U.S. ENVIRONMENTAL PROTECTION AGENCY
POLLUTION REPORT

I. HEADING

DATE: December 6, 2002

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

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POLREP #: AREA 1 POLREP #2 with attached photographs of: (1) backfill sampling, (2) stack testing the enclosed flare, (3) the vapor extraction system, and (4) the vapor extraction (VE) wells within the Area 5 stockpiles. In addition, attached is the Area 1 final drum excavation grid summary and a summary of the postbackfill sampling in Area 1.

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 (Area 5 Drum Removal) February 25, 2002 (Area 1 Drum Removal) August 7, 2002 (VE Treatment - Area 5 Stockpiles)
Completion Date	July 11, 2001 (Area 5 Drum Removal) January 2003 (Projected for Area 1 Drum Removal)

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 located at 950 Brandt Pike. The site consists of an area of approximately 100 acres that is separated into eastern and western portions by north-south-trending Valleycrest Drive. The eastern portion of the site consists of approximately 35 acres, and the western portion of the site consists of approximately 65 acres. The site is located above the Great Miami Aquifer, which is a sole-source aquifer for the City of Dayton.

The site is located in a mixed urban, industrial, and residential area. The site is bordered on the east and northeast by a residential neighborhood, on the north by several residences, on the southeast by commercial and residential structures and Valley Pike, and on the southwest by the CSX railroad property and residences. The site is bordered on the west by two residences and several industrial facilities, including the Brandt Pike petroleum terminals, Van Dyne Crotty Inc., industrial cleaner facility, and the Hotop demolition landfill.

The site is currently owned by the Keystone Gravel Company of Dayton, Ohio, and was operated as a sand and gravel quarry from before 1935 until the 1970s. In 1966, the site began accepting solid waste, and later, industrial waste, including hazardous waste drums in the eastern portion of the site (Area 1). Filling in the eastern portion of the site continued until approximately 1970. In 1970, the site began accepting waste in the western portion of the site (Area 5) and continued until approximately 1975.

IV. REMOVAL INFORMATION

A. Situation

1. Current Situation

Area 5 Drum Removal

From November 1998 through July 2001, a removal action involving the removal of subsurface hazardous waste drums and drum carcasses, drummed contents, and industrial waste was completed. The work was conducted pursuant to a U.S. Environmental Protection Agency (EPA) Administrative Order by Consent (AOC) signed by the Valleycrest Removal Action Coalition (VRAC), and dated September 10, 1998.

A total of 26,986 subsurface drums were removed by VRAC contractors from the 82 50- by 50-foot grids, identified as removal action areas based on geophysical anomalies. Drums containing hazardous waste solids (containing combinations of polychlorinated biphenyls [PCB], ignitable waste, sulfides, and/or Toxicity Characteristic Leaching Procedure [TCLP] trichloroethylene [TCE], vinyl chloride, lead, tetrachloroethylene [PCE], benzene, methyl ethyl ketone [MEK], and heptachlor epoxide) accounted for 67 percent of the total drums removed in Area 5. In addition, drums defined by the Resource Conservation and Recovery Act (RCRA) as RCRA empty drums totaled approximately 33 percent. Drums containing any measurable liquids (containing combinations of flammable liquids, PCBs, and/or TCLP TCE, vinyl chloride, PCE, benzene, MEK, arsenic, barium, cadmium, chromium, and lead) accounted for less than 3 percent of the total drums (totaling approximately 6,700 gallons collected). Liquid waste from an underground storage tank and rinse water used to aid pumping drummed liquids accounted for 2,845 gallons and approximately 4,500 gallons, respectively.

