

**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
POLLUTION REPORT**

**I. HEADING**

**DATE:** January 16, 2001

**SUBJECT:** **POLREP for the Valleycrest (North Sanitary) Landfill Site Removal Action, Dayton, Montgomery County, Ohio.**

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**POLREP #:** POLREP #15 with attached photographs of: (1) view of VDRAG contractors overpacking an excavated and intact waste drum; (2) view of the drum excavation area in Area 5 Rows 10 and 11; (3) view of hazardous waste drums containing flammable liquid being loaded for off-site disposal; and (4) the Drum Excavation Grid Table.

**II. BACKGROUND**

<b>Site Number</b>	B543
<b>Response Authority</b>	CERCLA Time Critical Removal, PRP-funded (AOC)
<b>NPL Status</b>	NPL listed 1994, Currently in RI phase with Ohio EPA
<b>Latitude</b>	39/47'14" North
<b>Longitude</b>	84/09'08" West
<b>State Notification</b>	Ohio EPA requested removal - RI/FS concurrent
<b>Start Date</b>	June 23, 1998 (Landfill Gas Abatement System) November 11, 1998 (Drum Removal)
<b>Completion Date</b>	To be determined

### III. SITE INFORMATION

#### A. Incident Category

CERCLA incident category: PRP Time Critical Removal at an NPL site

#### B. Site Description

##### 1. Site location and background

See previous POLREPS.

### IV. REMOVAL INFORMATION

#### A. Situation

##### 1. Current situation

Pursuant to a USEPA Administrative Order by Consent (AOC) dated September 10, 1998, Valleycrest Drum Removal Action Group (VDRAG) contractors initiated work on a landfill gas (LFG) abatement system in June 1998. Six perimeter LFG extraction systems have been installed (along the north, east, and southeast site perimeter) and manifolded into an enclosed flare. VDRAG contractors initiated a subsurface drum removal in Disposal Area 5 in November 1998. To date, 21,072 subsurface drums have been removed from Disposal Area 5 (west side of site), which represents approximately 79% of Disposal Area 5 subsurface magnetic anomalies. All excavated drums (liquid and solid hazardous waste), PCB- and lead-contaminated debris is stabilized and transported for off-site disposal. TCE-contaminated debris is currently stockpiled (covered and lined) on site pending treatment.

##### 2. Removal activities to date (since last POLREP)

- During the month of **August 2000**, VDRAG contractors continued the subsurface drum excavation of Row 10 to the depth of waste (approximately 26 feet below ground surface (bgs)) and Row 11 to a depth of 13 feet bgs. VDRAG contractors continued sampling, overpacking, and bulking drums for disposal. All TCLP TCE/PCB-contaminated soil/debris from staging pad #7 was transported for off-site disposal. VDRAG contractors completed sampling stockpiled excavated soil/debris from Rows 10 and 11 on staging pad #5. Fifteen samples out of the 42 (36%) samples (or cells equaling 150 yd<sup>3</sup>) collected from staging pad #5 showed concentrations of TCLP TCE (maximum of 67 ppm) greater than the TCLP TCE regulatory limit of 0.5 ppm, and one sample out of the 42 samples showed elevated concentrations of TCLP lead (maximum of 7.1 ppm) greater than the TCLP lead regulatory limit of 5.0 ppm. TCLP TCE concentrations of 882 ppm and 840 ppm (greater than 1,600 times regulatory limit of 0.5 ppm) were shown in composite samples from two rolloff boxes containing shredded, excavated drums. Weekly on-site meetings conducted every Wednesday with EPA, Ohio EPA, VDRAG contractors, and City of Riverside and City of Dayton fire department representatives.

The landfill gas enclosed flare combustor operated at cycles from 2 to 3 hours “on” and 4 to 5 hours “off”. Compliance probes remained in compliance with perimeter methane percentages consistently reading less than 5% at the north, south, and southeast site perimeter.

A total of two roll-off boxes containing 204 shredded, excavated drums and respective contents were transported for off-site disposal to Environmental Quality’s (EQ’s), Wayne Disposal Landfill, in Belleville, Michigan as hazardous waste. A total of 38,606 gallons of non-hazardous wastewater was transported to Perma-Fix in Dayton, Ohio for treatment and disposal. A total of 25 roll-off boxes (500 cubic yards) containing soil/debris contaminated with PCBs and TCLP TCE were transported to ChemWaste Management in Model City, New York for hazardous waste disposal. A total of 41 drums of TCLP TCE/flammable liquid and 30 drums of TCLP TCE/ignitable solid material were transported to ChemWaste Management in Model City, New York for hazardous waste disposal. A total of 3,250 gallons of hazardous liquid was transported to Perma-Fix in Dayton, Ohio for treatment and disposal.

