

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



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Region IV

Subject: POLREP #2
Continuation of Emergency Response Operations
Knoxville College
B43S
Knoxville, TN
Latitude: 35.9709164 Longitude: -83.9434094

To:
From: Kevin Eichinger, OSC
Date: 6/11/2014
Reporting Period: June 8, 2014 through June 11, 2014

1. Introduction

1.1 Background

Site Number:	B43S	Contract Number:	
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:		Completion Date:	
CERCLIS ID:		RCRIS ID:	
ERNS No.:		State Notification:	
FPN#:		Reimbursable Account #:	

1.1.1 Incident Category

Emergency Response, inactive facility.

1.1.2 Site Description

The incident occurred at an abandoned laboratory science teaching facility on the campus of the Knoxville College. The AK Stewart Science Hall is a three story brick structure located in the center of the campus. The facility is unsecured with many broken windows and doors at ground level. There are 39 rooms and laboratories containing various containers or hazardous substances. The college is in a residential neighborhood, with residences directly across the street. The facility is not fenced. There are numerous dilapidated structures on the campus that show evidence of trespassers and 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

There are numerous containers of hazardous materials, including some extremely hazardous substances, unsecured. Many are broken, and rain infiltration threatens to wash them from the building into the environment. Continued vandalism and theft in the building will only exacerbate the problem. The nature and type of the chemicals present pose toxicity, flammability, and reactivity threats to anyone mixing or playing with the chemicals. This poses the greatest threat to neighborhood children exploring the abandoned building.

1.1.3 Preliminary Removal Assessment/Removal Site Inspection Results

Knoxville College reported discontinued their science program in 2007. Since then, time, vandalism, and theft have led to the destruction and degradation of much of the containers stored in the A. K. Stewart Science Hall. Tennessee Department of Environmental Conservation (TDEC) performed a site reconnaissance on June 5, 2014, and immediately contacted the Region 4 Emergency Response and Removal Branch (ERRB) to report the conditions. Thousands of bottles of hazardous chemicals, including acids, bases, oxidizers, organic peroxides, cyanides, radioactive sources, and asbestos are all present in

the building. Container size ranges from 5-gallon buckets to milliliter-sized small containers. Many containers have no, or illegible, labels. Many containers are spilled, broken, or otherwise destroyed. Flammable and corrosive liquids are spilled onto the floor. Vandals have thrown containers from upper windows onto the ground below, causing the bottles to break and spill. Elevated mercury levels were detected throughout the facility. Three radioactive sources were found unsecured in the building.

The building is dilapidated, with leaks in the roof and a flooded ground floor. There is no security for the building; the windows are broken and the doors not functional. Entry into the building is unrestricted. The building does not have automatic sprinklers.

2. Current Activities

2.1 Operations Section

2.1.1 Narrative

There are numerous containers of hazardous materials, including some extremely hazardous substances, unsecured. Many are already broken, and the rain infiltration threatens to wash them from the building into the environment. Continued vandalism and theft in the building will only exacerbate the problem. The nature and type of the chemicals present pose toxicity, flammability, and reactivity threats to anyone mixing or playing with the chemicals. This poses the greatest threat to neighborhood children exploring the abandoned building. In consideration of these factors, the OSC elected to initiate an emergency response to address the potential risk of fire, explosion, and release of hazardous substances to the environment.

2.1.2 Response Actions to Date

June 8, 2014

Equipment, supplies and personnel mobilized in order to begin removal operations.

June 9, 2014

Crews arrived on site and established work zones, reviewed and finalized work plans, and established air monitoring stations. A small amount of site prep was necessary to create a staging and lay-down area. A decontamination corridor was established. Crews performed two Level C entries.

Security will be on site each night from 1730 hours until 0700 hours.

June 10, 2014

Superfund Technical Assistance Team (START) Crews established exterior and interior air monitoring stations. These air monitoring stations are reporting through the VIPER system. Asbestos air samples are being collected. Air monitoring stations will operate when work is performed. No detections above background were observed. Asbestos results will be shared once analytical results are received from the laboratory.

