

FINAL

PROGRESS REPORT

January 1, 2007 - June 30, 2007

(30TH REPORT)



Camp Stanley Storage Activity

Boerne, Texas

USEPA ID No. TX2210020739

July 2007

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ACRONYMS AND ABBREVIATIONS

1,1-DCE	1,1-dichloroethene
AOC	area of concern
APPL	Agriculture & Priority Pollutants Laboratories, Inc.
Bexar Met	Bexar Metropolitan Water District
<i>cis</i> -1,2-DCE	<i>cis</i> -1,2-dichloroethene
COC	Chemical of concern
CRP	community relations plan
CSSA	Camp Stanley Storage Activity
DQO	data quality objective
ERA	Ecological risk assessment
GAC	granular activated carbon
gpm	Gallons per minute
I/SM	interim/stabilization measures
LTMO	long-term monitoring optimization
MCL	Maximum contaminant level
mg/l	Milligrams per liter
O&M	operations and maintenance
Order	§3008(h) Administrative Order on Consent
PCL	Protective Concentration Limits
PCE	Tetrachloroethene
QAPP	Quality Assurance Program Plan
RCRA	Resource Conservation and Recovery Act
RFI	RCRA facility investigation
SAWS	San Antonio Water Systems
SVE	soil vapor extraction
STL	Severn Trent Laboratory
SVE	Soil vapor extraction
SWMU	solid waste management unit
TCE	Trichloroethene
TDS	Total dissolved solids
TCEQ	Texas Commission on Environmental Quality
TO	task order
TOC	total organic carbon
TPDES	Texas Pollution Discharge Elimination System
<i>trans</i> -1,2-DCE	<i>trans</i> -1,2-dichloroethene
TRRP	Texas Risk Reduction Program
UIC	underground injection control
USACE	United States Army Corps of Engineers
USEPA	United States Environmental Protection Agency
VC	Vinyl Chloride
VFA	Volatile fatty acids
VOC	volatile organic compound
WP	work plan

PROGRESS REPORT JANUARY 1, 2007 - JUNE 30, 2007 (30TH PERIOD)

INTRODUCTION

This 30th Progress Report for Camp Stanley Storage Activity (CSSA), Boerne, Texas, U.S. Environmental Protection Agency (USEPA) Identification Number TX2210020739, is submitted in accordance with the Administrative Order on Consent (Order) issued to CSSA on May 5, 1999, pursuant to §3008(h) of the Safe Drinking Water Act, as amended by the Resource Conservation and Recovery Act (RCRA), and further amended by the Hazardous and Solid Waste Act of 1984, 42 United States Code §6928(h). This report addresses the project progress from January 1, 2007 through June 30, 2007. In June 2006, CSSA switched from quarterly to semi-annual progress reporting, as approved by USEPA. Subsequent progress reports will continue to be submitted on a semi-annual basis. Progress reports covering project work between January 1 and June 30 will be submitted by July 10; and progress reports covering project work between July 1 and December 31 will be submitted by January 10.

Summary of Activities this Period

Between January 1 and June 30, 2007, significant activities related to the Order included:

- Continuation of solid waste management unit (SWMU) B-3 bioreactor treatability studies (Aquifer Substrate Injection and Bioreactor);
- Continuation of Area of Concern (AOC)-65 Soil Vapor Extraction (SVE) operations and monitoring and expansion of the SVE system;
- Continuation of the groundwater monitoring program under the regulator-approved data quality objectives (DQO);
- Installation of six Lower Glen Rose monitoring wells;
- Complete the rehabilitation of CSSA drinking water well CS-9, where elevated metals concentrations were detected in 2006; and
- Continuation of two projects to investigate SWMUs and AOCs.

Details regarding these activities are summarized in this report.

Report Organization

This report details work completed on tasks associated with the four project phases outlined in the Order. Phase names and task names listed in **Table 1** are taken directly from the Order. Information for each active task requested in the Order is provided in this report. No current information is provided for tasks that are not active; however, a summary of the tasks, subtasks, and their status has been presented in previous reports. Information on the on-post outfall discharge is included in **Table 2**. Mass removal estimation data from the past 12 months

of SWMU B-3 bioreactor treatability study operation are presented in **Table 3**. **Table 4** includes the Summary of SWMU B-3 Trench 1 Baseline volatile organic compounds (VOC) Sample Results. Approximate PCE Mass Removal Rates from the SVE System at AOC-65 are included in **Table 5**. Details of the evaluation of the percent complete by awarded projects are included in **Table 6**. An updated project team contact information chart with telephone numbers and addresses is included in **Table 7**.

Attachment 1 shows the locations of groundwater wells referenced in this report. A summary of the status of all identified SWMUs and AOCs at CSSA is provided in **Attachment 2**. **Attachment 3** is a summary of the physical percent complete of each order-related task being conducted at CSSA. **Attachment 4** is a summary of groundwater results for sampling events conducted this period. **Attachment 5** includes a summary of the data collected this period for SWMU B-3 bioreactor treatability study.

Table 1 §3008(h) Administrative Order on Consent Project Phases

3008(h) Order Phase and Subtasks	Phase Purpose	Phase's % of Overall Order	Subtask's % of Phase	Physical % Complete of Subtask	Subtask portion of Phase % Complete	Physical % Complete of Phase	Active During P29?
Interim Measures		30%				91%	
Interim Measures Work Plan	Mitigate a current or potential threat to human health and/or the environment.		7%	100%	7.0%		No
Interim Measures Implementation			70%	87%	60%		No
Reports			23%	98%	22.5%		No
RCRA Facility Investigation		30%				73%	
Preliminary Report	Characterize the environmental setting of CSSA; define the sources of contamination; define the degree and extent of contamination; identify actual or potential receptors; and assess whether any additional interim/stabilization measures may be warranted.		5%	100%	5%		No
RFI Work Plan			10%	100%	5%		Yes
Facility Investigation			40%	69%	28%		Yes
Risk Assessment			10%	99%	10%		No
Investigation Analysis			10%	84%	8%		No
Groundwater Investigation			15%	74%	11%		Yes
Treatability Studies			10%	45%	5%		Yes
Progress Reports		5%	25%	1%		Yes	
Corrective Measures Study		10%				0%	
Identify and Develop Alternatives	Identification, screening, and development of alternatives for removal, containment, treatment, and/or other remediation of the contamination.		15%	0%	0%		No
Evaluate Alternatives			60%	0%	0%		No
Reports			25%	0%	0%		No
Corrective Measures Implementation		30%				0%	
Implementation Program Plan	Design, construct, operate, maintain, and monitor the performance of corrective measure(s) selected to protect human health and the environment.		5%	0%	0%		No
Corrective Measure Design			15%	0%	0%		No
Corrective Measure Construction			70%	0%	0%		No
Reports			10%	0%	0%		No
% of All Phases Complete						48%	

RCRA FACILITY INVESTIGATION

The RCRA Facility Investigation (RFI) is being conducted to characterize the environmental setting of CSSA, define the sources of contamination, define the degree and extent of contamination, identify actual or potential receptors, and assess whether any additional interim/stabilization measures (I/SM) may be warranted. The discussions below include only the tasks related to preparation of the RFI Work Plan (WP), Facility Investigations, and Treatability Studies. Discussion of other RFI subtasks will be included in future reports if changes or additions to previously reported activities occur. The majority of current ongoing environmental activities at CSSA are part of the RFI task. Work on each of these tasks is described in the following paragraphs. The main areas of work during this period included:

- Groundwater monitoring of on- and off-post wells as shown in **Attachment 1**;
- Groundwater monitoring of Westbay[®] wells;
- Verification and validation of analytical data;
- Initiation of investigations of SWMU B-71 and AOCs 63 and 64 under the Texas Risk Reduction Program (TRRP);
- SVE system operation and expansion at AOC-65; and
- Continuation of treatability studies at SWMU B-3.

RFI Work Plan

The Order requires the RFI WP task to include a Project Management Plan, Data Collection Quality Assurance Plan, Health and Safety Plan, and a Community Relations Plan (CRP). As previously agreed by USEPA, because the CSSA Environmental Encyclopedia includes all information required by the Order, it will be used to fulfill this requirement. Completion of this task is funded for the planned RFI tasks. The RFI WP task makes up approximately 10 percent of the RFI phase. Estimation of percent complete is difficult due to the continuing need for plan addenda as new projects are identified. As of the end of Period 30, WPs currently under scope are 100 percent complete. The CSSA Environmental Encyclopedia will continue to be updated as WPs for the new projects are finalized.

Environmental Encyclopedia Updates

The CSSA website (www.stanley.army.mil) was updated with documents added to the Environmental Encyclopedia through the end of December 2006. The website includes CSSA's Administrative Record as required under the Order. The electronic encyclopedia and hard copy encyclopedia were updated with all final reports through December 2006. Updates made in Period 30 included the following:

- Period 30 USEPA Progress Report;
- June 2006 On-post Groundwater Monitoring Report;
- June 2006 Off-post Groundwater Monitoring Report;

- September 2006 On-post Groundwater Monitoring Report;
- September 2006 Off-post Groundwater Monitoring Report;
- Well owner letters for September and December 2006;
- TO0207 Work Plan, Sampling and Analysis Plan, and Health and Safety Plan;
- TO0006 Sampling and Analysis Plan and Work Plan;
- Final SVE Upgrade Work Plan;
- SWMU B-3 RFI Waste Management Plan Addendum;
- Final SWMU B-3 Permit;
- SWMU B-3 Bioreactor Construction Report;
- Various correspondence to and from CSSA;
- Various meeting minutes; and
- Various tables of contents, site chronologies, and indices.

Facility Investigations

An investigation of the facility is being conducted to:

- Characterize the environmental setting of the facility;
- Define the source(s) of contamination;
- Define the nature and extent of contamination; and
- Identify actual or potential receptors.

In some cases, multiple investigational phases may be necessary. Investigation results will be used to develop and evaluate alternatives during the Corrective Measure Study. All investigation activities are being conducted in accordance with the RFI WP discussed above.

Completion of the facility investigations for the planned RFI tasks is partially funded. **Attachment 2** indicates the sites for which investigations have been initiated with site status as well as sites that have been identified, but not yet investigated. The Facility Investigations subtask makes up approximately 40 percent of the RFI phase. As of the end of Period 30, this task is approximately 69 percent complete.

A total of 84 SWMUs, AOCs, and Range Management Units have been identified at CSSA, and investigations have been conducted at 64 of those sites. A summary of the status of each site, including whether the site is recommended for closure or if closure is approved, is provided in **Attachment 2**. To date, Risk Reduction Standard 1 closure of 35 CSSA sites has been approved by Texas Commission on Environmental Quality (TCEQ), and eight sites were either delisted or granted No Further Action status.

Encyclopedia Modification

In an effort to improve the usability of the Environmental Encyclopedia, CSSA is in the process of developing an online, interactive Environmental Summary (Site Management Plan). This summary will operate along side the encyclopedia and provide a brief overview of past efforts, current status and planned actions. This summary will include active links to the encyclopedia and other appropriate web sources and will be periodically updated as work progresses. The Environmental Summary is currently in draft form and under review.