- During the month of **September 2000**, VDRAG contractors completed the subsurface drum excavation to the depth of waste (approximately 26 feet bgs) and the post-excavation sampling in Area 5 Rows 10 and 11. VDRAG contractors continued sampling, overpacking, and bulking hazardous waste drums for disposal. All TCLP lead-contaminated soil/debris from staging pad #5 was transported for off-site disposal. VDRAG contractors completed sampling stockpiled excavated soil/debris from Rows 10 and 11 on staging pad #6. Eleven samples out of the 42 (26%) samples (or cells equaling 150 yd<sup>3</sup>) collected from staging pad #6 showed concentrations of TCLP TCE (maximum of 7.2 ppm) greater than the TCLP regulatory limit. VDRAG contractors completed transporting VOC-contaminated soil/debris from staging pads #5 and #6 to staging pad #7. The analytical results of VDRAG drum composites continues to show TCLP TCE greater than regulatory limits (up to 900 times TCLP limits). In addition, TCLP vinyl chloride was shown in a drum composite at 2.1 ppm (TCLP regulatory limit of 0.2 ppm) and TCLP cadmium was shown in another drum composite at 1.44 ppm (TCLP regulatory limit of 1.0 ppm). A TCLP TCE concentration of 825 ppm was shown for a composite sample from a rolloff box containing shredded, excavated drums. Weekly on-site meetings conducted every Wednesday with EPA, Ohio EPA, VDRAG contractors, and City of Riverside and City of Dayton fire department representatives.

The landfill gas enclosed flare combustor operated at cycles of 3 hours “on” and 5 hours “off”. Compliance probes remained in compliance with perimeter methane percentages consistently reading less than 5%.

A total of 16 roll-off boxes containing 2,097 shredded, excavated drums and respective contents were transported for off-site disposal to EQ’s, Wayne Disposal Landfill in Belleville, Michigan as hazardous waste. A total of 13,138 gallons of non-hazardous wastewater was transported to Perma-Fix in Dayton, Ohio for treatment and disposal. A total of eight roll-off boxes (160 cubic yards) containing soil/debris contaminated with TCLP lead were transported to EQ’s, Wayne Disposal Landfill in Belleville, Michigan for disposal as hazardous waste. The average TCLP TCE levels of shredded, excavated drums and respective contents is 336 ppm, which is greater than 750 times the regulatory level.

- During the month of **October 2000**, VDRAG contractors began the subsurface drum excavation in Area 5 Row 12 to a depth of 13 feet below ground surface. VDRAG contractors continued sampling, overpacking, and bulking drums for disposal. VDRAG contractors completed sampling stockpiled excavated soil/debris from Rows 11 and 12 on staging pad #8. Twenty-six samples out of the 36 (72%) samples (or cells equaling 150 yd<sup>3</sup>) collected from staging pad #8 showed concentrations of TCLP TCE (maximum of 38 ppm) greater than the TCLP TCE regulatory limit, and one sample out of the 36 samples showed elevated concentrations of TCLP chlordane (maximum of 1.6 ppm) greater than the TCLP chlordane regulatory limit of 0.03 ppm. Staging pad #7 was filled with VOC-contaminated soil/debris from staging piles #5 and #6, and covered with a 16-mm poly liner, pending possible on-site treatment. VDRAG contractors began backfilling clean material (below TCLP regulatory limits) in Rows 10 and 11 to an elevation of 750 feet. A TCLP heptachlor epoxide concentration of 14.75 ppm (TCLP regulatory limit of 0.008 ppm) was shown in a composite sample from a rolloff box containing shredded, excavated drums. Two underground storage tanks were unearthed along the southern site perimeter (found during RI waste delineation work activities), one which contained approximately 2,800 gallons of TCE-contaminated liquid. Weekly on-site meetings conducted every Wednesday with EPA, Ohio EPA, VDRAG contractors, and City of Riverside and City of Dayton fire department representatives.

The landfill gas enclosed flare combustor operated at cycles of 3 hours “on” and 5 hours “off”. Compliance probes remained in compliance with perimeter methane percentages consistently reading less than 5% at the north, east, and southeast perimeter.

A total of 11 roll-off boxes containing 1,344 shredded, excavated drums and respective contents were transported for off-site disposal to EQ’s, Wayne Disposal Landfill in Belleville, Michigan as hazardous waste. A total of 22,597 gallons of non-hazardous wastewater was transported to Perma-Fix in Dayton, Ohio for treatment and disposal. One roll-off box containing 29 shredded, excavated drums and respective contents contaminated with PCBs was transported to ChemWaste Management in Model City, New York for disposal as hazardous waste.

