PROGRESS REPORT

July 1, 2010 – December 31, 2010

(37th REPORT)

Camp Stanley Storage Activity

Boerne, Texas

USEPA ID No. TX2210020739

January 2011

EXECUTIVE SUMMARY

This 37th 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 July 1, 2010 through December 31, 2010. 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.

Summary of Activities this Period

Between July 1 and December 31, 2010, significant activities related to the Order included:

- Continuation of Solid Waste Management Unit (SWMU) B-3 bioreactor treatability studies and submittal of the SWMU B-3 Bioreactor Operations & Maintenance (O&M) Manual on April 2, 2010;
- Continuation of Area of Concern (AOC)-65 Soil Vapor Extraction (SVE) and O&M of the SVE system treatability study;
- Collection of vapor samples in the vicinity of AOC-65;
- Continuation of the groundwater monitoring program under the regulator-approved data quality objectives (DQO);
- Submittal of Long-Term Monitoring Optimization Report for groundwater monitoring;
- Continuation of investigations of SWMUs and AOCs including SWMU B-2, SWMU B-4, SWMU B-8, SWMU B-15/16, SWMU B-20/21, SWMU B-24, SWMU B-28, SWMU B-34, AOC-45, AOC-51, AOC-57, AOC-59, AOC-62, AOC-70, and AOC-72;
- Approximately 2,200 cubic yards of soil were removed from SWMU B-28 and taken to the East Pasture berm for reuse as per TQEQ approval on April 19, 2006;
- TCEQ approval of No Further Action at AOC-63, and closure of AOC-67/68;
- Continued maintenance of on-post and off-post granular activated carbon (GAC) systems and on-post permitted outfalls;
- Status update meeting with USEPA and the Texas Commission on Environmental Quality (TCEQ) in July 2010, and planning for another in January 2011; and
- Continuation of administrative record maintenance.

Details regarding these activities are summarized in this report.

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ACRONYMS AND ABBREVIATIONS

ºC	Degrees Celsius
1,1-DCE	1,1-dichloroethene
AOC	Area of Concern
AL	action level
APAR	affected property assessment report
APPL	Agriculture & Priority Pollutants Laboratories, Inc.
cis-1,2-DCE	*cis*-1,2-dichloroethene
CAH	chlorinated aliphatic hydrocarbons
COC	chemical of concern
CSSA	Camp Stanley Storage Activity
CY	cubic yard
DQO	data quality objective
GAC	granular activated carbon
gpm	gallons per minute
H&A	Hankins and Anderson
I/SM	interim/stabilization measures
LTMO	long-term monitoring optimization
MCL	Maximum Contaminant Level
MD	munitions debris
MEC	munitions and explosives of concern
µg/l	micrograms per liter
NFA	No Further Action
O&M	operations and maintenance
Order	§3008(h) Administrative Order on Consent
PCL	Protective Concentration Limit
PCE	tetrachloroethene
QAPP	Quality Assurance Program Plan
RCRA	Resource Conservation and Recovery Act
RFI	RCRA facility investigation
RIR	Release Investigation Report
SCL	Secondary Contaminant Levels
SVE	coil vapor extraction
SVOC	semi-volatile organic compound
SWMU	solid waste management unit
TCE	trichloroethene
TCEQ	Texas Commission on Environmental Quality
TO	task order
TRRP	Texas Risk Reduction Program
UIC	underground injection control
USACE	United States Army Corps of Engineers
USEPA	United States Environmental Protection Agency
UXO	unexploded ordnance
VC	vinyl chloride
VOC	volatile organic compound

PROGRESS REPORT
JULY 1, 2010 – DECEMBER 31, 2010
(37th PERIOD)

INTRODUCTION

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- TCEQ approval of No Further Action at AOC-63, and closure of AOC-67/68;
- Continued maintenance of on-post and off-post granular activated carbon (GAC) systems and on-post permitted outfalls;
- Conducted Environmental Compliance Audit, and have initiated actions to address findings;
- Status update meeting with USEPA and the Texas Commission on Environmental Quality (TCEQ) in July 2010, and planning for another meeting in January 2011; and
- Continuation of administrative record maintenance.

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 tasks active from July 1 through December 31, 2010 is provided in this report. No current information is provided for tasks that are not active; however, a summary of all tasks, subtasks, and their status has been presented in previous reports. Details of the evaluation of the percent complete by awarded projects are included in **Table 2**. An updated project team contact information chart with telephone numbers and addresses is included in **Table 3**.

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** details the current and upcoming remedial activities at various SWMUs and AOCs at CSSA.

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 P37
Interim Measures	Mitigate a current or potential threat to human health and/or the environment.	30%				99%	
Interim Measures Work Plan			7%	100%	7%		No
Interim Measures Implementation			70%	99%	69%		No
Reports			23%	99%	23%		No
RCRA Facility Investigation	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.	30%				78%	
Preliminary Report			5%	100%	5%		No
RFI Work Plan			5%	100%	5%		Yes
Facility Investigation			40%	79%	32%		Yes
Risk Assessment			10%	89%	9%		No
Investigation Analysis			10%	84%	8%		No
Groundwater Investigation			15%	85%	13%		Yes
Treatability Studies			10%	46%	5%		Yes
Progress Reports			5%	30%	1%		Yes
Corrective Measures Study	Identification, screening, and development of alternatives for removal, containment, treatment, and/or other remediation of the contamination.	10%				0%	
Identify and Develop Alternatives			15%	0%	0%		No
Evaluate Alternatives			60%	0%	0%		No
Reports			25%	0%	0%		No
Corrective Measures Implementation	Design, construct, operate, maintain, and monitor the performance of corrective measure(s) selected to protect human health and the environment.	30%				0%	
Implementation Program Plan			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		53%	

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 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;
- Groundwater monitoring of Westbay®-equipped wells;
- Verification and validation of analytical data;
- SVE system O&M and soil vapor investigation at AOC-65;
- Continuation of bioreactor operation and other treatability studies at SWMU B-3; and
- Investigations of SWMU B-2, SWMU B-4, SWMU B-8, SWMU B-15/16, SWMU B-20/21, SWMU B-24, SWMU B-28, and SWMU B-34;
- Interim removal actions at SWMUs B-2 and B-28;
- Investigations of AOC-45, AOC-51, AOC-57, AOC-59, AOC-62, AOC-70, and AOC-72.

RFI Work Plan

The Order requires the RFI work plan (WP) task to include a Project Management Plan, Data Collection Quality Assurance Plan, Health and Safety Plan, and a Community Relations Plan. As previously agreed by USEPA, because the CSSA Environmental Encyclopedia includes all information required by the Order, it is used to fulfill this requirement. The RFI WP task makes up approximately 5 percent of the RFI phase. Estimation of percent complete is difficult due to the continuing need for plan addenda as new projects are identified and awarded. As of the end of Period 37, WPs currently under scope are 100 percent complete. The CSSA Environmental Encyclopedia will continue to be updated as WPs for any 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 2010. 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 2010. Updates made in Period 37 included the following:

- Period 36 USEPA Progress Report;
- Final June 2010 Off-Post Groundwater Monitoring Report;
- SWMU B-3 Bioreactor Operations and Maintenance Manual, July 2010;

- Letter from TCEQ to CSSA, regarding Approval of APAR for AOC-63 (August 12, 2010);
- Final September 2010 Off-Post Groundwater Monitoring Report;
- September 2010 Off-Post Well Owner Letters;
- Final September 2010 On-Post Groundwater Monitoring Report;
- SWMU B-3 Extraction Well Construction Summary (September 14, 2010);
- TCEQ Closure Approval Letter for AOC-67 and AOC-68 (September 29, 2010);
- Letter from TCEQ to CSSA, regarding Notice of Enforcement, CCEDS Investigation No. 866434 (October 22, 2010);
- Final DQO Groundwater Monitoring Report (Revised November 2010);
- Final Three-Tiered LTMO Evaluation Update (November 2010);
- Letter to USEPA from Parsons, regarding Notification of Groundwater Monitoring Activities (November 1, 2010);
- Data Quality Objectives Groundwater Monitoring Program (Revised November 2010);
- Various correspondence to and from CSSA;
- Various meeting minutes; and
- Various tables of contents, site chronologies, and indices.

Documents completed during Period 37 will be added to the Environmental Encyclopedia in January 2011.

In an effort to improve the usability of the Environmental Encyclopedia, CSSA developed the online, interactive CSSA Environmental Summary. This summary operates alongside the encyclopedia and gives a brief overview of past efforts, current status and planned actions. This summary includes active links to the encyclopedia and other appropriate web sources and will be periodically updated as work progresses. The CSSA Environmental Summary is available through password-protected access on the Environmental Encyclopedia home web page (www.stanley.army.mil). In addition, CSSA is developing a Document Management System (DMS) to archive all documents associated with its environmental program, and make them readily available in searchable electronic format.

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 Measures 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 36, this task is approximately 79 percent complete.

A total of 82 SWMUs, AOCs, and Range Management Units (RMUs) have been identified at CSSA, and investigations have been conducted at most 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, closure of 40 CSSA sites has been approved by TCEQ, and 13 sites were either delisted or granted No Further Action (NFA) status.

SWMU and AOC Investigations

The Facility Investigation subtask makes up approximately 40 percent of the RFI phase. As of the end of Period 37, this task is approximately 82 percent complete. During Period 37, CSSA initiated a substantial effort to proceed with field investigations and interim removal actions at its remaining open sites, with the goal of closing approximately one site per quarter. CSSA plans to continue to close as many sites as possible to background or Tier 1 PCLs. At sites where Tier 1 PCLs cannot be met, closure under Tier 2 requirements will be sought. CSSA plans to combine appropriate sites together in Affected Property Assessment Reports (APARs) to minimize redundant documentation requirements. Submittal of the combined APAR will be delayed until field activities are completed at the sites. Field activities at the remaining open sites - shown in **Attachment 5** - are anticipated to potentially include x-ray fluorescence (XRF) sampling, geophysical surveying, exploratory trenching, soil sampling and laboratory analysis, and interim removal actions.

SWMUs B-2 and B-8

During Period 37, the results of the field portable XRF analysis at SWMUs B-2 and B-8 (conducted in Period 36) were statistically analyzed and used to help define the surface soil contamination. In addition, an Interim Removal Action (IRA) was conducted at SWMU B-2 in December 2010.

Approximately 10% of the 500 XRF analyzer samples collected in June 2010 were also collected for laboratory analysis. A statistical analysis of the two types of samples indicated a very good correlation between lead and zinc and a poorer to weak correlation for copper and barium. Using the results of the XRF analyzer for lead and zinc, the estimated horizontal extent of contamination was identified for both SWMU B-2 and B-8.

The IRA included both a small scale excavation and the collection of additional surface soil samples. The southern trench floor at SWMU B-2 where 2,4-dinitrotoluene (2,4-DNT) was detected in 2003 was excavated. The soil in the area of the 2003 sample location was excavated and a confirmation sample from the new floor of the excavation showed no indication of 2,4-DNT. An additional 33 surface soil samples were collected for laboratory analysis from locations indicated by the XRF survey to identify the extent of above-background levels of lead and zinc. Remaining lead concentrations do not exceed the Tier 2 PCL. The 95% upper confidence limit of remaining zinc concentrations does not exceed the Tier 2 PCL.

SWMU B-4

Site assessment performed by WESTON at SMWU B-4 earlier in 2010 identified metals (mercury, barium, cadmium, chromium, copper, lead, nickel and zinc) that exceed the CSSA background levels and/or soil cleanup standards within four formal disposal trenches at the site.

Soil from the trenches tested for VOCs, SVOCs, and explosives did not detect COCs from these contaminant classes that exceeded cleanup standards. A Self-Implementation Notice describing the intent to conduct a soil removal action to achieve Remedy Standard A with no institutional control under the Texas Risk Reduction Program was submitted in November 2010. A removal action targeting impacted soil and debris in the trenches is scheduled to begin in January 2011.

SWMU B-15/16

A work plan for an IRA to continue the excavation of the trenches at SWMU B-15/16 was finalized in December 2010 for work to begin January 2011. The IRA includes the continued excavation of the trenches and a ground sifting operation to remove all foreign and potentially contaminating debris from the site. A revised SWPPP was also completed in December and the erosion control measures were updated at the SWMU preparation of the IRA.

SWMUs B-20/21 and B-24

During Period 37, the evaluation of closure alternatives for SWMUs B-20/21 and B-24 continued. It was agreed to focus on closure of the munitions constituents (MC) contamination in the near term as a plan of action is developed for closure or containment of the munitions & explosives of concern (MEC) contamination at the SWMUs.

To better delineate the extent of metals contamination at SWMU B-24, the XRF analyzer was used in December 2010 to analyze lead and zinc concentrations at over 67 locations. Lead and zinc concentrations in surface soil exceed Tier 2 PCLs (including eco values) in an approximately one-acre area. Sampling for laboratory analysis (Pb, Zn, and Cu) will be conducted in Period 38 to confirm XRF results, and statistical analysis of results may also be conducted.

SWMU B-28

Remediation activities at SWMU B-28 during Period 37 (November and December 2010) included surface soil sample collection; erosion control; soil excavation and removal; waste characterization sampling; and post-excavation XRF and laboratory confirmation sample collection. Laboratory confirmation analytical results will be received in January and it is expected that an RIR for this site will be prepared in Period 38. Approximately 2,200 cubic yards of soil were removed from SWMU B-28 and taken to the East Pasture berm for reuse as per TQEQ approval on April 19, 2006.