SWMU and AOC Investigations

One SWMU and two AOC site investigations are funded under USACE Contract No. DACA56-04-D-2006, TO No. DY01. Weston Solutions, Inc., is conducting this work at SWMU B-71, AOC-63, and AOC-64. Geophysical surveys, test trenching and initial soil sampling were conducted in March 2007. Laboratory results for various samples collected at each of the investigation sites indicated the presence of organic or inorganic contaminants exceeding the TCEQ TRRP PCLs for leaching of contaminants from soil to groundwater. For SWMU B-71 and AOC-64, the maximum detected chemical of concern (COC) concentrations were generally associated with the observed locations of munitions debris, either buried or present at the ground surface. No buried waste, munitions debris, or other potential contaminant sources were observed at AOC-63; however, benzene was detected above TRRP Tier 1 (30-acre source area) groundwater protective concentrations. Based on the initial site investigation findings, additional delineation and confirmation samples were collected and a rough order of magnitude was developed to estimate costs to close these sites. The estimate is currently under review.

In addition, CSSA will perform additional investigations for SWMU and AOC sites scheduled for closure under the TRRP rule that have been funded under the U.S. Army Corps of Engineers (USACE) Contract No. DACA87-02-D-0005, task order (TO) No. DY01, for investigation of inner cantonment sites SWMU I-1, AOC-67, and AOC-68, and the north pasture sites SWMUs B-2, B-8, B-20/21, and B-24. Work plans have been drafted for review by CSSA and USACE and the work plans were discussed at a meeting held on March 9, 2007. An Ecological Risk Assessment (ERA) is necessary to calculate Protective Concentration Limits (PCLs) for the north pasture sites. An ERA is currently being scoped and contracted. Additional sites (AOC 69 and AOC 73) will be added to this TO for investigation, and the modification was received in June 2007. A summary of the status of all SWMU and AOC investigations is provided in **Attachment 2**.

Groundwater Investigation

The Groundwater Investigation subtask makes up approximately 15 percent of the RFI phase. As of the end of Period 30, this task is approximately 74 percent complete.

On- and off-post groundwater monitoring was conducted in accordance with the regulator-approved DQOs during Period 30. Sampling frequencies for on-post wells are determined by the long term monitoring optimization (LTMO) study completed in May 2005, as approved by TCEQ and USEPA. Based on the LTMO recommendations, on-post wells are sampled

quarterly, semi-annually, or biennially (every 2 years). Off-post wells are not included in the LTMO recommendations and are sampled quarterly under the DQOs. A map of the well locations is provided in Attachment 1 of this report.

The analyte list for each monitoring event was in accordance with the applicable DQOs. On- and off-post monitoring wells were sampled for the SW-846 Method 8260 VOCs 1,1-dichloroethene (1,1-DCE), *cis*-1,2-dichloroethene (*cis*-1,2-DCE), *trans*-1,2-dichloroethene (*trans*-1,2-DCE), tetrachloroethene (PCE), trichloroethene (TCE), and vinyl chloride (VC). On-post monitoring wells only are sampled for the SW-846 Method 6010/6020 metals lead, cadmium and nickel. Additional samples are collected off-post from the well after treatment by the granular-activated carbon (GAC) filtration systems. On-post samples were analyzed by Severn Trent Laboratories (STL) in Arvada, Colorado, and off-post samples were analyzed by Agriculture & Priority Pollutants Laboratories, Inc. (APPL). Parsons' chemists validated and verified the data. All detected concentrations of VOCs and metals are presented in Attachment 4.

March 2007 Sampling

Twenty-four on-post wells were sampled in March 2007. Due to pump malfunction, well rehabilitation, and groundwater elevations below the pump inlet, three wells (CS I, CS-9, and CS MW11B LGR) could not be sampled. Off-post wells sampled in March 2007 included 32 private and public off-post drinking water wells and 8 post GAC samples. Additionally, 34 zones of the Westbay-equipped wells contained water and were able to be sampled in March 2007. **Attachment 4** includes each well sampled in March 2007 and the analytical results.

The maximum contaminant level (MCL) was exceeded in on-post monitoring wells CS-MW1-LGR, CS-MW16-LGR, CS-MW16-CC, and CS-D for the analytes PCE, TCE and/or *cis*-1,2-DCE. The MCL was exceeded in off-post wells OFR-3 and RFR-10 for PCE only, both of which were previously equipped with a GAC filtration system. Westbay-equipped wells CS-WB01, CS-WB02, CS-WB03, and CS-WB04 had exceedances of either PCE or TCE or both in various intervals. Three intervals in CS-WB01, 1 interval in CS-WB02, 7 intervals in CS-WB03, and 1 interval in CS-WB04 exceeded the MCL for PCE. Two intervals in CS-WB01, 2 intervals in CS-WB02, 3 intervals in CS-WB03, and 3 intervals in CS-WB04 exceeded the MCL for TCE. On-post water levels increase an average of 14.53 feet this period, following significant rainfall since December 2006. The on-post weather stations were offline at various times from January through June 2007. The National Weather Service precipitation totals for the San Antonio, Texas, area from January through June 22, 2007 estimate 19.61 inches of precipitation. The increase in water levels indicates a continued recovery of the water table at CSSA following a persistent drought during late 2005 and the first quarter of 2006.

June 2007 Sampling

The six newly installed on-post monitoring wells were sampled in June 2007. Off-post wells sampled in June 2007 included 26 private and public off-post drinking water wells. Three off-post wells could not be sampled (LS-3, LS-4, and I10-4). Electricity has been disconnected from all of these wells. LS-2 and LS-3 are still owned by Bexar Metropolitan Water District (Bexar Met), but were taken off-line when San Antonio Water Systems (SAWS) took over the

water distribution system in the Leon Springs Villas in May 2007. I10-4 was taken off-line due to future property development and the new owner has indicated the well will be plugged in the near future. CSSA will attempt to confirm the plugging and abandonment and obtain the report. No Westbay-equipped well samples or post-GAC samples were collected in June 2007. Laboratory results for the June 2007 event have not been received and will be reported in the next period.

On-Post GAC Systems

CSSA operated and maintained the on-post GAC unit at Outfalls 002 and the permitted discharge at Outfall 004 this period. A Discharge Monitoring Report is submitted each month the system operates to comply with Texas Pollution Discharge Elimination System (TPDES) permit requirements. Outfall operations per month are included in Table 2.

Table 2 On-post Outfall Operations

Month	Outfall 002	Outfall 004
January 2007	5,603 gallons	No discharge
February 2007	No discharge	No discharge
March 2007	675 gallons	No discharge
April 2007	No discharge	No discharge
May 2007	No discharge	No discharge
June 2007	No data	No data

The water treated consisted of monitoring well purge water and water generated during development of wells CS-MW24-LGR and CS-MW25-LGR in January 2007 and monitoring well sampling purged fluids in March 2007.

Off-Post GAC Systems

Based on sampling results received in 2001 and 2002 indicating VOC levels above or approaching the MCL, GAC filtration systems were installed at seven off-post wells. In accordance with the CSSA Off-Post Monitoring Program Response Plan dated June 2002, and the Groundwater Monitoring DQOs the off-post GAC filtration systems are maintained by CSSA and sampled every six months. Monthly operations and maintenance (O&M) activities for the off-post residential GAC filtration systems were performed this period. Work included inspection and replacement, as needed, of the pre- and post-GAC filters at wells LS-6, LS-7, RFR-10, RFR-11, and OFR-3. Confirmation samples from systems installed at wells LS-2 and LS-3, LS-6, LS-7, OFR-3, RFR-10 and RFR-11 were collected in March 2007. All results for the post-GAC water samples were non-detect. The GAC system at LS-2 and LS-3 is currently inactive because SAWS has taken over water distribution at Leon Springs Villas and is importing water from a different source.

Well CS-9 Reconstruction

As reported last period, well CS-9 had detections of lead and mercury in concentrations above drinking water MCLs in 2006 following well rehabilitation work. Well CS-9 was taken out of service immediately upon receipt of the metals analysis results. Investigation indicated debris (pipe casing and possibly a pump) present in the well borehole and the well was grouted up to cover the debris and prevent contact with the producing zones. Initial sampling show that metals levels are below MCLs. Approximately 2,800 gallons was pumped after the grouting was completed. A 24-hour pumping test was conducted on the well prior to the permanent pump installation. After the pump was installed, well CS-9 was reconnected to the CSSA system. Average pumping rates for Well CS-9 were 70 to 120 gallons per minute (gpm) after the well was rehabilitated.

Data Validation and Verification

Laboratory results from sampling efforts and investigations are validated and verified by Parsons' chemists to ensure results are in compliance with CSSA Quality Assurance Program Plan (QAPP) requirements. Data validation and verification continued during Period 30 under CSSA projects TO0006, TO0008, and TO0207. Parsons chemists conducted data validation for 37 data packages during Period 30:

- 28 related to TO0006 sampling activities; and
- Nine related to quarterly groundwater monitoring activities on both TO0008 and TO0207.

The TO0006 sampling included work performed at SWMU B-3 and the Westbay-equipped wells installed near SWMU B-3. These data packages were verified as screening-level data only. The TO0006 data packages were received from Gulf Coast Analytical Laboratories and Microbial Insights, and the TO0008 and TO0207 data packages were received from APPL and STL. Data packages were validated and verified in accordance with specific project DQOs and the CSSA QAPP.

Treatability Studies

The Treatability Study subtask makes up approximately 10 percent of the RFI phase. As of the end of Period 30, this task is approximately 45 percent complete.

SWMU B-3 Substrate Injection Pilot Study

The enhanced anaerobic bioremediation treatability study continued this period with the collection of another round of data collected nine months after the injection. This preliminary data is summarized in Table 3.

Prior to substrate injection, natural geochemical conditions at the study area were aerobic to mildly anaerobic. These geochemical conditions were incapable of supporting full reductive dechlorination of PCE and TCE. In part, this was due to the lack of bioavailable organic carbon in the system as evidenced by the lack of total organic carbon (TOC) and volatile fatty acids (VFAs) in groundwater.

Following the substrate injection in March 2006, TOC concentrations increased to levels capable of supporting biologically mediated reductive dechlorination (greater than 20 milligrams per liter [mg/L]) around the injection well. Within this area of increased TOC, iron (II), manganese, and methane concentrations also increased, while sulfate and nitrate concentrations decreased. These trends indicate that the geochemical conditions are becoming more reducing and that sulfate reduction, nitrate reduction, and methanogenesis were stimulated. Under these more strongly reducing conditions reductive dechlorination occurs most rapidly. Thus, the area impacted by the substrate derived organic carbon became more conducive to contaminant remediation as the geochemical conditions became more reductive. Additional data on these concentrations will be reported in the Quarterly Performance Monitoring Reports.

TOC and VFA data collected in the latest round of sampling (January, 2007), indicates that the injected substrate is nearing depletion, as demonstrated by the decreasing trend of the TOC and VFA concentrations within the injection zone. The lack of TOC and VFA concentration increases at the monitoring well WB05 indicates a lack of mobility of the injected substrate along assumed anthropogenic flowpaths.

