U.S. ENVIRONMENTAL PROTECTION AGENCY
POLLUTION/SITUATION REPORT
Wiley Property (aka Ohio County Arsenic Site) - Removal Polrep
Initial Removal Polrep

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Region IV

Subject: **POLREP #1**
Initial Polrep
Wiley Property (aka Ohio County Arsenic Site)

Hartford, KY
Latitude: 37.5123000 Longitude: -86.9653010

To:
From: Art Smith, On-Scene Coordinator
Date: 10/14/2015
Reporting Period: 3/24/2015 through 10/14/2015

1. Introduction

1.1 Background

Site Number:	B45H	**Contract Number:**	EP-S4-15-04
D.O. Number:	0007	**Action Memo Date:**	9/1/2015
Response Authority:	CERCLA	**Response Type:**	Time-Critical
Response Lead:	EPA	**Incident Category:**	Removal Action
NPL Status:	Non NPL	**Operable Unit:**	
Mobilization Date:	10/13/2015	**Start Date:**	10/13/2015
Demob Date:		**Completion Date:**	
CERCLIS ID:	KYN000403430	**RCRIS ID:**	
ERNS No.:		**State Notification:**	
FPN#:		**Reimbursable Account #:**	

1.1.1 Incident Category
CERCLA Incident Category: Abandoned Residential Property

1.1.2 Site Description

1.1.2.1 Location

The Wiley Property Site is located at 209 Shinkle Chapel Road in Hartford, Ohio County,Kentucky. The geographic coordinates of the Site are 37.5123000^{o} North and 86.9653010^{o} West. The Site consists of two parcels of land. The first residential tract is designated as Tax/Parcel ID 73-17-1 in the records for Ohio County, KY comprising 10.2 acres. This property is currently held by Wells Fargo Bank, following a foreclosure and Master Commissioner's sale in 2014. There are two improvements on Tax/Parcel ID 73-17-1: a single family home and an outbuilding.

The second tract making up the Site is designated as Tax/Parcel ID 73-17 in the records for Ohio County, KY. This parcel is privately owned and a portion of this property was subdivided to sell Parcel 73-17-1 in 2007. There are reports of an old barn on this property which was subsequently destroyed, thus suggesting that the past use of the property was for agricultural purposes.

The Site is bordered to the north by Shinkle Chapel Road, and by wooded, rural, and agricultural lands to the east, south, and west. There is an abandoned single family dwelling on the property, and there are 10 homes located within a half-mile radius of the Site.

1.1.2.2 Description of Threat
Direct contact with high concentrations of arsenic trioxide, a listed hazardous substance

1.1.3 Preliminary Removal Assessment/Removal Site Inspection Results

In August 2014, the last known occupant of the residence at 209 Shinkle Chapel Road contacted the Kentucky Department for Environmental Protection (KDEP) with a concern about an unknown white powdery substance at the Site. KDEP reported that the former occupant bred dogs at the Site and that the females were found to be sterile while others suffered from tumors. The former occupant was concerned about potential exposure to her family members while they lived at the property.

In September 2014, KDEP performed an initial visual investigation at the Site. They confirmed an area where the white substance was located in an area devoid of vegetation and approximately 30 feet in diameter. Samples were collected in October 2014, and analysis of the samples collected from this area revealed total arsenic at levels up to 525,000 milligrams/kilogram (mg/kg). The Toxicity Characteristic Leaching Procedure (TCLP) was performed on the sample with the highest total arsenic level and the result came back as 618 milligrams/liter (mg/L) leachable arsenic. Additional investigation and sampling in October 2014 documented that the arsenic contamination had migrated downhill a distance of approximately 120 feet to the north and west of the source area.

On November 14, 2104, the KDEP Superfund Branch formally requested that the U.S. EPA conduct a Removal Site Evaluation (RSE) at the Site.

2. Current Activities

2.1 Operations Section

2.1.1 Narrative

2.1.2 Response Actions to Date

On March 24, 2015, the Region 4 Superfund Technical Assistance and Response Team (START) contractor Tetra Tech EMI mobilized to the Site to collect samples. The purpose was to confirm the 2014 KDEP findings and to explore the potential for additional migration pathways at the Site. Also, a subset of samples were run for arsenic speciation in an attempt to identify the specific arsenic compound at the Site. (See Figure X located under the Documents tab of the website: www.epaosc.org/wileyproperty for locations of areas which were surveyed for total arsenic and leachable arsenic by both EPA and KDEP).

The sample collected from the source area was analyzed for total arsenic and the analysis revealed the concentration of arsenic to be 747,000 mg/kg. The arsenic speciation determined that the arsenic is an arsenite compound (As+3). The analysis for total metals revealed a relative absence of calcium, lead, sodium and other metals which would help to pinpoint the specific compound. By a process of elimination, the compound is most likely arsenic trioxide, which was used historically as an herbicide, which may explain its presence in the predominantly agricultural area surrounding the site.

The KDEP referral cited the possibility that a portion of the land was once used as a plant nursery or fruit orchard based on historical aerial photography. The START contractors utilized an X-Ray Fluorescence (XRF) instrument for real-time detection of metals in soil. XRF readings for this area were within normal range for background, and the previous existence of a plant nursery or fruit orchard could not be confirmed. However, further XRF readings at the Site did confirm the presence of arsenic dust inside the single family home at an estimated concentration of 770 mg/kg.

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

The preliminary title search is inconclusive as to who were the previous owners and operators of the Site during the period when hazardous substances were released to the environment. A full PRP search is currently underway.

2.1.4 Progress Metrics

Waste Stream	*Medium*	*Quantity*	*Manifest #*	*Treatment*	*Disposal*

2.2 Planning Section

2.2.1 Anticipated Activities

2.2.1.1 Planned Response Activities

On 10/13/2015, the OSC and the Emergency and Rapid Response Services (ERRS) contractor CMC, Inc. mobilized to the Site to begin a time -critical removal action. The initial phase of this removal action is being conducted pursuant to the OSC's $50,000 programmatic authority under CERCLA Regional Delegation 14-2 for a time-critical removal action where site conditions do not constitute an emergency.

The first phase of the removal action mainly consists of site preparation work. The activities include re-building the access road into the Site, constructing a staging area for personnel and equipment, and clearing the overgrown weeds. It will also involve consolidating waste materials in a covered stockpile, and erecting a fence with signs to warn of the arsenic hazard. This phase of the work should be completed within a week’s time.

2.2.1.2 Next Steps

Beginning on 10/20/2015, additional environmental samples will be collected by the START contractor in order to complete the removal site evaluation. The samples will be collected from areas downhill of the place where the waste was initially discovered. This will help to determine the volumes of waste material and contaminated soils to be removed at a later date. In addition, air and dust samples will be collected

inside the home to evaluate the potential exposure risk to arsenic in a residential setting.

2.2.2 Issues

The high arsenic concentrations at the surface may pose an airborne particulate exposure threat to site workers. During the initial phase of the removal action, ERRS personnel will wear personal sampling devices while managing the waste stockpile. The results will be evaluated to determine if compliance with the OSHA Arsenic Standard will be required for full-scale cleanup activities.

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

No information available at this time.

3. Participating Entities

No information available at this time.

4. Personnel On Site

No information available at this time.

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.