

College Grove Battery Chip Site, College Grove, TN

FINAL POLREP, 07/08/02

SITE ACTIVITIES

A. Actions Taken: The cleanup levels proposed by EPA R4 Office of Technical Services were 400 ppm lead in surface soil for residential land use and within a range of 750 to 1250 ppm for non-residential use. The Tennessee Department of Health recommended removal or containment of areas exceeding cleanup levels. The excavation of contaminated soil began on 19 June 2000 and was completed on 19 January, 2002. Prioritization of properties was determined first by known exposures to lead, then on a first-come basis. On virtually all properties the lead migrated no more than twelve inches vertically. Horizontal migration was a function of topographic slope and lead source concentrations. A Command Post, centrally located to the properties, was established to optimize efficient use of resources. All excavated material was characterized, staged, and treated (when necessary) at the Command Post. Most backfill material was stockpiled at the Command Post. All contaminated soil was ultimately disposed in a CERCLA approved RCRA permitted subtitle 'D' landfill. ERRS contractor returned to site 19 APR 02 to conduct additional grassing of Command Post property.

B. Use of Innovative Technologies: The initial assessment of properties was conducted with an X-ray fluorescent analyzer and periodically corroborated with traditional laboratory analysis. The confirmation of clean closure was determined in the same way.

The soil exhibiting the characteristic of lead toxicity was treated on Site by chemical stabilization using triple super phosphate.

C. Community Involvement: TDEC convened a Town-hall meeting to raise awareness of the community to the health threat due to the lead contamination. TDEC also maintained an information hotline to rapidly receive inquiries from concerned citizens. EPA established a Community Center in the town of College Grove to simplify the ability of community members to interact with the EPA removal process. EPA sent blanket mailings to each registered mail recipient in the College Grove and Eagleville zip code areas. EPA, TDEC, and U.S. Congressman Bart Gordon coordinated and delivered press releases periodically throughout the removal action. Over seven live interviews were conducted by the local affiliates of the national television and radio stations. Numerous stories were printed by the local newspapers regarding the removal action.

The excavations were conducted at each of 86 separate properties in the community which afforded community members, including neighbors and relatives of property owners, ample opportunity to address concerns to the OSC or contract employees.

ATSDR and TN Health Department conducted free blood screening at the College Grove Citizens Center.

D. Unusual Circumstances: The Rutherford County Planning Commission attempted to assess a several hundred thousand dollar permit fee upon EPA. EPA declined to pay such

fee; however, the OSC agreed to comply with several other substantive issues (e.g. to be available to answer questions of the County Engineer).

E. Future Considerations: Potential exists for additional lead-contaminated properties to become identified. TDEC is maintaining the lead for these properties and will address on a case-by-case basis.

F. Post Removal Site Control: At the Scales property/Spur Gas Station, the chips were located among the USTs that serve the gas station. These chips were not disturbed as they are under several feet of cover. Only the chips and lead-contaminated soil within the first two feet were removed and replaced with clean fill material. The side slopes were stabilized with a thick grass cover. The property owner has agreed to maintain the cover.

LESSONS LEARNED:

The use of the XRF facilitated rapid data collection and efficient field practice, such as immediately backfilling excavated properties. This expedient operation reduced material hauling (trucks hauled contaminated material to the Command Post, so as to minimize impact to the community).

The use of a central staging facility (the Command Post) greatly facilitated the logistics of the project. Subcontracts were more competitive due to the ability of the subcontractor to more accurately plan and estimate costs (e.g. back fill soils, gravel, disposal transportation) due to the use of the Command Post.

The removal activity has been proven to directly impact human health in a positive way. One child who tested high for blood-lead levels, with no other variables in his life changing, experienced a steady and marked decrease in blood-lead levels immediately after the removal action at his property.

Traditional lead exposures, e.g. ingestion of lead-contaminated soil or inhalation of lead-contaminated dusts, are not the only possible exposure routes. Samples of chicken eggs and catfish which, were routinely consumed, tested high for lead concentrations. In those cases, specific health advisories were issued.

POLREP #26, 12/17/01

SITE ACTIVITIES

Activity during the period from 16 November to 16 December 2001 included completion of treatment of all soil determined to be RCRA hazardous. Excavation has begun at the Command Post to remove residual contaminated soil and debris. Loadout of all excavated soil and debris from the Command Post is ongoing. The material is transported to an approved Subtitle 'D' landfill. Approximately 87,340 tons of nonhazardous soil have been disposed at the Waste Management Cedar Ridge landfill to date.

FUTURE ACTIONS

EPA will continue to restore the Command Post property to original condition and demobilize remaining equipment. TDEC will continue to identify suspect contaminated properties.

POLREP #25, 11/16/01

SITE ACTIVITIES

Activity during the period from 23 October to 15 November 2001 included completion of the Guffee, Moody, Bonnett, and Farris properties. Removal activity has been completed at all identified properties.