Table 3
Preliminary Data on Enhanced Anaerobic Bioremediation

Well	Jan-06	May-06	Jun-06	Aug-06	Oct-06	Jan-07
	PCE (µg/L)					
CS-B3-MW01	15.0	4.73	nd	nd	0.811 F	0.24 F
WB05-LGR-03B	45.8	31.6	nd	nd	nd	0.71 F
WB05-LGR-04A	22.5	nd	15.2	nd	0.449 F	0.24 F
WB05-LGR-04B	586	239	417	296	160	330
WB05-BS-1		ns	ns		59.8	0.47 F
WB05-CC-01		ns	ns		226	180
WB05-CC-02		ns	ns		167	72
CS-MW16-LGR		ns	ns		64.3	65
CS-MW16-CC		ns	ns		nd	

Well	TCE (µg/L)					
	CS-B3-MW01	30.7	10.1	1.46	nd	0.639 F
WB05-LGR-03B	78.3	46.6	48.1	76.9	60.7	76
WB05-LGR-04A	54.6	16.5	28.4	27.5	39.9	37
WB05-LGR-04B	562	280	491	324	201	340
WB05-BS-1		ns	ns		67.2	42
WB05-CC-01		ns	ns		172	170
WB05-CC-02		ns	ns		220	92
CS-MW16-LGR		ns	ns		63.7	68
CS-MW16-CC		ns	ns		59.3	

Well	cisDCE (µg/L)					
	CS-B3-MW01	57.8	16.9	48.1	49.7	31.8
WB05-LGR-03B	69.6	54.4	39.2	41.2	31.9	37
WB05-LGR-04A	111	17.6	37	25.5	29.4	29
WB05-LGR-04B	624	355	506	329	272	350
WB05-BS-1		ns	ns		61.1	31
WB05-CC-01		ns	ns		162	190
WB05-CC-02		ns	ns		236	170
CS-MW16-LGR		ns	ns		56.5	67
CS-MW16-CC		ns	ns		96.8	

Well	transDCE (µg/L)					
	CS-B3-MW01	nd	nd	nd	nd	nd
WB05-LGR-03B	nd	nd	nd	1.51	0.847 F	1.5
WB05-LGR-04A	nd	nd	1.01	nd	0.294 F	nd
WB05-LGR-04B	nd	nd	nd	nd	nd	0.65
WB05-BS-1		ns	ns		nd	nd
WB05-CC-01		ns	ns		nd	3.8
WB05-CC-02		ns	ns		nd	2.3
CS-MW16-LGR		ns	ns		nd	2.3
CS-MW16-CC		ns	ns		12.3	

Well	Vinyl Chloride (µg/L)					
	CS-B3-MW01	nd	nd	nd	nd	nd
WB05-LGR-03B	nd	nd	nd	nd	nd	nd
WB05-LGR-04A	nd	nd	nd	nd	nd	nd
WB05-LGR-04B	nd	nd	nd	nd	nd	nd
WB05-BS-1		ns	ns		nd	nd
WB05-CC-01		ns	ns		nd	nd

During the first two months following the injection of the substrate, concentrations of the parent compounds PCE and TCE decreased in the injection zone. During this time period *cis*-1,2-DCE concentrations increased 2-fold. Additional evaluation of these concentrations will be provided in the Quarterly Performance Monitoring reports. *Trans*-1,2-DCE and VC concentrations were below detectable limits at the injection zone through the course of the Pilot Study. This data, in addition to the four order of magnitude increase in methane at the injection well, may indicate that partial and potentially complete reductive dechlorination via methanogenesis was stimulated by the injected substrate within the first two months of the study and was sustained through the remainder of the first nine months following injection of the substrate. More detailed reports on the concentrations of various COCs and an evaluation of trends will be provided in the Quarterly Performance Monitoring reports for the SWMU B-3 bioreactor.

During the second through ninth months of the Pilot Study, PCE and TCE concentrations in the injection zone remained below the USEPA MCL of 5.0 µg/L. *Cis*-1,2-DCE concentrations within the injection zone declined slightly. This data indicates dechlorination continued within the reaction zone through the course of the study.

SWMU B-3 Bioreactor Treatability Study

The draft final Bioreactor O&M Manual was submitted to CSSA for review on April 6, 2007. On April 11, CSSA notified USEPA and TCEQ that it was planning to initiate active operations of the bioreactor during the following week. Delivery of the recovered groundwater was initiated into bioreactor trench 1 in accordance with CSSA's Class V Aquifer Remediation Injection Well Permit, TCEQ Authorization No. 5X2600431; WWC12002216 on April 24, 2007.

Injections were started at the approximate rate of 15-45 gallons/minute of groundwater from CS-MW16LGR into SWMU B-3 bioreactor trench 1. Groundwater samples were collected from sumps, wells, and/or Westbays after the discharge of the bioreactor delivery pump and prior to injection of the groundwater into SWMU B-3 trench 1. Sampling frequency was based on permit conditions with injected groundwater samples collected twice monthly and monitoring samples from the multiport monitoring wells and injection trench sumps collected monthly. All samples were analyzed for permit parameters - VOCs and total dissolved solids (TDS) as well as performance parameters by APPL, DHL Laboratory, and Microseeps Laboratory. Field data collected included injection volumes, injection pressures and the pH of recovered groundwater for TCEQ permit compliance. Analytical data collected for performance parameters include;

- Dissolved Organic Carbon
- Methane, Ethane, Ethene
- Hydrogen
- Temp, pH, SC
- Oxidation Reduction Potential
- Dissolved Oxygen
- TOC
- Carbon Dioxide
- Hydrogen Sulfide
- Alkalinity

- Nitrogen, Nitrate + Nitrite
- Additional ions including Sulfate, Chloride, Ferrous Iron, Manganese
- Dehalococcides populations

Prior to startup of the bioreactor, a period of heavy precipitation had caused a substantial rise of water levels within the bioreactor, particularly in Trench 1. A baseline round of bioreactor samples were collected from the water in the bioreactor resulting solely from the precipitation events. This baseline data was collected so that impacts from rainfall intrusion and accumulation into the bioreactor can be assessed. A summary of Trench 1 baseline analytical data collected on April 18, 2007 for VOCs is provided in Table 4. Results indicate that a significant amount of VOC components remain in the SWMU B-3 formation including DCE (a product of reductive dechlorination of highly chlorinated species such as PCE and TCE), and fuel components such as toluene. Results also indicate that passive reduction dechlorination is on-going at the site as VC is present and represents one of the final chlorinated components of attenuated chlorinated solvents.

Table 4
Summary of B3 - Trench 1 Baseline VOC Sample Results

Sample ID	<i>cis</i> -DCE (µg/L)	TCE (µg/L)	Toluene (µg/L)	Vinyl Chloride (µg/L)
B3-T1-1	660	2.7	340	6.2
B3-T1-2	610	3.5	260	5.7
B3-T1-3	35	1.5	260	0.29

Between April 24, 2007 and June 30, 2007, approximately 450,000 gallons of recovered groundwater from nearby well CS-MW16-LGR and CS-MW16-CC, were injected into SWMU B-3 bioreactor trench 1. A summary of field collected data of B-3 monitoring efforts are summarized in **Attachment 5**.

AOC-65 SVE System

CSSA completed one year of operating the SVE system located at AOC-65 with quarterly samples collected to assess mass removal rates in March 2007. Results of analysis from quarterly monitoring efforts show slight variability in the rate of mass removal from the extraction systems as shown in Table 5. The annualized rate shown is based on the hourly rate for 365 days of continuous operation.

Table 5
Approximate PCE Mass Removal Rates
from SVE Systems at AOC-65

Location	Date	Hourly PCE Effluent Rate (lb/hr)	Annualized PCE Mass Removal Rate (lb/yr)
Subslab System	June 2006	0.0146	127.9
	September 2006	0.0039	33.8
	December 2006	0.0043	38.0
	March 2007	0.0069	60.1

Exterior System	June 2006	0.0398	348.8
	September 2006	0.0035	30.5
	December 2006	0.0004	3.6
	March 2007	0.0062	54.7

Based on average removal rates over the past 12 months, and assuming that the subslab and exterior SVE systems were operating for 75% and 50% of the time, respectively, the estimated mass of PCE removed from the subsurface from the subslab system was approximately 49 pounds (0.007425 lb/hr average x 24 hr/day x 365 days/yr x 75% operational) while the estimated mass removed from the exterior system was 55 pounds (0.012475 lb/hr x 24 hr/day x 365 days/yr x 50% operational). Since the actual duration of blower stoppages are not known, there is a good deal of uncertainty in these estimates. The operating times were based on observations made during routine system checks. Both systems were checked twice per month with the subslab system observed to be running about 75% at the time of the system check and the exterior system observed to be running about 50% of the time.

During this reporting period, rehabilitation and expansion of the AOC-65 SVE system was initiated. Both systems were shut down during the drilling and construction activities related to the expansion of the new SVE wells located West of Building 90.

SUMMARY OF CONTACTS

Letters summarizing results of the March 2006 and June 2006 off-post groundwater monitoring event were mailed to owners of the off-post wells in July and September 2006. Additional contacts with TCEQ or USEPA regarding Order-related activities occurred this period:

Correspondence:

- January 5, 2007 Supplemental Reconditioning of Production Well CS-9, PWS I.D. 0150117 to TCEQ.
- January 8, 2007 Final September 2006 On-post and Off-post Quarterly Groundwater monitoring reports to TCEQ.
- February 26, 2007 Final SWMU B-3 Bioreactor Construction Report to TCEQ for Underground Injection Control (UIC) Authorization 5X2600431.
- June 2007 Submittal of UIC Authorization 5X2600431 Monthly Report to TCEQ for Period August-October 2006;

Meetings:

- March 9, 2007 Technical Interchange Meeting five held under TO0006 attended by TCEQ and USEPA to discuss SWMU B-3, site closures, groundwater monitoring, and miscellaneous items; and
- May 10, 2007 Interim Analytical Data Review Meeting, attended by TCEQ and USEPA to discuss SWMU B-71, AOC-63, and AOC-64 results.

Copies of all correspondence and meeting minutes are included in **Volume 1-7** of the **Environmental Encyclopedia**.

PROJECTED WORK FOR THE NEXT PERIOD

Fact Sheets

Fact Sheets covering the 2006 groundwater monitoring were forwarded to members of the CSSA mailing list. The CSSA mailing list was updated to include residents of the subdivision constructed south of the Jackson Woods neighborhood along Ralph Fair Road.

Groundwater Monitoring

The 2006 annual groundwater report will be submitted next period. Operations and maintenance at the residential GAC filtration systems (LS-6, LS-7, OFR-3, RFR-10, and RFR-11) and public water supply systems (LS-2/LS-3) will be conducted monthly during Period 31. The GAC system at LS-2 and 3 is currently inactive. During the next reporting period, CSSA will enter into discussions with Bexar Met regarding the future of the GAC. The Westbay-equipped wells will be profiled and sampled in September 2007. Continued sampling of on and off-post monitoring and water supply wells will continue in September and December 2007.

AOC-65 SVE System Operations

After the expansion of the exterior SVE system is complete on the West side of Building 90 and the expanded system blower is operational, SVE operations will be restarted for the entire site. The expanded system will include four blowers operating continuously, and operations and maintenance of those systems will be performed in accordance with the Updated O&M Manual for SVE Systems at CSSA. The project is currently on-hold while funding and design issues for the new SVE blower building are worked out.

SWMU and AOC Investigations

Work plans for investigations at SWMUs B-2, B-8, B-20/21, B-24, I-1, AOC-67, and AOC-68 will be completed. Incorporation of the modification to include AOC-69 and AOC-73 in these investigations will be conducted. Field work will be initiated and the Ecological Risk Assessment will be initiated after funding is completed.

SWMU B-3 Bioreactor Treatability Study Monitoring

Monitoring of the bioreactor at SWMU B-3 will be continued during Period 31. Monitoring requirements will be performed to meet TCEQ's UIC Authorization requirements. Performance monitoring data will be collected in accordance with the draft Bioreactor O&M Manual.

Post-substrate injection monitoring of monitoring wells and Westbay wells will be continued to obtain additional data regarding the effectiveness of the substrate injection

conducted in April 2006 in enhancing anaerobic dechlorination of PCE and TCE in the groundwater underlying SWMU B-3. The bioreactor O&M data collection will be coordinated so that applicable data from the bioreactor O&M can be used to continue the evaluation of the Enhanced Anaerobic Bioremediation treatability study efforts.