Emergency and Rapid Removal Services (ERRS) crews cleared debris and managed suspected asbestos containing building materials from the 2nd floor to provide for safe access. Seven rooms on the second floor were cleared of chemicals. Additional unknown radioactive sources were found on the second floor. These new sources were speciated and evaluated. There are a large number of unknown chemicals. EPA ERT provided consultation on chemical processing strategies and radiation source management. Severe storms moved through the Knoxville area. No significant damage occurred at the site.

June 11, 2014

Crews removed the remaining chemicals from all of the room and laboratories on the second floor. Chemicals have been removed from a total of 15 rooms and laboratories. These chemicals were moved to a central staging area and segregated by hazardous class. A small amount of bulking of like chemicals occurred. Additional reactive material was found (Picric Acid). Radioactive mineral samples were also discovered. Crews worked to identify chemicals that were labeled but needed to be classed into a hazard group.

Around 1800 chemical bottles have been collected from the second floor. The contents of approximately 200 of the bottles is unknown.

A secondary search for chemicals was completed in all rooms and laboratories on the second floor. Crews also performed a radiation and a mercury survey of each room. No radiation levels above background were detected in any of the rooms on the second floor. Mercury was still detected. A plan will be developed to remove visible metallic mercury. Crews are also considering heating and venting operations after the chemicals are removed from the floor to mitigate the low mercury levels.

No detections of concern were observed on exterior air monitoring stations. An air monitoring report summarizing the June 10, 2014 data was shared with the response partners.

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

Knoxville College has stated they are the property owners and former operators of the Science Hall, but are financially unable to perform the removal.

2.1.4 Progress Metrics

No pertinent information to report at this time.

2.2 Planning Section

2.2.1 Anticipated Activities

Anticipated removal activities for the Site include, but are not limited to, the following:

- Secure the site to limit trespassing or other unauthorized entry.
- Conduct inventory of hazardous materials stored at the Site.
- Stabilize hazardous materials pending testing and disposal.
- Segregate hazardous materials into hazard categories.
- Sample for hazard categorization and disposal profiling.
- Consolidate, repack, over-pack, and lab-pack materials.
- Off-site disposal, treatment, or recycling of materials.
- Additional cleanup activities that may include demolition as necessary to provide a safe and efficient work environment, excavation of contaminated soils, as necessary, decontamination of personnel and equipment.
- Conduct comprehensive air monitoring for employee and community protection.
- Continue coordination with Local and State Agencies.

2.2.1.1 Planned Response Activities

1. Bulk larger quantities of like chemicals collected from the second floor into shipping containers.
2. Initiate hazard categorization identification of unknown chemicals that are 1 pound or larger in size.
3. Clear debris from laboratories on the first floor.
4. Consolidate and manage chemicals from the laboratories on the first floor.
5. Perform a radiation and mercury survey after chemicals are removed from the laboratories and room on the first floor.

2.2.1.2 Next Steps

1. Develop plans to address the presence of metallic mercury on the floors and bench tops
2. Develop a process flow diagram and work plan to safely and efficiently manage the unknown chemicals and reactive chemicals.

2.2.2 Issues

- Large number of unknown chemicals have been found.
- Additional Radioactive Sources have been found.
- Metallic Mercury has been found on the floors and in the cabinets/drawers.

1.

2.3 Logistics Section

Logistical support is being provided by ERRS, START and Q-Solutions/EPA Warehouse contractors and EPA personnel.

2.4 Finance Section

No information available at this time.

2.5 Other Command Staff

2.5.1 Safety Officer

OSC Eichinger is serving as the Safety Officer with START and ERRS each providing an Assistant Safety Officer. An initial assessment of the structure was complete. All activities in the building will need to be conducted in Level B or C personal protective equipment.

Emergency responders will be exposed to serious risk of injury due to numerous containers of hazardous materials, including some extremely hazardous substances, that are unsecured, broken and leaking. There is also damaged friable asbestos containing building material throughout the facility.