All excavated soil and debris has been transported to the Command Post for a hazardous waste determination. Treatment of RCRA hazardous soil and debris is ongoing. All soil determined to be RCRA non-hazardous or treated to appropriate landfill disposal restriction standards is transported to an approved Subtitle 'D' landfill. Approximately 75,250 tons of nonhazardous soil have been disposed at the Waste Management Cedar Ridge landfill to date.

FUTURE ACTIONS

Treatment should continue until all required treatment has been accomplished. After soil treatment has been accomplished, EPA will restore the Command Post property to original condition and demobilize remaining equipment. TDEC will continue to identify suspect contaminated properties.

POLREP #24, 10/24/01

SITE ACTIVITIES

Activity during the period from 20 September to 22 October 2001 included completion of the Morgan, Morell, Hay Sr., Proger, Stephenson, C. Burns, Puckett, Fulghum, J. Scales, and Baker properties. Excavations are currently underway at the Guffee property.

Excavated soils are transported to the Command Post for a hazardous waste determination. Treatment of RCRA hazardous soil and debris resumed on 22 October. All soil determined to be RCRA non-hazardous or treated to appropriate landfill disposal restriction standards are transported to an approved Subtitle 'D' landfill. Approximately 62,578 tons of nonhazardous soil have been disposed at the Waste Management Cedar Ridge landfill to date.

FUTURE ACTIONS

Excavation will continue at the Guffee property. Excavation should begin on the Moody, Bonnett, and S. Farris properties next. Treatment should continue until all required treatment has been accomplished. After soil treatment has been accomplished, EPA will restore the Command Post property to original condition and demobilize remaining equipment. TDEC will continue to identify suspect contaminated properties.

POLREP #23, 09/20/01

SITTE ACTIVITIES

Activity during the period from 22 August to 19 September 2001 included completion of the Davis (Puckett), Charles Scales, Johnson, Underwood, Knox, David Anthony Burns, Carlton (Rockvale), Taylor, Ralston, Hall (Cedar Grove), Flora Bellenfant, Winters, and Smotherman properties. Excavations are currently underway at the Morgan and Morell properties.

Excavated soils are transported to the Command Post for a hazardous waste determination. RCRA hazardous soil and debris are staged at the Command Post for treatment pending sufficient quantity to mobilize the treatment equipment. All soil determined to be RCRA non-hazardous is transported an approved Subtitle 'D' landfill. Approximately 51,003 tons of nonhazardous soil have been disposed at the Waste Management Cedar Ridge landfill to date.

FUTURE ACTIONS

Excavation will continue at the Morgan and Morell properties. After removals are completed at current properties, the tentative schedule then includes the Fulghum and Moody properties.

POLREP #20, 07/10/01

SITE ACTIVITIES Activity during the period from 26 July to 22 August 2001 included completion of the Dyer, Ogelsby, and Broach properties. Excavations are currently underway at the Carlton, Ralston, and Winters properties. Excavation was postponed at the F. Bellenfant property until it sufficiently dries.

Excavated soils are transported to the Command Post for a hazardous waste determination. RCRA hazardous soil and debris are staged at the Command Post for treatment pending sufficient quantity to mobilize the treatment equipment. All soil determined to be RCRA non-hazardous is transported an approved Subtitle 'D' landfill. Approximately 43,100 tons of nonhazardous soil have been disposed at the Waste Management Cedar Ridge landfill to date.

FUTURE ACTIONS

Excavation will resume at the F. Bellenfant property as soon as conditions permit. After removals are completed at current properties, the tentative schedule then includes the Burns, Hall (Cedar Grove), and Taylor properties

POLREP #20, 07/10/01

SITE ACTIVITIES

Activity during the period from 11 May to 28 June 2001 included completion of the Moates, Roberts, Hood, Moody, Bellenfant Implements, Claxton, Barrett, and Suggs properties. Excavations are currently underway at the Lamb property.

Excavated soils are transported to the Command Post for hazardous waste characterization. RCRA hazardous soil and debris are staged at the Command Post for treatment pending sufficient quantity to mobilize the treatment equipment. All soil determined to be RCRA non-hazardous is transported an approved Subtitle 'D' landfill. Approximately 37,500 tons of nonhazardous soil have been disposed at the Waste Management Cedar Ridge landfill to date.

FUTURE ACTIONS

The project will be demobilized during the week of the 4th of July. Excavation and backfill will continue at the Lamb property. The tentative schedule then includes the Jones (Shady Grove), Winters, and Harper properties. The EPA Community Center will not be staffed after 3 August 2001.

POLREP #17, 03/08/01

SITE ACTIVITIES

Activity during the period from 10 February to 7 Mar 2001 included completion of the following properties: Parrish, Charlie Jones, Hall, Berryman, and Carruthers. The excavation has been completed at the Parrish property. Work is underway at the Wilson and Miller properties.