SWMU B-34

XRF-sampling was conducted at SWMU B-34 in December 2010. A total of 40 locations were sampled. Lead and zinc levels exceeding Tier 1 concentrations were detected at several locations, but none of the concentration exceeded Tier 2 commercial standards. SWMU B-34 is located in the inner cantonment area, in the vicinity of office and storage buildings and a parking lot.

SWMU B-71 and AOC-64

Weston submitted a Draft Affected Property Assessment Report (APAR) for AOC-64 and SWMU B-71 to CSSA. CSSA has completed review of the draft and additional soil data has been proposed for collection. Collection of the data is scheduled to occur in January 2011. The Final APAR for the combined sites is expected to be submitted in February 2011.

AOC-45

XRF-sampling was conducted at AOC-45 in December 2010 (**Figure 1**). AOC-45 is a site where disposal of lead-contaminated sand is suspected; however, the exact location was not previously known. The appropriate location for the site was determined to be immediately to the west of the previously identified location. Lead levels of over 1,600 mg/kg were identified. CSSA is considering excavation of the contaminated soils and construction of a stormwater detention pond in the area.

AOC-51

XRF-sampling was conducted at AOC-51 in late December 2010. Results are not yet available.

AOC-57

XRF-sampling was conducted at 67 locations at AOC-57 in December 2010. AOC-57 is a 6.3-acre site where past cleaning and maintenance operations were suspected of potentially causing contamination of surface soil. Only one location (of the 67) initially exceeded the Tier 1 criteria for lead and zinc. However, XRF reanalysis at this location and surrounding locations showed no exceedances. Surface soil sampling for laboratory VOCs and metals analysis is tentatively planned for Period 38.

AOC-59

XRF-sampling was conducted at 30 locations at AOC-59 in December 2010. AOC-59 is a small area in the East Pasture which was suspected of being a waste disposal area. A small soil pile and adjacent depressed area is present at the site. Previous investigation found no buried waste, but very few samples were collected at that time. Several of the December 2010 XRF samples exceeded the Tier 1 criteria for lead and zinc. Moving the soil pile to the East Pasture berm is tentatively planned for Period 38.

AOC-62

XRF-sampling was conducted at 16 surface soil locations at AOC-62 in December 2010. No debris was observed on the ground surface, and there were no lead or zinc concentrations above background. Exploratory trenching is tentatively planned for Period 38.

AOC-65

During previous work at AOC-65, lead-contaminated sand was found to have been used as wastewater pipe bedding material along the southeast side of Building 90. This material was removed in December 2010 and the top soil for the entire east side of Building 90 was transported to the East Pasture berm.

AOC-67 and AOC-68

An RIR requesting no further action for AOC-67 and AOC-68 was submitted to TCEQ on July 1, 2010, and closure of the sites was approved on September 29, 2010.

AOC-72

XRF-sampling was conducted at 17 surface soil locations at AOC-72 in December 2010. There were no lead or zinc concentrations above background. Exploratory trenching is tentatively planned for Period 38.

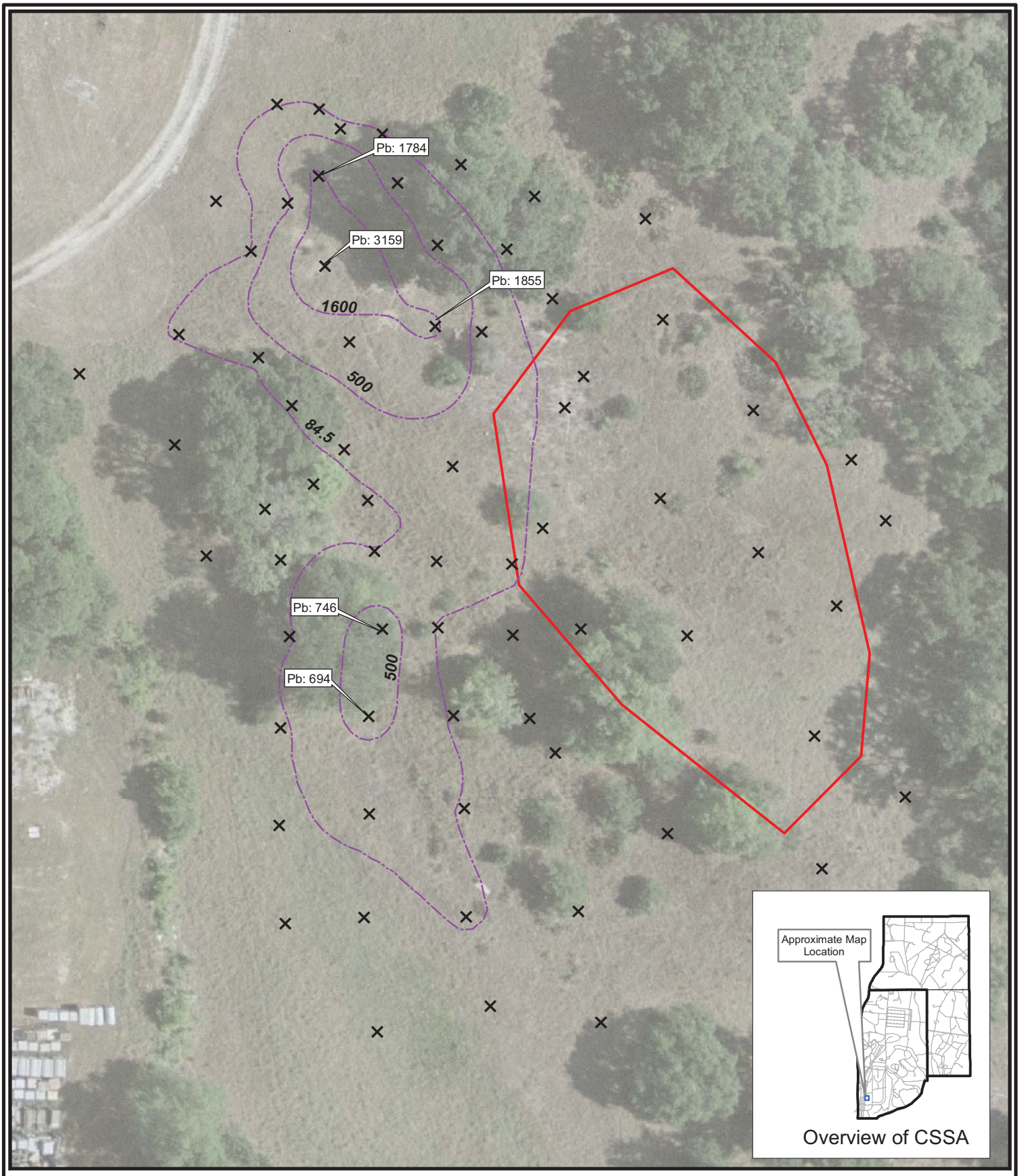

FIGURE 1

XRF Survey Results at AOC-45

Camp Stanley Storage Activity

PARSONS

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Groundwater Investigation

The groundwater investigation subtask makes up approximately 15 percent of the RFI phase. As of the end of Period 37, this task is approximately 87 percent complete.

On- and off-post groundwater monitoring was conducted in accordance with the regulator-approved DQOs during Period 37. 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 two years). Off-post wells are not included in the LTMO recommendations and are sampled quarterly under the DQOs and the CSSA Off-Post Monitoring and Response Plan. 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 WPs and DQOs. On- and off-post monitoring wells and Westbay-equipped wells were sampled for the SW-846 Method 8260B volatile organic compounds (VOCs) 1,1-dichloroethene (1,1-DCE), *cis*-1,2-dichloroethene (*cis*-1,2-DCE), *trans*-1,2- dichloroethene, tetrachloroethene (PCE), trichloroethene (TCE), and vinyl chloride (VC). On-post monitoring wells were sampled for the SW-846 Method 6010/6020 metals lead, cadmium, mercury, and chromium. On-post drinking water wells are sampled for four additional metals: barium, arsenic, copper, and zinc. Additional samples were collected off-post from the wells with GAC filtration systems. Samples were analyzed by APPL in Fresno, California. Parsons' chemists validated and verified the data in accordance with the CSSA Quality Assurance Program Plan (QAPP). All detected concentrations of VOCs and metals are presented in **Attachment 4**.

June 2010 Sampling

Twenty-six on-post wells were sampled in June 2010. Off-post wells sampled in June 2010 included 29 private and public drinking water wells. Sampling was conducted between June 1 and 14, 2010. All samples were analyzed for VOCs. In addition, the on-post samples were analyzed for selected metals. Five on-post wells (CS-MW1-LGR, CS-MW16-LGR, CS-MW16-CC, CS-D, CS-4) exceeded the MCL for VOCs and 1 former drinking water well (CS-9) exceeded the action level/MCL for lead and mercury respectively. Of the off-post wells sampled in June 2010, one well (RFR-10) exceeded the MCL for PCE and TCE. The AOC-65 Westbay-equipped wells were not sampled in June 2010 but water level data was collected from each zone.

September 2010 Sampling

Although only 17 wells were due for sampling per the 2005 LTMO recommendations, sampling of all on-post wells was planned for September 2010 to obtain a "snapshot" of contaminant levels and groundwater elevations across CSSA. The LGR zones of the four AOC-65 Westbay-equipped wells were also sampled in September 2010. Off-post wells sampled in September 2010 included 26 private and public off-post drinking water wells with six post-GAC samples. All samples were analyzed for VOCs. In addition, the on-post samples were analyzed for selected metals. Five on-post wells (CS-MW1-LGR, CS-MW16-LGR, CS-MW16-CC, CS-D, CS-4) exceeded the MCL for VOCs and, one well (CS-MW9-BS) exceeded the action level (AL) for lead. Westbay-equipped wells CS-WB01, CS-WB02, CS-WB03, and CS-

WB04 had exceedances of either PCE and/or TCE in 18 of the 35 LGR zones sampled. Of the off-post wells sampled, PCE and TCE exceeded MCLs in I10-4, OFR-3, and RFR-10.

December 2010 Sampling

Ten on-post wells were scheduled for sampling in December 2010. Off-post wells sampled in December 2010 included 27 private and public drinking water wells. Sampling was conducted between December 6 and 17, 2010. Laboratory results will be received in January 2011 and summarized in the next progress report.

On-Post GAC Systems

CSSA operated and maintained the permitted on-post GAC unit at Outfall 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 permit requirements. No discharge occurred at either outfall this period.

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 five 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 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. Post-GAC confirmation samples from all of the off-post GAC systems were collected in September 2010. All VOC results for the post-GAC water samples were non-detect. Carbon canister exchange was completed July 12, 2010 for the off-post GAC systems and will be due again in January 2011.

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 QAPP requirements. Data validation and verification continued during Period 37.

Long-Term Monitoring Optimization (LTMO) Update

In 2005, CSSA initiated a LTMO process to evaluate if statistical and spatial parameters would support a reduction in sampling locations and/or sampling frequencies without sacrificing the monitoring objectives. Validated analytical data spanning from 1992 through December 2004 from the monitoring well network was used to perform a Three-Tiered LTMO evaluation. The evaluation includes a "qualitative" analysis performed by geologists and chemists familiar with the site, followed by a temporal (statistical) evaluation of the data to identify trends. The final tier of the analysis is a spatial evaluation to determine the individual contribution that single well and its data make to the overall monitoring network.

The 2005 LTMO for the on-post and off-post wells recommended a refined monitoring program consisting of the 84 wells that would be sampled less frequently than before but still adequate to address the primary monitoring objectives. The recommendations included reducing the number of sampling events for the four Westbay™ multi-port wells (44 zones) from monthly to semi-annually. Implementation of these recommendations for the monitoring program at

CSSA would reduce the number of on- and off-post sampling events per year by approximately 57 percent and the WB sampling events per year by approximately 88 percent.

In 2005, USEPA and TCEQ approved the use of the LTMO recommendations for on-post monitoring wells and the Westbay multi-port wells. However, at that time, the TCEQ had reservations for implementing the off-post LTMO, and suggested that CSSA continue to follow the current approved off-post sampling program. The on-post LTMO recommendations were implemented beginning December 2005.

An additional change to the LTMO sampling frequency was made in 2009 to provide for an additional 9-month "snapshot" event. This "snapshot", in which all on- and off-post wells were sampled, was adopted to provide an area-wide status of the two plumes. The 9-month sampling interval was selected to provide long-term assurance that seasonal changes associated with the hydrologic cycle were taken into consideration.

In November 2010, an update to the original 2005 LTMO report was submitted to the EPA and TCEQ. An additional four years of analytical data from the existing and new wells were added to the three-tiered evaluation to determine if there had been changes in trends and if the sampling frequency could be further refined. By 2009, the monitoring network had grown to 111 wells which included new monitoring wells drilled at CSSA, and new off-post wells incorporated into the network. The same qualitative, temporal/statistical, and spatial evaluations were conducted to provide recommendations to further enhance or streamline the monitoring network.

Overall, since on-post LTMO was implemented, there has been no discernible increasing or decreasing trend in size or concentration with either CSSA VOC plume. In 2009, the combined three-tiered evaluation streamlined the on- and off-post monitoring network to better implement the 9-month sampling strategy. Further modifications to the CSSA groundwater monitoring plan for off-post include taking the wells that are currently sampled either annually or semi-annually and change their schedule to a 9-month frequency only. Select wells that are near the plume centers or are sentry wells will also be continued at a semi-annual frequency as well. The on-post potable water supply wells and key off-post wells will continue to be sampled on a quarterly basis. All off-post wells will also continue to be evaluated by the approved Off-Post Wells Data Quality Objectives (DQOs) that dictate sampling frequencies and remedial actions based upon the VOC concentrations detected in a given well. At all times, the DQOs will supersede the recommended LTMO sampling frequency if conditions change.