**Table 6 Project Task Completion to Date for Open Projects Only
 (Values updated through June 30, 2007)**

Project Number	Description of Task	Relation to Order	Percent Complete	Start/End Dates
Previously completed TOs:				
Order 37	UST Investigations	NA	100%	1991/1995
Order 52	Investigation of F-14	I/SM/RFI	100%	1992/1993
Order 67	Groundwater sampling, Water Well Inventory, Hydrogeologic Report	I/SM/RFI	100%	1992/1996
Order 71	Environmental Assessment	I/M	100%	1992/1993
Order 126	B-20, F-14 Investigations, Background Soils Study	RFI	100%	1994/1996
RL17	Geophysical surveys, Well Installations Soil Sampling and Groundwater sampling	I/SM/RFI	100%	1995/2003
RL33	Site investigations, B-20 treatability studies and unexploded ordnance investigation	RFI	100%	1996/2002
Order 23	Groundwater Sampling	RFI	100%	1996/1998
RL53	SWMU and AOC Investigations	RFI	100%	1997/2003
RL83	Geophysical Surveys	RFI	100%	1999/2003
RL74	Current Conditions Report, Community Relations, Groundwater Monitoring	RFI	100%	1999/2001
DO5068	Soil Gas Surveys	RFI	100%	1999/2002
DO23	Groundwater Monitoring	RFI	100%	1998/2001
DO5084	Building 90 Investigation, Groundwater Monitoring	RFI	100%	September 2000 to 2003
TO0058	Treatability Study for AOC 65	RFI	100%	September 2001 to April 2005
TO0042	Well Installations and Groundwater Monitoring	I/SM/RFI	100%	September 2001 to March 2006
TO0017	East Pasture Removal Action	Other	100%	March 2005 to May 2006
TO0019	SWMU Closures	RFI	100%	June 2003 to November 2006
Current TOs:				
TO0005	Environmental Program Technical Support	I/SM/RFI		June 2003 to February 2007
	TO Management	I/SM/RFI	100%	
	Meetings	RFI	100%	
	Environmental Encyclopedia Updates	RFI	100%	
	LAN Support	NA	100%	
	Quarterly Progress Reports	I/SM/RFI	100%	
	Publish Encyclopedia Website	I/SM/RFI	100%	
TO0008	Groundwater Monitoring	I/SM/RFI		May 2003 to February 2007
	TO Management	I/SM/RFI	94%	
	Meetings	I/SM/RFI	100%	
	WPs	I/SM/RFI	100%	

Project Number	Description of Task	Relation to Order	Percent Complete	Start/End Dates
	On-Post Groundwater Sampling	I/SM/RFI	100%	
	Off-Post Groundwater Sampling	I/SM/RFI	100%	
	Analytical Validation, Verification, and ERPIMS	I/SM/RFI	100%	
	LAN and GIS Support	I/SM/RFI	100%	
	Effluent Re-Use Feasibility Study	NA	100%	
	Well Network Optimization Study	RFI	100%	
	Installation of Monitoring Wells	RFI	83%	
	CSM Update	RFI	3%	
TO0006	SWMU B-3 and AOC-65 Remediation	RFI		August 2004 to September 2007
	Project Management	I/SM/RFI	89%	
	Meetings	I/SM/RFI	89%	
	WPs & DQOs	RFI	100%	
	Outfall Reuse Design & Construct	I/SM/RFI	23%	
	B3 Remedial Optimization	RFI	94%	
	AST Upgrade	I/SM/RFI	25%	
	SVE Expand & O&M	RFI	75%	
	SWMU B-3 Monitoring Network	RFI	100%	
	Asphalt Removal Action	Other	100%	
	SWMU B-3 Removal Action	RFI	100%	
	Bioreactor Construction	RFI	100%	
	Bioreactor Testing & O&M	RFI	40%	
	CS-MW16-CC Pumping Test	RFI	99%	
TO0098	Miscellaneous Studies	Other		August 2004 to February 2007
	Project Management	Other	99%	
	TPDES Permit Application	Other	100%	
	Storm Water Procedures Manual	Other	100%	
	Installation Cultural and Natural Resources Management Plans	Other	99%	
	Environmental Noise Management Plan	Other	100%	
	Community Relations Plan	RFI	100%	
	Air Permit Update	Other	100%	
	GIS and LAN Support	Other	100%	
	Salado Creek Feasibility Study and Implementation	Other	100%	
	EMS Implementation and Training	Other	100%	
TO0207	Environmental Support, Groundwater Monitoring	I/SM/RFI		August 2006 to March 2008
	Project Management	I/SM/RFI	59%	
	Meetings, teleconferences	I/SM/RFI	37%	
	Work Plans	I/SM/RFI	95%	
	On-post Groundwater Monitoring	I/SM/RFI	73%	
	Off-post Groundwater Monitoring	I/SM/RFI	75%	

Project Number	Description of Task	Relation to Order	Percent Complete	Start/End Dates
	Data validation and verification	I/SM/RFI	62%	
	Public Meetings	I/SM/RFI	100%	
	DMS Development	I/SM/RFI	10%	
	Environmental Encyclopedia Updates	I/SM/RFI	64%	
	LAN Updates	I/SM/RFI	30%	
	USEPA Progress Reports	I/SM/RFI	17%	
DY01 (Parsons)	Environmental Compliance, SWMU and AOC closure Investigations	RFI		August 2006 to August 2007
	Project management	RFI	67%	
	Kickoff meeting/Data Management	RFI	2%	
	Work Plans	RFI	95%	
	Inner Cantonment Site Investigation	RFI	0%	
	North Pasture Site Investigations	RFI	0%	
	Environmental Support	RFI	15%	
	Recordkeeping	RFI	0%	
	Title 2 Services	RFI	30%	
	Project meetings	RFI	0%	
DY01 (Weston)	Affected Property Assessment Investigations	RFI	0%	September 2006 to September 2007
	Update Plans	Other	0%	
	Tank Inspections	Other	0%	
	Title 2 Services	RFI	0%	

Table 7, Project Team Contact Information

Name	Organization/Role	Street Address	City, State, Zip	Phone No.	Fax No.	E-mail
Beal, Christopher	CSSA/Portage Environmental, Geologist and Environmental Assistant	c/o Environmental Office, 25800 Ralph Fair Road	Boerne, TX 78015-4800	(210) 336-1171	(210) 295-7386	bealc@envirodept.net
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Name	Organization/Role	Street Address	City, State, Zip	Phone No.	Fax No.	E-mail
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ATTACHMENT 1

ON-POST AND OFF-POST SAMPLED WELLS FIGURE

ATTACHMENT 2
SUMMARY OF STATUS OF EACH SWMU/AOC SITE

Attachment 2

Summary of Solid Waste Management Units and Area of Concern Status Table

Unit No.	Description	Investigation Report(s)	Recommendations	Requested Action				Closure Approved by	Closure Type
				RRS1	NFA	Delisting	TRRP		
B-1	Powder and ammo burn area (1954).	RFI/Closure Report July 2002	RRS1 Closure	X				November-02	RRS1
B-2	Small arms ammunition burning area (1954)	Draft RFI Report	Further investigation						
B-3	Landfill area (garbage disposal and burning trash); filled in 1990-91.	RFI Report March 2005	Conduct further treatment technology studies						
B-4	Classified burn area (documents and trash).	RFI Report June 2002	Removal of waste in trench and confirmation sampling						
B-5	Possible fired small arms ammo brass area. Not located.	RFI/Closure Report July 2002	RRS1 Closure	X				October-02	RRS1
B-6	Possible solid waste disposal area.	RFI/Closure Report July 2002	RRS1 Closure	X				October-02	RRS1
B-7	Possible fired small arms ammunition brass disposal area	RFI/Closure Report July 2002	RRS1 Closure	X				October-02	RRS1
B-8	Fired small arms ammo brass disposal area (piles of fire bricks, ammo shells)	RFI Report December 2003	Remediation of stockpiled and in-situ soils						
B-9	Miscellaneous solid waste (metal and weapons) disposal area.	RFI/Closure Report September 2002	RRS1 Closure	X				March-03	RRS1
B-10	Ammunition disposal area.	RFI/Closure Report May 2003	RRS1 Closure	X				January-04	RRS1
B-11	Miscellaneous solid waste disposal (ammo, scrap metal, const. debris).	RFI Closure Report June 04	RRS1 Closure	X				September-04	RRS1
B-12	Landfill, WPA trash when igloos were being built	RFI Report April-05	RRS1 Closure	X				July-05	RRS1
B-13	Trash dump area.	RFI Report June 2002	Excavation of waste and surface sampling.						
B-14	Possible fired brass area - not located.	Delisting Requested June 1997	Delisting			X			
B-15/16	Landfill (target vehicles, weapons mounts)	RFI Report October 2002	Removal of debris and sampling						
B-19	Solid waste disposal area (metals and weapons).	RFI/Closure Report June 2002	RRS1 Closure	X				September-02	RRS1
B-20/21	Former OB/OD area & ammunition disposal areas	RFI Report July 2002	Remediation of stockpiled and in-situ soils						
		Combined with B-20							
B-22	Burn area (artillery shells).	RFI/Closure Report August 2002	RRS1 Closure	X				December-02	RRS1
B-23	Disposal trenches (two green canisters)	RFI Report April 2005	RRS1 Closure	X				July-05	RRS1
B-23A	Disposal Trench (glass ampoules of liquid)	RFI Closure Report September 2004	RRS1 Closure	X				March-05	RRS1

Attachment 2

Summary of Solid Waste Management Units and Area of Concern Status Table

Unit No.	Description	Investigation Report(s)	Recommendations	Requested Action				Closure Approved by	Closure Type
				RRS1	NFA	Delisting	TRRP		
B-24	Spent ammo/rockets area	RFI Report May 2002	Remediation of stockpiled and in-situ soils						
B-25	Possible disposal trench	RFI Report April 2005	RRS1 Closure	X				July-05	RRS1
B-26	Possible disposal trench	Delisting Report August 2004	Delisting			X		November-04	Delisting
B-27	Sanitary landfill, consisting of 5-6 trenches (6 ft deep, 3 ft wide).	RFI Report July 2002	Removal of waste and confirmation sampling						
B-28	Disposal trenches (molten metal, ammo, ammo parts)	RFI Report April 2002	Remediation of stockpile soils						
B-29	Solid waste disposal area (in old quarry)	RFI Report April 2005	RRS1 closure	X					
B-30	Solid waste disposal area	RFI Report September 2004	RRS1 Closure	X				February-05	RRS1
B-31	Lead shot/sand pipe bedding	RFI/Closure Report July 2002	RRS1 Closure	X				November-02	RRS1
B-32	Lead shot/sand pipe bedding	RFI/Closure Report January 2003	RRS1 Closure	X				November-03	RRS1
B-33	Lead shot/sand pipe bedding	RFI Report September 2004	RRS1 Closure	X				November-04	RRS1
B-34	Maintenance pit floor drain and discharge point	RFI Report August 2002	Delineate contamination, disposal of soil				X		
B-71	Livestock area. Inner cantonment, SW of Well 16.	--	--						
Bldg 40	less-than 90-day accumulation container storage area	RFI/Closure Report September 2003	RRS1 Closure	X				January-04 and January-06	RRS1
Bldg 43	Inactive makeshift ammo demolition facility	RFI Report April 2005	RRS1 Closure	X				August-05	RRS1
DD	Dud ammunition disposal area	RFI Report January 2005	RRS1 Closure	X				April-05	RRS1
F-14	Hazardous waste storage area (<90-day)	RFI/Closure Report, 1995	RRS1 Closure	X				November-95	RRS1
I-1	Inactive incinerator (built in 1943), currently used for transformer storage	RFI Report February 2003	(Additional work)						
O-1	Waste liquid/sludge oxidation pond (1975)	RFI/Closure Report October 2000	RRS1 Closure	X				April-02	RRS1
Coal Bins	Coal bins (no longer in use)	Delisting Requested January 2003	Delisting			X			
AOC 35	Area immediately around Well 16. Northeast area of inner cantonment.	RFI/Closure Report October 2002	RRS1 Closure	X				February-03	RRS1