The treatment of hazardous soil and debris began on 6 March. Approximately 420 cubic yards have been treated with 4% (by weight) triple super phosphate. Treated stockpiles have been sampled for confirmation of adequate treatment; analysis pending. Approximately 15,500 tons of nonhazardous soil have been disposed at the Waste Management Cedar Ridge landfill.

TDEC has identified several additional properties for removal evaluation. The EPA Community Relations Center is open during the first week each month. A press release and fact sheet have been given to the local media to inform regarding the commencement of treatment process and general project status.

The following approximate volumes (cubic yards) have been removed to date:

880	Jennette -	200	Billy Farris
1300	Hopple -	600	Allen/Wrey/Rucker
220	Robinson -	200	Collins
8650	Jones (Horton Hwy)-	100	Farris Sawmill
1000	EJ Antiques -	100	Farris (Sam)
920	Redmond -	1400	McCune

800	Powell -	50	Spur Station	
80	Hay -	3850	Hayes/Stem	
280	Floyd -	2350	Writesman	
50	Ingram -	1250	Pace	
130	Simpson	1100	Walls	
740	Martin/Murphy	2250	Hall	
	Bellenfant "River Road"	1050	Carlton	200
	Bellenfant Implements	100	DavenPort/Jadoobirsing	60
	Jones (J.Windrow Rd)	870	Parrish	3080
	Carruthers	20	Berryman	20
	Davis	1420	Wilson	70
	Miller	500		
	TOTAL		36,030 cu.yds.	

FUTURE ACTIONS: Excavation and backfill will continue at the Miller and Wilson properties. The tentative schedule then includes the Case, Overton, Anderson, Emy-Joe Bellenfant-Bellis, and Lamb properties.

POLREP #16, 02/09/01

SITE ACTIVITIES Activity during the period from 21 December 2000 to 9 February 2001 included completion of the following properties: Farris Saw Mill property, Billy Farris residence, McCune residence, Hayes, Hayes-Stem, Writesman, Davenport, Jadoobirsing, Walls, and Carlton. The excavation has been completed at the Parrish property. Backfill and compaction of driveway aggregate is underway. Due to improved weather conditions compaction of backfill is also now possible and underway on the steep slopes at the Spur Gas Station. Excavation and backfill at the Charlie Jones and Hall properties is in progress.

Approximately 13,000 tons of nonhazardous soil have been disposed at the Waste Management Cedar Ridge landfill. The treatability study has been completed. The study has proposed a triple super phosphate admixture of 3% to 4% by weight to be used in a dry mixture process. Approximately 10,000 cubic yards of soil are currently stockpiled for treatment. Bureau of Reclamation personnel have completed their assignments. START personnel are accomplishing day-to-day oversight of removal activity. Few new property owners have expressed interest in assessments for their properties. The EPA Community Relations Center is now only open one week per month.

The following approximate volumes (cubic yards) have been removed to date:

880	Jennette -	200	Billy Farris	
1300	Hopple -	600	Allen/Wrey/Rucker	
220	Robinson -	200	Collins	
8650	Jones (Horton Hwy)-	100	Farris Sawmill	
1000	EJ Antiques -	100	Farris (Sam)	
920	Redmond -	1400	McCune	
800	Powell -	50	Spur Station	
80	Hay -	3850	Hayes/Stem	
280	Floyd -	2350	Writesman	
50	Ingram -	1250	Pace	
130	Simpson	1100	Walls	
740	Martin/Murphy	2250	Hall	
	Bellenfant "River Road"	1050	Carlton	200
	Bellenfant Implements	100	DavenPort/Jadoobirsing	60
	Jones (J.Windrow Rd)	500	Parrish	3080
	TOTAL		33,490 cu.yds.	

FUTURE ACTIONS Excavation and backfill will continue at the Charlie Jones and Hall properties. Backfill will be completed at the Parrish property and Spur Gas Station. The tentative schedule then includes the Davis, Berryman, Emy-Joe Bellenfant-Bellis, Case, Miller, and Lamb properties. Treatment of hazardous materials is anticipated to begin in March 2001. POLREP #15, 12/20/00

SITE ACTIVITIES

Activity during the period from 23 November to 20 December 2000 included continued excavation and backfill at the Farris and McCune properties in Rockvale, and excavation at the Bellenfant and Spur Gas Station properties in College Grove. The contamination at the Spur station appears to continue well into the property including the vicinity of the underground storage tanks. The fill in the UST area is approximately 8 - 12 feet deep. Only the surficial contamination is being excavated at the Spur station. The excavated areas will be backfilled with clay and grassed or paved as appropriate. This tactic should

remove the potential health threat while avoiding any contact with the fuel tanks or ancillary piping. Sampling of on site drinking water well indicated negligible lead migration to the aquifer.