Implementing these recommendations would reduce on- and off-post sampling events by 24 percent and 28 percent, respectively. Likewise the reduction of Westbay sampling would result in a 19 percent decrease in sampling events. Overall, the recommendations of the 2010 LTMO update will reduce the CSSA groundwater monitoring frequency by 24 percent.

Off-Post Well Survey Update

In accordance with the USEPA consent order, CSSA was required to locate all water wells within ¼-mile of the facility perimeter. To this end, the initial Off-Post Well Survey surrounding CSSA was completed in August 2001. Although the requirement was to identify wells within ¼-mile, Parsons cataloged and presented all wells within a 1-mile radius of the facility for which agency records (TCEQ and TWDB) were available. At the time of the initial survey, a total of

42 wells were located within the ¼-mile threshold. Another 90 wells were tentatively identified to exist within 1-mile of the CSSA property.

As a result of the Off-Site Well Survey, CSSA executed a community outreach program that ultimately became the Off-Post monitoring well network. Since that time, both Parsons and CSSA have been diligent to monitor well drilling activities in the vicinity of CSSA, and even offer geophysical and video logging services when a drilling rig is located in an area of interest. By staying proactive and alert, CSSA has been able to catalog new wells that have been installed since 2001, and even incorporate them into the monitoring network.

Currently, Parsons is conducting an update to the original 2001 Off-Post Well Survey. The intention of the 2010 effort is to positively locate all wells within ½-mile of CSSA and determine if there are nearby wells that CSSA may not be aware of, or possibly a change in status. The effort included a new records review of the TWDB databases, windshield surveys, and even interviews with local businesses to determine their water source. The current survey results have located a total of 77 well locations with ½-mile of the CSSA property.

Within a ½-mile radius of CSSA, only 11 of these recently-surveyed wells are in addition to the wells previously identified during the 2001 efforts. Four of these wells are supply test wells for the Fair Oaks development, north of CSSA. Another three wells are related to environmental investigations by either CSSA or property development companies. The remaining four wells are new domestic wells that CSSA has already approached and incorporated into their monitoring network shortly after they were drilled.

The 2010 well survey also revealed another nine wells either had a change in status or their existence is questionable due to poor recordkeeping. At least two wells are confirmed to be plugged and abandoned, and another five wells are presumed abandoned since property redevelopment. Two additional well records were located north of CSSA, but their presence could not be confirmed during the windshield survey due to lack of property access.

In summary, the 2010 Off-Post Well Survey did not reveal any new well locations downgradient of either Plumes 1 or 2 within ½-mile of CSSA. The government has remained proactive and alert as the surrounding area continues to develop, and has already identified new wells as they were installed. The presence of the SAWS municipal water source in the area will also likely curtail the future development of the Middle Trinity Aquifer in the vicinity of CSSA contamination.

Treatability Studies

The Treatability Study subtask makes up approximately 10 percent of the RFI phase. As of the end of Period 37, this task is approximately 46 percent complete.

SWMU B-3 Bioreactor Treatability Study

SWMU B-3 Bioreactor Performance Status Reports were submitted to CSSA, TCEQ and USEPA on a quarterly basis during Period 37. Approximately 31,158,859 gallons of groundwater extracted from CS-MW16-LGR, CS-MW16-CC, and CS-B3-EXW01 have been injected into the bioreactor trenches since the start of injection in 2007. A semiannual Underground Injection Control (UIC) report for the period, in accordance with CSSA's Class V Aquifer Remediation Injection Well Permit, TCEQ Authorization No. 5X2600431; WWC12002216 was submitted to the TCEQ in November 2010.

Groundwater samples were collected from sumps, monitoring wells, Westbay-equipped wells, and from the injection discharge. Sampling frequency was based on permit requirements and water availability. In general, injected groundwater samples are collected monthly and monitoring samples from the Westbay-equipped monitoring wells and injection trench sumps are collected quarterly. All samples were analyzed for permit parameters – VOCs, total dissolved solids, and other selected performance parameters. Analyses were performed by APPL, DHL Laboratory, Microbial Insights, and Microseeps Laboratory. Collected field data included injection volumes, injection pressures and the pH of recovered groundwater for TCEQ permit compliance. Results are reported semi-annually. Analytical data collected for performance parameters include;

- Dissolved Organic Carbon
- Methane, Ethane, Ethene
- Hydrogen
- Temperature, pH, specific conductivity
- Oxidation Reduction Potential
- Dissolved Oxygen
- Total Organic Carbon
- Carbon Dioxide
- Hydrogen
- Sulfide
- Alkalinity
- Nitrogen, Nitrate + Nitrite
- Additional ions including Sulfate, Chloride, Ferrous Iron, Manganese
- Dehalococcoides populations, and
- Isotopic ratio analyses.

During Period 37, the bioreactor remained at saturated conditions due to rainfall and the continued supply of supplemental water from wells CS-MW16-CC, CS-MW16-LGR, B3-EXW01, and B3-EXW02. Approximately 8,900,000 gallons of water were injected into bioreactor trenches 1 and 6 during Period 37. This is greater than Period 36 (2,497,429 gallons) where increased rainfall and the injection of uncontaminated groundwater from CS-12 for a flooding test filled the bioreactor to capacity. At the beginning of Period 37, trench 2 injections were ceased so that the injection of extracted groundwater into trench 6 could be initiated. Trench 6 has a higher infiltration rate than trench 2, and therefore can accommodate greater injection volumes.

A new extraction well (B3-EXW02) was installed near SWMU O-1 in June 2010. The goal of this well was to provide another reliable water source for the bioreactor and to increase the capture "footprint" of the ground water extraction system. A sample collected on May 19, 2010 was analyzed for VOCs, and three compounds were detected: *cis*-1,2-DCE at 12 µg/L, TCE at 3.8 µg/L, and PCE at 15 µg/L. This well was incorporated into the bioreactor system and has been contributing extracted groundwater since November 2010.

Monitoring results continue to indicate that effective treatment of injected groundwater in the bioreactor is occurring; however, a significant amount of VOC components continues to remain in strata adjacent and beneath the trenches. Breakdown products of highly chlorinated species, such as PCE and TCE, and minor amounts of fuel components, like toluene, are identified in groundwater samples from locations surrounding the bioreactor. During Period 37

(data available through October 2010), the degradation products vinyl chloride and ethene were identified within the bioreactor (vinyl chloride as high as 14 µg/L and ethene as high as 9.8 µg/L); and significant amounts of vinyl chloride were observed in Westbay-equipped wells in zones CS-WB05-LGR04A (32.6 µg/L), CS-WB05-LGR04B (300 µg/L) and CS-WB07-UGR01 (56 µg/L), CS-WB08-UGR01 (69 µg/L), and in monitoring well CS-B3-MW01 (220 µg/L). Less significant amounts of vinyl chloride were identified in zones WB05-BS01, WB05-CC02, WB06-UGR01, and WB07-UGR01. Significant amounts of ethene were observed in Westbay-equipped wells in zones CS-WB05-LGR04B (7.9 µg/L), CS-WB05-LGR03B (1.1 µg/L), CS-WB07-UGR01 (14.6 µg/L), and WB08-UGR01 (9.0 µg/L), additionally, ethene was observed in monitoring well CS-B3-MW01 (3.6 µg/L). Ethene represents one of the final degradation products of attenuated chlorinated solvents. In addition, elevated levels of manganese suggest biotic anaerobic oxidation of chlorinated aliphatic hydrocarbons (CAHs) to carbon dioxide, and elevated levels of iron and *trans*-DCE suggest abiotic reductive dechlorination may also be occurring.

Nine new shallow monitoring wells were installed in the previous period. These shallow monitoring wells surround the bioreactor and help demonstrate the influence of the bioreactor has on the UGR. Results from these wells during the period indicate breakdown products of highly chlorinated species, and minor amounts of fuel components occur in groundwater in the UGR surrounding the bioreactor. During Period 37, the degradation products vinyl chloride and ethene were identified in significant concentrations within shallow UGR wells MW26-UGR (48 µg/L and 7.7 µg/L), MW27-UGR (4.7 µg/L (vinyl chloride only)), and MW34-UGR (43 µg/L and 12.1 µg/L).

Stable Isotope Probes were deployed for the second time in July 2010 in the three sumps of the active bioreactor trench. The probes contained ^{13}C-labelled Tetrachloroethene and were intended to evaluate microbial degradation, biomass incorporation, and dissolved inorganic carbon production from degradation of chlorinated hydrocarbons through an anaerobic oxidation pathway. Comparison with Stable Isotope Probes deployed in October-December 2009 showed that microbial biomass in the bioreactor increased significantly between the two dates. Concomitantly, the amount of biomass enriched in the ^{13}C label also increased. This suggests that some of the microbial population is utilizing contaminant and/or degradation products as a carbon substrate for growth. Dissolved inorganic carbon contained ^{13}C label above background levels (i.e., was enriched), indicating that the inorganic carbon was derived from a process involving one or more contaminant species. Thus, contaminants are being degraded through at least two processes, one proceeding to ethene as the final product and one leading to dissolved inorganic carbon as an end product.

It is currently believed that the relatively high concentrations of dissolved manganese in bioreactor water are associated with a biogeochemical degradation process, as noted above. Rock core samples were taken to evaluate the potential depletion of manganese and the bioavailability of manganese and iron to participate in degradation reactions. Three samples were taken from trenches 1 and 2, as well as a single background sample from an area outside of the known footprint of contamination. The results of specialized analyses performed by Microseeps Laboratory indicate that manganese has been depleted in the rock substrate at the bottom of trench 1. However, dissolved manganese concentrations remain relatively high, so the impact (if any) of manganese depletion is unknown. As manganese depletion continues, an impact could be

seen in anaerobic oxidation if further study shows a relation between manganese and that pathway.

Analysis of volatile fatty acids (VFA) derived from microbial degradation of mulch in the bioreactor indicated that VFA concentrations and diversity are decreasing. Samples were collected from the three sumps in trench 1 in five events from January 2009 to July 2010. The impact of this decline, if any, is uncertain at this time. VFAs serve as a carbon substrate for both growth and energy metabolism of microbes, and their concentrations can serve as a useful indicator concerning the long-term operation of the bioreactor. However, humic acids also serve as carbon substrate for metabolic reactions and are potentially available during the degradation of mulch in the bioreactor.

Samples for analysis of compound-specific carbon stable isotope ratios (CSIA) were acquired in July from SWMU B-3 and several wells located off-post. Results suggest that water infiltrating the subsurface from the bioreactor is flushing additional DNAPL contamination into both the Upper and Lower Glen Rose formations.

AOC-65 SVE System

Monthly monitoring and semi-annual sampling of the AOC-65 SVE system has been ongoing since April 2008. Initial monitoring results indicate no exceedances of permit-by-rule (PBR) limits occurred for the SVE system. Soil vapor samples were collected from the AOC-65 SVE system during Period 37 and analyzed for VOCs. Results indicated that PCE emissions from the SVE system were 12.4 lb/year during this period, which is well below the permitted level of 0.268 lbs/hr or 2,347.68 lbs/year.

To evaluate vapor intrusion potential resulting from the AOC-65 VOC source areas, 12 soil gas samples were collected in March 2010 near CSSA's boundary, west of Building 90. As previously reported, analytical results from this soil vapor investigation indicate PCE concentrations ranged from non-detect (3.4 micrograms per cubic meter [$\mu g/m^3$]) to 12 $\mu g/m^3$.

To assess the potential of soil vapor from AOC-65 to impact indoor air, indoor air samples were collected from within Building 90 between July and September 2010. Results for samples analyzed by USEPA Method TO-15 SIM for PCE indicate a presence of PCE greater than USEPA's RSL for residential indoor air (0.06 ppbv or 0.41 $\mu g/m^3$), but below the residential indoor air screening value of 1.6 ppbv or 6.1 $\mu g/m^3$ which is calculated using TCEQ toxicity data for PCE. Analytical results for PCE concentrations collected over a 24-hour period ranged from a high of 0.25 ppbv with the HVAC and SVE systems off to 0.15 ppbv with the HVAC system off and the SVE system on. A report summarizing the findings will be generated during Period 38.

In December 2010, vapor samples were collected along the western CSSA fence line, down gradient of the AOC-65 VOC source area. Results of this sampling effort will provided in subsequent progress reports.

MEETINGS

A status meeting with TCEQ and EPA was held at Camp Stanley on July 29, 2010. The meeting provided summaries of CSSA environmental investigations and proposed future work.

SUMMARY OF CONTACTS

Letters summarizing results of the June and September 2010 off-post groundwater monitoring events were mailed to owners of the off-post wells in Period 37. Groundwater sampling notification letters were sent to the USEPA and TCEQ one month prior to the start of the September and December 2010 sampling events. Other correspondence during Period 37 included:

- Letter from TCEQ to CSSA, regarding Approval of APAR for AOC-63 (August 12, 2010);
- TCEQ Closure Approval Letter for AOC-67 and AOC-68 (September 29, 2010); and
- Letter from TCEQ to CSSA, regarding Notice of Enforcement, CCEDS Investigation No. 866434 (October 22, 2010).
- In compliance with the CSSA Biological Opinion requirements, a letter report summarizing CSSA efforts to protect on-post endangered bird habitat was provided to US Fish and Wildlife (October 15, 2010).

PROJECTED WORK FOR THE NEXT PERIOD

Groundwater Monitoring

Continued sampling of on- and off-post monitoring and water supply wells will continue in March and June 2011. Quarterly and annual groundwater monitoring reports will be submitted next period. The O&M at the residential GAC filtration systems (LS-6, LS-7, OFR-3, RFR-10, and RFR-11) will be conducted every three weeks during Period 38. The semi-annual carbon exchange will be performed in January 2011. The LTMO and DQO updates were completed and submitted to the TCEQ and USEPA during Period 37.