Excavation, stockpiling, and sampling of all nondrummed material was conducted throughout the Area 5 removal to characterize the material and determine the appropriate disposition. Material below RCRA and Toxic Substances Control Act regulatory limits was backfilled. TCLP volatile organic compound (VOC)-impacted material was maintained on site (pending on-site treatment) and other TCLP-impacted soil and debris was sent for off-site disposal. An estimated 40,000 cubic yards of TCLP VOC-impacted soil and debris (greater than TCLP regulatory limits for TCE and PCE) were stockpiled on site and have been resampled for pending VE treatment or backfilling. In addition, approximately 6,900 tons of TCLP TCE soil/debris, 280 tons of TCLP chlordane soil/debris, 320 tons of TCLP lead soil/debris, and 3,790 tons of PCB soil/debris were transported for off-site hazardous waste disposal.

Area 1 Drum Removal

On February 25, 2002, a removal action involving the removal of subsurface hazardous waste drums and drum contents was initiated. The work is pursuant to an EPA AOC dated September, 10, 1998. De maximis, Inc., continues as the primary consultant to the VRAC and continues to have their subcontractor, Conestoga Rovers & Associates (CRA), overseeing day-to-day operations at the site and writing all site work plans. On December 12, 2001, EPA approved the Final Area 1 Drum Removal Work Plan.

Landfill Gas System

Due to subsurface landfill gas levels at the property perimeter exceeding 5 percent methane (methane is explosive between 5 and 15 percent) and pursuant to an EPA AOC dated September 10, 1998, VRAC contractors initiated work on the installation of a perimeter landfill gas (LFG) abatement system in June 1998. Seven perimeter LFG extraction systems have been installed (along the northern, eastern, southern, and southeastern site perimeters) and manifolded into an enclosed flare. VRAC contractors conducted a second emission stack testing event of the

enclosed flare in October 2002. The LFG abatement system is operated on a daily basis (currently 3 hours 'on' and 3 hours 'off') and monitored on a weekly basis. All property perimeter compliance gas probes are less than 5 percent methane, except for TGP-76, located in the southeast portion of Area 5. A Corrective Action was approved by EPA in November 2002 to install two additional extraction wells to prevent methane migration in that area.

Area 5 Soil/Debris Stockpiles

CRA used VE to treat the three stockpiles for approximately 1,060 hours. A stack test was conducted on the VE treatment system acid scrubber in October 2002, and the data were reviewed by an EPA technical team.

2. Drum Removal, Landfill Gas System, and Stockpile Remediation Activities

- During the last two weeks of **April 2002**, VRAC contractors continued full-scale subsurface drum removal activities in Area 1. CRA collected a post excavation soil sample from the bottom of each completed excavation grid. Analytical results showed Grids L-17, K-17, J-16, and I-17 having post excavation TCLP TCE concentrations of 0.56, 0.65, 0.5 and 2.1 parts per million (ppm), respectively, which exceeds the TCLP TCE limit of 0.5 ppm. Approximately 6,098 drums were excavated through April 2002. The depth of excavation in each completed grid ranged from 15 to 19 feet below ground surface, terminating in groundwater. Excavated drums with liquid or contents not associated with the approved waste profile were overpacked into 85-gallon drums and sampled. CRA segregated drums with potentially responsible party (PRP) label information and allowed Ohio EPA to review the information prior to disposition of the drum. All other excavated drums were shredded using an excavator and placed into rolloff boxes for off-site disposal. TCLP TCE continued to be observed in all of the rolloff box samples. All excavated soil/debris was backfilled into completed excavated grids as drums were excavated from new grids. The Tetra Tech EM Inc., (Tetra Tech) Superfund Technical Assessment and Response Team (START) continued to provide oversight and documentation of drum removal activities. CRA continued perimeter air monitoring during each working day using real-time gas chromatographs (Scentograph Plus II units) at three downwind and one upwind locations. Tetra Tech START continued to provide perimeter air monitoring on a periodic basis using a Miran ThermoSapphIRe unit. CRA continued bi-weekly thermocouple monitoring of the on-site soil/debris stockpiles. All temperatures were less than 90 degrees Fahrenheit (°F). Weekly on-site meetings were conducted every Wednesday with EPA, Ohio EPA, the City of Dayton, VRAC contractors, Dayton Hazmat, and City of Riverside and City of Dayton Fire Department representatives.

