action level.

1.2 Response Actions to Date

Week of 6 Jun 11 - Heavy equipment was mobilized to the site and used to remove the support poles for the playset. Concrete at the base of poles was chipped off. Poles were set aside for pick up and storage by the City of Salem until the play set can be re-established after soil cleanup work is completed.

Stone was spread to create a parking area and access way over the former play area. Wood fences on park property were removed and placed in a storage container. Yard items, landscaping bricks and pavers at 10 Woodbury Court were removed and stored in the container.

Week of 13 Jun 11 - Removal and storage of personal property and landscaping items from all properties was completed. An ERRS-subcontracted tree company cut, chipped, and shipped off site all large diameter trees.

Week of 20 Jun 11 - The City of Salem provided a backflow preventer to connect to fire hydrants near the site to make water available for dust suppression. A narrow strip was excavated and backfilled at Gonyea Park to establish a clean area on which to place an office trailer, generator, handwash station, and portable toilets.

Large granite blocks encountered during excavation were left at the bottom of the excavation. Sample locations that were established during the site investigation were sampled at the final excavation depth of 3 feet. High visibility orange fence was placed at the bottom of the excavation as a marker prior to backfilling. Backfill was placed in lifts and compacted with heavy equipment to prevent future settlement. Backfill does not include loam which will be placed at a later date when it is clear there will no longer be a need to access the area. These procedures will be followed for the entire site.

Each day excavation is performed and it is not raining, twelve air monitors are placed around the perimeter of the site. A report of results is provided the following day. Air monitoring results this week revealed the concentrations of contaminants are significantly less than the action level for the site. This is the case for all subsequent weeks included in this report.

Excavation and backfilling began at 12 Woodbury Court.

DEP representatives installed soil gas monitoring points in basements at residential locations.

Week of 27 Jun 11

Excavation was completed at 12 Woodbury Court except for an area sloping up to Gonyea Park and a small area at the end of the driveway at 10 Woodbury Court.

EPA's Regional Safety Officer performed an unannounced site inspection. No major safety concerns were identified.

A DEP representative visited the site. No action items were identified

Week of 4 Jul 11

The driveway at 10 Woodbury Court was found to be stone placed over an existing asphalt driveway. Stone was removed using hand tools to assess the condition of the underlying pavement. Only minor cracks were present. It appears the reason for applying stone was to address settlement ruts that had formed where vehicle tires regularly pass. As a paved driveway is considered a permanent feature, no excavation was performed in this area.

Excavation at 10 Woodbury Court began in a small area between the house and driveway. Excavation was done using hand tools to avoid damaging the foundation, house, driveway, and stairs into the house.

After several weeks arranging for START to add the apartment property owner as an additional insured on their certificate of insurance, soil samples were collected at the apartment property adjacent to 12 Woodbury Court. Consistent with the investigation of other properties, a sample was collected at the surface, and one, two, and three feet below the surface. Samples were collected near the property line in common with 12 Woodbury Court in the vicinity of a chain link fence. The fence is on apartment property. It is a single straight line of fence that does not form an enclosure. The end of the fence where it meets Woodbury Court is approximately 3 feet from the property boundary in common with 12 Woodbury Court. The other end of the fence at Bridge Street Bypass is approximately 15 feet from the property line in common with 12 Woodbury Court. Four samples were collected between the fence and #12. This area is unmaintained property overgrown with brush and weeds. Four samples were collected between the fence and a paved walk way on the apartment property. This area is a lawn maintained as part of the apartment property.

A DEP representative visited the site. No action items were identified

Week of 11 Jul 11

A second small area between the house and driveway at 10 Woodbury Court was excavated largely by hand. A small dimple in trim molding on a basement window resulted from limited use of heavy equipment to facilitate the operation taking place in hot, humid conditions. (This response-related damage was repaired later to the owner's satisfaction.) Stones were replaced onto the asphalt driveway.

Other areas of 10 Woodbury Court were excavated with heavy equipment, and the rectangular section of 12 Woodbury Court at the end of the driveway at #10. Based on a safety recommendation by the ERRS contractor, the excavation was limited to a depth of one foot along a one foot wide strip adjacent to footings supporting the house.