USGS Investigations and Modeling

CSSA has contracted with the United States Geological Survey (USGS) to perform geophysical surveys and develop a 3-D geologic model for Camp Stanley and the immediate surrounding area. The geologic model will be compatible with ground water modeling programs that can be used to model Middle Trinity Aquifer ground water present at the facility. The newly-funded work will build upon previous USGS work including surface geologic mapping, aerial electromagnetic AEM surveys, and borehole EM surveys. The work conducted at CSSA will become the framework for a larger USGS study conducted on the Trinity Aquifer in Northern Bexar County.

The USGS will conduct borehole geophysics in a select number of both on- and off-post wells to further define hydrostratigraphic model of the Middle Trinity Aquifer. The borehole logging activities will include the standard suite of geophysical methods, advanced video imaging, and nuclear logging tools to aid in the estimation of stratigraphy, porosity, and permeability. The USGS will combine this newly-acquired data with existing geologic data from CSSA to build a three-dimensional (3D) visualization model using the EarthVision software. Ultimately, the model will visually depict the hydrostratigraphic and structural features of model area and can form the basis for a numerical groundwater flow model.

CSSA is also contracting the USGS to demonstrate their 3D EM surface geophysical tools which are currently under development. The USGS has developed a new methodoloyg by which standard EM technology is processed into a 3D image of conductive materials buried in the

subsurface. The potential applications of this technology include the in situ detection and identification of munitions or other UXO/MEC items. The project is currently being scoped, but will generally include a small-scale prove-out area such as SWMU B-15/16 and B-20. The geophysical surveys will be conducted initially, followed by intrusive confirmation activities to dig up and compare identified targets by the geophysical method.

AOC-65 SVE System Operations

AOC-65 SVE system O&M will continue in Period 38. The system includes four blowers operating continuously, and O&M of those systems will be performed in accordance with the Updated O&M Manual for SVE Systems at CSSA. Monitoring is expected to occur twice monthly, monthly, and semi-annually.

Soil vapor intrusion assessment efforts are expected to continue at AOC-65 with the collection of soil property data along the AOC-65 western fence line and other areas, as necessary; and 24-hour breathing air samples from near the source area within Building 90 for PCE selective ion method analysis. These additional data will be used to assess and report on the potential for soil vapor intrusion of PCE from AOC-65 to the surrounding residential area.

SWMU and AOC Investigations

Investigations (including XRF analysis), interim removal actions, and/or reporting will be continued for SWMUs B-2/B-8, B-4, B-15/16, B-20/21, B-24, B-28, and B-34; AOC-45, -51, -57, 59, and -70. Reports summarizing investigation results will be submitted. A summary of upcoming remedial activities at several SWMUs and AOCs is included as **Attachment 5**.

SWMU B-3 Bioreactor Treatability Study Monitoring

Monitoring of the bioreactor at SWMU B-3 will be continued during Period 38. Monitoring requirements will be performed to meet TCEQ's UIC authorization requirements. Performance monitoring data will be collected in accordance with the Bioreactor O&M Manual.

The new bioreactor extraction well, EXW-02 (brought on-line during Period 37), will be fully incorporated in SCADA during Period 38 which will allow remote monitoring and control of the well. Additionally, initial designs will be evaluated for the replacement of the 6,000 gallon storage tank located upstream from the injection manifold. The new design includes a larger poly-tank that will provide greater storage capacity and an easier platform from which to mount SCADA controls.

MEETINGS

A status meeting will be held with TCEQ and USEPA in January 2011. Quarterly groundwater meetings will be held prior to the quarterly events scheduled in March and June 2011.

Table 2, Project Task Completion to Date for Open Projects Only (Values updated through December 31, 2010)

Project Number	Description of Task	Relation to Order	Percent Complete	Start/End Dates
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%	2000-2003
TO0058	Treatability Study for AOC-65	RFI	100%	2001-2005
TO0042	Well Installations and Groundwater Monitoring	I/SM/RFI	100%	2001-2006
TO0017	East Pasture Removal Action	Other	100%	2005-2006
TO0019	SWMU Closures	RFI	100%	2003-2006
TO0005	Environmental Program Technical Support	I/SM/RFI	100%	2003-2007
TO0098	Miscellaneous Studies	Other	100%	2004-2007
TO0008	Groundwater Monitoring	I/SM/RFI	100%	2003-2008
TO0006	SWMU B-3 and AOC-65 Remediation	I/SM/RFI	100%	2004-2008
TO0207	Environmental Support, Groundwater Monitoring	I/SM/RFI	100%	2006-2008
DY01 (Weston)	Affected Property Assessment Investigations	RFI	100%	2006-2007
DY01 (Parsons)	Environmental Compliance, SWMU, and AOC Closure Investigations	RFI	100%	2006-2010
DY02 (Parsons)	Environmental Compliance, SWMU and AOC closure Investigations	I/SM/RFI	100%	2007-2009
DO11 (Parsons)	Environmental and Groundwater Investigations	RFI	100%	2008-2010

Table 2 Continued, Project Task Completion to Date for Open Projects Only (Values updated through December 31, 2010)

Project Number	Description of Task	Relation to Order	Percent Complete
DY02 (Weston)	**Removal Action**	**RFI**	
	Plan Preparation and Mobilization	RFI	100%
	AOC-64 Interim Removal Action	RFI	100%
	Interim Removal Action Reporting	RFI	0%
H&A (Parsons)	**Administrative Support and Environmental Services**		
	Administrative Record, LAN & GIS and USEPA Progress Reports	RFI	100%
	Miscellaneous Sampling	Other/RFI	98%
	Project Management	RFI	100%
DO50 (Parsons)	**Environmental and Groundwater Investigations**		
	Administrative Order Recording and Management	RFI	81%
	Compliance and Sampling	RFI	44%
	Environmental Studies	RFI	100%
	Environmental Program Support	RFI	74%
	Groundwater Monitoring	RFI	81%
	Site Investigations and Closure	RFI	36%
	Treatability Study Systems Operation	RFI	92%
	Project Management	RFI	84%
Army Contract (Parsons)	**Environmental and Groundwater Investigations**		
	Treatability Study Systems Operation	RFI	5%
	Compliance and Sampling	RFI	0%
	Project Management	RFI	9%
	Environmental Studies	RFI	0%
	Site Investigations and Closure	RFI	5%
	Groundwater Monitoring	RFI	1%
	Bird Survey	RFI	0%
	Administrative Record	RFI	0%
DO07 (Parsons)			
	Routine Environmental Program Support	RFI	0%
	Non-Routine Environmental Program Support	RFI	0%
	AOC-65 Waste Excavation and Removal	RFI	1%
	Task Order Management	RFI	5%

Table 3, Project Team Contact Information

Name	Organization/Role	Street Address	City, State, Zip	Phone No.	Fax No.	E-mail
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Moreno, Gaberiel	CSSA Environmental Program Manager	25800 Ralph Fair Road	Boerne, TX 78015-4800	(210) 698-5208	(210) 295-7386	morenog@envirodept.net
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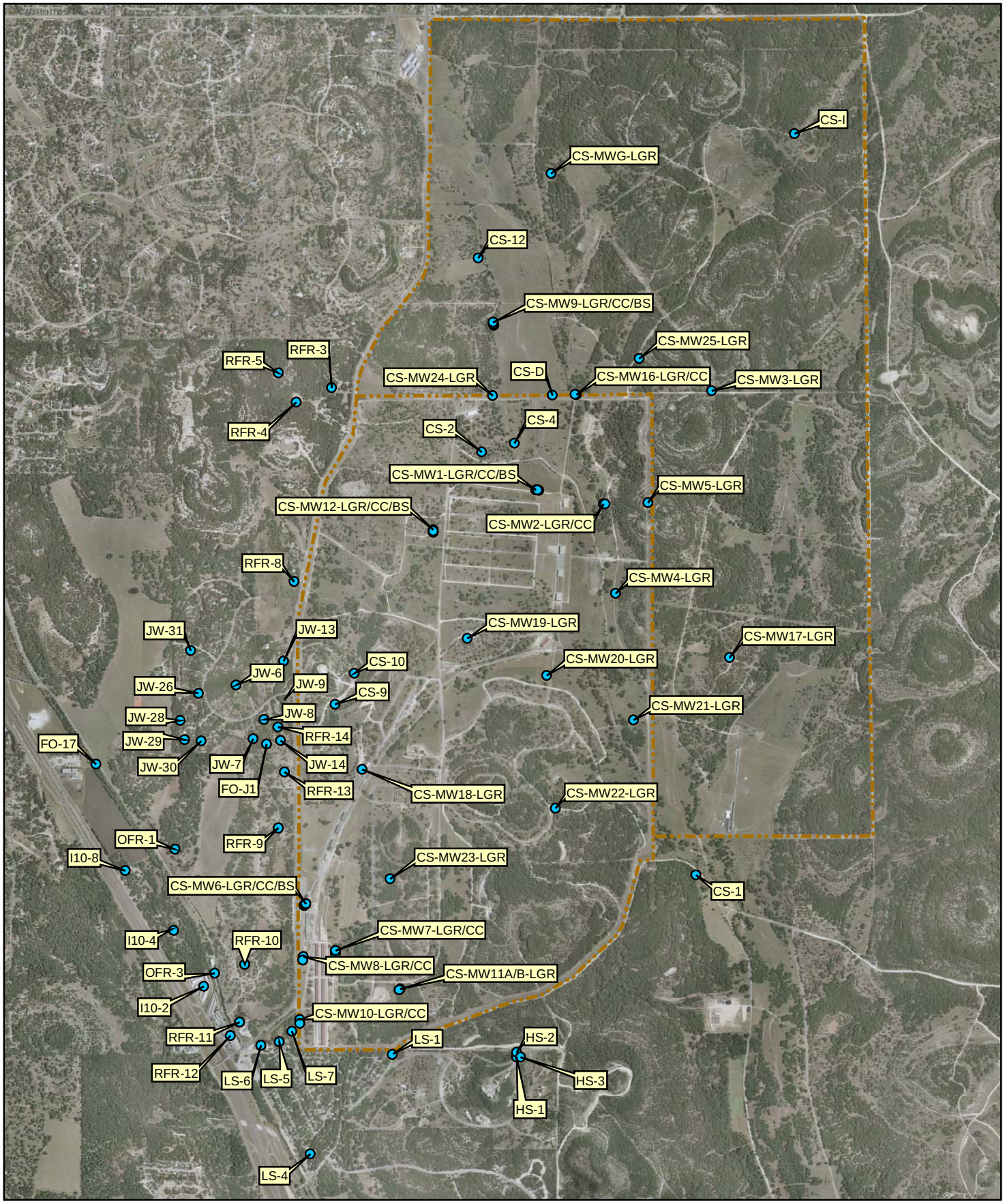
Shirley, Jason (LTC, retired)	CSSA Installation Manager	25800 Ralph Fair Road	Boerne, TX 78015-4800	(210) 295-7416	(210) 295-7386	

