U.S. ENVIRONMENTAL PROTECTION AGENCY
POLLUTION/SITUATION REPORT
FMO Pesticide Site - Removal Polrep
Final Removal Polrep

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Region III

Subject: **POLREP #35**
Removal Action Completion POLREP
FMO Pesticide Site
A3PZ
Orefield, PA
Latitude: 40.6322715 Longitude: -75.6149893

To: Gerald Heston, US EPA Region III
Jeff Bartlett, North Whitehall Township
Dennis Carney, EPA Region III
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From: Ruth Scharr, Federal On-Scene Coordinator
Date: 8/15/2012
Reporting Period: April 2012 through August 15, 2012

1. Introduction

1.1 Background

Site Number:	A3PZ	**Contract Number:**	EP-S3-07-03
D.O. Number:		**Action Memo Date:**	9/1/2010
Response Authority:	CERCLA	**Response Type:**	Time-Critical
Response Lead:	EPA	**Incident Category:**	Removal Action
NPL Status:	Non NPL	**Operable Unit:**	
Mobilization Date:	7/1/2010	**Start Date:**	9/17/2010
Demob Date:		**Completion Date:**	
CERCLIS ID:	PAN000306719	**RCRIS ID:**	
ERNS No.:		**State Notification:**	
FPN#:		**Reimbursable Account #:**	

1.1.1 Incident Category

Time-Critical Removal

1.1.2 Site Description

The Site is characterized as a time-critical removal. The Site includes land that was used formerly for the commercial growing and harvesting of fruit from orchard trees and are currently zoned for residential or public use primarily in North Whitehall Township, PA. Lead arsenate pesticide was historically used for several decades at the Site until its use was banned in 1988 by EPA. Elevated levels of arsenic and lead have been detected in surface soil samples on residential parcels and in public use areas. The FMO Pesticide Action Memo was submitted by the OSC and signed on September 1, 2010 approving a Removal Action which addresses contamination at residential parcels.

1.1.2.1 Location

The site is located in the Orefield/Schnecksville area of North Whitehall Township, and a small portion of South Whitehall Township, Lehigh County, Pennsylvania.

1.1.2.2 Description of Threat

Incidental ingestion of lead and arsenic through direct contact with contaminated soil, or ingestion of contaminants from small particles that have been aerosolized from the disturbance of soil.

2. Current Activities

2.1 Operations Section

2.1.1 Narrative

2.1.2 Response Actions to Date

Properties were identified through a series of assessment activities. The initial investigation of the Former Mohr Orchard site investigated approximately 4417 acres utilized as former orchard. Background sampling was conducted to determine background concentrations of lead and arsenic in areas not historically utilized for orchard operations. Phase I assessment sampling identified general areas which were impacted by elevated levels of arsenic and/or lead. A description of background sampling and the Phase I sampling assessment is detailed in Final Trip Report for Soil Sampling at the Former Mohr Orchard Site, dated March 2, 2009.

Phase II assessment sampling consisted of sampling individual properties in areas which were identified for further assessment. Additional investigation activities into locations of potential hot spot locations including areas reportedly used for mixing pesticides and filling stations of spraying trucks. Investigations of surface water, sediment, and dioxins in surface soils were also conducted. These investigations are detailed in Trip Report for the Phase II Soil Assessment at the Former Mohr Orchard Site, dated June 30, 2010. Additional Phase II assessment sampling activities which occurred after June 30, 2010 are documented in Trip Report Addendum - Phase II Soil Assessment, dated March 2012.

EPA compared the results of Phase II soil assessment activities against a site specific action level for arsenic of 73.4 parts per million (ppm) and an action level for lead of 400 ppm. The development of the site specific action level is documented in the letter Soil Arsenic ARAR from EPA to PADEP, dated December 22, 2009. Twenty-three residential properties were identified for a removal action. Removal activities occurred within areas of high use or high exposure risk which were identified to have concentrations of arsenic and/or lead above site action levels believed to be related to historic orchard operations. These areas were vegetable gardens, toddler play areas, and portions of the yard within 40 feet of the home. These areas were gridded and sampled during an extent of contamination sampling phase. Details of this sampling activity are documented in Trip Report – Extent of Contamination and Post-Excavation Soil Sampling, dated July 2012.

Removal activities consisted of excavation of grids within each high use or high exposure risk area to a depth of six inches, except for vegetable garden areas which were excavated to a depth of 12 inches. At three properties, which only had impacts in the vegetable garden area, raised garden beds were installed. Contaminated soils were transported and disposed of offsite. Approximately 2,267 tons of soil were disposed of as non-hazardous waste. Approximately 13 tons of debris was disposed of consisting of poly sheeting, fence posts, safety fencing, sod stakes, PPE, wood, and metal.

Sampling was conducted from the base of each excavated area to document concentrations of remaining soil. Clean soil was backfilled into excavated areas and sod was installed on areas excavated or damaged by machinery. EPA watered sod areas during times of high heat, and for a set time period until residents signed off on approval of restoration activities. Sampling of excavated areas is detailed in Trip Report – Extent of Contamination and Post-Excavation Soil Sampling, dated July 2012. Dust monitoring was conducted during removal activities to ensure worker protection and that no contaminated soils were migrating offsite. No elevated dust readings were identified during removal activities.

2.1.3 Emergency Response and Removal Outcome Measures

2.1.3.1 Human exposure avoided per $1 million extramural resources expended

Removal activities were conducted at 23 residential properties. The specific number of people living at each of these properties is not available, and may change over time. Using an average of 2.59 persons per household, approximately 60 people would utilize these 23 residential properties. The population within one mile of the properties is approximately 2,090. This was determined by taking the population per square mile from each population zone that falls within one mile of the properties as defined in the 2010 Census data. That population density was applied to the total area from each population zone within one mile of the properties. As removal activities were conducted on private residential properties, a restricted-access multiplier of 0.5 is used. No removal activities were conducted within areas of public use.

Using the above numbers, the population that is potential exposed is 1,105 people. The total extramural cost of the removal activities is approximately $2,758,000.00. Therefore, 401 human exposures are avoided per $1 million extramural resources expended due to this removal action.

2.1.3.2 Acreage protective for people at Emergency Response and Removal sites

A total of approximately 2.1 acres was excavated or covered with raised garden beds at 23 properties. This was calculated using maps of excavated areas developed using aerial photography and global positioning system data. This total does not include areas that had sod installed due to damage from equipment or scraping of cells for esthetic reasons.

2.2 Planning Section

Not applicable

2.3 Logistics Section

Not applicable

2.4 Finance Section

No information available at this time.

2.5 Other Command Staff

2.5.1 Community Involvement Coordinator

David Polish 215 814-3327

3. Participating Entities

EPA personnel were in charge of site operations through the duration of the site. Removal activities were supported by Kemron Environmental Services, Inc under the ERRS contract. Assessment and removal activities were supported by Tetra Tech, EM Inc, and Weston Solutions, Inc under the START contract.

Assistance was provided throughout portions of the project by the Environmental Response Team, the Agency for Toxic Substances and Disease Registry, the Pennsylvania Department of Environmental Protection, the Pennsylvania Department of Health, and the University of Missouri.

4. Personnel On Site

Not applicable.

5. Definition of Terms

No information available at this time.

6. Additional sources of information

6.1 Internet location of additional information/report

Documents are listed on the epaosc.net website, at http://www.epaosc.org/site/doc_list.aspx?site_id=6358.

7. Situational Reference Materials

No information available at this time.