Attachment 2

Summary of Solid Waste Management Units and Area of Concern Status Table

Unit No.	Description	Investigation Report(s)	Recommendations	Requested Action				Closure Approved by	Closure Type
				RRS1	NFA	Delisting	TRRP		
AOC 36	Area between Well 16 and B-3. Possible waste verified not present by magnetometer survey.	RFI/Closure Report April 2002	RRS1 Closure	X				August-02	RRS1
AOC 37	Livestock area. NW of Well 16 and N of Well D.	RFI/Closure Report June 2004	RRS1 Closure	X				January-05	NFA
AOC 38	Livestock area. Inner cantonment, SW of Well 16.	RFI Report September 2004	RRS1 Closure	X				February-05	RRS1
AOC 39	None. Area west of Well 16 between North Outer Rd and cantonment fence.	RFI/Closure Report April 2002	RRS1 Closure	X				September-02	RRS1
AOC 40	None. Area east of Well 16 between North Outer Rd and cantonment fence.	RFI/Closure Report May 2002	RRS1 Closure	X				August-02	RRS1
AOC 41	Gate area east of well 16. North Pasture, north of gate 6.	No Further Action Report April 2005	No Further Action		X			July-05	NFA
AOC 42	None. South of SWMUs B-28 and B-19, west of B-4.	RFI Report October 2002	Excavation and sampling.						
AOC 43	Shallow trench without mounds. Metal, UXO. Located 50 ft south of B-7.	RFI/Closure Report October 2002	RRS1 Closure	X				February-03	RRS1
AOC 44	Fox holes and trenches south of B-9 along west slope of hill. UXO includes Stokes mortars and 20-lb bombs.	Delisting Report April 2005	Delisting			X		July-05	Delisting
AOC 45	Flat area with spent and undamaged bullets. Located east of B-31, near bend in road.	--	--						
AOC 46	Bermed area with stockpile of lead shot and sand. Located south of Engineering on east side of Thompkins Road.	RFI/Closure Report April 2005	--	X				July-05	RRS1
AOC 47	Area of trenches and mounds (similar to B-15/16). South of B-15/16, in SW area of East Pasture.	RFI/Closure Report June 2002	RRS1 Closure	X				September-02	RRS1
AOC 48	Three N-S trending mounds and a construction debris pile. Located north of B-15/16.	Delisting Report August 2004	Delisting Report			X		November-04	Delisting
AOC 49	Trench (4 x 7 ft) without surficial debris. Located SW of deer stand 41 in central East Pasture.	Delisting Report April 2005	Delisting			X		July-05	Delisting
AOC 50	Area with orange discolored material (most likely nickel penetrate) at ground surface. South of B-30 along gravel road.	RFI/Closure Report January 2005	RRS1 Closure	X				April-05	RRS1
AOC 51	East pasture, east of active range, approximately 25 acres, area around B-9	--	--						
AOC 52	Area west of B-4 towards Salado Creek near trees, two trenches	--	--						
AOC 53	Building foundation near B-27 at Central Road and road to "D" Tank, batteries at rear of slab	RFI/Closure Report April 2005	--	X				July-05	RRS1
AOC 54	Area near gutting pit, east of Welding Shop Building, right side of road batteries were stored in the area	Closure Report July 2004	--	X				November-04	RRS1

Attachment 2

Summary of Solid Waste Management Units
and Area of Concern Status Table

Unit No.	Description	Investigation Report(s)	Recommendations	Requested Action				Closure Approved by	Closure Type
				RRS1	NFA	Delisting	TRRP		
AOC 55	Landfill, south of Tenberg Drive, east of Salado Creek	RFI/Closure Report Feb 04	RRS1 Closure	X					
AOC 56	Landfill, at intersection of Bernard Road and East Outer Road, surface depression on south side of intersection	Closure Report June 04	RRS1 Closure	X				September-04	RRS1
AOC 57	East of Building 98 and KOA Area, cleaning/maintenance activities performed at temporary structures	--	--						
AOC 58	Suspected disposal trench within Inner Cantonment	RFI Report October 2002	Investigate anomaly						
AOC 59	Trench-type anomaly located west Test Pad in the East Pasture	--	--						
AOC 60	Trench located west of tunnel and entrance roadway in the East Pasture.	Delisting Report April 2005	Delisting			X		July-05	Delisting
AOC 61	Suspected landfill	RFI/Closure Report October 2002	RRS1 Closure	X				February-03	RRS1
AOC 62	Located west of monitoring well MW-2 and east of Salado Creek.	--	--						
AOC 63	Area consisting of 3 barrels containing rocks, south of deer stand 41 in the East Pasture.	--	--						
AOC 64	Area east of SWMU B-4; flares observed in the area	--	--						
AOC 65	A concrete pit area that housed a metal vat that contained TCE and PCE.	RFI Report August 2003	Additional investigation, remediation ongoing						
AOC 66	Area north of Well 16 in the outer cantonment.	Closure Report June 04	RRS1 Closure	X				February-05	NFA
AOC 67	Concrete pad near Building 90 housed a vat containing cleaning solvents.	RFI Report August 2002	--						
AOC 68	Area includes metal slag/debris storage area from Wheelabrator operations next to Building 90-2.	--	--						
AOC 69	Located on west side of CSSA.	--	--						
AOC 70	Building used to mix pesticides. Near Building 1.	--	--						
AOC 72	Area containing concrete, possible asbestos. Located east of Building 94, in SW CSSA.	--	--						
AOC 73	Ranch landfill with overgrown trenches. Near Well I1, in northwest corner of CSSA.	--	--						

ATTACHMENT 3

OVERALL H ORDER PERCENT COMPLETE

Attachment 3
Overall (H) Order Percent Complete

Task Name	% of Project	% of Phase	% Complete	% of Activity Complete	% of Task Complete
Interim Measures	30%				90%
Interim Measures Work Plan		7%	100%	7.0%	
Interim Measures Implementation Reports		70%	87%	60.6%	
		23%	98%	22.5%	
RCRA Facility Investigation	30%				73%
Preliminary Report		5%	100%	5%	
RFI Workplan		5%	100%	5%	
Facility Investigation		40%	69%	28%	
Risk Assessment		10%	99%	10%	
Investigation Analysis		10%	84%	8%	
Groundwater Investigation		15%	74%	11%	
Treatability Studies		10%	45%	5%	
Progress Reports		5%	25%	1%	
Corrective Measures Study	10%				0%
Identify and Develop Alternatives		15%	0%	0%	
Evaluate Alternatives		60%	0%	0%	
Reports		25%	0%	0%	
Corrective Measures Implementatio	30%				0%
Implementation Program Plan		5%	0%	0%	
Corrective Measure Design		15%	0%	0%	
Corrective Measure Construction		70%	0%	0%	
Reports		10%	0%	0%	
% of Phase Complete					48.81%

Attachment 3
Overall (H) Order Percent Complete

Task Name	% of Phase	% of Task	% Complete	% of Activity Complete	% of Activity Remaining	% of Task Complete	Comments/Status
1 Interim Measures Work Plan	7%					100.0%	
Draft IM Workplan		80%	100%	80%	0%		
Draft Final IM Workplan		15%	100%	15%	0%		
Final IM Workplan		5%	100%	5%	0%		
2 Interim Measures Implementation	70%					86.5%	
Sample 3 Off-Site Wells		1%	100%	1%	0%		
Sample 20 Off-Site Wells (6 events)		6%	100%	6%	0%		(remaining off-post sampling conducted under the RFI task)
2000 Groundwater Monitoring (4 events)		5%	100%	5%	0%		
2001 Groundwater Monitoring (4 events)		5%	100%	5%	0%		
2002 Groundwater Monitoring (4 events)		5%	100%	5%	0%		
2003 Groundwater Monitoring (4 events)		5%	100%	5%	0%		
2004 Groundwater Monitoring (4 events)		5%	100%	5%	0%		
2005 Groundwater Monitoring (4 events)		5%	100%	5%	0%		
2006 Groundwater Monitoring		5%	100%	5%	0%		
2007 Groundwater Monitoring		5%	50%	3%	50%		
Locate and map off-site wells		1%	100%	1%	0%		
O-1 Soil Borings		3%	100%	3%	0%		
O-1 Excavation, Stabilization, Diposal		12%	100%	12%	0%		
Establish Treatment Unit		1%	0%	0%	100%		may or may not be necessary.
Determine appropriate disposition of soil piles		5%	100%	5%	0%		When treatability studies results have been evaluated
Treat/dispose of soil piles		20%	50%	10%	50%		Unfunded CSSA future work.
AOC 50 Excavation and Disposal		3%	100%	3%	0%		Not included as IM in the Order.
AOC 65 Excavation and Disposal		8%	100%	8%	0%		
3 Reports	23%					97.9%	
Quarterly Progress Report 1 (August 1999)		0.83%	100%	0.83%	0%		
Quarterly Progress Report 2 (November 1999)		0.83%	100%	0.83%	0%		
Quarterly Progress Report 3 (February 2000)		0.83%	100%	0.83%	0%		
Quarterly Progress Report 4 (May 2000)		0.83%	100%	0.83%	0%		
Quarterly Progress Report 5 (August 2000)		0.83%	100%	0.83%	0%		
Quarterly Progress Report 6 (November 2000)		0.83%	100%	0.83%	0%		
Quarterly Progress Report 7 (February 2001)		0.83%	100%	0.83%	0%		
Quarterly Progress Report 8 (May 2001)		0.83%	100%	0.83%	0%		
Quarterly Progress Report 9 (August 2001)		0.83%	100%	0.83%	0%		
Quarterly Progress Report 10 (November 2001)		0.83%	100%	0.83%	0%		
Quarterly Progress Report 11 (February 2002)		0.83%	100%	0.83%	0%		
Quarterly Progress Report 12 (May 2002)		0.83%	100%	0.83%	0%		
Quarterly Progress Report 13 (August 2002)		0.83%	100%	0.83%	0%		
Quarterly Progress Report 14 (November 2002)		0.83%	100%	0.83%	0%		
Quarterly Progress Report 15 (February 2003)		0.83%	100%	0.83%	0%		
Quarterly Progress Report 16 (May 2003)		0.83%	100%	0.83%	0%		
Quarterly Progress Report 17 (August 2003)		0.83%	100%	0.83%	0%		
Quarterly Progress Report 18 (November 2003)		0.83%	100%	0.83%	0%		
Quarterly Progress Report 19 (February 2004)		0.83%	100%	0.83%	0%		
Quarterly Progress Report 20 (May 2004)		0.83%	100%	0.83%	0%		
Quarterly Progress Report 21 (August 2004)		0.83%	100%	0.83%	0%		
Quarterly Progress Report 22 (November 2004)		0.83%	100%	0.83%	0%		
Quarterly Progress Report 23 (February 2005)		0.83%	100%	0.83%	0%		
Quarterly Progress Report 24 (May 2005)		0.83%	100%	0.83%	0%		
Quarterly Progress Report 25 (August 2005)		0.83%	100%	0.83%	0%		
Quarterly Progress Report 26 (October 2005)		0.83%	100%	0.83%	0%		
Quarterly Progress Report 27 (January 2006)		0.83%	100%	0.83%	0%		
Quarterly Progress Report 28 (April 2006)		0.83%	100%	0.83%	0%		
Semi-annual Progress Rpt 29 (Dec 2006)		0.83%	100%	0.83%	0%		
Semi-annual Progress Rpt 30 (July 2007)		0.83%	100%	0.83%	0%		
Semi-annual Progress Rpt 31 (Dec 2007)		0.83%	0%	0.00%	100%		Unfunded CSSA future work.
Semi-annual Progress Rpt 32 (July 2008)		0.83%	0%	0.00%	100%		Unfunded CSSA future work.
Semi-annual Progress Rpt 33 (Dec 2008)		0.83%	0%	0.00%	100%		Unfunded CSSA future work.
Draft O-1 IM Report		19%	100%	19%	0%		
Draft final O-1 IM Report		12%	100%	12%	0%		
Final O-1 IM Report		5%	100%	5%	0%		
Draft Soil Pile IM Report		20%	100%	20%	0%		
Draft Final Soil Pile IM Report		12%	100%	12%	0%		
Final Soil Pile IM Report		5%	100%	5%	0%		
% of Phase Complete						90.07%	