ATTACHMENT 1

ON-POST AND OFF-POST SAMPLED WELLS FIGURE

ATTACHMENT 1

ON-POST AND OFF-POST SAMPLED WELLS FIGURE



Attachment 1

2010 Sampled On-Post and Off-Post Ground Water Wells Camp Stanley Storage Activity

PARSONS

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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	NA	**X**				November-02	RRS1
B-2	Small arms ammunition burning area (1954) - North Pasture	RFI/closure Report June 2002 Closure Report March 2005	Currently under investigation						
B-3	Landfill area (garbage disposal and burning trash); filled in 1990-91.	RFI Report March 2005	Continue bioreactor treatability study						
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	NA	**X**				October-02	RRS1
B-6	Possible solid waste disposal area.	RFI/Closure Report July 2002	NA	**X**				October-02	RRS1
B-7	Possible fired small arms ammunition brass disposal area	RFI/Closure Report July 2002	NA	**X**				October-02	RRS1
B-8	Fired small arms ammo brass disposal area (piles of fire bricks, ammo shells) - North Pasture	RFI Report December 2003	Currently under investigation						
B-9	Miscellaneous solid waste (metal and weapons) disposal area.	RFI/Closure Report September 2002	NA	**X**				March-03	RRS1
B-10	Ammunition disposal area.	RFI/Closure Report May 2003	NA	**X**				January-04	RRS1
B-11	Miscellaneous solid waste disposal (ammo, scrap metal, const. debris).	RFI Closure Report June 04	NA	**X**				September-04	RRS1
B-12	Landfill, WPA trash when igloos were being built	RFI Report April-05	NA	**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 Request November 2007	NA			**X**		February-08	Delisting
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	NA	**X**				September-02	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-20/21	Former OB/OD area & ammunition disposal areas - North Pasture	RFI Report July 2002	Currently under investigation						
		Combined with B-20							
B-22	Burn area (artillery shells).	RFI/Closure Report August 2002	NA	**X**				December-02	RRS1
B-23	Disposal trenches (two green canisters)	RFI Report April 2005	NA	**X**				July-05	RRS1
B-23A	Disposal Trench (glass ampoules of liquid)	RFI Closure Report September 2004	NA	**X**				March-05	RRS1
B-24	Spent ammo/rockets area - North Pasture	RFI Report May 2002	Currently under investigation						
B-25	Possible disposal trench	RFI Report April 2005	NA	**X**				July-05	RRS1
B-26	Possible disposal trench	Delisting Report August 2004	NA			**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	NA	**X**				February-08	RRS1
B-30	Solid waste disposal area	RFI Report September 2004	NA	**X**				February-05	RRS1
B-31	Lead shot/sand pipe bedding	RFI/Closure Report July 2002	NA	**X**				November-02	RRS1
B-32	Lead shot/sand pipe bedding	RFI/Closure Report January 2003	NA	**X**				November-03	RRS1
B-33	Lead shot/sand pipe bedding	RFI Report September 2004	NA	**X**				November-04	RRS1
B-34	Maintenance pit floor drain and discharge point	RFI Report August 2002	Delineate contamina-tion, disposal of soil						
B-71	Livestock area. Inner cantonment, SW of Well 16.	-- (Weston)	Closure				**X**		
Bldg 40	less-than 90-day accumulation container storage area	RFI/Closure Report September 2003	NA	**X**				January-04 and January-06	RRS1
Bldg 43	Inactive makeshift ammo demolition facility	RFI Report April 2005	NA	**X**				August-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*		
DD	Dud ammunition disposal area	RFI Report January 2005	NA	**X**				April-05	RRS1
F-14	*Hazardous waste storage area (<90-day)*	RFI/Closure Report, 1995	NA	**X**				November-95	RRS1
I-1	Inactive incinerator (built in 1943), currently used for transformer storage	RFI Report February 2003	Investigated 2007/2008 (Parsons)				**X**	November-08	NFA
O-1	Waste liquid/sludge oxidation pond (1975)	RFI/Closure Report October 2000	NA	**X**				April-02	RRS1
Coal Bins	*Coal bins (no longer in use)*	Delisting Requested January 2003	NA			**X**		February-08	Delisting
AOC 35	Area immediately around Well 16. Northeast area of inner cantonment.	RFI/Closure Report October 2002	NA	**X**				February-03	RRS1
AOC 36	Area between Well 16 and B-3. Possible waste verified not present by magnetometer survey.	RFI/Closure Report April 2002	NA	**X**				August-02	RRS1
AOC 37	Livestock area. NW of Well 16 and N of Well D.	RFI/Closure Report June 2004	NA	**X**				January-05	NFA
AOC 38	Livestock area. Inner cantonment, SW of Well 16.	RFI Report September 2004	NA	**X**				February-05	RRS1
AOC 39	None. Area west of Well 16 between North Outer Rd and cantonment fence.	RFI/Closure Report April 2002	NA	**X**				September-02	RRS1
AOC 40	None. Area east of Well 16 between North Outer Rd and cantonment fence.	RFI/Closure Report May 2002	NA	**X**				August-02	RRS1
AOC 41	Gate area east of well 16. North Pasture, north of gate 6.	No Further Action Report April 2005	NA		**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	NA	**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	NA			**X**		July-05	Delisting
AOC 45	Flat area with spent and undamaged bullets. Located east of B-31, near bend in road.	--	--						

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 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	NA	**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	NA			**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	NA			**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	NA	**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	NA	**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	NA	**X**				November-04	RRS1
AOC 55	Landfill, south of Tenberg Drive, east of Salado Creek	RFI/Closure Report Feb 04	Closure	**X**				June-08	RRS1
AOC 56	Landfill, at intersection of Bernard Road and East Outer Road, surface depression on south side of intersection	Closure Report June 04	NA	**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	**--**	Closure						
AOC 60	Trench located west of tunnel and entrance roadway in the East Pasture.	Delisting Report April 2005	NA			**X**		July-05	Delisting
AOC 61	Suspected landfill	RFI/Closure Report October 2002	NA	**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 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.	APAR October 2008	Closure				**X**	July-09	TRRP
AOC 64	Area east of SWMU B-4; flares observed in the area	-- (Weston)	Closure				**X**		
AOC 65	A concrete pit area that housed a metal vat that contained TCE and PCE.	RFI Report August 2003	Additional investigation, SVE remediation ongoing						
AOC 66	Area north of Well 16 in the outer cantonment.	Closure Report June 04	NA	**X**					NFA
AOC 67	Concrete pad near Building 90 housed a vat containing cleaning solvents.	Release Investigation Report July 2010	Closure		**X**			September-10	NFA
AOC 68	Area includes metal slag/debris storage area from Wheelabrator operations next to Building 90-2.	Release Investigation Report July 2010	Closure		**X**			September-10	NFA
AOC 69	Located on west side of CSSA.	Release Investigation Report June 2009	Closure				**X**	October-09	TRRP
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.	Release Investigation Report September 2008	Closure				**X**	January-09	TRRP

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%				99%
Interim Measures Work Plan		7%	100%	7.0%	
Interim Measures Implementation		70%	99%	69.3%	
Reports		23%	99%	22.8%	
RCRA Facility Investigation	30%				79%
Preliminary Report		5%	100%	5%	
RFI Workplan		5%	100%	5%	
Facility Investigation		40%	82%	33%	
Risk Assessment		10%	89%	9%	
Investigation Analysis		10%	84%	8%	
Groundwater Investigation		15%	87%	13%	
Treatability Studies		10%	46%	5%	
Progress Reports		5%	31%	2%	
Corrective Measures Study	10%				0%
Identify and Develop Alternatives		15%	0%	0%	
Evaluate Alternatives		60%	0%	0%	
Reports		25%	0%	0%	
Corrective Measures Implementation	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			53.52%

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%					99.0%	
Sample 3 Off-Site Wells		1%	100%	1%	0%		
Sample 20 Off-Site Wells (6 events)		6%	100%	6%	0%		(remaining off-post sampling
2000 Groundwater Monitoring (4 events)		4%	100%	4%	0%		conducted under the RFI task)
2001 Groundwater Monitoring (4 events)		4%	100%	4%	0%		
2002 Groundwater Monitoring (4 events)		4%	100%	4%	0%		
2003 Groundwater Monitoring (4 events)		4%	100%	4%	0%		
2004 Groundwater Monitoring (4 events)		4%	100%	4%	0%		
2005 Groundwater Monitoring (4 events)		4%	100%	4%	0%		
2006 Groundwater Monitoring		4%	100%	4%	0%		
2007 Groundwater Monitoring		4%	100%	4%	0%		
2008 Groundwater Monitoring		4%	100%	4%	0%		
2009 Groundwater Monitoring		4%	100%	4%	0%		
2010 Groundwater Monitoring		4%	100%	4%	0%		
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%		After treatability studies.
Treat/dispose of soil piles		20%	100%	20%	0%		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%					99.0%	
Quarterly Progress Report 1 (August 1999)		0.70%	100%	0.70%	0%		
Quarterly Progress Report 2 (November 1999)		0.70%	100%	0.70%	0%		
Quarterly Progress Report 3 (February 2000)		0.70%	100%	0.70%	0%		
Quarterly Progress Report 4 (May 2000)		0.70%	100%	0.70%	0%		
Quarterly Progress Report 5 (August 2000)		0.70%	100%	0.70%	0%		
Quarterly Progress Report 6 (November 2000)		0.70%	100%	0.70%	0%		
Quarterly Progress Report 7 (February 2001)		0.70%	100%	0.70%	0%		
Quarterly Progress Report 8 (May 2001)		0.70%	100%	0.70%	0%		
Quarterly Progress Report 9 (August 2001)		0.70%	100%	0.70%	0%		
Quarterly Progress Report 10 (November 2001)		0.70%	100%	0.70%	0%		
Quarterly Progress Report 11 (February 2002)		0.70%	100%	0.70%	0%		
Quarterly Progress Report 12 (May 2002)		0.70%	100%	0.70%	0%		
Quarterly Progress Report 13 (August 2002)		0.70%	100%	0.70%	0%		
Quarterly Progress Report 14 (November 2002)		0.70%	100%	0.70%	0%		
Quarterly Progress Report 15 (February 2003)		0.70%	100%	0.70%	0%		
Quarterly Progress Report 16 (May 2003)		0.70%	100%	0.70%	0%		
Quarterly Progress Report 17 (August 2003)		0.70%	100%	0.70%	0%		
Quarterly Progress Report 18 (November 2003)		0.70%	100%	0.70%	0%		
Quarterly Progress Report 19 (February 2004)		0.70%	100%	0.70%	0%		
Quarterly Progress Report 20 (May 2004)		0.70%	100%	0.70%	0%		
Quarterly Progress Report 21 (August 2004)		0.70%	100%	0.70%	0%		
Quarterly Progress Report 22 (November 2004)		0.70%	100%	0.70%	0%		
Quarterly Progress Report 23 (February 2005)		0.70%	100%	0.70%	0%		
Quarterly Progress Report 24 (May 2005)		0.70%	100%	0.70%	0%		
Quarterly Progress Report 25 (August 2005)		0.70%	100%	0.70%	0%		
Quarterly Progress Report 26 (October 2005)		0.70%	100%	0.70%	0%		
Quarterly Progress Report 27 (January 2006)		0.70%	100%	0.70%	0%		
Quarterly Progress Report 28 (April 2006)		0.70%	100%	0.70%	0%		
Semi-annual Progress Rpt 29 (Dec 2006)		0.70%	100%	0.70%	0%		
Semi-annual Progress Rpt 30 (July 2007)		0.70%	100%	0.70%	0%		
Semi-annual Progress Rpt 31 (Dec 2007)		0.70%	100%	0.70%	0%		
Semi-annual Progress Rpt 32 (July 2008)		0.70%	100%	0.70%	0%		
Semi-annual Progress Rpt 33 (Dec 2008)		0.70%	100%	0.70%	0%		
Semi-annual Progress Rpt 34 (July 2009)		0.70%	100%	0.70%	0%		
Semi-annual Progress Rpt 35 (Dec 2009)		0.70%	100%	0.70%	0%		
Semi-annual Progress Rpt 36 (July 2010)		0.70%	100%	0.70%	0%		
Semi-annual Progress Rpt 37 (Dec 2010)		0.70%	100%	0.70%	0%		
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		99.11%	

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%					100.0%	
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%	100%	5%	0%		
Final Work Plans (DY01)		10%	100%	10%	0%		
Draft Work Plans (DY02)		10%	100%	10%	0%		
Final Work Plans (DY02)		10%	100%	10%	0%		
Facility Investigation[1]	40%					81.9%	
Small Areas (0-2 acres in size)							
B-3 Investigation/Report		1.24%	50%	0.620%	50%		Final report submitted, additional work required.
B-4 Investigation/Report		1.24%	80%	0.992%	20%		Final report submitted. Additional work required.
B-5 Investigation/Report		1.24%	100%	1.240%	0%		RRS1 closure approved Oct 02.
B-6 Investigation/Report		1.24%	100%	1.240%	0%		RRS1 closure approved Oct 02.
B-7 Investigation/Report		1.24%	100%	1.240%	0%		RRS1 closure approved Oct 02.
B-8 Investigation/Report		1.24%	90%	1.116%	10%		Investigation underway
B-9 Investigation/Report		1.24%	100%	1.240%	0%		RRS1 closure approved Mar 03
B-10 Investigation/Report		1.24%	100%	1.240%	0%		RRS1 closure approved Jan 04
B-11 Investigation/Report		1.24%	100%	1.240%	0%		RRS1 closure approved Sept 04
B-12 Investigation/Report		1.24%	100%	1.240%	0%		RRS1 closure approved July 05
B-13 Investigation/Report		1.24%	80%	0.992%	20%		Final report submitted. Additional work required.
B-15/16 Investigation/Report		1.24%	90%	1.116%	10%		Investigation underway
B-19 Investigation/Report		1.24%	100%	1.240%	0%		RRS1 closure approved Sept 02
B-23 Investigation/Report		1.24%	100%	1.240%	0%		RRS1 closure approved July 05
B-23A Investigation/Report		1.24%	100%	1.240%	0%		RRS1 closure approved Mar 05
B-25 Investigation/Report		1.24%	100%	1.240%	0%		RRS1 closure approved July 05
B-26 Investigation/Report		1.24%	100%	1.240%	0%		Delisting approved November 04
B-27 Investigation/Report		1.24%	80%	0.992%	20%		Final report submitted, additional work required
B-28 Investigation/Report		1.24%	80%	0.992%	20%		Investigation underway
B-30 Investigation/Report		1.24%	100%	1.240%	0%		RRS1 closure approved Feb 05
B-31 Investigation/Report		1.24%	100%	1.240%	0%		RRS1 closure approved Nov 02
B-32 Investigation/Report		1.24%	100%	1.240%	0%		RRS1 closure approved Nov 03
B-33 Investigation/Report		1.24%	100%	1.240%	0%		RRS1 closure approved Nov 04
B-34 Investigation/Report		1.24%	80%	0.992%	20%		Final report and Addendum report submitted, additional work required
B-71 Investigation/Report		1.24%	99%	1.228%	1%		TRRP closure requested
BLDG-43 Investigation/Report		1.24%	100%	1.240%	0%		RRS1 closure approved Sept 05
Demo Dud Investigation/Report		1.24%	100%	1.240%	0%		RRS1 closure approved Apr 05
F-14 Investigation/Report		1.24%	100%	1.240%	0%		Closure approved Nov 95
I-1 Investigation/Report		1.24%	90%	1.116%	10%		Addt'l Investigation to be performed (DY01)
AOC 35 Investigation/Report		1.24%	100%	1.240%	0%		RRS1 closure approved Feb 03
AOC 37 Investigation/Report		1.24%	100%	1.240%	0%		RRS1 closure approved Jan 05
AOC 39 Investigation/Report		1.24%	100%	1.240%	0%		RRS1 closure approved Sept 02
AOC 40 Investigation/Report		1.24%	100%	1.240%	0%		RRS1 closure approved Aug 02
AOC 43 Investigation/Report		1.24%	100%	1.240%	0%		RRS1 closure approved Feb 03
AOC 44 Investigation/Report		1.24%	100%	1.240%	0%		Delisting approved July 2005.
AOC 45 Investigation/Report		1.24%	25%	0.310%	75%		Investigation underway
AOC 46 Investigation/Report		1.24%	100%	1.240%	0%		RRS1 closure approved July 05
AOC 47 Investigation/Report		1.24%	100%	1.240%	0%		Closure approved Sep 02

