

U.S. ENVIRONMENTAL PROTECTION AGENCY
POLLUTION/SITUATION REPORT
Knoxville College - Removal Polrep
Final Removal Polrep



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Region IV

Subject: POLREP #8
Science Building Re-Assessment
Knoxville College
B43S
Knoxville, TN
Latitude: 35.9709164 Longitude: -83.9434094

To:
From: Terrence Byrd, OSC
Date: 7/28/2016
Reporting Period: 4/8/2016 - 7/28/2016

1. Introduction

1.1 Background

Site Number:	B43S	Contract Number:	EP-S4-07-02, TO: 0127
D.O. Number:		Action Memo Date:	6/7/2014
Response Authority:	CERCLA	Response Type:	Emergency
Response Lead:	EPA	Incident Category:	Removal Action
NPL Status:	Non NPL	Operable Unit:	
Mobilization Date:	6/5/2014	Start Date:	6/5/2014
Demob Date:	10/17/2015	Completion Date:	6/27/2016
CERCLIS ID:	TNN000401009	RCRIS ID:	
ERNS No.:	1084952	State Notification:	06/05/2014
FPN#:		Reimbursable Account #:	

1.1.1 Incident Category

Removal assessment, inactive facility.

1.1.2 Site Description

The incident occurred at an abandoned laboratory science teaching facility on the campus of Knoxville College. The AK Stewart Science Hall is a three-story, brick structure located in the center of the campus. The facility is secured with many broken windows and doors at ground level. There are 39 rooms and laboratories throughout the building. The college is in a residential neighborhood, with residences directly across the street. The facility is gated at the main entrance to deter vehicular traffic but is not fully fenced. There are numerous dilapidated structures on the campus that show evidence of use by vagrants. Currently, the College is only utilizing one building for education and administrative purposes.

1.1.2.1 Location

The Site is located at 901 Knoxville College Drive, Knoxville, Knox County, Tennessee. The geographical coordinates are 35.970870, -83.943343.

1.1.2.2 Description of Threat

In June 2014, the U.S. Environmental Protection Agency (EPA) initiated emergency response (ER) and removal action (RA) activities at the Site after receiving a referral from the Tennessee Department of Environmental Conservation (TDEC) regarding large quantities of improperly stored hazardous chemicals located in the A.K. Stewart Science Building. ER and RA activities were conducted by EPA from June 5 through 27, 2014, and included the following: inventorying and lab packing identifiable chemicals; consolidating, stabilizing, and containerizing unknown chemicals; conducting air monitoring and sampling; and performing community outreach to inform nearby residents of cleanup activities.

1.1.3 Preliminary Removal Assessment/Removal Site Inspection Results

The dormitories are no longer in use by the College, and there is evidence of homeless people using them for shelter.

The buildings are dilapidated, with leaks in the roof. There is no security for the buildings; the windows are broken some doors not functional. Entry into some buildings are unrestricted. The buildings do not have

automatic sprinklers.

2. Current Activities

2.1 Operations Section

2.1.1 Narrative

2.1.2 Response Actions to Date

See previous Pollution Reports for details of response actions taken and complete during past reporting periods.

Between June 27, 2014 and August 18, 2014, The EPA contractor arranged for transportation and disposal of waste generated during the initial emergency response operations.

EPA and contractors re-mobilized on August 18, 2014 and made final preparations for waste transportation and disposal.

On August 19, 2014, contractors donned personal protective equipment and crushed empty drums within the building. The drums were loaded into a 20 cubic yard dumpster. 118 containers of hazardous waste was loaded into a tractor trailer. All hazardous waste and contaminated debris/personal protective equipment was shipped off for treatment and disposal by Tradebe Treatment and Recycling, LLC. Local compressed gas vendors removed 2 high pressure cylinders of nitrogen gas and 1 high pressure cylinder of oxygen at no cost.

On August 20, 2014, the radioactive waste was prepared and shipped for treatment and disposal by Philotechnics, Ltd. and the biological waste was shipped for disposal by Medical Waste of America. All equipment and storage containers were removed from the site and all crews de-mobilized.