  The LFG enclosed flare combustor operated at four 3-hour cycles per day. Propane continued to be used as a supplemental fuel during flare-outs. Site perimeter compliance probes remained in compliance with methane percentages consistently reading less than 5 percent.

  Analytical results were received from the re-sampling of the seven soil/debris stockpiles in accordance with the Area 5 stockpile remediation work plan. Four of the seven stockpiles (1, 2, 7, and 11) showed TCLP VOC levels less than TCLP regulatory limits and were approved by EPA to be backfilled in the southern portion of Area 5.

  Seventeen rolloff boxes containing shredded drums and drum contents (hazardous waste) were transported for off-site hazardous waste disposal at Environmental Quality (EQ), Belleville, Michigan. Approximately 24,000 gallons of nonhazardous water, accumulated within the berms of the on-site stockpiles, were transported for off-site disposal at Perma-Fix, Dayton, Ohio.

- During **May 2002**, VRAC contractors continued full-scale subsurface drum removal activities in Area 1, including excavation, test trenching activities, drum segregation, drum bulking, and sampling. CRA collected a post excavation soil sample from the bottom of nine completed excavation grids. Analytical results showed Grid G-13/H-13 with a PCB concentration of 55 ppm. Approximately 6,861 drums were excavated through May 2002. Excavated drums with liquid or contents not associated with the approved hazardous waste profile were overpacked into 85-gallon drums. A liquid composite sample of 40 drums showed a TCLP TCE concentration of 500 ppm. One liquid drum was found to have a liquid PCB concentration of approximately 400 ppm. All other excavated drums were shredded by an excavator and placed into rolloff boxes for off-site hazardous waste disposal. CRA segregated empty drums for decontamination. Pursuant to the Area 1 work plan, empty drums will be backfilled in an area on site yet to be determined. Tetra Tech START continued to provide oversight and documentation of drum removal activities. CRA continued perimeter air monitoring during each working day using real-time gas chromatographs (Scentograph Plus II units) at three downwind and one upwind locations. Tetra Tech START continued to provide perimeter air monitoring on a periodic basis using a Miran ThermoSapphIRe unit. CRA continued bi-weekly thermocouple monitoring within the on-site soil/debris stockpiles. CRA did not observe any soil/debris stockpiles having temperatures greater than 80°F. Weekly on-site meetings were conducted every Wednesday with EPA, Ohio EPA, the City of Dayton, VRAC contractors, Dayton Hazmat, and City of Riverside and City of Dayton Fire Department representatives.

  The LFG enclosed flare combustor operated at four 3-hour cycles per day. Propane continued to be used as a supplemental fuel during flare-outs. Site perimeter compliance probes remained in compliance with methane percentages consistently reading less than 5 percent.

  CRA began backfilling soil/debris stockpiles (1, 2, 7, and 11) into the southern portion of Area 5. Portions of the soil/debris stockpiles (3, 4, and 8) contained VOC contamination in excess of TCLP treatment standards and will be subject to VE treatment, in accordance with the terms of the Area 5 stockpile remediation work plan. The portions not subject to VE treatment will be backfilled into the southern portion of Area 5.

  Eight rolloff boxes containing shredded drums and drum contents (hazardous waste) were transported for off-site hazardous waste disposal to EQ, Belleville, Michigan. Approximately 45,030 gallons of nonhazardous water, accumulated within the berms of the on-site stockpiles, were transported for off-site disposal at Perma-Fix, Dayton, Ohio.