- During the month of **November 2000**, VDRAG contractors continued backfilling Area 5 Rows 10 and 11 with clean material (less than TCLP regulatory limits) to an elevation of 750 feet. VDRAG contractors continued sampling, overpacking, and bulking drums for disposal. VDRAG contractors completed sampling stockpiled

excavated soil/debris from Rows 11 and 11 on staging pad #9. Thirty-three samples out of the 54 (61%) samples (or cells equaling 150 yd<sup>3</sup>) collected from staging pad #9 showed concentrations of TCLP TCE (maximum of 53 ppm) greater than the TCLP TCE regulatory limit ppm. VDRAG contractors transferred TCE-contaminated soil/debris from staging pad #8 to staging pad #7, and from staging pad #9 to staging pads #1 and #8. One VDRAG solid drum sample composited from 84 excavated drums showed a TCLP heptachlor epoxide concentration of 9.9 ppm, which is greater than the TCLP regulatory limit of 0.008 ppm. Weekly on-site meetings conducted every Wednesday with EPA, Ohio EPA, VDRAG contractors, and City of Riverside and City of Dayton fire department representatives.

The landfill gas enclosed flare combustor operated at cycles of 3 hours 15 minutes “on” and 4 hours and 45 minutes “off”. Compliance probe CP4-1 showed a methane reading of 5.8% early in the month and was monitored for 10 days. The vacuum was increased to 180 cfm. Toward the end of the month, CP4-1 showed readings less than 5% methane at the site perimeter.

A total of 11 roll-off boxes containing 1,381 shredded, excavated drums and respective contents were transported for off-site disposal to EQ’s, Wayne Disposal Landfill, in Belleville, Michigan as hazardous waste. A total of 54,889 gallons of non-hazardous wastewater and 8,468 gallons of hazardous wastewater was transported to Perma-Fix in Dayton, Ohio for treatment and disposal.

- During the month of **December 2000**, VDRAG contractors continued subsurface drum excavation in Area 5 Row 12 to the depth of waste and Row 13 to a depth of 13 feet below ground surface. VDRAG contractors continued sampling, overpacking, and bulking drums for hazardous waste disposal. VDRAG contractors completed transferring TCE-contaminated soil/debris from staging pad #9 to staging pads #1 and #8. VDRAG contractors completed backfilling Area 5 Rows 10 and 11 to a depth of approximately 5 to 7 feet below ground surface. Weekly on-site meetings conducted every Wednesday with EPA, Ohio EPA, VDRAG contractors, and City of Riverside and City of Dayton fire department representatives.

The landfill gas enclosed flare combustor operated at cycles from 2 hours to 2 hours 30 minutes “on” and 3 hours 30 minutes to 5 hours 30 minutes “off”. Compliance probes remained in compliance with methane percentages consistently reading less than 5%, at the north, east, and southeast perimeter.

A total of 21,679 gallons of non-hazardous wastewater was transported to Perma-Fix in Dayton, Ohio for treatment and disposal. A total of 5,530 gallons of hazardous liquid was transported to Perma-Fix in Dayton, Ohio for treatment and disposal.

- During the period of **January 1 through 7, 2001**, VDRAG contractors continued subsurface drum excavation in Area 5 Rows 12 and 13 toward the depth of waste. VDRAG contractors continued sampling, overpacking, and bulking drums for disposal. Weekly on-site meetings conducted every Wednesday with EPA, Ohio EPA, VDRAG contractors, and City of Riverside and City of Dayton fire department representatives.

The landfill gas enclosed flare combustor operated at cycles of 2 hours “on” and 2 hours “off”. Compliance probe CP-6R showed 20% methane on 12-31-00. VDRAG to conduct a 10-day monitoring and evaluation period to determine the cause.

**B. Next Steps**

1. VDRAG contractors will continue operation of the enclosed flare landfill gas system. All LFG system vents and piping have been manifolded into the enclosed flare. Seasonal changes including temperature and moisture fluctuations have caused perimeter methane concentrations to exceed the action level of 5%. Corrections to extraction system vacuum levels and moisture traps have corrected the problems to date.
2. Continue subsurface drum excavation and off-site disposal of drums containing solid and liquid hazardous waste in Area 5.
3. Conduct full subsurface drum excavation to the limit of waste from Area 5 grids in Rows 12 through 16.
4. Continue weekly update meetings with local agencies every Wednesday at 1300 hours.

**C. Key Issues**

1. A total of 21,072 subsurface drums have been removed to date from 65 out of 82 (79%) 50-foot by 50-foot grids in Disposal Area 5. A total of 82 grids have been identified, but additional grids may be identified south of Row 16 once excavation activities are conducted in Row 16. To date, 66% of subsurface drums contain solid or liquid hazardous waste. TCLP TCE levels in drums bulked in rolloff boxes has been documented at greater than 34,000 times the regulatory level of 0.5 ppm.
2. On-going Ohio-EPA led RI/FS will determine if subsurface drum wastestreams are potentially impacting local groundwater near City of Dayton well fields.
3. On December 18, 2000, VDRAG representatives requested a meeting with USEPA Region 5 to discuss suspending the drum removal action. During the meeting, VDRAG requested the removal in Areas #5 and #1 to be suspended and for long-term storage of TCE-contaminated stockpiled soil/debris waste.
4. Public meeting to be held in February 2001.