Attachment 3
Overall (H) Order Percent Complete

Task Name	% of Phase	% of Task	% Complete	% of Activity Complete	% of Activity Remaining	% of Task Complete	Comments/Status
Preliminary Report	5%					100.0%	
Draft DCC Report		80%	100%	80%	0%		
Draft Final DCC Report		15%	100%	15%	0%		
Final DCC Report		5%	100%	5%	0%		
RFI Workplan	5%					99.9%	
Draft Community Relations Plan		25%	100%	25%	0%		
Draft Final CRP		5%	100%	5%	0%		
Final CRP (2006)		10%	100%	10%	0%		
Draft RFI Workplans		20%	100%	20%	0%		
Draft Final RFI Workplan		5%	100%	5%	0%		
Final RFI Workplans		5%	98%	5%	2%		
Draft Closure Plan (TO 0019)		15%	100%	15%	0%		
Final Closure Plan (TO 0019)		5%	100%	5%	0%		
Draft GW Mon Plan (TO 0207)		8%	100%	8%	0%		
Final GW Mon Plan (TO 0207)		2%	100%	2%	0%		
Facility Investigation¹	40%					68.9%	
Small Areas (0-2 acres in size)							
B-3 Investigation/Report		1.22%	50%	0.610%	50%		Final report submitted, additional work required.
B-4 Investigation/Report		1.22%	80%	0.976%	20%		Final report submitted. Additional work required.
B-5 Investigation/Report		1.22%	100%	1.220%	0%		RRS1 closure approved Oct 02.
B-6 Investigation/Report		1.22%	100%	1.220%	0%		RRS1 closure approved Oct 02.
B-7 Investigation/Report		1.22%	100%	1.220%	0%		RRS1 closure approved Oct 02.
B-8 Investigation/Report		1.22%	80%	0.976%	20%		Final report submitted. Additional work required.
B-9 Investigation/Report		1.22%	100%	1.220%	0%		RRS1 closure approved Mar 03
B-10 Investigation/Report		1.22%	100%	1.220%	0%		RRS1 closure approved Jan 04
B-11 Investigation/Report		1.22%	100%	1.220%	0%		RRS1 closure approved Sept 04
B-12 Investigation/Report		1.22%	100%	1.220%	0%		RRS1 closure approved July 05
B-13 Investigation/Report		1.22%	80%	0.976%	20%		Final report submitted. Additional work required.
B-15/16 Investigation/Report		1.22%	80%	0.976%	20%		Final report submitted. Additional work required.
B-19 Investigation/Report		1.22%	100%	1.220%	0%		RRS1 closure approved Sept 02
B-23 Investigation/Report		1.22%	100%	1.220%	0%		RRS1 closure approved July 05
B-23A Investigation/Report		1.22%	100%	1.220%	0%		RRS1 closure approved Mar 05
B-25 Investigation/Report		1.22%	100%	1.220%	0%		RRS1 closure approved July 05
B-26 Investigation/Report		1.22%	100%	1.220%	0%		Delisting approved November 04
B-27 Investigation/Report		1.22%	80%	0.976%	20%		Final report submitted, additional work required
B-28 Investigation/Report		1.22%	80%	0.976%	20%		Final report submitted, additional work required
B-30 Investigation/Report		1.22%	100%	1.220%	0%		RRS1 closure approved Feb 05
B-31 Investigation/Report		1.22%	100%	1.220%	0%		RRS1 closure approved Nov 02
B-32 Investigation/Report		1.22%	100%	1.220%	0%		RRS1 closure approved Nov 03
B-33 Investigation/Report		1.22%	100%	1.220%	0%		RRS1 closure approved Nov 04
B-34 Investigation/Report		1.22%	80%	0.976%	20%		Final report and Addendum report submitted, additional work required
B-71 Investigation/Report		1.22%	0%	0.000%	100%		Not investigated
BLDG-43 Investigation/Report		1.22%	100%	1.220%	0%		RRS1 closure approved Sept 05
Demo Dud Investigation/Report		1.22%	100%	1.220%	0%		RRS1 closure approved Apr 05
F-14 Investigation/Report		1.22%	100%	1.220%	0%		Closure approved Nov 95
I-1 Investigation/Report		1.22%	80%	0.976%	20%		Final RFI report submitted.
AOC 35 Investigation/Report		1.22%	100%	1.220%	0%		Additional work required.
AOC 37 Investigation/Report		1.22%	100%	1.220%	0%		RRS1 closure approved Feb 03
AOC 39 Investigation/Report		1.22%	100%	1.220%	0%		RRS1 closure approved Jan 05
AOC 40 Investigation/Report		1.22%	100%	1.220%	0%		RRS1 closure approved Sept 02
AOC 43 Investigation/Report		1.22%	100%	1.220%	0%		RRS1 closure approved Aug 02
AOC 44 Investigation/Report		1.22%	100%	1.220%	0%		RRS1 closure approved Feb 03
AOC 45 Investigation/Report		1.22%	0%	0.000%	100%		RRS1 closure approved July 2005.
AOC 46 Investigation/Report		1.22%	100%	1.220%	0%		Delisting approved July 2005.

Attachment 3
Overall (H) Order Percent Complete

Task Name	% of Phase	% of Task	% Complete	% of Activity Complete	% of Activity Remaining	% of Task Complete	Comments/Status
AOC 47 Investigation/Report		1.22%	100%	1.220%	0%		Closure approved Sep 02
AOC 49 Investigation/Report		1.22%	100%	1.220%	0%		Delisting approved July 2005
AOC 50 Investigation/Report		1.22%	100%	1.220%	0%		Closure approved Apr 05
AOC 52 Investigation/Report		1.22%	0%	0.000%	100%		
AOC 53 Investigation/Report		1.22%	100%	1.220%	0%		closure approved July 2005.
AOC 54 Investigation/Report		1.22%	100%	1.220%	0%		Closure approved Nov 04
AOC 55 Investigation/Report		1.22%	99%	1.207%	1%		closure report submitted
AOC 56 Investigation/Report		1.22%	100%	1.220%	0%		Closure approved Sept 04
							Final RFI report submitted, additional work recommended.
AOC 58 Investigation/Report		1.22%	80%	0.976%	20%		
AOC 59 Investigation/Report		1.22%	0%	0.000%	100%		
AOC 60 Investigation/Report		1.22%	100%	1.220%	0%		Delisting approved July 2005.
AOC 61 Investigation/Report		1.22%	100%	1.220%	0%		Closure approved Feb 03
AOC 62 Investigation/Report		1.22%	0%	0.000%	100%		
AOC 63 Investigation/Report		1.22%	0%	0.000%	100%		
AOC 64 Investigation/Report		1.22%	0%	0.000%	100%		
AOC 68 Investigation/Report		1.22%	0%	0.000%	100%		
AOC 69 Investigation/Report		1.22%	0%	0.000%	100%		
AOC 70 Investigation/Report		1.22%	0%	0.000%	100%		
AOC 72 Investigation/Report		1.22%	0%	0.000%	100%		
AOC 73 Investigation/Report		1.22%	0%	0.000%	100%		
Medium Areas (2-10 acres in size)							
B-1 Investigation/Report		1.2%	100%	1.220%	0%		Closure approved Nov 02 Final report submitted, additional work recommended
B-2 Investigation/Report		1.2%	80%	0.976%	20%		
B-22 Investigation/Report		1.2%	100%	1.220%	0%		Closure approved Dec 02 Final report submitted, additional work recommended
B-24 Investigation/Report		1.2%	80%	0.976%	20%		Final RRS1 closure report submitted
B-29 Investigation/Report		1.2%	99%	1.207%	1%		Closure approved Aug 02
AOC 36 Investigation/Report		1.2%	100%	1.220%	0%		Closure approved July 2005.
AOC 41 Investigation/Report		1.2%	100%	1.220%	0%		Final report submitted, additional work recommended
AOC 42 Investigation/Report		1.2%	80%	0.976%	20%		
AOC 48 Investigation/Report		1.2%	100%	1.220%	0%		Delisting approved Nov 04
AOC 57 Investigation/Report		1.2%	0%	0.000%	100%		
Large Areas (>10 acres in size)							
B-20/21 Investigation/Report		1.2%	80%	0.976%	20%		Final report submitted, additional work recommended
AOC 38 Investigation/Report		1.2%	100%	1.220%	0%		Closure approved February 05
AOC 51 Investigation/Report		1.2%	0%	0.000%	100%		
AOC 66 Investigation/Report		1.2%	100%	1.220%	0%		NFA Closure approved Feb 05
RMU-1 Investigation/Report		1.2%	0%	0.000%	100%		
RMU-5 Investigation/Report		1.2%	0%	0.000%	100%		
AOC 65 Investigation/Report		1.2%	80%	0.976%	20%		Final report submitted, additional work recommended
AOC 67 Investigation/Report		1.2%	80%	0.976%	20%		Final report submitted, additional work recommended
AOC 68 Investigation/Report		1.2%	0%	0.000%	100%		
AOC 69 Investigation/Report		1.2%	0%	0.000%	100%		
AOC 70 Investigation/Report		1.2%	0%	0.000%	100%		
Coal Bins Investigation/Report		1.2%	100%	1.220%	0%		Site being de-listed as a SWMU
RMU-2 Investigation/Report		1.2%	0%	0.000%	100%		
RMU-3 Investigation/Report		1.2%	0%	0.000%	100%		
RMU-4 Investigation/Report		1.2%	0%	0.000%	100%		
Groundwater Investigation							
		15%				74%	
Well Installation				8%	20%		Well installations pending under TO 08
Groundwater Monitoring 1999		4.2%	100%	4%	0%		
Groundwater Monitoring 2000		4.2%	100%	4%	0%		
Groundwater Monitoring 2001		4.2%	100%	4%	0%		
Groundwater Monitoring 2002		4.2%	100%	4%	0%		
Groundwater Monitoring 2003		4.2%	100%	4%	0%		