- During **June 2002**, VRAC contractors continued full-scale subsurface drum removal activities in Area 1, including excavation, test trenching activities, drum segregation, drum bulking, and sampling. CRA collected a post excavation soil sample from the bottom of two completed excavation grids and collected post backfill soil/debris samples from 12 grids using a drill rig. Analytical results from post excavation sampling did not reveal any TCLP or PCB exceedences. Analytical results from the first round of post backfill sampling showed that 6 out of the 12 grids sampled had TCLP TCE concentrations greater than the regulatory limit of 0.5 ppm, with a high TCLP TCE concentration of 15 ppm. Approximately 8,570 drums were excavated through June 2002. Excavated drums with liquid or contents not associated with the approved hazardous waste profile were overpacked into 85-gallon drums. A liquid composite sample (Z-148) of 45 drums showed a TCLP TCE concentration of 150 ppm. All other excavated drums were shredded by an excavator and placed into rolloff boxes for off-site hazardous waste disposal. CRA continued segregating empty drums for decontamination. Tetra Tech START continued to provide oversight and documentation of drum removal activities. CRA continued perimeter air monitoring during

each working day using real-time gas chromatographs (Scentograph Plus II units) at three downwind and one upwind locations. Tetra Tech START continued to provide perimeter air monitoring on a periodic basis using a Miran ThermoSapphIRe unit. CRA continued bi-weekly thermocouple monitoring of the on-site soil/debris stockpiles. CRA did not observe any soil/debris stockpiles having temperatures greater than 80°F. Weekly on-site meetings were conducted every Wednesday with EPA, Ohio EPA, the City of Dayton, VRAC contractors, Dayton Hazmat, and City of Riverside and City of Dayton Fire Department representatives.

The LFG enclosed flare combustor operated at four 3-hour cycles per day. Propane continued to be used as a supplemental fuel during flare-outs. Compliance Probes CP4-1, CP4-C, and CP4-2 went out of compliance during the month and a 14-day monitoring period was initiated. Three temporary gas probes (TGP-70 through TGP-72), installed as part of the ongoing RI/FS in the northwestern portion of the site, showed greater than 5 percent methane. The probes were not placed at the property perimeter, and three new probes (TGP-73 through TGP-75) were installed at the property perimeter within 20 feet of a residential home. All site perimeter compliance probes were in compliance with methane percentages less than 5 percent by the end of the month.

CRA completed backfilling soil/debris stockpiles (1, 2, 7, and the portions of 3, 4, and 8 not exceeding TCLP limits), into the southern portion of Area 5. CRA completed installing 6 VE wells in Stockpile 3, 22 VE wells in Stockpile 4, and 8 VE wells in Stockpile 8. Delivery of the catalytic oxidizer unit was scheduled for July 2002. Soil/debris stockpile treatment activities are required to be completed by March 1, 2003.

Two rolloff boxes containing shredded drums and drum contents (hazardous waste) were transported for off-site hazardous waste disposal at EQ, Belleville, Michigan. Two rolloff boxes containing shredded drums and drum contents contaminated with PCBs were transported for off-site hazardous waste disposal at Model City, New York. Approximately 43,200 gallons of nonhazardous water, accumulated within the berms of the on-site stockpiles, were transported for off-site disposal at Perma-Fix, Dayton, Ohio.

- During **July 2002**, VRAC contractors continued full-scale subsurface drum removal activities in Area 1, including excavation, test trenching activities, drum segregation, drum bulking, and sampling. CRA collected a post excavation soil sample from the bottom of three completed excavation grids. Analytical results from post excavation sampling did not reveal any TCLP or PCB exceedences. Approximately 10,253 drums were excavated through July 2002. Excavated drums with liquid or contents not associated with the approved hazardous waste profile were overpacked into 85-gallon drums. All other excavated drums were shredded by an excavator and placed into rolloff boxes for off-site disposal. CRA continued segregating empty drums for decontamination. Tetra Tech START continued to provide oversight and documentation of drum removal activities. CRA continued perimeter air monitoring during each working day using real-time gas chromatographs (Scentograph Plus II units) at three downwind and one upwind locations. Tetra Tech START continued to provide perimeter air monitoring on a periodic basis using a Miran ThermoSapphIRe unit. CRA continued bi-weekly thermocouple monitoring of completed removal grids with TCLP TCE- or PCB-contaminated, backfilled soil/debris. CRA did not observe any soil/debris stockpiles having temperatures greater than 75°F. Weekly on-site meetings were conducted every Wednesday with EPA, Ohio EPA, the City of Dayton, VRAC contractors, Dayton Hazmat, and City of Riverside and City of Dayton Fire Department representatives.

