

**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
POLLUTION REPORT**

I. HEADING

DATE: August 27, 2001

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

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POLREP #: POLREP #16 with attached photographs of: (1) view of VRAC contractor installing physical barrier in Area 2; (2) view of START conducting perimeter methane compliance probe monitoring; (3) view of VRAC contractors sampling an excavated drum containing liquid contents; and (4) view of excavated drum containing liquid contents being bulked into an on-site baker tank.

II. BACKGROUND

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

The Valleycrest Landfill site is a 102-acre former gravel pit. The site is located above the Great Miami Aquifer, which is a sole-source aquifer for the city of Dayton. The site is surrounded by residential and commercial properties. See previous POLREPS.

IV. REMOVAL INFORMATION

A. Situation

1. Current situation

Pursuant to a USEPA Administrative Order by Consent (AOC) dated September 10, 1998, the Valleycrest Removal Action Coalition (VRAC) 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. VRAC contractors have conducted stack testing of the enclosed flare and are planning on conducting another round of stack testing in October 2001. VRAC contractors are currently extending the LFG abatement system south of Area 5 and into Area 2 (southern perimeter). This extension will be manifolded into the enclosed flare. VRAC contractors initiated a **subsurface drum removal** in Disposal Area 5 in November 1998. In July 2001, VRAC contractors completed the excavation of subsurface drums in Area 5. To date, 26,986 subsurface drums were excavated and removed from Disposal Area 5 (west side of site). All excavated drums (liquid and solid hazardous waste) and excavated PCB- and TCLP lead-contaminated debris was stabilized and transported for off-site disposal. Approximately 35,700 cubic yards of excavated TCLP VOC-contaminated soil/debris is currently stockpiled (covered and lined) on site pending treatment.

2. Removal activities to date (since last POLREP)

- During the month of **January 2001**, VRAC contractors completed subsurface drum excavation activities in Row 13 to the depth of waste. VRAC contractors began subsurface drum excavation activities in Rows 14 through 16 toward a depth of 13 feet below ground surface (bgs). VRAC contractors completed backfilling Rows 10 and 11. A total of 22,000 drums were excavated through January 2001. See attached Area 5 drum excavation totals diagram. VRAC contractors continued sampling, overpacking, and bulking drums for disposal. VRAC contractors completed sampling stockpiled excavated soil/debris from Rows 12 and 13 on staging pad #6. Eight samples out of the 36 (22%) samples (of cells equaling 150 yd³) collected from staging pad #6 showed concentrations of TCLP TCE (maximum of 30 ppm) greater than the TCLP TCE regulatory limit of 0.5 ppm. Weekly on-site meetings were conducted every Wednesday with EPA, Ohio EPA, VRAC contractors, Dayton Hazmat, 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 to 4 hours “off”. Perimeter compliance probe CP-6R showed 20% methane on 12-31-00 (greater than 5% methane equals non-compliance). VRAC conducted a 10-day monitoring and evaluation period and made adjustments to LFG Leg #2. Since the adjustment, CP-6R showed less than 5% methane.

A total of seven roll-off boxes containing 650 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 19 drums of TCLP TCE/flammable liquid and 18 drums of TCLP TCE/ignitable solid material were transported to ChemWaste Management in Model City, New York for

hazardous waste disposal.

- During the month of **February 2001**, VRAC contractors continued subsurface drum excavation activities in Rows 14 through 16 to a depth of 13 feet bgs. A total of 23,209 drums were excavated through February 2001. VRAC contractors continued sampling, overpacking, and bulking drums for disposal. VRAC contractors completed post excavation sampling in Rows 12 and 13. VRAC contractors completed sampling stockpiled excavated soil/debris from Rows 14 and 15 on staging pad #10. Three samples out of the 42 (7%) samples (of cells equaling 150 yd³) collected from staging pad #10 showed concentrations of TCLP TCE (maximum of 5.4 ppm) greater than the TCLP TCE regulatory limit of 0.5 ppm. Weekly on-site meetings conducted every Wednesday with EPA, Ohio EPA, VRAC contractors, and City of Riverside and City of Dayton fire department representatives. A USEPA public meeting was conducted at Stebbins High School on February 7, 2001. Approximately 250 people attended the public meeting including local media representatives.

The landfill gas enclosed flare combustor operated at cycles from 1.5 hours “on” and 4.5 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 fourteen roll-off boxes containing 1,776 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 47,229 gallons of non-hazardous wastewater was transported to Perma-Fix in Dayton, Ohio for treatment and disposal.