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 49 Investigation/Report		1.24%	100%	1.240%	0%		Delisting approved July 05
AOC 50 Investigation/Report		1.24%	100%	1.240%	0%		Closure approved Apr 05
AOC 52 Investigation/Report		1.24%	0%	0.000%	100%		
AOC 53 Investigation/Report		1.24%	100%	1.240%	0%		Closure approved July 05.
AOC 54 Investigation/Report		1.24%	100%	1.240%	0%		Closure approved Nov 04
AOC 55 Investigation/Report		1.24%	100%	1.240%	0%		Closure approved June 08.
AOC 56 Investigation/Report		1.24%	100%	1.240%	0%		Closure approved Sept 04
AOC 58 Investigation/Report		1.24%	80%	0.992%	20%		Final RFI report submitted, additional work recommended.
AOC 59 Investigation/Report		1.24%	90%	1.116%	10%		RIR prepared requesting NFA closure
AOC 60 Investigation/Report		1.24%	100%	1.240%	0%		Delisting approved July 05.
AOC 61 Investigation/Report		1.24%	100%	1.240%	0%		Closure approved Feb 03
AOC 62 Investigation/Report		1.24%	0%	0.000%	100%		
AOC 63 Investigation/Report		1.24%	100%	1.240%	0%		Closure approved Aug 09.
AOC 64 Investigation/Report		1.24%	99%	1.228%	1%		TRRP closure requested
AOC 67 Investigation/Report		1.24%	100%	1.240%	0%		Closure approved Sept 10.
AOC 68 Investigation/Report		1.24%	100%	1.240%	0%		Closure approved Sept 10.
AOC 69 Investigation/Report		1.24%	0%	0.000%	100%		
AOC 70 Investigation/Report		1.24%	0%	0.000%	100%		
AOC 72 Investigation/Report		1.24%	50%	0.620%	50%		Investigation underway
AOC 73 Investigation/Report		1.24%	100%	1.240%	0%		Closure approved July 2009
Medium Areas (2-10 acres in size)							
B-1 Investigation/Report		1.2%	100%	1.220%	0%		Closure approved Nov 02
B-2 Investigation/Report		1.2%	90%	1.098%	10%		Investigation underway
B-22 Investigation/Report		1.2%	100%	1.220%	0%		Closure approved Dec 02
B-24 Investigation/Report		1.2%	80%	0.976%	20%		Final report submitted, additional work recommended
B-29 Investigation/Report		1.2%	99%	1.207%	1%		Final RRS1 closure report submitted
AOC 36 Investigation/Report		1.2%	100%	1.220%	0%		Closure approved Aug 02
AOC 41 Investigation/Report		1.2%	100%	1.220%	0%		Closure approved July 05.
AOC 42 Investigation/Report		1.2%	80%	0.976%	20%		Final report submitted, additional work recommended
AOC 48 Investigation/Report		1.2%	100%	1.220%	0%		Delisting approved Nov 04
AOC 57 Investigation/Report		1.2%	25%	0.305%	75%		Investigation underway
Large Areas (>10 acres in size)							
B-20/21 Investigation/Report		1.2%	90%	1.098%	10%		Investigation underway
AOC 38 Investigation/Report		1.2%	100%	1.220%	0%		Closure approved February 05
AOC 51 Investigation/Report		1.2%	25%	0.305%	75%		
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%	25%	0.305%	75%		
AOC 65 Investigation/Report		1.2%	80%	0.976%	20%		Final report submitted, additional work recommended
AOC 69 Investigation/Report		1.2%	100%	1.220%	0%		Closure approved Oct 09
AOC 70 Investigation/Report		1.2%	0%	0.000%	100%		
Coal Bins Investigation/Report		1.2%	100%	1.220%	0%		Site de-listed as a SWMU
RMU-2 Investigation/Report		1.2%	25%	0.305%	75%		Investigation underway
RMU-3 Investigation/Report		1.2%	25%	0.305%	75%		Investigation underway
RMU-4 Investigation/Report		1.2%	25%	0.305%	75%		Investigation underway
Groundwater Investigation	15%					87%	
Well Installation		10%	80%	8%	20%		
Groundwater Monitoring 1999		3.0%	100%	3%	0%		
Groundwater Monitoring 2000		3.0%	100%	3%	0%		
Groundwater Monitoring 2001		3.0%	100%	3%	0%		
Groundwater Monitoring 2002		3.0%	100%	3%	0%		
Groundwater Monitoring 2003		3.0%	100%	3%	0%		
Groundwater Monitoring 2004		3.0%	100%	3%	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 2005		3.0%	100%	3%	0%		
Groundwater Monitoring 2006		3.0%	100%	3%	0%		
Groundwater Monitoring 2007		3.0%	100%	3%	0%		
Groundwater Monitoring 2008		3.0%	100%	3%	0%		
Groundwater Monitoring 2009		3.0%	100%	3%	0%		
Groundwater Monitoring 2010		3.0%	100%	3%	0%		
Conceptual Site Model (CSM)		20.0%	100%	20%	0%		
CSM Update		4.0%	80%	3%	20%		
LTMO 2005 (optimization study)		10%	100%	10%	0%		Complete
LTMO 2010 (review of optimization)		10%	100%	10%	0%		Complete
Risk Assessment	10%					89%	
Draft TAD		10%	100%	10%	0%		
Draft Final TAD		4%	100%	4%	0%		
Final TAD		1%	0%	0%	100%		Complete when analytical data are available for full evaluation.
Draft CSM		70%	100%	70%	0%		
Update to CSM		10%	50%	5%	50%		
Final CSM		5%	0%	0%	100%		
Investigation Analysis	10%					84%	
Collect Background Data		10%	100%	10%	0%		
Draft Investigation Analysis		85%	82%	70%	18%		Information included in facility investigation reports; percent complete based on overall percent complete of facility investigation tasks.
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%					46%	
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%	90%	9%	10%		
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%					31.4%	
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%		

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 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%	100%	0.85%	0%		
Semi-Annual 32 (July 2008)		0.85%	100%	0.85%	0%		
Semi-Annual 33 (December 2008)		0.85%	100%	0.85%	0%		
Semi-Annual 34 (July 2009)		0.85%	100%	0.85%	0%		
Semi-Annual 35 (December 2009)		0.85%	100%	0.85%	0%		
Semi-Annual 36 (July 2010)		0.85%	100%	0.85%	0%		
Semi-Annual 37 (December 2010)		0.85%	100%	0.85%	0%		
(Addt'l Quarters - rows hidden)							
				% of Phase Complete		79.31%	

[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
June 2010 Quarterly Off-post Groundwater Analytical Results

Well ID	Sample Date	1,1-DCE	cis-1,2-DCE	trans-1,2-DCE	PCE	TCE	Vinyl Chloride
FO-17	6/1/2010	0.12U	0.07U	0.08U	0.06U	0.05U	0.08U
FO-J1	6/2/2010	0.12U	0.07U	0.08U	0.06U	0.05U	0.08U
HS-3	6/4/2010	0.12U	0.07U	0.08U	0.06U	0.05U	0.08U
I10-2	6/2/2010	0.12U	0.07U	0.08U	0.06U	0.05U	0.08U
I10-4	6/1/2010	0.12U	0.07U	0.08U	0.06U	0.05U	0.08U
I10-8	6/4/2010	0.12U	0.07U	0.08U	0.06U	0.05U	0.08U
JW-6	6/2/2010	0.12U	0.07U	0.08U	0.06U	0.05U	0.08U
JW-7	6/3/2010	0.12U	0.07U	0.08U	**0.36F**	0.05U	0.08U
JW-8	6/2/2010	0.12U	0.07U	0.08U	0.06U	0.05U	0.08U
JW-13	6/9/2010	0.12U	0.07U	0.08U	0.06U	0.05U	0.08U
JW-14	6/2/2010	0.12U	0.07U	0.08U	0.06U	0.05U	0.08U
JW-28	6/3/2010	0.12U	0.07U	0.08U	0.06U	0.05U	0.08U
JW-29	6/3/2010	0.12U	0.07U	0.08U	0.06U	0.05U	0.08U
JW-30	6/3/2010	0.12U	0.07U	0.08U	0.06U	0.05U	0.08U
JW-30 FD	6/3/2010	0.12U	0.07U	0.08U	0.06U	0.05U	0.08U
JW-31	6/3/2010	0.12U	0.07U	0.08U	0.06U	0.05U	0.08U
LS-1	6/3/2010	0.12U	**0.19F**	0.08U	0.06U	0.05U	0.08U
LS-4	6/3/2010	0.12U	0.07U	0.08U	0.06U	0.05U	0.08U
LS-5	6/1/2010	0.12U	0.07U	0.08U	**0.98F**	**2.22**	0.08U
LS-6	6/1/2010	0.12U	0.07U	0.08U	**0.95F**	**0.23F**	0.08U
LS-7	6/1/2010	0.12U	0.07U	0.08U	**0.47F**	**0.19F**	0.08U
OFR-1	6/2/2010	0.12U	0.07U	0.08U	0.06U	0.05U	0.08U
OFR-3	6/1/2010	0.12U	0.07U	0.08U	**3.23**	**3.04**	0.08U
RFR-8	6/4/2010	0.12U	0.07U	0.08U	0.06U	0.05U	0.08U
RFR-9	6/23/2010	0.12U	0.07U	0.08U	0.06U	0.05U	0.08U
RFR-10	6/2/2010	0.12U	**0.21F**	0.08U	**10.56**	**5.05**	0.08U
RFR-11	6/1/2010	0.12U	0.07U	0.08U	**1.13F**	0.05U	0.08U
RFR-12	6/2/2010	0.12U	0.07U	0.08U	0.06U	**0.38F**	0.08U
RFR-12 FD	6/2/2010	0.12U	0.07U	0.08U	0.06U	**0.35F**	0.08U
RFR-13	6/2/2010	0.12U	0.07U	0.08U	0.06U	0.05U	0.08U
RFR-14	6/4/2010	0.12U	0.07U	0.08U	**0.16F**	0.05U	0.08U
RFR-14 FD	6/4/2010	0.12U	0.07U	0.08U	**0.17F**	0.05U	0.08U

BOLD	= Above the MDL
BOLD	= Above the RL
BOLD	= Above the MCL

All samples were analyzed by APPL, Inc.
VOC data reported in ug/L.

Abbreviations/Notes:

FD	Field Duplicate
TCE	Trichloroethene
PCE	Tetrachloroethene
DCE	Dichloroethene

Data Qualifiers

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

Attachment 4
September 2010 Quarterly Off-post Groundwater Analytical Results

Well ID	Sample Date	1,1-DCE	cis-1,2-DCE	trans-1,2-DCE	PCE	TCE	Vinyl Chloride
FO-J1	9/1/2010	0.12U	0.07U	0.08U	0.06U	0.05U	0.08U
HS-2	9/2/2010	0.12U	0.07U	0.08U	0.06U	0.05U	0.08U
I10-2	8/31/2010	0.12U	0.07U	0.08U	0.06U	0.05U	0.08U
I10-4	8/31/2010	0.12U	0.07U	0.08U	**7.02**	**3.55**	0.08U
I10-8	9/2/2010	0.12U	0.07U	0.08U	0.06U	0.05U	0.08U
JW-7	8/31/2010	0.12U	0.07U	0.08U	**0.26F**	0.05U	0.08U
JW-8	9/1/2010	0.12U	0.07U	0.08U	**0.22F**	0.05U	0.08U
JW-14	9/1/2010	0.12U	0.07U	0.08U	0.06U	0.05U	0.08U
JW-26	8/30/2010	0.12U	0.07U	0.08U	0.06U	0.05U	0.08U
JW-28	9/2/2010	0.12U	0.07U	0.08U	0.06U	0.05U	0.08U
JW-29	9/2/2010	0.12U	0.07U	0.08U	0.06U	0.05U	0.08U
JW-30	8/31/2010	0.12U	0.07U	0.08U	0.06U	0.05U	0.08U
JW-31	9/1/2010	0.12U	0.07U	0.08U	0.06U	0.05U	0.08U
JW-31 FD	9/1/2010	0.12U	0.07U	0.08U	0.06U	0.05U	0.08U
LS-1	8/30/2010	0.12U	0.07U	0.08U	**0.22F**	0.05U	0.08U
LS-1 FD	8/30/2010	0.12U	0.07U	0.08U	**0.24F**	0.05U	0.08U
LS-4	8/30/2010	0.12U	0.07U	0.08U	0.06U	0.05U	0.08U
LS-5	8/30/2010	0.12U	0.07U	0.08U	**0.82F**	**2.73**	0.08U
LS-6	8/30/2010	0.12U	0.07U	0.08U	**0.78F**	**0.27F**	0.08U
LS-6-A2	8/30/2010	0.12U	0.07U	0.08U	0.06U	0.05U	0.08U
LS-7	8/30/2010	0.12U	0.07U	0.08U	**1.68**	**0.24F**	0.08U
LS-7-A2	8/30/2010	0.12U	0.07U	0.08U	0.06U	0.05U	0.08U
OFR-1	8/31/2010	0.12U	0.07U	0.08U	**0.16F**	0.05U	0.08U
OFR-3	8/30/2010	0.12U	0.07U	0.08U	**7.97**	**4.96**	0.08U
OFR-3-A2	8/30/2010	0.12U	0.07U	0.08U	0.06U	0.05U	0.08U
RFR-9	9/16/2010	0.12U	0.07U	0.08U	0.06U	0.05U	0.08U
RFR-10	8/30/2010	0.12U	0.07U	0.08U	**12.12**	**7.96**	0.08U
RFR-10-A2	8/30/2010	0.12U	0.07U	0.08U	0.06U	0.05U	0.08U
RFR-10-B2	8/30/2010	0.12U	0.07U	0.08U	0.06U	0.05U	0.08U
RFR-11	8/30/2010	0.12U	0.07U	0.08U	**0.59F**	**1.11**	0.08U
RFR-11-A2	8/30/2010	0.12U	0.07U	0.08U	0.06U	0.05U	0.08U
RFR-12	8/31/2010	0.12U	0.07U	0.08U	0.06U	**0.25F**	0.08U
RFR-14	8/31/2010	0.12U	0.07U	0.08U	**0.18F**	0.05U	0.08U
RFR-14 FD	8/31/2010	0.12U	0.07U	0.08U	**0.15F**	0.05U	0.08U

BOLD	≥ MDL
BOLD	≥ RL
BOLD	≥ MCL

All samples were analyzed by APPL, Inc.
VOC data reported in ug/L.