  The LFG enclosed flare combustor operated at four 3-hour cycles per day. Propane continued to be used as a supplemental fuel during flare-outs. All site perimeter compliance probes were in compliance with methane percentages less than 5 percent.

CRA completed backfilling the portion of Stockpile 11 not exceeding TCLP or PCB criteria into the southern portion of Area 5. CRA received the catalytic oxidizer and acid scrubber. The VE system will be installed and balanced in August 2002. CRA continued bi-weekly thermocouple monitoring of the three on-site soil/debris stockpiles. CRA did not observe any soil/debris stockpiles having temperatures greater than 90°F.

Eleven rolloff boxes containing shredded drums and drum contents (hazardous waste) were transported for off-site hazardous waste disposal at EQ, Belleville, Michigan. One rolloff box containing shredded drums and drum contents contaminated with PCBs were transported for off-site hazardous waste disposal at Port Arthur, Texas. Approximately 9,000 gallons of nonhazardous water, accumulated within the berms of the on-site stockpiles, was transported for off-site disposal at Perma-Fix, Dayton, Ohio. Approximately 1,000 gallons of TCE-contaminated bulked drummed liquid were transported for off-site hazardous waste disposal at Perma-Fix, Dayton, Ohio.

- During **August 2002**, VRAC contractors continued full-scale subsurface drum removal activities in Area 1, including excavation, test trenching activities, drum segregation, drum bulking, and sampling. CRA collected a post excavation soil sample from the bottom of nine completed excavation grids. Analytical results from post excavation sampling in Grid A-9/B-9 revealed a TCLP TCE concentration of 1.1 ppm. CRA collected post backfill samples from the center of 12 grids in Area 1. Six of the grids showed TCLP TCE exceedences as high as 3.3 ppm, and one grid (Grid G-14) had a PCB concentration of 55.3 ppm. Approximately 12,050 drums were excavated through the month of August. Excavated drums with liquid or contents not associated with the approved hazardous waste profile were overpacked into 85-gallon drums. All other excavated drums were shredded by an excavator and placed into rolloff boxes for off-site disposal. CRA continued segregating empty drums for decontamination. Tetra Tech START continued to provide oversight and documentation of drum removal activities. CRA continued perimeter air monitoring during each working day using real-time gas chromatographs (Scentograph Plus II units) at three downwind and one upwind locations. Tetra Tech START continued to provide perimeter air monitoring on a periodic basis using a Miran ThermoSapphIRe unit. CRA continued bi-weekly thermocouple monitoring of completed removal grids with TCLP TCE- or PCB-contaminated, backfilled soil/debris. CRA did not observe any soil/debris stockpiles having temperatures greater than 83°F. CRA applied ConCover over excavation areas twice per day and continuous Ecosorb to suppress VOC emissions. Weekly on-site meetings were conducted every Wednesday with EPA, Ohio EPA, the City of Dayton, VRAC contractors, Dayton Hazmat, and City of Riverside and City of Dayton Fire Department representatives.

  The LFG enclosed flare combustor operated at four 3-hour cycles per day. All site perimeter compliance probes were in compliance with methane percentages less than 5 percent, except for only 1 day, when CP4-3, CP4-1, CP4-C, and CP3B-9 were out of compliance as a result of one of the landfill gas system sumps becoming flooded from a heavy rain event. After the sump was pumped out, the compliance probes decreased to less than 5 percent methane.

  CRA assembled and began the balancing process of the VE treatment system. The VE system is designed to pull VOCs (using vacuum blowers) from the three stockpiles through an air filter, a moisture filter, a catalytic oxidizer, and then an acid scrubber. CRA continued bi-weekly thermocouple monitoring of the three on-site soil/debris stockpiles. CRA observed Stockpile 8 with a temperature as high as 127°F, the other two stockpiles did not have temperatures exceeding 102°F. EPA collected Tedlar® air samples to check the VE system treatment process.