Approximately 1,000 cubic yards of nonhazardous soil have been disposed at the Waste Management Cedar Ridge landfill during this reporting period. The treatability study to determine a cost effective stabilization for the contaminated soils exhibiting the toxicity characteristic is underway.

Bureau of Reclamation personnel have augmented the removal management staff. START personnel have participated mostly in the assessment of newly identified properties. A total of approximately 70 properties have been identified with lead contaminated soils and battery debris. No new properties have been added to the project during this reporting period. The EPA Community Relations Center is staffing reduced hours due to the limited demand.

Jennette -	200
Bellenfant "River Road"	1000
Hopple -	600
Allen/Wrey/Rucker	1300
Robinson -	200
Collins	250
Jones -	100
Farris Sawmill	8600
Farris (S)	1000
EJ Antiques -	100
Redmond -	1400
Powell -	50
Hay -	3850
Floyd -	2350
Ingram -	1250

Simpson	1100
Martin/Murphy	2250
Spur Station	800
Mccune	750
TOTAL	23,800 cu.yds.

POLREP #14, 11/22/00

SITE ACTIVITIES

Activity during the period from 20 October to 22 November 2000 included excavation and backfill at the Farris and McCune properties in Rockvale. The McCune property has been impacted by lead migration coming from the Farris property. The Farris property is heavily laden with battery chips. All excavated material from this property has exceeded TCLP limits for lead.

Approximately 8,000 cubic yards of nonhazardous soil have been disposed at the Waste Management Cedar Ridge landfill during this reporting period.

Bureau of Reclamation personnel have augmented the removal management staff. START personnel have participated mostly in the assessment of newly identified properties. A total of approximately 70 properties have been identified with lead contaminated soils and battery debris.

Jennette -	200
Bellenfant "River Road"	1000
Hopple -	600
Allen/Wrey/Rucker	1300
Robinson -	200

Collins	250
Jones -	100
Farris	7800
EJ Antiques -	100
Redmond -	1400
Powell -	50
Hay -	3850
Floyd -	2350
Ingram -	1250
Simpson	1100
Martin/Murphy	2250
TOTAL	27,100 cu.yds.

FUTURE ACTIONS Due to poor weather conditions the work force has demobilized until after the holiday break. Excavation and backfill will continue at the Farris, McCune, and Spur Station properties after 2 January 2001. The tentative schedule then includes: the Stem and Parrish properties. Treatment of hazardous materials is anticipated to begin in February 2001. POLREP #13, 10/19/00

SITE ACTIVITIES

Activity during the period from 23 September to 19 October 2000 included excavation and backfill at the following properties: Martin/Murphy property (owned by Martin, inhabited by Murphy); the portion of the Bellenfant property named "River Road"; Allen/Rucker/Wrey properties (the Allen contamination migrated to the Rucker and Wrey properties to the west and east, respectively); and, Collins.

Excavation has begun at the Farris property in Rockvale. The contamination has spread to the McCune property to the south; therefore, the contaminated portion of the McCune property will be excavated concurrently with the Farris contamination.

Air monitoring was performed on a visual basis only; engineering controls were maintained (i.e. water fog for dust suppression). START personnel were not present on

site during this month. Several months of air monitoring data indicated fugitive dust emissions were negligible or nondetectable.

The Waste Management Cedar Ridge landfill has been approved for CERCLA off-site disposal. Approximately 8,000 cubic yards of nonhazardous soil are stock piled at the Command Post awaiting disposal.

The EPA Community Relations Center continues to receive requests from property owners for appraisal each week. A total of 61 properties have been identified by TDEC thus far.

The following volumes (cubic yards) have been removed to date:

Jennette -	200
Bellenfant "River Road"	1000
Hopple -	600
Allen/Wrey/Rucker	1300
Robinson -	200
Collins	250
Jones -	100
Farris	1450
EJ Antiques -	100
Redmond -	1400
Powell -	50
Hay -	3850
Floyd -	2350
Ingram -	1250
Simpson	1100
Martin/Murphy	2250
TOTAL	17,450 cu.yds.

FUTURE ACTIONS: Excavation and backfill will continue at the Farris property. The tentative schedule then includes: the Stem and Scales/Spur Station properties. Excavation has not been scheduled for any of the new properties. Disposal of non-hazardous stockpiled materials is anticipated to begin at the end of October and take 4 to 6 weeks. Treatment of hazardous materials is anticipated to begin in early January.

POLREP #11, 09/15/00

SITE ACTIVITIES

EPA Region 4 Emergency Response contractor CMC mobilized to the first property targeted for removal action on 19 June 2000. Removal activity began after noon the same day. EPA simultaneously mobilized Technical Assistance contractor Tetra Tech EMI to perform health and safety monitoring and documentation of achievements. EPA and State Superfund personnel shared responsibility of staffing an information center to serve the local community.

