U.S. ENVIRONMENTAL PROTECTION AGENCY
POLLUTION/SITUATION REPORT
American Nuclear Corporation - Removal Polrep

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Region IV

Subject: **POLREP #4**
Removal Progress
American Nuclear Corporation
C4N8
Clinton, TN
Latitude: 36.0433521 Longitude: -84.1837529

To: James Webster, USEPA R4 ERRB
Steve Sanders, TDEC

From: Carter Owens, OSC
Date: 7/9/2024
Reporting Period: 5/18/2024 thru 7/5/2024

1. Introduction

1.1 Background

Site Number:	C4N8	**Contract Number:**	
D.O. Number:		**Action Memo Date:**	9/12/2023
Response Authority:	CERCLA	**Response Type:**	Time-Critical
Response Lead:	EPA	**Incident Category:**	Removal Action
NPL Status:	Non NPL	**Operable Unit:**	
Mobilization Date:	11/15/2023	**Start Date:**	11/15/2023
Demob Date:		**Completion Date:**	
CERCLIS ID:	TNN000420811	**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 a former radiological source manufacturing facility. Operations at the facility caused sitewide radiological contamination. The building remaining on-site contains a former machine shop, electronics lab, office, and a Hot Cell formerly used to load teletherapy sources. The Hot Cell is a shielded radiation containment chamber contained inside a second attached building on the east side of the facility. Key problem areas include the Hot Cell and the surrounding supporting building, drainage piping underneath the building, and contaminated soils.

1.1.2.1 Location
The Site is located at Blockhouse Valley Road, Clinton, Tennessee, 37716. The geographic coordinates of the Site are 36.043251 degrees north and 84.183476 degrees west. The Site is bordered by TVA and County-owned property. Melton Hill Lake and the Clinch River are approximately four tenths of a mile to the west, and Braden Branch Creek is approximately 50 yards to the south of the Site.

1.1.2.2 Description of Threat
Release of Cs-137 and Co-60 to the environment, as well as residual radiological contamination throughout the operations building containing the Hot Cell. Cs-137 and Co-60 are hazardous substances as defined by Section 101(14) of CERCLA, 42 U.S.C. § 9601(14), and are listed as hazardous substances in 40 C.F.R § 302.4.

1.1.3 Preliminary Removal Assessment/Removal Site Inspection Results
See Initial POLREP.

2. Current Activities

2.1 Operations Section

2.1.1 Narrative
The EPA has documented the presence of Cs-137 and C0-60 above site-specific RMLs within site soils and sediments. Gamma exposure readings inside the building indicate levels as high as 1500 times greater than background levels for the area. Cs-137 and Co-60 are hazardous substances as defined by Section 101(14) of CERCLA, 42 U.S.C. § 9601(14), and are listed as hazardous substances in 40 C.F.R § 302.4.

2.1.2 Response Actions to Date
See Initial POLREP for previous actions

Response actions conducted during the reporting period of 5/18/2024 through 7/5/2024 consisted of the following items:
- The disposal facility alerted the EPA that the Site is within a Fire Ant Quarantine Zone. An Animal and Plant Health Inspection Service (APHIS) compliance agreement and Limited Permit are required to ship any soils from the Site to the disposal facility in West Texas. The EPA coordinated directly with the TN Regional U.S. Department of Agriculture office and their counterparts in Texas to ensure all requirements of the Fire

Ant Quarantine Zone have been met.
- The mounded area from the cleanup conducted by USAEC has been excavated, sampled extensively to develop average activity levels for soil stockpiles, and staged for loading. Four vaults were uncovered when excavating the mound. Three vaults are concrete monoliths of consolidated waste from the USAEC cleanup. The remaining vault appears to be a cistern-like structure with piping leading to it from underneath the building housing the hot cell. The piping is in-line with a floor drain located within the Hot Cell. The three vaults from the USAEC cleanup have been sampled and staged for demolition inside of the building housing the Hot Cell. The fourth, cistern-like vault remains in place and connected to the piping from the building until a plan can be developed for safe removal and demolition.
- The interior metal housing of the Hot Cell has been cut, dismantled, and staged on-site for disposal. Material from the dismantling with elevated exposure levels has been staged in shielded containers and stored inside the building pending disposal.
- Radiologically contaminated soils and debris are being loaded in to 25-yard intermodal containers and shipped off in blocks of 10 intermodals, per the requirements of the rail line making final transport to the WCS disposal facility. Each intermodal is filled with approximately 37,000 pounds of material with 90% being soils and 10% being debris. This soil/debris ratio is suggested by the disposal facility. The intermodals are weighed on-site to ensure proper soil to debris ratios and for calculating activity level per load for proper WCS and DOT manifesting, labeling, and placarding.

2.1.3 Enforcement Activities, Identity of Potentially Responsible Parties (PRPs)
As of July 1980, the State of Tennessee had condemned and taken ownership of the ANC property. The State of Tennessee does not presently have resources or funds available to conduct a removal action at the Site, and referred the Site to the EPA's Superfund program on July 15, 2022.

2.1.4 Progress Metrics

Waste Stream	*Medium*	*Quantity*	*Manifest #*	*Treatment*	*Disposal*
C&D Debris	Debris	170 ton			Disposed as Non-haz
Rad Waste	Soil	333 ton			WCS LLRW
Rad Waste	Debris	37 ton			WCS LLRW

2.2 Planning Section
2.2.1 Anticipated Activities
Load and ship radiologically contaminated soils and debris from the Site in 25-yard, lined, intermodal containers.

2.2.1.1 Planned Response Activities
Load and ship radiologically contaminated soils and debris from the Site in 25-yard, lined, intermodal containers.

2.2.1.2 Next Steps
Continue to load and ship radiologically contaminated soils and debris from the Site in 25-yard, lined, intermodal containers. Materials with elevated activity levels and/or exposure rates have been safely stored on-site until the proper DOT shipping containers are delivered to the Site for disposal.

2.2.2 Issues
N/A
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2.3 Logistics Section
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2.4 Finance Section
2.4.1 Narrative
An Action Memorandum authorizing EPA removal activities has been approved for the Site.

Estimated Costs *

	Budgeted	Total To Date	Remaining	% Remaining
Extramural Costs				
ERRS - Cleanup Contractor	$7,100,000.00	$4,566,251.01	$2,533,748.99	35.69%
TAT/START	$228,806.00	$50,000.00	$178,806.00	78.15%
Intramural Costs				
Total Site Costs	$7,328,806.00	$4,616,251.01	$2,712,554.99	37.01%

* The above accounting of expenditures is an estimate based on figures known to the OSC at the time this report was written. The OSC does not necessarily receive specific figures on final payments made to any contractor(s). Other financial data which the OSC must rely upon may not be entirely up-to-date. The cost accounting provided in this report does not necessarily represent an exact monetary figure which the government may include in any claim for cost recovery.

2.5 Other Command Staff

2.5.1 Safety Officer
An ERRS Radiation Safety Officer sub-contractor is on-site during removal activities.
The OSC continues to coordinate with the EPA Safety Officer and EPA-ERT Radiation Subject Matter Expert.

2.5.2 Liaison Officer
ERRS coordinates the receipt of equipment and supplies to the Site.

2.5.3 Information Officer
EPA's Public Information Officer coordinates community outreach and provides information to the public.

3. Participating Entities

3.1 Unified Command
EPA
TDEC

4. Personnel On Site

ERRS - Kemron
RSO - Solutient
EPA

5. Definition of Terms

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6. Additional sources of information

6.1 Internet location of additional information/report
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7. Situational Reference Materials

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