Nine rolloff boxes containing shredded drums and drum contents (hazardous waste) were transported for off-site hazardous waste disposal at EQ, Belleville, Michigan. Approximately 3,861 gallons of nonhazardous water, accumulated within the berms of the on-site stockpiles, were transported for off-site disposal at Perma-Fix, Dayton, Ohio. Approximately 4,489 gallons of hazardous liquid were transported for off-site hazardous waste disposal at Perma-Fix, Dayton, Ohio.

- During **September 2002**, VRAC contractors continued full-scale subsurface drum removal activities in Area 1, including excavation, test trenching activities, drum segregation, drum bulking, and sampling. CRA collected a post excavation soil sample from the bottom of six completed excavation grids. Approximately 13,502 drums were excavated through September 2002. Excavated drums with liquid or contents not associated with the approved hazardous waste profile were overpacked into 85-gallon drums. All other excavated drums were shredded by an excavator and placed into rolloff boxes for off-site hazardous waste disposal. CRA continued segregating the empty drums for decontamination. CRA requested, and EPA/Ohio EPA approved, that decontaminated empty drums would be backfilled in Grid I-11. Tetra Tech START continued to provide oversight and documentation of drum removal activities. CRA continued perimeter air monitoring during each working day using real-time gas chromatographs (Scentograph Plus II units) at three downwind and one upwind locations. CRA continued bi-weekly thermocouple monitoring of completed removal grids with TCLP TCE- or PCB-contaminated, backfilled soil/debris. CRA did not observe any soil/debris stockpiles having temperatures greater than 81°F. CRA continued applying ConCover over excavation areas twice per day and continuous Ecosorb to suppress VOC emissions. Weekly on-site meetings were conducted every Wednesday with EPA, Ohio EPA, the City of Dayton, VRAC contractors, Dayton Hazmat, and City of Riverside and City of Dayton Fire Department representatives. Henry S. Cole and Associates, TAG Consultant to the Old North Dayton Neighborhood Association, joined the weekly meetings.

  The LFG enclosed flare combustor operated at three 4-hour cycles per day. All site perimeter compliance probes were in compliance with methane percentages less than 5 percent, except for TGP-50, which showed a methane concentration of 7.4 percent. The system vacuum was increased, and the probe decreased to less than 5 percent methane.

  CRA continued using VE to treat the three VOC-contaminated Area 5 stockpiles (3, 4 and 8). CRA continued thermocouple monitoring of the three on-site soil/debris stockpiles. CRA observed Stockpile 8 with a temperature as high as 121°F, the other two stockpiles did not have temperatures exceeding 117°F. EPA collected Tedlar® air samples to check the treatment process of the VE system. Preliminary data from EPA Tedlar® air bag samples showed a decrease in VOC levels in each of the piles. CRA scheduled a stack test of the VE system acid scrubber in October 2002.

  Three rolloff boxes containing shredded drums and drum contents (hazardous waste) were transported for off-site hazardous waste disposal at EQ, Belleville, Michigan. One rolloff box containing shredded drums and drum contents contaminated with PCBs were transported for off-site hazardous waste disposal at Port Arthur, Texas. Two rolloff boxes containing shredded drums and drum contents contaminated with PCBs were transported for off-site hazardous disposal at Model City, New York. Approximately 9,700 gallons of nonhazardous water, accumulated within the berms of the on-site stockpiles, were transported for off-site disposal at Perma-Fix, Dayton, Ohio.