- During the month of **March 2001**, VRAC contractors completed subsurface drum excavation activities in Rows 14 through 16 to a depth of 13 feet bgs and began drum excavation to the depth of waste. A total of 24,230 drums were excavated through March 2001. VRAC contractors continued sampling, overpacking, and bulking drums for disposal. All post excavation samples in Rows 12 and 13 had TCLP levels less than regulatory limits. VRAC contractors completed sampling stockpiled excavated soil/debris from Rows 14 through 16 on staging pad #9. Zero samples out of the 45 samples (of cells equaling 150 yd³) collected from staging pad #9 showed concentrations of TCLP VOCs greater than the regulatory limits. VRAC submitted a work plan to excavate the potential buried tanker south of Area 5. Weekly on-site meetings conducted every Wednesday with EPA, Ohio EPA, VRAC 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. Two additional compliance probes were installed adjacent to the Clever property. One of the probes (TGP-51) showed a methane concentration as high as 34%. On March 16, 2001 USEPA and VRAC conducted a meeting to discuss re-stack testing the enclosed flare. VRAC agreed to submit a stack test work plan with additional sample parameters as requested by USEPA, ODH, and RAPCA.

A total of seven roll-off boxes containing 625 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 10,500 gallons of non-hazardous wastewater was transported to Perma-Fix in Dayton, Ohio for treatment and disposal. A total of 2,500 gallons of hazardous liquid was transported to Perma-Fix in Dayton, Ohio for treatment and disposal.

- During the month of **April 2001**, VRAC contractors continued subsurface drum excavation activities in Rows 14 through 16 to the depth of waste. A total of 25,443 drums were excavated through April 2001. VRAC contractors continued sampling, overpacking, and bulking drums for disposal. VRAC contractors completed backfilling Rows 12 and 13. VRAC contractors began post excavation sampling in several grids within Rows 14 through 16. VRAC contractors completed sampling stockpiled excavated soil/debris from Rows 14 through 16 on staging pad #10. Zero samples out of the 42 samples (of cells equaling 150 yd³) collected from staging pad #10 showed concentrations of TCLP VOCs greater than the regulatory limits. Weekly on-site meetings conducted every Wednesday with EPA, Ohio EPA, VRAC contractors, and City of Riverside and City of Dayton fire department representatives. USEPA, Ohio EPA, ATSDR, Ohio Department of Health, and USEPA headquarters personnel conducted a meeting in Columbus, OH to discuss pending removal activities in Area 1 and ODH’s health assessment. Due to repeated trespassing a vandalism at the site, off-shift security was implemented (9pm

to 6am and all day Sunday). On April 26, 2001 the USEPA announced that pursuant to the 1998 AOC, it would require the VRAC to continue the removal action into Area 1.

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. Compliance probes adjacent to the Clever property continued to show greater than 5% methane. The VRAC contractors excavated and pulled back waste from the compliance probes in Area 2 and south of Area 5 in an attempt to reduce the methane readings. In addition, six additional compliance probes (TGP-58 to TGP-63) were installed in Area 2 and south of Area 5. The VRAC submitted a stack test work plan to USEPA for review.

A total of fourteen roll-off boxes containing 1,566 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 15,217 gallons of non-hazardous wastewater was transported to Perma-Fix in Dayton, Ohio for treatment and disposal.

- During the month of **May 2001**, VRAC contractors continued subsurface drum excavation activities in Rows 14 through 16 to the depth of waste and backfilled grids which showed post excavation sampling at less than TCLP regulatory limits. A total of 26,065 drums were excavated through May 2001. VRAC contractors continued sampling, overpacking, and bulking drums for disposal. VRAC contractors completed sampling stockpiled excavated soil/debris from Rows 14 through 16 on staging pad #5. One sample out of the 33 samples (of cells equaling 150 yd³) collected from staging pad #5 showed a PCB concentration at 50 ppm. Weekly on-site meetings conducted every Wednesday with EPA, Ohio EPA, VRAC contractors, and City of Riverside and City of Dayton fire department representatives. Off-shift security continued (9pm to 6am and all day Sunday). VRAC contractors performed a test trenching investigation for the buried tankers south of Area 5. No tankers were identified. USEPA solid drum composite CSS-15 showed a TCLP MEK concentration of 3,680 ppm and a TCLP TCE concentration of 12.2 ppm. On May 22, 2001 a meeting was conducted at the Convention Center in Dayton, Ohio with USEPA, Ohio EPA, local and state health departments and City of Dayton officials. USEPA stated that Dion Novak would be the new Remedial Project Manager for the site and oversee the pending stockpile remediation work.