Abbreviations/Notes:

FD	Field Duplicate
TCE	Trichloroethene
PCE	Tetrachloroethene
DCE	Dichloroethene

Data Qualifiers

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

Attachment 4
June 2010 Quarterly On-Post Groundwater Monitoring Analytical Results

Well ID	Sample Date	Arsenic	Barium	Cadmium	Chromium	Copper	Lead	Zinc	Mercury
CS-MW1-LGR	6/9/2010	NA	NA	0.0005U	**0.003F**	NA	0.0019U	NA	0.0001U
CS-MW2-LGR	6/9/2010	NA	NA	0.0005U	0.001U	NA	0.0019U	NA	0.0001U
CS-MW3-LGR	6/10/2010	NA	NA	0.0005U	0.001U	NA	0.0019U	NA	0.0001U
CS-MW4-LGR	6/10/2010	NA	NA	0.0005U	0.001U	NA	0.0019U	NA	0.0001U
CS-MW5-LGR	6/9/2010	NA	NA	0.0005U	0.001U	NA	0.0019U	NA	0.0001U
CS-MW6-LGR	6/8/2010	NA	NA	0.0005U	**0.002F**	NA	0.0019U	NA	0.0001U
CS-MW7-LGR	6/8/2010	NA	NA	0.0005U	**0.004F**	NA	0.0019U	NA	0.0001U
CS-MW9-LGR	6/10/2010	NA	NA	0.0005U	**0.002F**	NA	0.0019U	NA	0.0001U
CS-MW11A-LGR	6/8/2010	NA	NA	0.0005U	**0.002F**	NA	0.0019U	NA	0.0001U
CS-MW16-LGR	6/14/2010	NA	NA	0.0005U	0.001U	NA	0.0019U	NA	0.0001U
CS-MW16-CC	6/14/2010	NA	NA	0.0005U	0.001U	NA	0.0019U	NA	0.0001U
CS-MW18-LGR	6/8/2010	NA	NA	0.0005U	0.001U	NA	0.0019U	NA	0.0001U
CS-MW19-LGR	6/8/2010	NA	NA	0.0005U	**0.003F**	NA	0.0019U	NA	0.0001U
CS-MW20-LGR	6/9/2010	NA	NA	0.0005U	0.001U	NA	0.0019U	NA	0.0001U
CS-MW21-LGR	6/10/2010	NA	NA	0.0005U	0.001U	NA	0.0019U	NA	0.0001U
CS-MW22-LGR	6/9/2010	NA	NA	0.0005U	**0.002F**	NA	**0.0033F**	NA	0.0001U
CS-MW23-LGR	6/8/2010	NA	NA	0.0005U	0.001U	NA	0.0019U	NA	0.0001U
CS-MW24-LGR	6/9/2010	NA	NA	0.0005U	0.001U	NA	0.0019U	NA	0.0001U
CS-MW24-LGR FD	6/9/2010	NA	NA	0.0005U	0.001U	NA	0.0019U	NA	0.0001U
CS-MW25-LGR	6/10/2010	NA	NA	0.0005U	0.001U	NA	0.0019U	NA	0.0001U
CS-D	6/10/2010	NA	NA	0.0005U	0.001U	NA	0.0019U	NA	0.0001U
CS-I	6/14/2010	NA	NA	0.0005U	0.001U	NA	0.0019U	NA	0.0001U
CS-4	6/10/2010	NA	NA	0.0005U	0.001U	NA	0.0019U	NA	0.0001U
CS-12	6/14/2010	**0.0034F**	**0.038**	**0.0006F**	**0.002F**	**0.01**	**0.0039F**	**0.431**	0.0001U
CSSA Drinking Water Well System									
CS-1	6/14/2010	**0.0023F**	**0.045**	0.0005U	0.001U	**0.009F**	0.0019U	**0.081**	0.0001U
CS-9	6/14/2010	**0.0004F**	**0.0455**	0.0005U	**0.002F**	**0.011**	**0.0168F**	**1.939**	**0.0036**
CS-10	6/14/2010	**0.0035F**	**0.0503**	0.0005U	0.001U	**0.008F**	0.0019U	**0.11**	0.0001U
CS-10 FD	6/14/2010	**0.0034F**	**0.0499**	0.0005U	0.001U	**0.011**	0.0019U	**0.117**	0.0001U

BOLD	= Above the MDL
BOLD	= Above the RL
BOLD	= Above the MCL

All samples were analyzed by APPL, Inc.
VOC data reported in ug/L & metals data reported in mg/L.

Abbreviations/Notes:

FD	Field Duplicate
TCE	Trichloroethene
PCE	Tetrachloroethene
DCE	Dichloroethene
AL	Action Level
SS	Secondary Standard
NA	Not Analyzed for this parameter

Data Qualifiers

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

Attachment 4
June 2010 Quarterly On-Post Groundwater Monitoring Analytical Results

Well ID	Sample Date	1,1-DCE	cis-1,2-DCE	trans-1,2-DCE	PCE	TCE	Vinyl Chloride
CS-MW1-LGR	6/9/2010	0.12U	**54.85**	**0.68**	**37.85**	**51.15**	0.08U
CS-MW2-LGR	6/9/2010	0.12U	**1.13F**	0.08U	**0.16F**	0.05U	0.08U
CS-MW3-LGR	6/10/2010	0.12U	0.07U	0.08U	0.06U	0.05U	0.08U
CS-MW4-LGR	6/10/2010	0.12U	0.07U	0.08U	0.06U	0.05U	0.08U
CS-MW5-LGR	6/9/2010	0.12U	**0.96F**	0.08U	**0.88F**	**0.94F**	0.08U
CS-MW6-LGR	6/8/2010	0.12U	0.07U	0.08U	0.06U	0.05U	0.08U
CS-MW7-LGR	6/8/2010	0.12U	0.07U	0.08U	0.06U	0.05U	0.08U
CS-MW9-LGR	6/10/2010	0.12U	0.07U	0.08U	0.06U	0.05U	0.08U
CS-MW11A-LGR	6/8/2010	0.12U	0.07U	0.08U	**0.86F**	0.05U	0.08U
CS-MW16-LGR	6/14/2010	0.12U	**136.56**	**0.22F**	**142.56**	**162.6**	0.08U
CS-MW16-CC	6/14/2010	**0.33F**	**33.86**	**3.92**	**4.9**	**42.6**	0.08U
CS-MW18-LGR	6/8/2010	0.12U	0.07U	0.08U	0.06U	0.05U	0.08U
CS-MW19-LGR	6/8/2010	0.12U	0.07U	0.08U	**0.43F**	0.05U	0.08U
CS-MW20-LGR	6/9/2010	0.12U	0.07U	0.08U	**1.95**	0.05U	0.08U
CS-MW21-LGR	6/10/2010	0.12U	0.07U	0.08U	0.06U	0.05U	0.08U
CS-MW22-LGR	6/9/2010	0.12U	0.07U	0.08U	0.06U	0.05U	0.08U
CS-MW23-LGR	6/8/2010	0.12U	0.07U	0.08U	0.06U	0.05U	0.08U
CS-MW24-LGR	6/9/2010	0.12U	0.07U	0.08U	0.06U	0.05U	0.08U
CS-MW24-LGR FD	6/9/2010	0.12U	0.07U	0.08U	0.06U	0.05U	0.08U
CS-MW25-LGR	6/10/2010	0.12U	0.07U	0.08U	0.06U	0.05U	0.08U
CS-D	6/10/2010	0.12U	**98.94**	**0.88**	**100.03**	**137.52**	0.08U
CS-I	6/14/2010	0.12U	0.07U	0.08U	0.06U	0.05U	0.08U
CS-4	6/10/2010	0.12U	**2.03**	0.08U	**4.34**	**5.55**	0.08U
CS-12	6/14/2010	0.12U	0.07U	0.08U	0.06U	0.05U	0.08U
CSSA Drinking Water Well System							
CS-1	6/14/2010	0.12U	0.07U	0.08U	0.06U	0.05U	0.08U
CS-9	6/14/2010	0.12U	0.07U	0.08U	0.06U	0.05U	0.08U
CS-10	6/14/2010	0.12U	0.07U	0.08U	0.06U	0.05U	0.08U
CS-10 FD	6/14/2010	0.12U	0.07U	0.08U	0.06U	0.05U	0.08U

BOLD	= Above the MDL
BOLD	= Above the RL
BOLD	= Above the MCL

All samples were analyzed by APPL, Inc.
VOC data reported in ug/L & metals data reported in mg/L.

Abbreviations/Notes:

FD	Field Duplicate
TCE	Trichloroethene
PCE	Tetrachloroethene
DCE	Dichloroethene
AL	Action Level
SS	Secondary Standard
NA	Not Analyzed for this parameter

Data Qualifiers

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

Attachment 4
September 2010 Quarterly On-Post Groundwater Monitoring Analytical Results

Well ID	Sample Date	Arsenic	Barium	Cadmium	Chromium	Copper	Lead	Zinc	Mercury
CS-MW1-LGR	9/7/2010	NA	NA	**0.0011F**	**0.002F**	NA	0.0019U	NA	0.0001U
CS-MW1-CC	9/7/2010	NA	NA	**0.0006F**	0.001U	NA	0.0019U	NA	0.0001U
CS-MW1-BS	9/7/2010	NA	NA	0.0005U	0.001U	NA	0.0019U	NA	0.0001U
CS-MW2-LGR	9/16/2010	NA	NA	0.0005U	**0.002F**	NA	0.0019U	NA	0.0001U
CS-MW2-CC	9/16/2010	NA	NA	0.0005U	**0.003F**	NA	0.0019U	NA	0.0001U
CS-MW3-LGR	9/14/2010	NA	NA	0.0005U	0.001U	NA	0.0019U	NA	0.0001U
CS-MW4-LGR	9/17/2010	NA	NA	0.0005U	**0.002F**	NA	0.0019U	NA	0.0001U
CS-MW5-LGR	9/9/2010	NA	NA	**0.0010F**	0.001U	NA	0.0019U	NA	0.0001U
CS-MW6-LGR	9/10/2010	NA	NA	**0.0008F**	0.001U	NA	0.0019U	NA	0.0001U
CS-MW6-CC	9/10/2010	NA	NA	0.0005U	0.001U	NA	0.0019U	NA	0.0001U
CS-MW6-BS	9/10/2010	NA	NA	0.0005U	0.001U	NA	0.0019U	NA	0.0001U
CS-MW7-LGR	9/15/2010	NA	NA	0.0005U	**0.003F**	NA	0.0019U	NA	0.0001U
CS-MW7-CC	9/15/2010	NA	NA	0.0005U	**0.002F**	NA	0.0019U	NA	0.0001U
CS-MW7-CC FD	9/15/2010	NA	NA	0.0005U	0.001U	NA	0.0019U	NA	0.0001U
CS-MW8-LGR	9/15/2010	NA	NA	0.0005U	**0.002F**	NA	0.0019U	NA	0.0001U
CS-MW8-CC	9/15/2010	NA	NA	0.0005U	**0.002F**	NA	0.0019U	NA	0.0001U
CS-MW9-LGR	9/14/2010	NA	NA	0.0005U	0.001U	NA	0.0019U	NA	0.0001U
CS-MW9-CC	9/14/2010	NA	NA	0.0005U	0.001U	NA	0.0019U	NA	0.0001U
CS-MW9-BS	9/14/2010	NA	NA	0.0025U*	0.005U*	NA	**0.0327F***	NA	0.0005U*
CS-MW10-LGR	9/15/2010	NA	NA	0.0005U	**0.002F**	NA	0.0019U	NA	0.0001U
CS-MW10-CC	9/15/2010	NA	NA	0.0005U	0.001U	NA	0.0019U	NA	0.0001U
CS-MW11A-LGR	9/9/2010	NA	NA	**0.0011F**	**0.002F**	NA	0.0019U	NA	0.0001U
CS-MW11B-LGR	9/9/2010	NA	NA	**0.0010F**	**0.024**	NA	0.0019U	NA	0.0001U
CS-MW12-LGR	9/10/2010	NA	NA	**0.0006F**	0.001U	NA	0.0019U	NA	0.0001U
CS-MW12-CC	9/10/2010	NA	NA	0.0005U	0.001U	NA	0.0019U	NA	0.0001U
CS-MW12-BS	9/10/2010	NA	NA	**0.0008F**	0.001U	NA	0.0019U	NA	0.0001U
CS-MW16-LGR	9/8/2010	NA	NA	**0.0008F**	0.001U	NA	0.0019U	NA	0.0001U
CS-MW16-CC	9/8/2010	NA	NA	0.0005U	0.001U	NA	0.0019U	NA	0.0001U
CS-MW17-LGR	9/14/2010	NA	NA	0.0005U	**0.002F**	NA	0.0019U	NA	0.0001U
CS-MW18-LGR	9/10/2010	NA	NA	**0.0007F**	0.001U	NA	0.0019U	NA	0.0001U
CS-MW19-LGR	9/17/2010	NA	NA	0.0005U	**0.003F**	NA	0.0019U	NA	0.0001U
CS-MW19-LGR FD	9/17/2010	NA	NA	0.0005U	**0.003F**	NA	0.0019U	NA	0.0001U
CS-MW20-LGR	9/17/2010	NA	NA	0.0005U	0.001U	NA	0.0019U	NA	0.0001U
CS-MW21-LGR	9/17/2010	NA	NA	0.0005U	**0.002F**	NA	0.0019U	NA	0.0001U
CS-MW22-LGR	9/17/2010	NA	NA	0.0005U	**0.003F**	NA	**0.0021F**	NA	0.0001U
CS-MW23-LGR	9/15/2010	NA	NA	0.0005U	0.001U	NA	0.0019U	NA	0.0001U
CS-MW23-LGR FD	9/15/2010	NA	NA	0.0005U	0.001U	NA	0.0019U	NA	0.0001U
CS-MW24-LGR	9/17/2010	NA	NA	0.0005U	**0.002F**	NA	0.0019U	NA	0.0001U
CS-MW24-LGR FD	9/17/2010	NA	NA	0.0005U	0.001U	NA	0.0019U	NA	0.0001U
CS-MW25-LGR	9/14/2010	NA	NA	0.0005U	**0.011**	NA	0.0019U	NA	0.0001U
CS-MWG-LGR	9/14/2010	NA	NA	0.0005U	0.001U	NA	0.0019U	NA	0.0001U
CS-D	9/16/2010	NA	NA	0.0005U	0.001U	NA	0.0019U	NA	0.0001U
CS-I	9/13/2010	NA	NA	**0.0008F**	0.001U	NA	0.0019U	NA	0.0001U
CS-2	9/16/2010	NA	NA	0.0005U	**0.002F**	NA	0.0019U	NA	0.0001U
CS-4	9/16/2010	NA	NA	0.0005U	0.001U	NA	0.0019U	NA	0.0001U
CS-12	9/17/2010	**0.0082F**	**0.0335**	0.0005U	0.001U	**0.008F**	0.0019U	**0.239**	0.0001U
CSSA Drinking Water Well System									
CS-1	9/8/2010	**0.0024F**	**0.036**	**0.0009F**	0.001U	0.003U	0.0019U	**0.1**	0.0001U
CS-9	9/8/2010	**0.0011F**	**0.046**	**0.0008F**	0.001U	0.003U	**0.0131F**	**1.247**	**0.0022**
CS-9 FD	9/8/2010	**0.0045F**	**0.0414**	**0.0009F**	0.001U	0.003U	**0.0125F**	**1.212**	**0.0021**
CS-10	9/8/2010	**0.0046F**	**0.041**	**0.0006F**	0.001U	**0.014**	0.0019U	**0.133**	0.0001U