Activity during the period from 5 September to 15 September, 2000 included completion of excavation at the Ingram and Simpson properties. Work also focused on the quantification of existing residences where clean-up has not commenced to determine size, degree and potential time frame for removal and rehabilitation activities. Fifty-one (51) homes have reported/contacted the Community Relations Center to report battery chips and to request visits from EPA and START personnel.

An information flier was during the week of August 26th to each address within the College Grove community describing the battery chip issue and the availability of the EPA Emergency Response and Removal Branch. This mailing was intended to reach those community members who have not been reached by the local news media. Over 850 fliers were sent. Several calls and visits from affected property owners have taken place as a result of this outreach activity. Fliers will be sent to the Errington community next week.

The pilot grassing demonstration continued in an attempt to determine an effective means to regrass excavated areas despite the summer drought. The three methods being demonstrated are hand-placed seed & straw, hydroseed, and an air-delivered mulch & seed. Three rainfall events have occurred at the test property since August 26; and germination of the seed is only apparent where seed has been overlain by straw along the entrance to the property in question..

Eight (8) soil samples have been collected by START of the waste piles generated from the various excavation/rehabilitation projects for TCLP analysis. Results are forthcoming.

The following volumes have been removed to date: Jennette - 200 cu.yds

Hopple -	600 cu.yds.
Robinson -	200 cu.yds.
Jones -	100 cu.yds.
EJ Antiques -	100 cu.yds.
Redmond -	1400 cu.yds.
Powell -	50 cu.yds.
Hay -	3850 cu.yds. (Includes Harper, Poteete, and County)
Floyd -	2350 cu.yds.
Ingram -	1230 cu yds
Simpson	2040 cu yds.
TOTAL	12,120 cu.yds.

FUTURE ACTIONS

Excavation and backfill will continue at the Ingram and Simpson properties. The Martin property is currently being excavated with pre and post NITON readings being conducted daily to determine lead levels. CMC and START personnel will then move to the Allen and Collins properties. The assessment of the new 21 properties is currently underway and will be complete by September 15, 2000.

POLREP #10, 09/01/00

SITE ACTIVITIES

EPA Region 4 Emergency Response contractor CMC mobilized to the first property targeted for removal action on 19 June 2000. Removal activity began after noon the same day. EPA simultaneously mobilized Technical Assistance contractor Tetra Tech EMI to

perform health and safety monitoring and documentation of achievements. EPA and State Superfund personnel shared responsibility of staffing an information center to serve the local community.

Activity during the period from 26 August to 1 September, 2000 included completion of excavation at the Floyd property. Work also commenced at the Ingram property.

An information flier was sent to each address within the College Grove community describing the battery chip issue and the availability of the EPA Emergency Response and Removal Branch. This mailing was intended to reach those community members who have not been reached by the local news media. Over 850 fliers were sent. Less than a dozen individuals have called in response to date. Of the respondents, 5 potentially have battery chips on their respective properties. The potential property locations will be forwarded to the State Superfund program for positive identification.

The pilot grassing demonstration continued in an attempt to determine an effective means to regrass excavated areas despite the summer drought. The three methods being demonstrated are hand-placed seed & straw, hydroseed, and an air-delivered mulch & seed. One rainfall event has occurred at the test property this week; however, no sign of germination is apparent.

The following volumes have been removed to date:

Jennette -	200 cu.yds
Hopple -	600 cu.yds.
Robinson -	200 cu.yds.
Jones -	100 cu.yds.
EJ Antiques -	100 cu.yds.
Redmond -	1400 cu.yds.
Powell -	50 cu.yds.
Hay -	3850 cu.yds. (Includes Harper, Poteete, and County RoW)
Floyd -	2350 cu.yds.
Ingram -	900 cu.yds.
TOTAL	9750 cu.yds.

FUTURE ACTIONS

Backfill restoration will continue at the Floyd property next week. Excavation and backfill will continue at the Ingram property. The tentative schedule then includes: Simpson, Allen, Collins, and Martin properties. The assessment of the new 21 properties is also scheduled to begin next week. The assessment is projected to take two weeks to accomplish.

POLREP #9, 08/25/00

SITE ACTIVITIES

EPA Region 4 Emergency Response contractor CMC mobilized to the first property targeted for removal action on 19 June 2000. Removal activity began after noon the same day. EPA simultaneously mobilized Technical Assistance contractor Tetra Tech EMI to perform health and safety monitoring and documentation of achievements. EPA and State Superfund personnel shared responsibility of staffing an information center to serve the local community.

Activity during the period from 19 - 25 August 2000 included completion of work at the Hay property on West Webb Road. Removal activity this week also included continued excavation and backfill at the Floyd property in Williamson County.