- During **October 2002**, VRAC contractors continued full-scale subsurface drum removal activities in Area 1, including excavation, test trenching activities, drum segregation, drum bulking, and sampling. CRA collected a post excavation soil sample from the bottom of seven completed excavation grids. Analytical

results from post excavation sampling in Grid H-4 revealed a PCB concentration of 61.5 ppm. CRA collected nine post backfill samples from the western cluster of grids in Area 1. All nine post backfill samples showed non-TCLP hazardous waste characteristics. Approximately 14,467 drums were excavated through October 2002. Excavated drums with liquid or contents not associated with the approved hazardous waste profile were overpacked into 85-gallon drums. A liquid composite sample (Z-149) of 41 drums showed a TCLP TCE concentration of 76,000 ppm; an MEK concentration of 9,600 ppm; and a flash point of 61°F. All other excavated drums were shredded by an excavator and placed into rolloff boxes for off-site hazardous waste disposal. All decontaminated, empty drums were backfilled in Grid I-11. Tetra Tech START continued to provide oversight and documentation of drum removal activities. CRA continued perimeter air monitoring during each working day using real-time gas chromatographs (Scentograph Plus II units) at three downwind and one upwind locations. CRA continued bi-weekly thermocouple monitoring of completed removal grids with TCLP TCE- or PCB-contaminated, backfilled soil/debris. CRA did not observe any soil/debris stockpiles having temperatures greater than 82°F. CRA continued applying ConCover over excavation areas twice per day and continuous Ecosorb to suppress VOC emissions. Weekly on-site meetings were conducted every Wednesday with EPA, Ohio EPA, the City of Dayton, VRAC contractors, Dayton Hazmat, and City of Riverside and City of Dayton Fire Department representatives.

The LFG enclosed flare combustor operated at four 3-hour cycles per day. All site perimeter compliance probes were in compliance with methane percentages less than 5 percent, except for TGP-50 (7.2 percent) and TGP-64 (15.7 percent). The LFG system vacuum was increased and TGP-64 immediately reduced to less than 5 percent methane. The VRAC installed a new compliance probe (TGP-76) to replace TGP-50, because TGP-50 was not positioned on the actual perimeter of the site. The VRAC began Phase II of the enclosed flare stack test.

CRA suspended the VE treatment system until an EPA technical review of the acid scrubber stack test was completed and it received verification that the system was properly operating. The system operated approximately 1,060 hours before the system was suspended. CRA continued thermocouple monitoring of the three on-site soil/debris stockpiles. CRA observed Stockpile 8 with a temperature as high as 117°F, the other two stockpiles did not have temperatures exceeding 115°F. CRA completed a stack test of the VE system acid scrubber. EPA technical experts were on site to oversee the stack testing.

Two rolloff boxes containing shredded drums and drum contents (hazardous waste) were transported for off-site hazardous waste disposal at EQ, Belleville, Michigan. One rolloff box containing shredded drums and drum contents contaminated with PCBs were transported for off-site hazardous waste disposal at Model City, New York. Approximately 89,965 gallons of nonhazardous water, accumulated within the berms of the on-site stockpiles, were transported for off-site disposal at Perma-Fix, Dayton, Ohio.

- During **November 2002**, VRAC contractors completed full-scale subsurface drum removal activities in Area 1, including excavation (on November 15, 2002), test trenching activities, drum segregation, drum bulking, and sampling. CRA collected a post excavation soil sample from the bottom of two completed excavation grids. CRA collected the remaining post backfill samples from the northern and northwestern cluster of grids in Area 1. Approximately 15,622 drums had been excavated through November 2002. Excavated drums with liquid or contents not associated with the approved hazardous waste profile were overpacked into 85-gallon drums. All other excavated drums were shredded by an excavator and placed into rolloff boxes for off-site hazardous waste disposal. Tetra Tech START continued to provide oversight and documentation of drum removal activities. CRA continued perimeter air monitoring during each working day using real-time gas chromatographs (Scentograph Plus II units) at three downwind and

one upwind locations. CRA continued bi-weekly thermocouple monitoring of completed removal grids with TCLP TCE- or PCB-contaminated, backfilled soil/debris. CRA did not observe any soil/debris stockpiles having temperatures greater than 80°F. CRA continued applying ConCover over excavation areas twice per day and continuous Ecosorb to suppress VOC emissions. Weekly on-site meetings were conducted every Wednesday with EPA, Ohio EPA, the City of Dayton, VRAC contractors, Dayton Hazmat, and City of Riverside and City of Dayton Fire Department representatives.