The landfill gas enclosed flare combustor operated at cycles from 1.5 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. Compliance probes south of Area 5 and in Area 2 continued to show methane percentages greater than 5% (TGP-60 @ 34% and TGP-61 @ 26.8%). The VRAC submitted a work plan to install a 2000-foot linear trench and a physical barrier in the areas of high methane percentages to prevent methane migration. USEPA conditionally approved the work plan if vertical extraction wells were installed adjacent to the barrier trench and manifolded into the existing LFG system to create an ‘active’ system.

A total of seven roll-off boxes containing 766 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 37,796 gallons of non-hazardous wastewater was transported to Perma-Fix in Dayton, Ohio for treatment and disposal.

- During the month of **June 2001**, VRAC contractors continued subsurface drum excavation activities in Rows 14 through 16 to the depth of waste and backfilled grids which showed post excavation sampling results at less than TCLP regulatory limits. A total of 26,850 drums excavated through June 2001. VRAC contractors continued sampling, overpacking, and bulking drums for disposal. VRAC contractors completed sampling stockpiled excavated soil/debris from Rows 14 through 16 on staging pad #6. Zero samples out of the 30 samples (of cells equaling 150 yd³) collected from staging pad #6 showed no TCLP VOC concentrations greater than regulatory limits. Weekly on-site meetings conducted every Wednesday with EPA, Ohio EPA, VRAC contractors, and City of Riverside and City of Dayton fire department representatives. Off-shift security continued (9pm to 6am and all day Sunday).

The landfill gas enclosed flare combustor operated at cycles from 1.5 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. Five to six compliance probes south of Area 5 and in Area 2 consistently showed methane percentages greater than 5%. On June 22, USEPA, START, ERT, REAC, RAPCA, Montgomery County Health Department, VRAC, and a VRAC subcontractor conducted a stack test meeting at USEPA's office in Cincinnati, Ohio. VRAC stated that stack testing of the enclosed flare would not be completed until after the Area 2 Corrective Action is completed (potentially in November or December 2001).

A total of nine roll-off boxes containing 867 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 37,796 gallons of non-hazardous wastewater was transported to Perma-Fix in Dayton, Ohio for treatment and disposal.

- During the month of **July 2001**, VRAC contractors completed subsurface drum excavation activities and post excavation confirmatory sampling in Area 5. A total of 26,986 were excavated in Area 5. VRAC contractors completed backfilling remaining grids in Rows 14 through 16 to an elevation of 750-feet. VRAC contractors continued sampling, overpacking, and bulking drums for disposal. Weekly on-site meetings conducted every Wednesday with EPA, Ohio EPA, VRAC contractors, and City of Riverside and City of Dayton fire department representatives. Off-shift security continued (9pm to 6am and all day Sunday).

The landfill gas enclosed flare combustor operated at cycles from 1.5 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. Five to six compliance probes south of Area 5 and in Area 2 continued to show methane percentages greater than 5%. VRAC contractors began excavating the 2,000-foot linear trench and installing the physical barrier as part of the Area 2 LFG Corrective Action Plan submitted on June 7, 2001.

A total of three roll-off boxes containing 357 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 9,899 gallons of non-hazardous wastewater was transported to United Waste Water, Cincinnati, Ohio for treatment and disposal.

- During the month of **August 2001**, VRAC contractors completed bulking all overpacked drums from the drum staging pad and continued installing a 12-inch lift of clean fill above the backfilled soil/debris in rows 14 to 16. VRAC contractors continued perimeter air monitoring activities. Weekly on-site meetings conducted every Wednesday with EPA, Ohio EPA, VRAC contractors, and City of Riverside and City of Dayton fire department representatives. Off-shift security continued (9pm to 6am and all day Sunday).

The landfill gas enclosed flare combustor operated at cycles from 1.5 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. VRAC contractors continued excavating 2,000-foot linear trench and installing the physical barrier associated with the Area 2 LFG Corrective Action Plan.

A total of six roll-off boxes containing 573 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 20,539 gallons of non-hazardous wastewater was transported to United Waste Water, Cincinnati, Ohio for treatment and disposal. A total of 11,000 gallons of hazardous wastewater was transported to Perma-Fix, Dayton, Ohio for treatment and disposal.

On August 25, 2001 the USEPA conditionally approved the VRAC Area 1 Drum Removal and Stockpile Remediation work proposal. The USEPA approval will require both work plans to be submitted by September 14, 2001.

B. Next Steps

1. VRAC contractors will continue operation of the enclosed flare landfill gas extraction 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 the LFG extraction system vacuum levels and moisture traps have corrected the problems to date.