The pilot grassing demonstration continued in an attempt to determine an effective means to regrass excavated areas despite the summer drought. The three methods being demonstrated are hand-placed seed & straw, hydroseed, and an air-delivered mulch & seed. Negligible rain has fallen at the test property this week.

The following volumes have been removed to date: Jennette - 200 cu.yds

Hopple - 600 cu.yds.

Robinson - 200 cu.yds.

Jones - 100 cu.yds.

EJ Antiques - 100 cu.yds.

Redmond - 1400 cu.yds.

Powell - 50 cu.yds.

Hay -	3850 cu.yds. (Includes Harper, Poteete, and County RoW)
Floyd -	2150 cu.yds.
TOTAL	8650 cu yds.

FUTURE ACTIONS

Work will continue at the Floyd property next week. The tentative schedule then includes: Ingram, Collins, Simpson, and Allen properties. The assessment of the new 21 properties is scheduled to begin immediately after the Labor Day weekend. The assessment is projected to take two weeks to accomplish.

INITIAL POLREP, June 23, 2000

SITE SUMMARY

The Site initially consists of fourteen private residential properties and two commercial properties located within an eight mile radius of the town of College Grove, Tennessee. The properties are contaminated with lead which is leaching from waste battery chips. The waste battery chips have been used as an aggregate substitute over the past fifty years at various locations throughout the community. Potential exists for more contaminated private properties to be added to the Site. Property owners have become more aware of the contamination issues due to the high visibility of the removal effort in the area and the efforts of the joint EPA-TDEC Superfund Community Involvement Program. State Superfund is maintaining the lead for identification of new properties.

SITE ACTIVITIES

EPA Region IV Emergency Response contractor CMC mobilized to the first property targeted for removal action on 19 June 2000. Removal activity began after noon the same day. EPA simultaneously mobilized Technical Assistance contractor Tetra Tech EMI to perform health and safety monitoring and documentation of achievements. EPA and State Superfund personnel shared responsibility of staffing an information center to serve the local community.

Activity this first week focused on the excavation of the driveway and shed areas of the Jennette property. The ERRS contractor exercised the engineering control of dust suppression by water fog. No particulate emissions were recorded by the mini-ram monitoring sensor. Contaminant migration was restricted to the six inch layer below the battery chips. Contaminated chips, soil, and debris were removed and staged at a remote area designated for the purpose of staging/ultimate treatment of contaminated soil and debris. Additional activity included establishing the Command Post.

FUTURE ACTIONS

Work should be completed at the Jennette property next week, with the exception of reestablishing vegetation that was destroyed during excavation. This work includes excavation of the contamination to the north of the trailer home on the property as well as reconstruction of the driveway. Vegetation will be reestablished as advised by a locally contracted landscape professional and concurrence of the property owner. Work should begin at the Hopple residence Monday p.m., 26 June 2000. Mr. Hopple has been advised. The tentative schedule then includes: Redmond 5-7 July, Jones 10-14 July.

**U.S. ENVIRONMENTAL PROTECTION AGENCY
FINAL POLREP**

DATE: July 1, 2004

FROM: Steve Spurlin
On-Scene Coordinator
ERRB-Region 4

TO: RRC Region 4
Shane Hitchcock, Branch Chief
Don Rigger, Section Chief
TDEC

I. GENERAL SITE INFORMATION

Site ID#	A4T3
Site Name:	College Grove Battery Chip
Street Address:	Various Properties in Rutherford & Williamson Cos., TN
City, County, State:	College Grove, Williamson Co., Tennessee
Response Authority:	CERCLA
NPL Status:	Non-NPL
Incident Category:	Removal Action
Completion Date:	January 14, 2004
EPA OSC:	Steve Spurlin

II. BACKGROUND INFORMATION

The U. S. Environmental Protection Agency (EPA) has been involved with this site periodically since September 1999. The Tennessee Department of Environment & Conservation (TDEC) requested assistance in 1999 when it was discovered that there had been wide spread use of lead acid battery chips as fill material around the College Grove, Rutherford County, Tennessee area. EPA, with the assistance of the START contractor, originally conducting sampling investigations at 20 residential, agricultural, and commercial properties from September through November of 1999. An additional 98 properties were discovered and assessed from January through February 2002. Of the 118 properties initially assessed, 96 had lead concentrations exceeding safe levels, prompting the OSC assigned at that time, Rick Jardine, to develop and submit an Action Memorandum requesting the 12 month/\$2 million statutory exemption for a removal action. Since the ceiling request exceeded \$6 million, the action memo was sent to EPA Headquarters for approval. Headquarters approval was obtained June 15, 2000, and signed-off at the Region on June 26, 2000. The approved project ceiling for the action memo was \$10,282,000. All work for this Site has been conducted pursuant to this original action memo.