Attachment 3
Overall (H) Order Percent Complete

Task Name	% of Phase	% of Task	% Complete	% of Activity Complete	% of Activity Remaining	% of Task Complete	Comments/Status
Groundwater Monitoring 2004		4.2%	100%	4%	0%		
Groundwater Monitoring 2005		4.2%	100%	4%	0%		
Groundwater Monitoring 2006		4.2%	100%	4%	0%		Fieldwork complete to Mar 06
Groundwater Monitoring 2007		4.2%	50%	2%	50%		incomplete
Groundwater Monitoring 2008		4.2%	0%	0%	100%		incomplete
Groundwater Monitoring 2009		4.2%	0%	0%	100%		incomplete
Conceptual Site Model (CSM)		20.0%	100%	20%	0%		Final submitted May 2005
CSM Update		4.0%	0%	0%	100%		
LTM0 2005 (optimization study)		10%	100%	10%	0%		Complete
LTM0 2010 (review of optimization)		10%	0%	0%	100%		incomplete
Risk Assessment	10%					99%	
Draft TAD		10%	100%	10%	0%		
Draft Final TAD		4%	100%	4%	0%		
Final TAD		1%	0%	0%	100%		Complete when analytical data is available for full evaluation.
Draft CSM		80%	100%	80%	0%		
Final CSM		5%	100%	5%	0%		
Investigation Analysis	10%					84%	
Collect Background Data		10%	100%	10%	0%		Information included in facility investigation reports; percent complete based on overall percent complete of facility investigation tasks.
Draft Investigation Analysis		85%	82%	70%	18%		
Final Investigation Analysis		5%	82%	4%	18%		Information included in facility investigation reports; percent complete based on overall percent complete of facility investigation tasks.
Treatability Studies	10%					45%	
Draft Treatability Study Report B-20		15%	100%	15%	0%		
Final Treatability Study Report B-20		5%	100%	5%	0%		
Continued O&M for B-3		10%	100%	10%	0%		
AOC-65 Treatability Studies		10%	80%	8%	20%		
Draft Treatability Study & Technology Evaluation Reports		10%	70%	7%	30%		
Final Treatability Study		25%	0%	0%	100%		
Recharge Study		25%	100%	25%	0%		
Progress Reports	5%					25.4%	
Quarter 1 (August 1999)		0.85%	100%	0.85%	0%		
Quarter 2 (November 1999)		0.85%	100%	0.85%	0%		
Quarter 3 (February 2000)		0.85%	100%	0.85%	0%		
Quarter 4 (May 2000)		0.85%	100%	0.85%	0%		
Quarter 5 (August 2000)		0.85%	100%	0.85%	0%		
Quarter 6 (November 2000)		0.85%	100%	0.85%	0%		
Quarter 7 (February 2001)		0.85%	100%	0.85%	0%		
Quarter 8 (May 2001)		0.85%	100%	0.85%	0%		
Quarter 9 (August 2001)		0.85%	100%	0.85%	0%		
Quarter 10 (November 2001)		0.85%	100%	0.85%	0%		
Quarter 11 (February 2002)		0.85%	100%	0.85%	0%		
Quarter 12 (May 2002)		0.85%	100%	0.85%	0%		
Quarter 13 (August 2002)		0.85%	100%	0.85%	0%		
Quarter 14 (November 2002)		0.85%	100%	0.85%	0%		
Quarter 15 (February 2003)		0.85%	100%	0.85%	0%		
Quarter 16 (May 2003)		0.85%	100%	0.85%	0%		
Quarter 17 (August 2003)		0.85%	100%	0.85%	0%		
Quarter 18 (November 2003)		0.85%	100%	0.85%	0%		
Quarter 19 (February 2004)		0.85%	100%	0.85%	0%		
Quarter 20 (May 2004)		0.85%	100%	0.85%	0%		
Quarter 21 (August 2004)		0.85%	100%	0.85%	0%		
Quarter 22 (November 2004)		0.85%	100%	0.85%	0%		
Quarter 23 (February 2005)		0.85%	100%	0.85%	0%		
Quarter 24 (May 2005)		0.85%	100%	0.85%	0%		

Attachment 3
Overall (H) Order Percent Complete

Task Name	% of Phase	% of Task	% Complete	% of Activity Complete	% of Activity Remaining	% of Task Complete	Comments/Status
Quarter 25 (August 2005)		0.85%	100%	0.85%	0%		
Quarter 26 (November 2005)		0.85%	100%	0.85%	0%		
Quarter 27 (February 2006)		0.85%	100%	0.85%	0%		
Quarter 28 (May 2006)		0.85%	100%	0.85%	0%		
Semi-Annual 29 (December 2006)		0.85%	100%	0.85%	0%		
Semi-Annual 30 (July 2007)		0.85%	100%	0.85%	0%		
Semi-Annual 31 (December 2007)		0.85%	0%	0.00%	100%		
Semi-Annual 32 (July 2008)		0.85%	0%	0.00%	100%		
Semi-Annual 33 (December 2008)		0.85%	0%	0.00%	100%		
Semi-Annual 34 (July 2009)		0.85%	0%	0.00%	100%		
Semi-Annual 35 (December 2009)		0.85%	0%	0.00%	100%		
Semi-Annual 36 (July 2010)		0.85%	0%	0.00%	100%		
Semi-Annual 37 (December 2010)		0.85%	0%	0.00%	100%		
(Add'l Quarters - rows hidden)							
% of Phase Complete						72.64%	
¹ Breakdown of percent complete for RFI facility investigations: Field work complete (25%), data validation (20%), boring logs (if applicable)(10%), analytical data tables (10%), figures (10%), draft report (20%), final report (5%). Note: if additional investigations are needed, then the percent complete will need to be adjusted on a site by site basis.							

Attachment 3
Overall (H) Order Percent Complete

Task Name	% of Phase	% of Task	% Complete	% of Activity Complete	% of Task Complete
Identify and Develop Alternatives	15%				0.0%
Update DCC Report		35%	0%	0%	
Establish Corrective Action Objectives		30%	0%	0%	
ID, Screen, Develop CM Alternatives		35%	0%	0%	
Evaluate Alternatives	60%				0.0%
Draft Description of CM Alternative		90%	0%	0%	
Final Description of CM Alternative		10%	0%	0%	
???				0%	
Reports	25%				0.0%
Draft CMS Report		75%	0%	0%	
Final CMS Report		5%	0%	0%	
Quarter 1 Progress Report		5%	0%	0%	
Quarter 2 Progress Report		5%	0%	0%	
Quarter 3 Progress Report		5%	0%	0%	
Quarter 4 Progress Report		5%	0%	0%	
???			0%	0%	
% of Phase Complete					0.0%

Attachment 3
Overall (H) Order Percent Complete

Task Name	% of Phase	% of Task	% Complete	% of Activity Complete	% of Task Complete
Implementation Program Plan	5%				0.0%
Draft Program Management Plan		40%	0%	0%	
Final Program Management Plan		10%	0%	0%	
Draft Update to CRP		40%	0%	0%	
Final Update to CRP		10%	0%	0%	
Corrective Measure Design	15%				0.0%
Draft CMD Report		90%	0%	0%	
Final CMD Report		10%	0%	0%	
Corrective Measure Construction	70%				0%
Draft Construction QAPP		35%	0%	0%	
Final Construction QAPP		5%	0%	0%	
Implementation of Construction QAPP		60%	0%	0%	
Reports	10%				0%
Progress Report 1		25%	0%	0%	
Progress Report 2		25%	0%	0%	
Progress Report 3		25%	0%	0%	
Progress Report 4		25%	0%	0%	
????					
% of Phase Complete					0.00%

ATTACHMENT 4

GROUNDWATER RESULTS SUMMARY

Attachment 4
March 2007 Quarterly On-Post Groundwater Analytical Results

Well ID	Date Sampled	1,1-DCE	<i>cis</i> -1,2-DCE	PCE	<i>trans</i> -1,2-DCE	TCE	Vinyl Chloride
CS-MW1-LGR	3/6/07	--	17	11	0.33F	24	--
CS-MW2-LGR	3/7/07	--	0.98F	--	--	--	--
CS-MW3-LGR	3/12/07	--	--	--	--	--	--
CS-MW4-LGR	3/13/07	--	--	--	--	--	--
CS-MW4-LGR-FD	3/13/07	--	--	--	--	--	--
CS-MW5-LGR	3/7/07	--	1.2	0.65F	--	0.87F	--
CS-MW6-LGR	3/7/07	--	--	--	--	--	--
CS-MW7-LGR	3/7/07	--	--	--	--	--	--
CS-MW8-LGR	3/16/07	--	--	1.0F	--	--	--
CS-MW9-LGR	3/16/07	--	--	--	--	--	--
CS-MW-10-LGR	3/7/07	--	--	1.3F	--	0.37F	--
CS-MW11A-LGR	3/8/07	--	--	1.1F	--	--	--
CS-MW12-LGR	3/8/07	--	--	--	--	--	--
CS-MW16-LGR	3/6/07	--	72*	59*	0.76	69*	--
CS-MW16-CC	3/6/07	0.68F	90*	2.1	7.8	59	0.57F
CS-MW17-LGR	3/16/07	--	--	0.31F	--	--	--
CS-MW18-LGR	3/13/07	--	--	--	--	--	--
CS-MW19-LGR	3/12/07	--	--	0.38F	--	--	--
CS-MWG-LGR	3/16/07	--	--	--	--	--	--
CS-1	3/6/07	--	--	--	--	--	--
CS-1-FD	3/6/07	--	--	--	--	--	--
CS-2	3/8/07	--	--	--	--	--	--
CS-4	3/13/07	--	2.1	1.3F	--	2.7	--
CS-10	3/6/07	--	--	--	--	--	--
CS-11	3/6/07	--	--	--	--	--	--
CS-D	3/12/07	--	97*	69*	4.6	110*	--

Data Qualifiers:

F- The analyte was positively identified but the associated numerical value is below the RL.

J - The analyte was positively identified, the quantitation is an estimation.

U - The analyte was analyzed for, but not detected. The associated numerical value is at or below the MDL.

M- Matrix Effect Present

"--" indicates the result was non-detect

All values are reported in µg/L

* = dilution run was performed. Values are in ug/L.

BOLD	= Above the MCL
BOLD	= Above the RL
BOLD	= Above the MDL (F flagged)