A small shed at 10 Woodbury Court was lifted up and placed on park property using an excavator and straps. The area under the shed was excavated and backfilled, completing excavation of 10 Woodbury Court. The shed was replaced at a different location as requested by the owner. Minor response-related repairs were required to a floor board reported by the owner to be popping up where it had not previously. Similarly, a loose flower box and window sill/frame were secured in spite of there being little unrotted wood in which to secure nails.

The surveyor returned to the site to re-establish a property marker on the property line in common between 12 Woodbury Court and the apartment property. As excavation to date stayed cautiously to the #12 side of this property boundary, up to 18 inches was excavated to straighten and complete the excavation along this property line. Backfilling at 12 Woodbury Court was completed.

Excavation began on park property adjacent to 8 Woodbury Court that has historically served as a back yard for #8.

A DEP representative visited the site twice this week. No action items were identified.

Week of 18 Jul 11

Excavation and backfilling at 8 Woodbury Court was completed, including re-establishing a peastone driveway. Loam was placed along each side of the driveway, including a narrow strip belonging to 10 Woodbury Court adjacent to the driveway at #8.

Excavation continued on park property adjacent to 8 Woodbury Court, and began on park property adjacent to 4 Woodbury Court. This area is largely sloped unevenly down from 4 to 8 Woodbury Court, and down from the park to the residences.

Week of 25 Jul 11

Excavation and backfilling on park property behind residential properties was largely completed. This included re-establishing steps of pressure treated lumber and peastone behind 4 Woodbury Court, and the slope up to the park behind 8 Woodbury Court. Re-establishing the slope was not finalized on park property behind 4 Woodbury Court because the soil stockpile has extended to very near where the final top of the slope would be. A safety margin was left in place between the toe of the stockpile and the slope below it that has been excavated and backfilled.

Loam was spread on park property behind homes where no further access is required, as well as 8 and 10 Woodbury Court, except where a patio of pavers is to be replaced.

The site was demobilized until subcontracting arrangements for landscaping and disposal are finalized.

2.1.3 Enforcement Activities, Identity of Potentially Responsible Parties (PRPs)

This is a fund-lead removal action. Enforcement actions have not been undertaken.

2.1.4 Progress Metrics

All waste remains on site at this time.

2.2 Planning Section

2.2.1 Anticipated Activities

See Section 2.1.1 below.

2.1.1 Planned Response Activities

The following planned actions are taken directly from the action memorandum.

The OSC will guide the EPA's Emergency and Rapid Response Services (ERRS) contractor personnel on their initial site visit for the purpose of identifying first hand to the contractor, the scope and objectives of the project.

The OSC anticipates using heavy equipment to excavate soil to a depth of not more than three feet where any of the ten hazardous substances identified exceed the state standards listed above in this action memorandum, and then restoring the impacted area to the extent practical. In addition to soil, waste material (coal tar, drums, or other containers) that may be encountered will also be excavated. Restoration includes, but is not necessarily limited to, backfilling excavated areas, re-establishing a lawn, correcting response-related damage that may occur, and re-planting existing vegetation with plants that are commonly available. The replacement for adult, fully-grown trees will be much smaller, commonly available nursery stock. For residential properties, prior to initiating work, a list of all existing plants must be generated, and the building and grounds videotaped and photo-documented with specific attention to existing deficiencies.

A limited number of test pits will be dug to provide information about subsurface conditions at depths greater than three feet. Excavation below three feet may be undertaken in a limited area to remove a discrete source of contamination, such as a pocket of coal tar waste or a drum.

The limits of excavation will be identified for future reference with snow fence. A barrier of soil, stone, and/or man-made materials will be employed to prevent contact with hazardous substances if not all contaminated soil can be excavated from depths less than three feet, for example, to save old-growth trees at the request of the property owner, if the water table, bedrock, or foundation remnants are encountered, to prevent damage to residential foundations, or for other reasons.

Based on the impact to residents of homes where a cleanup takes place, residents will have the opportunity to be temporarily relocated while work is taking place. Temporary relocation or other accommodation will be accomplished via an interagency agreement (IAG) with the U.S. Army Corps of Engineers (USACE). Related costs can be expected to include, but are not necessarily limited to, housing, meals, day care, laundry, and boarding pets. Should residents be temporarily relocated while contaminated soil is addressed, a security guard will be posted outdoors at the home during their absence.