A removal action was conducted at these original 96 properties in Rutherford and Williamson

Counties from May 2000 until February 2002. A report documenting the actions for the 96 properties was completed in July 2002.

In August 2002, TDEC contacted EPA about additional properties. Six additional properties were assessed from September through December 2002. A removal was conducted at 5 of the 6 properties from October 2002 until February 2003. A report documenting the actions for the 5 properties was completed in June 2003.

In October 2003, TDEC contacted EPA about an additional property (Smith property) where battery chips were reported. The property was assessed in October 2003, and a removal conducted from November 2003 until December 2003. A report summarizing the action was completed in February 2004.

III. RESPONSE INFORMATION

A. Actions Taken:

October 2002

CMC viewed two properties during the month. Samples from these properties were taken by START and submitted for analysis to determine waste characterization. Transportation and disposal sub-contracts were solicited for bids and awarded. Materials for restoration activities were located and set up.

November

Mobilization took place on November 11th. CMC, EPA, and START looked at 4 properties that were to have remediation. One property, Crockett Springs Farm, had two locations. Scales Trucking was selected for landfill hauling and topsoil delivery. START provided marking of contaminated areas and determining clean with a Niton instrument. The Glenn property was started and completed on November 12th. Equipment was moved to the Tomlin property which had a long drive and area around a barn that required removal. Rock was used for backfill on the Tomlin property. Work was completed at the Tomlin property on November 20th. Equipment was moved to the Crockett Springs Farm where an area around a sawmill and over a septic system at a house were addressed. The Crockett Springs Farm property was completed on November 22nd.

Equipment was moved to the Osbourn property and work started on November 22nd. Work was not completed at the Osbourn property when the Thanksgiving break started on the 27th.

A total of an estimated 1,440 tons was disposed of at the Waste Management's Subtitle D landfill at Lewisburg, TN during November.

December

Work continued at the Osbourn property with disposal of contaminated soil and backfilling. Disposal was completed at the Osbourn property on December 3rd. Total disposal for the month was 291.64 tons for a total to date 1,732.17 tons. Restoration would continue when the area

dried. Equipment was moved to the White property located at 200 Mallory Station Road, Franklin, TN on December 4th. Excavation and stockpiling started and continued throughout the month. START took samples of the stockpiles, and all results indicated TCLP Lead greater than 5 ppm. Therefore, the stockpiles were consolidated and moved to an area suitable for transfer to the mixing cell. Pricing was obtained for hazardous waste disposal and an estimate was prepared for mixing with Triple Super Phosphate (TSP) and disposal as non-hazardous. The decision was to mix the contaminated soil with TSP, but the mixing would be in prepared cells by use of a rototiller pulled by a tractor. Mixing started on December 16th. The Rutherford Coop was the low bidder for supplying TSP. CMC could obtain the material on an as needed basis. START took samples every day of the mixed material to verify the accomplishment. Every batch of mixed soil had a TCLP Lead analysis of non-detect.

Excavation at the White property became extensive with approximately 2 ½ acres disturbed. START provided confirmatory sampling with the XRF instrument as excavation was being done. An estimate of 2,000 tons of soil to be treated was used to estimate costs so an increase of the ceiling could be obtained. On December 10th, an increase of \$200,000 was obtained. A temporary road made with swamp mats was put in for truck traffic.

January 2003

Treatment of soil continued until January 4th. All samples of treated soil indicated that treatment was effective in making the soil non-hazardous. Disposal of soil from the White property started on January 2nd and continued throughout the month. During the month 3,243.35 tons of soil from the White property was disposed of. As the load out stockpile became smaller, START took confirmatory analysis with the XRF to confirm concentration of residual material. The area east of the asphalt driveway was excavated on January 22nd and backfill was completed on the 23rd. The area west of the asphalt driveway was excavated on the 27th and backfill was completed on the 28th. Backfilling of the area east of the barn started on the 28th with the use of an off-road dump truck to transport the backfill to the area. Backfilling continued through the rest of the month.

Restoration at the Osborn property was completed on January 11th with addition of more topsoil, grading, adding rock for a drive to the storage shed, seeding, and strawing.

An additional \$150,000 was added to the ceiling because of the amount of material removed from the White property. A job total of 4,975.52 tons of contaminated soil has been disposed of to date.

February

An additional \$75,000 was added to the ceiling to complete the work. Backfilling of the White property continued until February 3rd when wet weather prevented additional backfill being delivered to the site. CMC demobilized from the site on February 4th to wait until additional backfill can be delivered. The remaining amount of contaminated material was disposed of on February 4th with a total of 107.55 tons being disposed of during the month. There was a total of 3,350.9 tons disposed of from the White property and a job total of 5,083.07 tons.