The LFG enclosed flare combustor operated at 4 cycles (total of 10 to 16 hours per day). All site perimeter compliance probes were in compliance with methane percentages less than 5 percent, except for TGP-76. The VRAC submitted a corrective action plan to EPA describing installation of two additional extraction wells by TGP-76 to control methane from migrating off site. The VRAC completed the Phase II enclosed flare stack test.

EPA submitted comments to the VRAC on the results of the VE treatment system. The system operated approximately 1,060 hours before the system was suspended. CRA continued thermocouple monitoring of the three on-site soil/debris stockpiles. CRA observed Stockpile 8 with a temperature as high as 101°F, the other two stockpiles did not have temperatures exceeding 101°F.

Seven rolloff boxes containing shredded drums and drum contents (hazardous waste) were transported for off-site hazardous waste disposal at EQ, Belleville, Michigan. One rolloff box containing shredded drums and drum contents contaminated with PCBs were transported for off-site hazardous waste disposal at Model City, New York. One rolloff box containing shredded drums and drum contents contaminated with PCBs were transported for off-site hazardous waste disposal at Port Arthur, Texas. Approximately 25,500 gallons of nonhazardous water, accumulated within the berms of the on-site stockpiles, were transported for off-site disposal at Perma-Fix, Dayton, Ohio.

B. Next Steps

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

2. VRAC will install two extraction wells near TGP-76 and manifold the piping into the LFG enclosed flare.

3. In December 2002, VRAC will investigate the existence of buried tankers south of Area 5.

4. Weekly update meetings with state and local agencies will continue to be held every Wednesday at 1300 hours and with representatives of the VNCC every other Wednesday at 1500 hours.

5. VRAC contractors will continue to monitor temperatures and liner maintenance of soil/debris stockpiles, pending proposed on-site treatment activities.

6. The EPA Office of Public Affairs will mail a site bulletin in December 2002 to the local community.

C. Key Issues

1. A total of 15,622 subsurface drums have been removed to date from Area 1. Approximately **95.3 percent** of the subsurface drums contained solid or liquid hazardous waste. TCLP TCE levels in drums bulked into rolloff boxes have been documented at greater than 1,700 times the regulatory level of 0.5 ppm. A total of 107 rolloff boxes were transported for off-site hazardous waste disposal.

2. A total of 26,986 subsurface drums have been removed to date from Area 5. Approximately 66 percent of the subsurface drums contained solid or liquid hazardous waste. TCLP TCE levels in drums bulked into rolloff boxes have been documented at greater than 34,000 times the regulatory level of 0.5 ppm. Area 5 was completed on July 11, 2001.

3. Soil/debris Stockpiles 3, 4, and 8 are required to be treated using VE by March 1, 2003.

4. Groundwater was encountered in all but one of the excavated grids, which did not allow use of the EM-38 magnetometer survey to verify that all subsurface drums were excavated. In March, an amendment was approved by EPA stating that when CRA had excavated 2 feet below the deepest drum in a grid, and groundwater was encountered and filling the bottom of the grid, then an additional 5 feet would be excavated.

5. On September 8, 2002, the western side of Grid F-6 caught fire. CRA personnel arrived and extinguished the fire using an excavator. The Dayton Fire Department arrived and verified that the fire was extinguished.

6. On November 10, 2002, lightening struck the LFG enclosed flare. The system had to be operated manually for 1 day until the system was repaired. No other problems resulted.

V. COST INFORMATION (estimated as of November 2002)

Personnel	Budget	Used to Date	Remaining
START I (TDD #S05-9806-005)	$208,864	$208,864	$ 0
START II (TDD #S05-0012-016)	$195,000	$190,000	$ 5,000
EPA	$300,000	$240,000	$ 60,000
EPA ERT/REAC	$156,158	$156,158	$ 0
TOTALS	$860,022	$795,022	$ 65,000