

United States Environmental Protection Agency
Region IV
POLLUTION REPORT

Date: Friday, June 18, 2010
From: Dave Andrews, On-Scene Coordinator

Subject: FINAL POLREP
Crowders Mountain State Park Drum Site
616 Ross Road, Kings Mountain, NC
Latitude: 35.2325610
Longitude: -81.2869670

POLREP No.:	9	Site #:	B417
Reporting Period:		D.O. #:	0704-F4-0069
Start Date:	9/17/2009	Response Authority:	CERCLA
Mob Date:	9/17/2009	Response Type:	Time-Critical
Demob Date:	5/11/2010	NPL Status:	Non NPL
Completion Date:	5/11/2010	Incident Category:	Removal Action
CERCLIS ID #:	NCS000000478	Contract #	EP-S4-07-04
RCRIS ID #:			

Site Description

EPA Region 4 On Scene Coordinator initiated an emergency response action at the Crowders Mountain State Park after discovering numerous abandoned drums during a Removal Site Evaluation. Orphaned drums, containing product, are scattered about the site. Drums are in poor, dilapidated condition, unidentifiable or without legible markings. Located on the two-acre site are several open excavation pits and three stockpiles of soil/crushed drums & debris with contamination that tested as RCRA Hazardous or above TCLP concentrations for lead and VOCs.

Residential properties and a creek border the site. The OSC documented that erosion and sedimentation countermeasures were not in place. Organic vapors were identified in the ambient air throughout site. Source contamination was tentatively identified as miscellaneous paint/lacquers/organic solvents.

On September 16, 2009 the OSC initiated a response and through the Region 4 EROC mobilized ERRS and START contractors to site on 9/17/09 to stabilize the site by installing measures to control/prevent the off-site migration of contamination and dispose of existing stockpiles of contaminated soil and debris.

On December 17, 2009, the OSC obtained approval to complete the removal under a Ceiling Increase Action Memorandum. ERRS and START remobilized to the Site on January 13, 2010 to complete the removal and site restoration.

Current Activities

EPA's Response Objectives:

- 1-) Establish erosion and sedimentation countermeasures to prevent off-site migration of contamination.
- 2-) During site work conduct air monitoring to assure appropriate level of worker protection and adjust on-site work to control off-site odor from affecting adjacent residential properties to the site.
- 2-) Evaluate existing and future stockpiles of contaminated soil/debris, drummed & bulked waste and ship off-site for treatment and disposal. Drummed waste will be evaluated with Haz-Cat (field compatibility testing and instrumentation). Stockpiled and bulked waste streams will be sampled and evaluated at commercial environmental laboratory.
- 3-) Collect ground water samples from residents located within one-quarter (1/4) mile from the site. Analyze for metals, volatile & semi-volatiles, pesticides, PCBs and evaluate for drinking water quality and for any health-based concentrations.
- 4-) Collect samples from excavated and impacted areas to confirm clean-up goals were reached. Regrade site to approximate original drainage. Back-fill excavated areas with clean top-soil at

0.5 to 1.0 foot horizons, and over-seed with a rye/fescue blend. Use fallen trees as natural erosion barriers.

5-) Correct any damage to fence-line or Ross Road prior to demobilization.

Removal Benchmarks:

PHASE I - SITE STABILIZATION (Sept - Dec 2009)

September 17, 2009 – EPA ERRS contractor mobilize to site and briefed OSC on Health & Safety Plan (HASP) and discussed goals for site stabilization.

September 27, 2009 – START directed to conduct site perimeter air monitoring and close-in air monitoring of excavation. START also directed to collect ground water samples from wells within ¼-mile of Site. ERRS collected samples from the three stockpiles of contaminated soil and debris generated by NCDENR contractor. Funding for the NCDENR contractor was exhausted in June of '09 and site shut down. The removal contractor for NCDENR, A&D Environmental, shipped off-site for disposal one tote and 11 overpacked drums that were previously manifested for disposal under the state contracted removal action.

October 5, 2009 - START completed sampling of 10 neighboring wells that service 16-residential properties. The resulting data did not indicate contamination of the water sources above EPA MCLs at any of the residential wells.

October 13, 2009 - SESD deploys blimp to take aerial georeferenced imagery of the site.

October 16, 2009 – Data from ERRS sample data indicated that all three soil/debris stockpiles exceed TCLP concentrations for lead (>5 ppm) and > 100 ppm for VOCs (Land Band levels) thus requiring in-situ treatment in order to qualify as RCRA non-hazardous consideration and disposal at a Sub-Title D facility. Due to space constraints and location of the stockpiles, the OSC directed ERRS to cease excavation of drums and focus on treatment and removal of the three stockpiles (estimated 1,800 cu yds).

October 23, 2009 - ERRS completed treatment of three stockpiles of approximately 1800 cu yards of contaminated soil with triple super-phosphate (TSP) (2.5% Fe + 1% P-TSP) fertilizer to stabilize lead and VOCs to below TCLP and Land Band concentration levels.

November 6-9, 2009 – The three stockpiles were completely removed over 43 shipments to a Subtitle-D landfill in Lenoir, NC.

November 14, 2009 - SESD conducts geophysical survey (magnetometer) of the site to identify remaining burial locations of drums.

November 18, 2009 – ERRS and START demobilize from Site.

December 17, 2009 – Ceiling Increase Action Memorandum signed/approved for funding to support completion of drum excavation and site restoration.

PHASE II - COMPLETION OF REMOVAL ACTION (Jan - May 2010)

January 13, 2010 – ERRS and START remobilized to the Site with the goals to complete excavation.

