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

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Region IV

Subject: **POLREP #2**
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: 4/19/2024
Reporting Period: 3/17/2024 through 4/19/2024

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 1497 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 3/17/2024 through 4/19/2024 consisted of the following items:
- Continue site preparation for demolition of the Hot Cell and the surrounding building structures.
- General housecleaning measures to eliminate trip hazards and overhead hazards inside the building caused by deterioration over time.
- Install silt fencing along both edges of the drainage ditch which runs laterally across the site.

- Radiation Safety Officer (RSO) conducted a field radiation training for all on-site personnel.
- RSO continues to screen materials and coordinate with ERRS on logistics and operations for Hot Cell entry and building demolition. This includes procuring temporary shielding for when the Hot Cell door is opened.
- Attachment points were welded onto the Hot Cell door to be used as anchor points for pulling the door open.
- Hot Cell entry was made during the week of April 1, 2024. A radiological assessment was conducted consisting of dose rate readings and swipe/smear samples. Dose rates ranged from 2.5 mR/hr to 20 mR/hr. The smear results ranged from a few thousand dpm/100cm2 up to 560,000 dpm/100 cm2. 560,000 dpm equates to approximately 252,000 pCi. Isotopic identification using a GR-135 meter showed the primary isotope as Cs-137.
- Rubble inside of the hot cell was bagged, removed, and staged for disposal. Removable contamination within the Hot Cell was fixated, following industry standard protocols, in preparation for demolition.
- During the week of April 8, 2024, Suspected ACM was found inside the cinder block exterior building wall adjacent to the Hot Cell when prepping the area for demolition. Demolition work was halted pending ACM sampling and analysis. Preliminary results were negative for asbestos and demolition work resumed the week of April 15, 2024.
- Hot Cell demolition began on April 16. The Hot Cell structure is several layers of solid brick with the two, large steel entry doors placed between the layers. Demolition will be conducted in phases one layer at a time, with all rubble being screened for radiological contamination between each phase of demolition. Swipe samples of the rubble will be screened and compared to Site threshold criteria established by the NRC NUREG-1757 “Consolidated Decommissioning Guidance” Appendix B. Any rubble below the threshold criteria will be staged outside for disposal. Rubble above the threshold criteria will be staged inside of the building, with all other elevated materials, for disposal. Air sampling is conducted around the perimeter of the property and inside of the building during Hot Cell demolition. Air samples are analyzed daily to ensure no contaminated fugitive dust migration off-site.

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*

2.2 Planning Section
2.2.1 Anticipated Activities
Continue building demolition and staging of material for disposal.

2.2.1.1 Planned Response Activities
Continue building demolition and staging of material for disposal.

2.2.1.2 Next Steps
Continue building demolition and staging of material for disposal. The RSO has collected waste samples and is preparing the waste profile for disposal.

2.2.2 Issues
..

2.3 Logistics Section
..

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	$4,600,000.00	$3,793,500.00	$806,500.00	17.53%
TAT/START	$228,806.00	$30,000.00	$198,806.00	86.89%
Intramural Costs				
Total Site Costs	$4,828,806.00	$3,823,500.00	$1,005,306.00	20.82%

* 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
START - Tetra Tech
EPA

5. Definition of Terms

..

6. Additional sources of information

6.1 Internet location of additional information/report

..

7. Situational Reference Materials

..