

U.S. ENVIRONMENTAL PROTECTION AGENCY
POLLUTION/SITUATION REPORT
Medford Housing Authority - Removal Polrep



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Region I

Subject: POLREP #2
Medford Housing Authority
01LU
Medford, MA
Latitude: 42.4036000 Longitude: -71.1033000

To:
From: Gary Lipson, On-Scene Coordinator
Date: 11/17/2015
Reporting Period: POLREP 1 - November 17, 2015

1. Introduction

1.1 Background

Site Number:	01LU	Contract Number:	
D.O. Number:		Action Memo Date:	8/5/2015
Response Authority:		Response Type:	Time-Critical
Response Lead:	EPA	Incident Category:	Removal Action
NPL Status:	Non NPL	Operable Unit:	
Mobilization Date:	10/1/2015	Start Date:	10/1/2015
Demob Date:		Completion Date:	
CERCLIS ID:	MAN000100745	RCRIS ID:	
ERNS No.:		State Notification:	Yes
FPN#:		Reimbursable Account #:	

1.1.1 Incident Category

Time Critical Removal Action

1.1.2 Site Description

See POLREP 1 for details

1.1.2.1 Location

See POLREP 1 for details

1.1.2.2 Description of Threat

Lead has been detected in surface soils at the MHA Willis Avenue Apartments. Although lead is a naturally occurring element and found in higher concentrations in urban settings due to anthropogenic sources, the concentrations detected in this neighborhood are close to, and in many cases exceed, typical urban background concentrations as well as EPA Regional Removal Management Levels (RMLs). These RMLs are not meant to be action or cleanup levels but rather a starting point to determine if further action is warranted, should the numbers be met or exceeded. The RML for lead in a residential setting is 400 parts per million (ppm). As a screening technology was used to identify lead levels (X-Ray fluorescence) in the field, the OSC selected a concentration of 350 ppm in his analysis of site conditions. This concentration represents a site-specific action level that accounts for the uncertainty of the screening technology. A minimum of 10% of the samples analyzed by XRF were also sent to a laboratory for confirmatory analysis.

During the PA/SI, five of the seven playground locations exceeded the 350 ppm limit within the top foot of soil. In addition, soil within some of the community raised bed gardens and one private garden exceeded the concentration of concern. Lead in surface soil is the primary contaminant at this Site. Lead is a listed CERCLA hazardous substance in 40 CFR 302.4.

Lead in surface soils in the playgrounds and some of the gardens presents a potential health threat through direct exposure to local residents, including children.

1.1.3 Preliminary Removal Assessment/Removal Site Inspection Results

See POLREP 1 for details

2. Current Activities

2.1 Operations Section

2.1.1 Narrative

Surface soil (0-1' bg) contains lead above 350 ppm, the level of concern, in five of the seven designated playground areas within the housing complex, the public raised garden bed area, and one private garden. The average concentration of lead in the five play areas is 635 ppm. In most cases, this removal action will be limited to removing the top foot of contaminated soil and replacing it with clean fill in the playgrounds as well as the identified gardens. In 2 of the playground grids, the play areas will be raised in a manner similar to the raised garden beds.

2.1.2 Response Actions to Date

On October 1, 2015, EPA's cleanup contractor began mobilizing equipment to the site and site prep activities continued into the following week.

Please refer to the map located in the documents section of the website www.epaossc.org/MedfordHousingAuthority for the locations of the specific grids.

Excavation of a playground in grid 19 began soon after site prep, followed by grid 14, where the community raised bed gardens were located. In this location, the soil underneath the raised beds was removed and will be replaced with clean fill. The raised beds will be filled with clean loam as well.

On October 14 and 15, a tree service was subcontracted to remove a total of 14 trees from 4 different grids. These trees were growing in contaminated soil and the choice of which trees to remove was made in conjunction with representatives of the MHA. Some of the remaining stumps were excavated from grid 14 on October 28 and from grids 6 and 7 on November 5.

Grids 6 and 7 have been combined into 1 area that is being raised due to the topography as opposed to excavation and backfill. Backfilling of this area with a gravel base began on November 9.

On October 16, samples were collected from the loam pile at a local subcontracted gravel pit. Due to miscommunication with the laboratory, the 2 samples were inadvertently composited and only 1 sample was analyzed. Results indicated that the sample was slightly above the Massachusetts standard for residential surface soil for one compound, benzo(a)pyrene. Unfortunately, a number of loads had already been delivered to the site and a small amount had been spread out in one location. A second sample was collected from the loam pile on November 3 to determine if an average of the 2 concentrations was below the standard. The second sample proved to be almost as high for that particular compound, so it was decided that the material could not be used for this application. The stockpile was removed from the site on November 12 and trucked back to the gravel pit. The portion that was spread out was removed on November 16.

While 14 trees were removed to allow for excavation in particular locations, 4 trees within the hot zones were kept, due to the shade and ambiance they provide. An attempt made to save them by carefully removing the soil from around its roots. Hydro-excavation was chosen as it appeared that it would be the gentlest method of soil removal that would give the tree the largest chance of long-term survival. This proved erroneous however as the high pressure water spray began stripping the bark off of the roots. An arborist, subcontracted by EPA's START contractor for his technical expertise during this removal, stated that this would eventually lead to the undermining and eventual death of the tree. Hydro-excavation was soon halted and working with the arborist, it was decided that a minimal covering of the roots with a loamy sand would provide sufficient cover and would allow the trees to survive.

Air monitoring is being conducted in all locations where intrusive activities involving contaminated soil are occurring. This is to ensure that contaminated soil/dust is not being generated and/or released during removal activities.

None of the playground equipment located in the 4 grids could be salvaged as it had been in place for many years. The equipment had deep and expansive footings, was rusted to a point where they could not be dismantled and moved, and was no longer to the present code required for commercial playgrounds. Therefore, the equipment will eventually be replaced.

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

See POLREP 1 for details

2.2 Planning Section

2.2.1 Anticipated Activities

The stumps in grid 3 where the majority of trees were removed will either be excavated or ground down as 2 of them are located over a subsurface natural gas line. Once the stumps are removed, this grid will be excavated to 1' in depth, prior to it being backfilled. The ballfield which takes up all of grid 1 will then be excavated, backfilled, and properly graded. In addition, the remaining grids and garden areas will be backfilled to grade.

It is expected that EPA and its contractors will demobilize in mid-December and remobilize in the spring to

hydroseed and install new playground equipment.

2.3 Logistics Section

No information available at this time.

2.4 Finance Section

No information available at this time.

2.5 Other Command Staff

2.5.1 Safety Officer

The OSC is serving as the site safety officer, however, it has been stressed to the crew that every individual working on-site has the authority to halt site activities if an unsafe situation is detected.

2.5.2 Liaison Officer

2.5.3 Information Officer

3. Participating Entities

No information available at this time.

4. Personnel On Site

10 total: 1 EPA OSC; 1 Weston Solutions Superfund Technical Assistance and Response Team (START) member; 5 EPA Cleanup Contractor (Guardian Environmental Services [GES]) employees: 1 response manager, 1 foreman, 2 equipment operators; and 3 Team Subcontractors to GES (ENPRO): 3 technicians.

5. Definition of Terms

No information available at this time.

6. Additional sources of information

No information available at this time.

7. Situational Reference Materials

No information available at this time.