**V. COST INFORMATION (estimated as of January 8, 2001)**

<b>Personnel</b>	<b>Budget</b>	<b>Used to Date</b>	<b>Remaining</b>
START I (TDD #S05-9806-005)	\$208,864	\$208,864	\$ 0
START II (TDD #S05-0012-016)	\$ 6,000	\$ 2,000	\$ 4,000
USEPA	\$150,000	\$145,000	\$ 5,000
<b>TOTALS</b>	<b>\$364,864</b>	<b>\$355,864</b>	<b>\$ 9,000</b>

**VI. DRUM INFORMATION**

See attached Disposal Area 5 - Drum Excavation Grid Table.

**VII. SUMMARY OF MOST ELEVATED ANALYTICAL RESULTS IN DRUMS AND SOIL/DEBRIS (results in ppm)**

Parameter	Regulatory Limit (ppm)	Excavated soil/debris and drum contents shredded in rolloff boxes	VDRAG liquid drum samples	VDRAG solid drum samples	EPA liquid drum samples	EPA solid drum samples
<u>TCLP VOCs:</u>						
TCE	0.5	17,200	720	469	178,000	600
Vinyl chloride	0.2	0.4		6.9	16	1.3
PCE	0.7	28	10	1.2	3,140	1.6
Chloroform	6.0			11	170	13
Chlorobenzene	100.0			240		
Benzene	0.5			1.8		1.6
MEK	200.0		370		21,600	470
o-Cresol	200.0					410
<u>TCLP pesticides:</u>						
Chlordane	0.03	1.6				
Heptachlor epoxide	0.008	14.75		9.9		
<u>TCLP metals:</u>						
Arsenic	5.0				6.9	
Lead	5.0	33	11	290	450	172
Cadmium	1.0			1.44	1.4	
Barium	100.0			1,190	216	
Chromium	5.0				12.6	
Silver	5.0				5.4	
PCBs	—	360	71			300
Flash Point	< 140°F	54	50			

**VIII. DISPOSAL INFORMATION (as of December 11, 2000)**

<b>Wastestream</b>	<b>Quantity</b>	<b>Containment Migration Control</b>	<b>Disposal Option</b>	<b>Disposal Facility</b>
Bulked solid drummed waste	115 roll-off boxes (13,119 drums)	N/A	Microencapsulation	Environmental Quality Belleville, Michigan.
TCE-contaminated solid/debris	290 roll-off boxes (5,800 cubic yards)	N/A	Microencapsulation	Environmental Quality Belleville, Michigan.
PCB-contaminated soil/debris	13 roll-off boxes (260 cubic yards)	N/A	Incineration	ChemWaste Management Port Arthur, Texas.
PCB solids PCB liquid	3 roll-off boxes (bulked 160 drums) 1 drums (55 gal.)	N/A	Incineration	ChemWaste Management Port Arthur, Texas.
PCB/TCE-contaminated soil/debris	145 roll-off boxes (2,900 cubic yards)	N/A	Landfill	ChemWaste Management Model City, New York.
TCLP lead-contaminated soil/debris	17 roll-off boxes (340 cubic yards)	N/A	Landfill	Environmental Quality Belleville, Michigan.
TCLP chlordane-contaminated soil/debris	10 roll-off boxes (200 cubic yards)	On staging pad ready to ship off site		
Hazardous liquid	125,727 gallons	N/A	Treatment	ChemWaste Management Sauget, Illinois. ChemWaste Management Port Arthur, Texas. Perma-Fix Dayton, Ohio.
Sulfide drums	14 drums	N/A	Treatment	City Environmental Detroit, Michigan.
TCE/ignitable solids TCE/ignitable solids	1 roll-off box (bulked 150 drums) 75 drums	N/A	Landfill	ChemWaste Management Sauget, Illinois.
TCE/flammable liquid	41 drums	N/A	Fuels blending	ChemWaste Management Model City, New York.
Non-hazardous water	454,926 gallons	N/A	Treatment	City Environmental Detroit, Michigan. Perma-Fix Dayton, Ohio.
PCB/TCE-contaminated solids	6 roll-off boxes (bulked 613 drums)	N/A	Landfill	ChemWaste Management Model City, New York.
VOC-contaminated soil/debris (> TCE TCLP levels)	33,800 cubic yards in 7 on-site stockpiles	Covered with 16-mil poly liner	Potential on-site treatment	To be determined