January 15 – March 25, 2010 – ERRS completes excavation and stockpiling of buried drums, drum carcasses, and spilled waste. The drum staging area had to be moved from the center to the northeast edge of the site to accommodate excavation operations. Weather events including heavy mid-winter rain and snow hampered the work schedule, but overall progress was maintained. Waste that was lost (spilled) from weakened drums during extrication from the ground was either transferred to cubic yard boxes. The superficial soil contamination was stockpiled in one central “soil/debris” stockpile estimated at 1,300 cu yds and, as with the Phase I stockpiles, required treatment with triple superphosphate (TSP) (2.5% Fe + 1% P-TSP) fertilizer to stabilize lead and VOCs. Overall, lead and volatile organic constituents (VOCs) - toluene, xylenes and methyl ethyl ketone (MEK) were the primary contaminants of concern in concentrations above health-based levels or EPA’s removal action levels (RALs). Approximately 200 drum carcasses were recovered and stockpiled separately from the soil stockpile.

April 7 & 8, 2010 – Drum carcasses shipped off-site for disposal.

April 22, 2010 – Cubic Yard Boxes and Overpacked Drums shipped off-site for disposal.

April 26 – 29, 2010 – Treated stockpiled soil and debris shipped off-site for disposal.

May 3 – 11, 2010 – Site restoration completed and repair to a portion of Ross Road that was damaged from heavy traffic. Drainage at the northeast corner of the site outside the fence line was adjusted (rip rap and modified conduit) to better accommodate heavy rain and prevent erosion.

May 11, 2010 – Completed personnel and equipment demobe.

June 15, 2010 - SESD completes final aerial imagery of site.

Planned Removal Actions

No further Site activity is scheduled to take place under the existing Delivery Order or TDD.

Next Steps

None.

Key Issues

Unseasonal rain and winter weather hampered Site schedule and removal efforts, but the project obtained it's intended goals under the budget outlined in the Action Memorandum.

Estimated Costs *

	Budgeted	Total To Date	Remaining	% Remaining
Extramural Costs				
ERRS - Cleanup Contractor	\$850,000.00	\$811,291.76	\$38,708.24	4.55%
TAT/START	\$122,689.00	\$116,403.12	\$6,285.88	5.12%
Intramural Costs				
Total Site Costs	\$972,689.00	\$927,694.88	\$44,994.12	4.63%

* 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.

Disposition of Wastes

Phase I (Site Stabilization): Sept 17 thru Dec 18, 2010

- Three stockpiles of contaminated soil & debris were treated with superphosphate fertilizer (TSP) to stabilize lead and Toluene and disposed at Subtitle-D facility. Disposal took place on November 6, 7 & 9, 2009 and 43 truck-loads to the land-fill at a cost of approximately \$24,534.74.

Phase II (Removal Under Ceiling Increase Action Memo): Jan 13 thru May 11, 2010

- Five (5) trailer loads of drum carcasses totalling 33.64 tons was disposed at Subtitle-D facility on 4/7-8, 2010 at a cost of \$1,264.70.

- Four (4) Cubic Yard Boxes (CYB) of Flamable Solids (D001, D008 & Paint Related Material) were shipped off-site for incineration on April 22, 2010 at a cost of \$4,305.04.

- Eight (8) Drums of Flamable Solids (D001, D008 & Paint Related Material) were shipped off-site for incineration on April 22, 2010 at a cost of \$2,288.88.

- Four (4) Drums of Flamable Liquids (D001, D008 & Paint Related Material) were shipped off-site for incineration on April 22, 2010 at a cost of \$574.20.

- Seventy-Three (73) Dump Trailer loads of tripple-phosphate treated soil (for Pb & VOCs) totalling 1,264.38 tons were shipped (Non-Hazardous) for disposal to a Sub-Title D Landfill on April 26 thru 29, 2010 at a cost of \$46,149.87.

Total Disposal Costs: \$ 77,852.90 (based on invoices not the above dollar figures)
9.6 % of total (ERRS) removal cost.

Waste Stream	Quantity	Manifest #	Disposal Facility
Contaminated soil & debris - Pb and VOC.	721.61 Tons	Nos. 001 thru 043; Nov 6,7 & 9,2009	Foothills Environmental Landfill Solid Waste Permit No. 14-03 2800 Cheraw Lenoir, NC 28645
Contaminated Soil & Debris (Drum Carcasses)	33.64 Tons	Republic Services Invoice No. 1839 (May 7, 2010)	Foothills Environmental Landfill Solid Waste Permit No. 14-03 2800 Cheraw Lenoir, NC 28645
Flamable Liquids (D001 & D008)	4 X 55 Gal DM	EMES Invoice No. 9158 (May 5, 2010)	755 Industrial Boulevard Sumter, SC 29150-6705
Flamable Solids (D001 & D008)	4 X Cubic Yard Boxes	EMES Invoice No. 9158 (May 5, 2010)	755 Industrial Boulevard Sumter, SC 29150-6705
Flamable Solids (D001 & D008)	8 X 55 Gal DM	EMES Invoice No. 9158 (May 5, 2010)	755 Industrial Boulevard Sumter, SC 29150-6705
Contaminated soil & debris - Pb and VOC.	1264.38 Tons	Republic Services Invoice No. 1839 (May 7, 2010)	Foothills Environmental Landfill Solid Waste Permit No. 14-03 2800 Cheraw Lenoir, NC 28645

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POLREP #9 Last Updated 7/24/2010