Crews cleared debris and tripping hazards from the floors to provide safe access to the laboratories. Carts are being used to transport chemical bottles to minimize the risk of dropping. A fix air monitoring station has been established on the floor the crews are working on. Crews also carry around a portable monitor with them when they are working in the laboratories. All air monitors are equip with remote web-based data collection and alert capabilities (using EPA's VIPER system); no adverse conditions have been observed. Asbestos air sampling is being performed in the building, at the personnel decontamination area and at the Command Post. These samples are analyzed at an off-site analytical laboratory. There is a 24-hour delay in asbestos results.

2.5.2 Liaison Officer

OSC Eichinger is currently coordinating will Local and State Response Partners.

The Knoxville Knox County Emergency Management Agency (EMA) hosted OSC Eichinger and CIC Atashi in order to provide a briefing for Local and State partners at the Emergency Operations Center (EOC). Numerous personnel from the City of Knoxville, TDEC, TEMA, Knox County EMA and Knox County were in attendance. OSC Eichinger resented on the situation, what EPA is doing and how we are assuring that the local community is protected. Response partners were given access to the response website so they can view response information and the real-time air monitoring data. Knoxville Fire Department, TEMA and

TDEC visit the site daily.

OSC Eichinger created a detailed Emergency Response Plan (ERP) for the local EMA's and the Fire Department. The response plan details fire suppression run-off locations, potential evacuation zones and estimated plume models should a fire occur. The ERP can be found at http://epaosc.org/sites/9307/files/Knoxville_College_Emergency_Response_Plan_Printed_06112014.pdf

2.5.3 Community Involvement Coordinator (CIC)

CIC Atashi arrived on-site mid-afternoon on June 9, 2014

A fact sheet for the response has been created. The fact sheet was shared with local and State response partners. It is at <http://epaosc.org/sites/9307/files/Knoxville%20College-%20Fact%20Sheet%20Number%201.pdf>. CIC Atashi began to visit homes within ¼ mile radius of the site and handed out the fact sheet and met with some residents. CIC Atashi will continue to visit homes as the week progresses. He will also have the fact sheets mailed out to those residents in the ¼ mile radius. Contacts were made with the local home owners association who invited us to attend their monthly meeting next week. On June 10, 2014, 5 residents were visited. Severe weather prevent additional home visits. On June 11, 2014, 38 homes were visited.

There is high media interest in the response. OSC Eichinger has provided numbers interviews to the local media.

3. Participating Entities

3.1 Unified Command

An incident command structure has been established for this incident. At this time, OSC Eichinger is filling the role of Incident Commander with personnel from START and ERRS filling the Operation Section Chief, Assistance Safety Officer, HAZMAT Team Leader, Decontamination Team Leader, Air Monitoring Group Supervisor, Resource Unit Leader and Documentation Unit Leader positions. At this time, a Unified Command structure is not needed due to the size of the incident. Local and State Agencies will participate in the incident command structure as Assisting Agencies

3.2 Assisting Agencies

The following local and state agencies are providing support:

- Tennessee Department of Environmental Conservation (TDEC)
- Tennessee Department of Emergency Management (TEMA)
- City of Knoxville Emergency Management
- City of Knoxville Mayor's Office
- City of Knoxville Fire Department

4. Personnel On Site

The following personnel were on-site at various times throughout this reporting period:

- EPA - 2
- START - 4
- ERRS - 6
- TDEC - 2
- TEMA - 2
- City of Knoxville (from various departments) - 6
- PRP - 1

5. Definition of Terms

Abbreviations and acronyms are spelled out within the text of the Pollution Report. Definitions will be added to this section as necessary.

6. Additional sources of information

6.1 Internet location of additional information/report

Documents, photographs, maps and other important/pertinent information can be found at <http://epaosc.org/knoxvillecollege>. Log-in credentials may be required to view certain documents.

6.2 Reporting Schedule

Pollution Reports (POLREP) will initially be drafted as significant events occur. This schedule will change and be less frequent as the emergency response progresses. Please note that POLREP must be review and approved prior to publication, so there may be a delay.

7. Situational Reference Materials

All situational reference materials will be uploaded to <http://epaosc.org/knoxvillecollege>. Log-in credentials may be required to access certain documents.