Attachment 4
March 2007 Westbay Analytical Results

Well ID	Date Sampled	1,1-DCE	cis -1,2-DCE	PCE	trans -1,2-DCE	TCE	Vinyl Chloride
CS-WB01-UGR-01	3/14/07	dry	dry	dry	dry	dry	dry
CS-WB01-LGR-01	3/14/07	--	--	4.6	--	0.26F	--
CS-WB01-LGR-02	3/14/07	--	--	6.8	--	3.2	--
CS-WB01-LGR-03	3/14/07	--	--	1.1F	--	3.3	--
CS-WB01-LGR-04	3/14/07	--	--	--	--	--	--
CS-WB01-LGR-05	3/14/07	--	--	--	--	0.17F	--
CS-WB01-LGR-06	3/14/07	--	--	0.26F	--	0.41F	--
CS-WB01-LGR-07	3/14/07	--	--	11	--	9.5	--
CS-WB01-LGR-08	3/14/07	--	--	0.35F	--	0.74F	--
CS-WB01-LGR-09	3/14/07	--	0.44F	10	--	20	--
CS-WB02-UGR-01	3/14/07	dry	dry	dry	dry	dry	dry
CS-WB02-LGR-01	3/14/07	--	--	3.8	--	2.6	--
CS-WB02-LGR-02	3/14/07	dry	dry	dry	dry	dry	dry
CS-WB02-LGR-03	3/14/07	--	--	4.5	--	3.1	--
CS-WB02-LGR-04	3/14/07	--	--	2.0	--	10	--
CS-WB02-LGR-05	3/14/07	--	--	0.53F	--	3.1	--
CS-WB02-LGR-06	3/14/07	--	--	0.86F	--	3.8	--
CS-WB02-LGR-07	3/14/07	--	--	0.59F	--	0.46F	--
CS-WB02-LGR-08	3/14/07	--	--	1.3F	--	1.3	--
CS-WB02-LGR-09	3/14/07	--	0.24F	6.6	--	9.8	--
CS-WB03-UGR-01	3/15/07	dry	dry	dry	dry	dry	dry
CS-WB03-LGR-01	3/15/07	dry	dry	dry	dry	dry	dry
CS-WB03-LGR-02	3/15/07	dry	dry	dry	dry	dry	dry
CS-WB03-LGR-03	3/15/07	--	0.31F	17	--	9.4	--
CS-WB03-LGR-04	3/15/07	--	--	15	--	7.5	--
CS-WB03-LGR-05	3/15/07	--	--	13	--	6.4	--
CS-WB03-LGR-06	3/15/07	--	--	9	--	1.5	--
CS-WB03-LGR-07	3/15/07	--	--	5.7	--	1.7	--
CS-WB03-LGR-08	3/15/07	--	--	13	--	1.3	--
CS-WB03-LGR-09	3/15/07	--	--	7.1	--	0.85F	--
CS-WB04-UGR-01	3/15/07	dry	dry	dry	dry	dry	dry
CS-WB04-LGR-01	3/15/07	--	--	0.24F	--	--	--
CS-WB04-LGR-02	3/15/07	--	--	--	--	--	--
CS-WB04-LGR-03	3/15/07	--	--	--	--	--	--
CS-WB04-LGR-04	3/15/07	--	--	--	--	--	--
CS-WB04-LGR-05	3/15/07	dry	dry	dry	dry	dry	dry
CS-WB04-LGR-06	3/15/07	--	3.0	2.1	0.24F	11	--
CS-WB04-LGR-07	3/15/07	--	2.9	1.3F	0.20F	8.8	--
CS-WB04-LGR-08	3/15/07	--	--	--	--	0.65F	--
CS-WB04-LGR-09	3/15/07	--	--	7.7	--	8.2	--
CS-WB04-LGR-10	3/15/07	--	--	0.47F	--	0.48F	--
CS-WB04-LGR-11	3/15/07	--	--	--	--	--	--

Data Qualifiers:

F- The analyte was positively identified but the associated numerical value is below the RL.
 J - The analyte was positively identified, the quantitation is an estimation.
 U - The analyte was analyzed for, but not detected. The associated numerical value is at or below the MDL.
 M- Matrix Effect Present.
 "--" indicates the result was non-detect.
 All values are reported in µg/L.

BOLD = Above the MCL
BOLD = Above the RL

Attachment 4
March 2007 Quarterly Off-Post Groundwater Analytical Results

Well ID	Date Sampled	1,1-DCE	cis -1,2-DCE	PCE	trans -1,2-DCE	TCE	Vinyl Chloride
DOM-2	3/22/07	0.12U	0.07U	0.06U	0.08U	0.05U	0.08U
FO-8	3/20/07	0.12U	0.07U	0.06U	0.08U	0.05U	0.08U
FO-J1	3/22/07	0.12U	0.07U	0.16F	0.08U	0.05U	0.08U
HS-1	3/21/07	0.12U	0.07U	0.15F	0.08U	0.05U	0.08U
HS-2	3/21/07	0.12U	0.07U	0.16F	0.08U	0.05U	0.08U
HS-2 FD	3/21/07	0.12U	0.07U	0.16F	0.08U	0.05U	0.08U
I10-2	3/20/07	0.12U	0.07U	0.06U	0.08U	0.05U	0.08U
I10-4	3/22/07	0.12U	0.07U	2.31	0.08U	1.11	0.08U
I10-7	3/20/07	0.12U	0.07U	0.06U	0.08U	0.05U	0.08U
I10-7 FD	3/20/07	0.12U	0.07U	0.06U	0.08U	0.05U	0.08U
JW-5	3/20/07	0.12U	0.07U	0.07F	0.08U	0.05U	0.08U
JW-7	3/21/07	0.12U	0.07U	0.39F	0.08U	0.05U	0.08U
JW-8	3/21/07	0.12U	0.12F	0.31F	0.08U	0.05U	0.08U
JW-9	3/20/07	0.12U	0.07U	0.06U	0.08U	0.05U	0.08U
JW-14	3/22/07	0.12U	0.07U	0.16F	0.08U	0.05U	0.08U
JW-15	3/20/07	0.12U	0.07U	0.06U	0.08U	0.05U	0.08U
JW-27	3/21/07	0.12U	0.07U	0.06U	0.08U	0.05U	0.08U
JW-28	3/21/07	0.12U	0.07U	0.06U	0.08U	0.05U	0.08U
JW-29	3/20/07	0.12U	0.07U	0.06U	0.08U	0.05U	0.08U
JW-30	3/22/07	0.12U	0.07U	0.06U	0.08U	0.05U	0.08U
JW-30 FD	3/22/07	0.12U	0.07U	0.06U	0.08U	0.05U	0.08U
LS-3	3/21/07	0.12U	0.07U	1.08F	0.08U	0.66F	0.08U
LS-2/LS-3-A1	3/21/07	0.12U	0.07U	0.06U	0.08U	0.19F	0.08U
LS-2/LS-3-A2	3/21/07	0.12U	0.07U	0.06U	0.08U	0.05U	0.08U
LS-4	3/21/07	0.12U	0.07U	0.22F	0.08U	0.05U	0.08U
LS-5	3/19/07	0.12U	0.07U	0.06U	0.08U	0.15F	0.08U
LS-6	3/19/07	0.12U	0.07U	2.33	0.08U	0.11F	0.08U
LS-6 FD	3/19/07	0.12U	0.07U	2.51	0.08U	0.13F	0.08U
LS-6-A2	3/19/07	0.12U	0.07U	0.06U	0.08U	0.05U	0.08U
LS-7	3/19/07	0.12U	0.07U	2.1	0.08U	0.41F	0.08U
LS-7 A2	3/19/07	0.12U	0.07U	0.06U	0.08U	0.05U	0.08U
OFR-1	3/20/07	0.12U	0.07U	0.35F	0.08U	0.05U	0.08U
OFR-3	3/19/07	0.12U	0.18F	8.15	0.08U	4.8	0.08U
OFR-3-A2	3/19/07	0.12U	0.07U	0.06U	0.08U	0.05U	0.08U
OFR-4	3/20/07	0.12U	0.07U	0.06U	0.08U	0.05U	0.08U
RFR-4	3/21/07	0.12U	0.07U	0.06U	0.08U	0.05U	0.08U
RFR-5	3/21/07	0.12U	0.07U	0.06U	0.08U	0.05U	0.08U
RFR-10	3/19/07	0.12U	0.13F	11.64	0.08U	4.57	0.08U
RFR-10-A2	3/19/07	0.12U	0.07U	0.06U	0.08U	0.05U	0.08U
RFR-10-B2	3/19/07	0.12U	0.07U	0.06U	0.08U	0.05U	0.08U
RFR-11	3/19/07	0.12U	0.07U	3.84	0.08U	0.05U	0.08U
RFR-11-A2	3/19/07	0.12U	0.07U	0.06U	0.08U	0.05U	0.08U
RFR-12	3/20/07	0.12U	0.07U	0.06U	0.08U	0.05U	0.08U
RFR-14	3/21/07	0.12U	0.07U	0.10F	0.08U	0.05U	0.08U

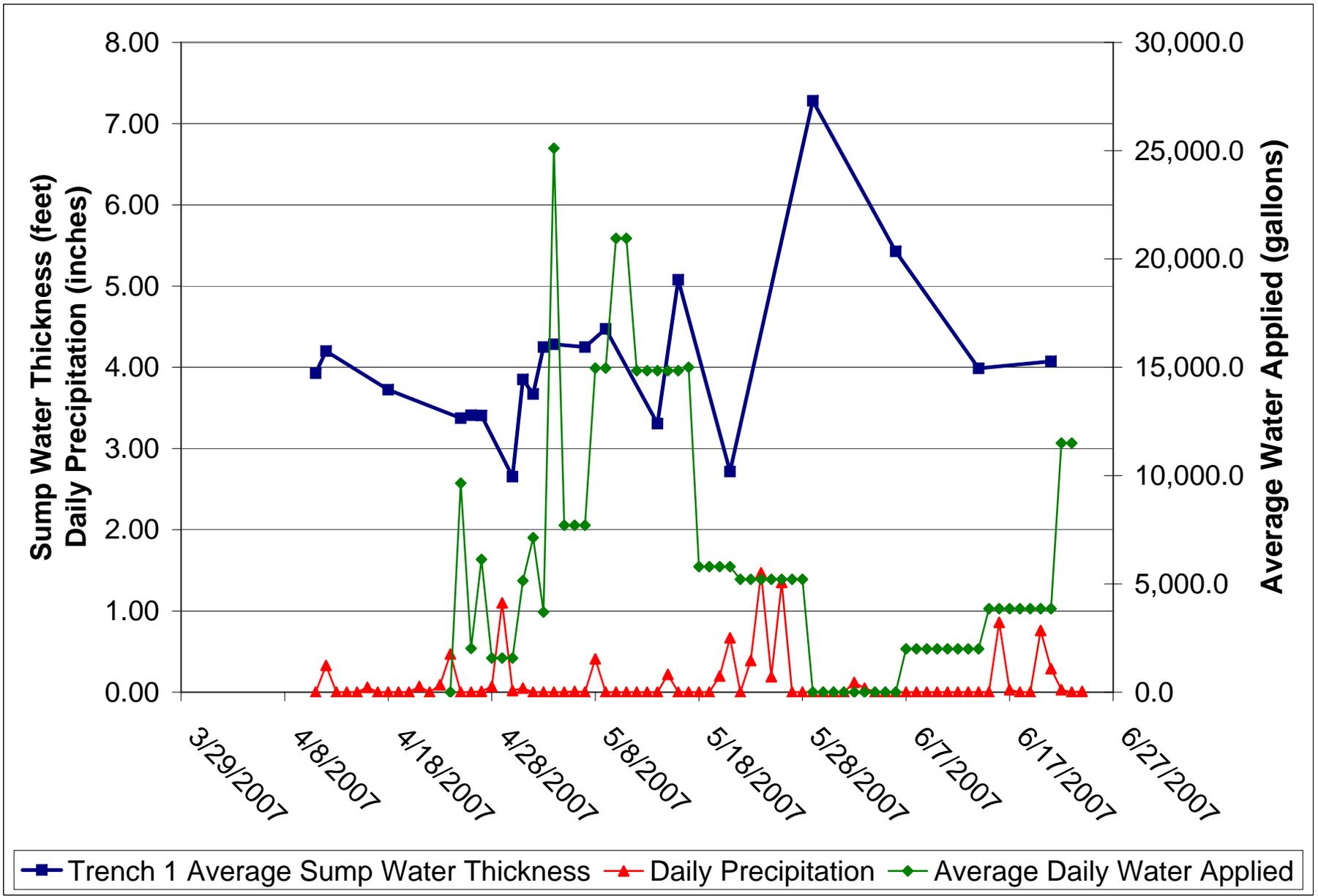
Bold	= Above the MCL
Bold	= Above the RL
Bold	= Above the MDL (F flagged)

Abbreviations/Notes:
 FD Field Duplicate

This table presents all laboratory results.
 All samples were analyzed by APPL, Inc.
Data Qualifiers:
 F- The analyte was positively identified but the associated numerical value is below the RL.
 J- The analyte was positively identified, the quantitation is an estimation.
 U - The analyte was analyzed for, but not detected. The associated numerical value is at or below the MDL.
 M- Matrix Effect Present

ATTACHMENT 5

SWMU B-3 SUMMARY OF COLLECTED MONITORING DATA



SWMU B-3 Multiport Monitoring Wells - Zone LGR 03B
(uppermost saturated zone)