March

CMC remobilized to the site on March 10th to complete backfilling the White property. The last of the backfill topsoil was delivered on March 17th. A rough grade was put on the backfilled area. Bids were received from vendors capable of putting a finish grade on the property and then hydroseeding the area. A Purchase Order was issued to McFall Sod and Seed, Columbia, TN to do the finish grade and hydroseeding once the soil dried some.

The swamp pad road was removed and shipped back to CMC. All materials and equipment were removed from the White property by March 21st.

William Oglesby's property at 2437 S. Hwy 41A, Eagleville required some repair of the drive due to washing. This property was remediated during a Delivery Order issued under the ERRS Contract No. 68-S7-4006. Mr. Spurlin approved the repair, which required adding more rock to the drive and grading the affected part of the drive. Not all of the drive was worked on during work on March 20th.

CMC demobilized from the site on March 21st.

April

A final grade was put on the White property during April 2nd by McFall Sod and Seed that also hydroseeded the property on April 3rd. Mr. Bartlett visited the site on April 29th to inspect the grass growth and view the erosion that had occurred. April had been a very wet month. Erosion damage will need to be repaired. The seeding will need to be watched for possible reseeding in some areas.

May

May continued to be a very wet month. Scheduling could not be worked out for erosion repair and reseeding with McFall Sod.

June

A Purchase Order was issued to Commercial Hydroseed for repair of the erosion areas, tilling some bare areas for reseeding, and spreading seed and straw over approximately one acre of the White property in Franklin, TN. This work was done on June 6th. It started raining as the work was finishing, so the Project Manager observed where the water flow was coming from that was causing the erosion. The gutter on the barn was leaking and overflowing causing rainwater to flow over the seeded areas. The OSC wanted CMC to patch the gutter and put up a water diversion before spreading more seed.

The gutter repair and cleaning the gutters and down spout and putting sand bags along the edge of the concrete pad for water diversion were done on June 24th. The erosion areas were raked, seeded, and strawed on June 25th. Grass was well underway in getting established on most of the White property.

There was no site activity in July through August at the site.

September

The PM went by Mrs. White's property, Franklin, on September 21st to observe the growth of the grass. It would require minor reseeded only in spots. The drainage diversion was effective in preventing erosion.

October

The Period of Performance was extended to July 1, 2004. An additional property was made known, and START took soil samples on October 30th. Cedar Ridge Landfill was contacted about pricing, and there has been a \$0.03 per ton tax increase since the last disposal.

November

An increase in the ceiling of \$35,000 was received in November for the continuation of the remediation. The soil samples from the additional property indicated that the material required remediation and treatment before disposal. The additional property is owned by the Smith's and is located at 4248 Pate Road, Franklin, TN. There was a site visit by Mr. Corman, Ray Savage, the substitute Project Manager, and the EPA OSC on November 12th to review the scope of work for the site.

CMC mobilized to the Smith property on November 16th. Triple Super Phosphate, the reagent for reducing the leachable lead, was hauled to the site. Excavation of the site started on the 17th with the driveway and extended to an area near the garage and into the backyard. START used a NITON to assist in the excavation. The soil was stockpiled. Mixing the TSP with the contaminated soil was done with the mini-excavator that was on-site. Backfilling with crusher run and soil started on the 21st. Disposal of the treated material took place on the 25th and 26th with the disposal of 146.67 tons.

The sand bags used for drainage diversion at the White property were removed on the 20th and consolidated with the material from the Smith property for disposal.

No activity occurred in December.

January 2004

On January 13-14, 2004, CMC completed the backfill and restoration of the Smith property

February

Prices were solicited for aerating, overseeding, fertilizing, and weed spraying of approximately 2.5 acres of the White property. A purchase order was given to Turf Way Lawn Care

March

The overseeding and fertilizing of the White property took place on March 4th by Turf Way Lawn Care.

April

No activity occurred during the month.

May

The seeded area of Mrs. White's property was sprayed for weeds on May 19th. This completes the work at this site.

B. Future Actions: No future actions are planned. No post-removal site controls needed.

IV. COST INFORMATION**

The following direct costs are associated with the property cleanups conducted during the time period October 2002 to February 2003.

ERRS	\$641,568
START	\$ 51,000
EPA	\$ 6,400

**The above accounting of expenditures is an estimate based on figures known to the OSC at the time this report was written. The cost accounting provided on this report does not represent an exact monetary figure which the government may include in any claim for cost recovery.

V. ROSTER OF AGENCIES/ORGANIZATIONS ASSISTING IN REMOVAL

<u>ORG/AGENCY</u>	<u>CONTACT</u>	<u>PHONE</u>
US EPA	Steve Spurlin	731/422-0101
TDEC-EAC/Nashville	Pam Franklin	888/891-8332
START	Ron Grover/ Alan Brown	615/254-4559
CMC, Inc.	Raymond Savage	888/854-3732