2. VRAC contractors to complete the installation of the physical barrier associated with the Area 2 Corrective Action. Once the physical barrier is set in place, six additional vertical extraction wells will be installed adjacent to the trench and manifolded into the main header line leading to the enclosed flare.
3. VRAC contractors required to submit a DRAFT Area 1 Drum Removal Action Plan for USEPA to review by September 14, 2001. In addition, VRAC contractors are required to submit a DRAFT stockpile remediation work plan for the USEPA RPM to review by September 14, 2001.
4. Continue weekly update meetings with local agencies every Wednesday at 1300 hours.
5. Conduct a public meeting prior to initiating drum removal activities in Area 1.
6. VRAC contractors to continue perimeter air monitoring.
7. VRAC contractors to transport and dispose off site approximately 150 yd³ of soil/debris contaminated with TCLP chlordane and approximately 150 yd³ of soil/debris contaminated with PCBs.
8. VRAC contractors to continue monitoring temperatures and liner maintenance of soil/debris stockpiles pending proposed on-site treatment activities.
9. USEPA Office of Public Affairs will mail out a site update news letter. Additionally the Valleycrest Landfill site webpage (www.epa.gov/region5/valleycrest/) will be updated.

C. Key Issues

1. A total of 26,986 subsurface drums have been removed to date from Area 5. Approximately 66% of the subsurface drums contained 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. Perimeter air monitoring has not detected contamination blowing into the adjacent neighborhoods. START supplementing perimeter air monitoring with Miran ThermosaphIRE instrument.

V. COST INFORMATION (estimated as of month ending July 2001)

Personnel	Budget	Used to Date	Remaining
START I (TDD #S05-9806-005)	\$208,864	\$208,864	\$ 0
START II (TDD #S05-0012-016)	\$ 65,000	\$ 64,000	\$ 1,000
USEPA	\$300,000	\$200,000	\$ 100,000
USEPA ERT/REAC	\$175,000	\$156,158	
TOTALS	\$508,929	\$472,864	\$ 101,000

VI. DRUM INFORMATION

See attached Disposal Area 5 - FINAL Drum Excavation Grid Table.

VII. SUMMARY OF MOST ELEVATED ANALYTICAL RESULTS IN DRUMS AND SOIL/DEBRIS FROM AREA 5 (results in ppm)

Parameter	Regulatory Limit (ppm)	Excavated soil/debris	VRAC liquid drum samples	VRAC solid drum samples and drums shredded in rolloff boxes	EPA liquid drum samples	EPA solid drum samples
<u>TCLP VOCs:</u>						
TCE	0.5	340	720	3,410	178,000	600
Vinyl chloride	0.2	0.4	---	6.9	16	2
PCE	0.7	28	10	14.75	3,140	1.6
Chloroform	6.0	---	400	11	170	13
Chlorobenzene	100.0	---	---	240	---	---
Benzene	0.5	7.9	5.1	1.8	---	1.6
MEK	200.0	---	370	256	21,600	3,680
o-Cresol	200.0	---	---	---	---	410
<u>TCLP pesticides:</u>						
Chlordane	0.03	1.6	---	---	---	---
Heptachlor epoxide	0.008	---	---	14.75	---	---
<u>TCLP metals:</u>						
Arsenic	5.0	---	---	---	6.9	---
Lead	5.0	33	11	290	450	172
Cadmium	1.0	---	2.29	4.76	1.4	---
Barium	100.0	---	---	1,190	216	---
Chromium	5.0	---	---	32	12.6	---
Selenium	1.0	2.1	---	---	---	---
Silver	5.0	---	---	---	5.4	---
PCBs	50	360	1,200	1,600	---	300
Flash Point	< 140°F	---	41	< 50	---	---

VIII. DISPOSAL INFORMATION (as of August 17, 2001)

Wastestream	Quantity	Containment Migration Control	Disposal Option	Disposal Facility
Hazardous waste solids (drums and contents)	222 roll-off boxes (25,325 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) 6 roll-off boxes (bulked 741 drums)	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- and PCB-contaminated soil/debris	150 cubic yards each	On staging pad ready to ship off site		
Hazardous liquid	139,227 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) 93 drums	N/A	Landfill	ChemWaste Management Sauget, Illinois.
TCE/flammable liquid	60 drums	N/A	Fuels blending	ChemWaste Management Model City, New York.
Non-hazardous water	649,669 gallons	N/A	Treatment	City Environmental Detroit, Michigan. Perma-Fix Dayton, Ohio.
VOC-contaminated soil/debris (> TCE TCLP levels)	35,700 cubic yards in 7 on-site stockpiles	Covered with 16-mil poly liner	Potential on-site treatment	To be determined