On October 15, 2015, EPA, along with contractors from CMC Inc. and Tetra Tech, mobilized to the Site to conduct additional Removal Assessment activities. Included in these activities was the removal of 15 bags of suspected ACBM from the A.K. Stewart Science Building, which remained in the building since the June 2014 RA activities. EPA and contractors performed a walk-through assessment of the following buildings to identify the potential presence of loose, suspected ACBM: Davis Hall, McCulloch Hall, Colston Hall, Beveridge Hall, Brandon Hall, and the 10-story high rise dormitory located to the northeast of the A.K. Stewart Science Building.

Suspected ACBM was identified on the floor and around the piping located in Colston Hall. EPA contractors performed wetting, bagging, and removal of loose, suspected ACBM (AeroCell™) from the bottom floor of Colston Hall; a total of 33 bags of suspected ACBM were removed. The suspected ACBM was double-bagged and "burrito" wrapped inside a 20-cubic yard roll-off container and disposed.

Attempts to deter trespassing and vandalism in McCulloch and Colston Hall were made by covering doors and windows with plywood which was screwed onto the building. Warped and deteriorating plywood was removed and replaced at the A.K. Science Building. These removal activities were completed on October 17, 2015.

On April 8, 2016, the State of Tennessee sent an email to EPA requesting assistance in securing the A.K. Stewart Science Building. The email stated that TDEC sampling of the building "revealed widespread mercury contamination on surfaces within the structure" and "vandals and thieves are removing items of value for use or possibly to sell. There is a high risk that these items are contaminated with mercury." Further, TDEC requested "very heavy security on the 6 entrances to the building which cannot be breached by simple bolt cutters and pry bars." A follow up phone conversation between OSC Terrence Byrd and Dan Hawkins (TDEC) revealed that mercury wipe samples were taken instead of air samples. EPA agreed to return to the Site to perform additional sampling activity.

EPA and contractors re-mobilized to the Site on June 27, 2016, to conduct a mercury assessment of the A.K. Stewart Science Building. Mercury vapors were detected at concentrations as high as 10.3 micrograms per cubic meter at ground level. The highest reading in breathing zone was 0.5 micrograms per cubic meter. The concentrations were found in the second floor stairwell as well as the hallway between rooms 203 and 204. Visible Mercury was observed in the hallway in an amount estimated to be less than a teaspoon. The building is secured; the first floor windows are boarded and doors are securely fastened and/or locked.

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

Knoxville College trustees have indicated they are the property owners and former operators of the Science Hall. However, they are financially unable to perform the removal. OSC Eichinger reviewed records and files found in the Science Hall. To date, no other PRPs have been identified from the information reviewed.

2.1.4 Progress Metrics

Waste Stream	Medium	Quantity	Manifest #	Treatment	Disposal
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Hazardous Waste Debris	Solid	12600 pounds	012512017JJK		Incineration
Mercury Contaminated Debris	Solid	700 pounds	012512017JJK	Retort	Landfill
Lab Packs (Laboratory Chemicals)	Solid/Liquid	3600 pounds	012512017JJK		Landfill
Lab Packs (Laboratory Chemicals)	Solid/Liquids	9140 pounds	012512015JJK	Incineration	Landfill
Chlorine Gas	Gas	10 pounds	012512006JJK	Waste Water Treatment	
Compressed Nitrogen Gas	Gas	2 cylinder		Reuse	
Compressed Oxygen Gas	Gas	1 cylinder		Reuse	
Misc Debris/Empty Drums	Solid	20 cubic yards	3127-01	Recycling	Landfill
Medical/Biological Waste	Solid/Liquid	200 pounds	21477		Incineration
Low Level Radioactive Waste	Solid	10 pounds			Landfill
Asbestos Contaminated Material	Solid	48 bags			Landfill

2.2 Planning Section

2.2.1 Anticipated Activities

No further response actions are planned.

2.2.1.1 Planned Response Activities

The concentration of mercury vapor detected in the science building meets the criteria for a small scale removal action. However, the engineering controls which are in place are a suitable temporary solution until the property owners determine future use of the building. Given the small quantity and isolated location of the contamination, I recommend that no further removal action be taken by EPA.

2.2.1.2 Next Steps

If the building is to be inhabited in the future, EPA recommends Mercury removal by a professional contractor. If the building is to be destroyed, EPA recommends consultation with a landfill treatment and disposal coordinator to determine the proper waste profile for substances which remain in the building.

2.2.2 Issues

TDEC has been in consultation with the trustees of the College and a public hearing has been conducted to determine future 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.