The project will employ temporary fence and warning signs to secure work areas, and security guards posted if warranted by circumstances other than the relocation of residences. To document that contaminants are not migrating off site as a result of cleanup activities, air will be monitored as work progresses, and compared to OSHA standards and background data collected prior to beginning excavation activities. Wetting soil will be carried out as needed to supplement existing soil moisture to minimize if not eliminate dust from being generated, and thereby the potential for off-site migration of contaminants. Additional preventative measures or alternative work practices will be implemented if concentrations reach one-half the OSHA standard.

Samples will be collected of waste, soil, water, and air to comply with the requirements of the Site's health and safety plan, characterize waste, document the effectiveness of the cleanup or final conditions, and assure the quality of backfill obtained from off-site vendors, and for other reasons that may arise.

Additional sampling is necessary to fully define the extent of contamination. If additional properties beyond

those identified to date are discovered to be part of this site, it is likely a additional funding will be required.

In the event that the state's soil gas sampling indicates residences are being impacted, it may be appropriate to expand the scope of this project to include vapor intrusion abatement. Should this situation arise, it would be addressed by a Change-In-Scope Action Memorandum that outlines the nature of the threat and the recommended response action, and likely include a request for additional funds.

2.2.1.2 Next Steps

Ship excavated soil off site and landscape occupied residential properties.

2.2.2 Issues

It is anticipated that the full ceiling approved in the action memorandum will be required to complete the scope of work outlined therein. Presently the ERRS budget is funded at 65% of the approved ceiling (ERRS + contingency).

As outlined in the scope of work in the approved action memorandum, tests performed on samples collected at an adjacent apartment property and one additional residence may expand site boundaries. A ceiling increase will likely be required should EPA perform a removal action at these properties.

2.3 Logistics Section

The OSC is the Logistics Section Chief.

2.4 Finance Section

No information available at this time.

2.5 Other Command Staff

2.5.1 Safety Officer

The OSC is the Safety Officer for this site. A site-specific health and safety plan has been developed, and approved by EPA and the ERRS and START contractors.

2.6 Liaison Officer

The OSC is the Liaison Officer for this site, and is maintaining an open line of communication with counterparts at DEP and the City of Salem.

2.7 Information Officer

2.7.1 Public Information Officer

A PIO is not needed at this time. The OSC will coordinate with the EPA Community Involvement Coordinator assigned to this site.

2.7.2 Community Involvement Coordinator

Kate Renahan is the Community Involvement Coordinator, and has assisted the OSC with generating and distributing a Community Update, setting up a location for a neighborhood meeting, and placing an advertisement in the local newspaper to alert the community about the neighborhood meeting.

Kate attended the neighborhood meeting held on 19 May 2011 at 7:00 p.m, at which the OSC provided a brief review of CERCLA, site history, and planned actions. ATSDR, DEP, and Salem representatives provided assistance with answers to questions in their respective areas of expertise. DEP also outlined its plan to take soil gas measurements in homes at and adjacent to the site as it is currently defined, to confirm that vapor intrusion is not a concern. This work will be undertaken concurrent with the removal action.

3. Participating Entities

3.1 Unified Command

The Environmental Protection Agency is responsible for this site at this time.

3.2 Cooperating Agencies

Massachusetts Department of Environmental Protection.

Agency for Toxic Substances and Disease Registry

City of Salem Mayor's Office, Planning, and Engineering Departments

4. Personnel On Site

The OSC, ERRS and START contractors.

5. Definition of Terms

OSC - On-Scene Coordinator

ERRS - Emergency and Rapid Response Services

PA/SI - Preliminary Assessment/Site Investigation

START - Superfund Technical Assistance Response Team
ATSDR - Agency for Toxic Substances and Disease Registry
DEP - Massachusetts Department of Environmental Protection
POLREP/SITREP - Pollution Report/Situation Report
CERCLA - Comprehensive Environmental Response Compensation and Liability Act
IAG - Interagency Agreement
NCP - National Contingency Plan
ppm - parts per million
ppb - parts per billion

6. Additional sources of information

6.1 Internet location of additional information/report

Additional information can be found on the web at epaossc.net.

6.2 Reporting Schedule

Periodic.

7. Situational Reference Materials

None.