Attachment 4
September 2010 Quarterly On-Post Groundwater Monitoring Analytical Results

Well ID	Sample Date	1,1-DCE	cis-1,2-DCE	trans-1,2-DCE	PCE	TCE	Vinyl Chloride
CS-MW1-LGR	9/7/2010	0.12U	**20.77**	**0.31F**	**16.73**	**34.92**	0.08U
CS-MW1-CC	9/7/2010	0.12U	0.07U	0.08U	0.06U	0.05U	0.08U
CS-MW1-BS	9/7/2010	0.12U	**1.38**	0.08U	0.06U	0.05U	0.08U
CS-MW2-LGR	9/16/2010	0.12U	**1.41**	0.08U	0.06U	0.05U	0.08U
CS-MW2-CC	9/16/2010	0.12U	0.07U	0.08U	0.06U	0.05U	0.08U
CS-MW3-LGR	9/14/2010	0.12U	0.07U	0.08U	0.06U	0.05U	0.08U
CS-MW4-LGR	9/17/2010	0.12U	0.07U	0.08U	0.06U	0.05U	0.08U
CS-MW5-LGR	9/9/2010	0.12U	**1.69**	0.08U	**0.84F**	**1.71**	0.08U
CS-MW6-LGR	9/10/2010	0.12U	0.07U	0.08U	0.06U	0.05U	0.08U
CS-MW6-CC	9/10/2010	0.12U	0.07U	0.08U	0.06U	0.05U	0.08U
CS-MW6-BS	9/10/2010	0.12U	0.07U	0.08U	0.06U	0.05U	0.08U
CS-MW7-LGR	9/15/2010	0.12U	0.07U	0.08U	0.06U	0.05U	0.08U
CS-MW7-CC	9/15/2010	0.12U	0.07U	0.08U	0.06U	0.05U	0.08U
CS-MW7-CC FD	9/15/2010	0.12U	0.07U	0.08U	0.06U	0.05U	0.08U
CS-MW8-LGR	9/15/2010	0.12U	0.07U	0.08U	**1.88**	0.05U	0.08U
CS-MW8-CC	9/15/2010	0.12U	0.07U	0.08U	0.06U	0.05U	0.08U
CS-MW9-LGR	9/14/2010	0.12U	0.07U	0.08U	0.06U	0.05U	0.08U
CS-MW9-CC	9/14/2010	0.12U	0.07U	0.08U	0.06U	0.05U	0.08U
CS-MW9-BS	9/14/2010	0.12U	0.07U	0.08U	0.06U	0.05U	0.08U
CS-MW10-LGR	9/15/2010	0.12U	0.07U	0.08U	**1.96**	**0.38F**	0.08U
CS-MW10-CC	9/15/2010	0.12U	0.07U	0.08U	0.06U	0.05U	0.08U
CS-MW11A-LGR	9/9/2010	0.12U	0.07U	0.08U	**0.73F**	0.05U	0.08U
CS-MW11B-LGR	9/9/2010	0.12U	0.07U	0.08U	**0.92F**	0.05U	0.08U
CS-MW12-LGR	9/10/2010	0.12U	0.07U	0.08U	0.06U	0.05U	0.08U
CS-MW12-CC	9/10/2010	0.12U	0.07U	0.08U	0.06U	0.05U	0.08U
CS-MW12-BS	9/10/2010	0.12U	0.07U	0.08U	0.06U	0.05U	0.08U
CS-MW16-LGR	9/8/2010	0.12U	**239.84**	**0.6**	**236.28**	**293.04**	0.08U
CS-MW16-CC	9/8/2010	0.12U	**30.27**	**4.03**	**2.99**	**38.4**	0.08U
CS-MW17-LGR	9/14/2010	0.12U	0.07U	0.08U	**0.29F**	0.05U	0.08U
CS-MW18-LGR	9/10/2010	0.12U	0.07U	0.08U	0.06U	0.05U	0.08U
CS-MW19-LGR	9/17/2010	0.12U	0.07U	0.08U	**0.41F**	0.05U	0.08U
CS-MW19-LGR FD	9/17/2010	0.12U	0.07U	0.08U	**0.49F**	0.05U	0.08U
CS-MW20-LGR	9/17/2010	0.12U	0.07U	0.08U	**1.79**	0.05U	0.08U
CS-MW21-LGR	9/17/2010	0.12U	0.07U	0.08U	0.06U	0.05U	0.08U
CS-MW22-LGR	9/17/2010	0.12U	0.07U	0.08U	0.06U	0.05U	0.08U
CS-MW23-LGR	9/15/2010	0.12U	0.07U	0.08U	0.06U	0.05U	0.08U
CS-MW23-LGR FD	9/15/2010	0.12U	0.07U	0.08U	0.06U	0.05U	0.08U
CS-MW24-LGR	9/17/2010	0.12U	0.07U	0.08U	0.06U	0.05U	0.08U
CS-MW24-LGR FD	9/17/2010	0.12U	0.07U	0.08U	0.06U	0.05U	0.08U
CS-MW25-LGR	9/14/2010	0.12U	0.07U	0.08U	0.06U	0.05U	0.08U
CS-MWG-LGR	9/14/2010	0.12U	0.07U	0.08U	0.06U	0.05U	0.08U
CS-D	9/16/2010	0.12U	**122.82**	**3.98**	**110.02**	**153.76**	0.08U
CS-I	9/13/2010	0.12U	0.07U	0.08U	0.06U	0.05U	0.08U
CS-2	9/16/2010	0.12U	0.07U	0.08U	0.06U	0.05U	0.08U
CS-4	9/16/2010	0.12U	**5.99**	**0.6**	**6.39**	**10.03**	0.08U
CS-12	9/17/2010	0.12U	0.07U	0.08U	0.06U	0.05U	0.08U
CSSA Drinking Water Well System							
CS-1	9/8/2010	0.12U	0.07U	0.08U	0.06U	**0.17F**	0.08U
CS-9	9/8/2010	0.12U	0.07U	0.08U	0.06U	0.05U	0.08U
CS-9 FD	9/8/2010	0.12U	0.07U	0.08U	0.06U	0.05U	0.08U
CS-10	9/8/2010	0.12U	0.07U	0.08U	0.06U	0.05U	0.08U

BOLD	≥ MDL
BOLD	≥ RL
BOLD	≥ MCL

All samples were analyzed by APPL, Inc.
VOC data reported in ug/L & metals data reported in mg/L.
Abbreviations/Notes:

FD	Field Duplicate
TCE	Trichloroethene
PCE	Tetrachloroethene
DCE	Dichloroethene
AL	Action Level
SS	Secondary Standard
NA	Not Analyzed for this parameter

Data Qualifiers
U-The analyte was analyzed for, but not detected. The associated numerical value is at or below the MDL.
F-The analyte was positively identified but the associated numerical value is below the RL.
* The analyte was run at a dilution of 5.

Attachment 4
September 2010 Westbay Analytical Results

Well ID	Date Sampled	1,1-DCE (1,1-dichloroethene)	cis-1,2-DCE (cis-1,2-dichloroethene)	TCE (trichloroethene)	PCE (tetrachloroethene)	trans-1,2-DCE (trans-1,2-dichloroethene)	Vinyl Chloride
CS-WB01-LGR-01	9/1/2010	<0.30	<0.16	**0.25F**	**5**	<0.19	<0.23
CS-WB01-LGR-02	9/1/2010	<0.30	<0.16	**2.9**	**8.1**	<0.19	<0.23
CS-WB01-LGR-03	9/1/2010	<0.30	<0.16	**10**	**2.8**	<0.19	<0.23
CS-WB01-LGR-04	9/1/2010	<0.30	<0.16	<0.16	<0.15	<0.19	<0.23
CS-WB01-LGR-05	9/1/2010	<0.30	<0.16	**0.35F**	<0.15	<0.19	<0.23
CS-WB01-LGR-06	9/1/2010	<0.30	<0.16	**1.5**	<0.15	<0.19	<0.23
CS-WB01-LGR-07	9/1/2010	<0.30	**0.26F**	**22**	**19**	<0.19	<0.23
CS-WB01-LGR-08	9/1/2010	<0.30	<0.16	**3.9**	**1.2F**	<0.19	<0.23
CS-WB01-LGR-09	9/1/2010	<0.30	**0.27F**	**19**	**12**	<0.19	<0.23
CS-WB02-LGR-01	9/3/2010	<0.30	<0.16	**1.7**	**0.64F**	<0.19	<0.23
CS-WB02-LGR-03	9/3/2010	<0.30	<0.16	**0.26F**	**3.3**	<0.19	<0.23
CS-WB02-LGR-04	9/3/2010	<0.30	<0.16	**8.4**	**2.2**	<0.19	<0.23
CS-WB02-LGR-05	9/3/2010	<0.30	<0.16	**3.6**	**0.93F**	**0.33F**	<0.23
CS-WB02-LGR-06	9/3/2010	<0.30	**0.26F**	**4.7**	**4.8**	**0.35F**	<0.23
CS-WB02-LGR-07	9/3/2010	<0.30	<0.16	**1.3**	**1.1F**	<0.19	<0.23
CS-WB02-LGR-08	9/3/2010	<0.30	**1.8**	**2.7**	**0.50F**	**1.4**	<0.23
CS-WB02-LGR-09	9/3/2010	<0.30	**0.20F**	**15**	**18**	<0.19	<0.23
CS-WB03-UGR-01	9/8/2010	<30.00*	<16.00*	**59F***	**5700***	<19.00*	<23.00*
CS-WB03-LGR-01	9/8/2010	<30.00*	<16.00*	<16.00*	**520***	<19.00*	<23.00*
CS-WB03-LGR-03	9/8/2010	<0.30	<0.16	**5.9**	**9.3**	<0.19	<0.23
CS-WB03-LGR-04	9/8/2010	<0.30	<0.16	**8.3**	**21**	<0.19	<0.23
CS-WB03-LGR-05	9/8/2010	<0.30	<0.16	**5.7**	**21**	<0.19	<0.23
CS-WB03-LGR-06	9/8/2010	<0.30	<0.16	**1.2**	**8.5**	<0.19	<0.23
CS-WB03-LGR-07	9/8/2010	<0.30	**0.78F**	**16**	**14**	<0.19	<0.23
CS-WB03-LGR-08	9/8/2010	<0.30	**1.4**	**2**	**10**	<0.19	<0.23
CS-WB03-LGR-09	9/8/2010	<0.30	<0.16	**7.6**	**5**	<0.19	<0.23
CS-WB04-LGR-01	9/3/2010	<0.30	<0.16	<0.16	**0.44F**	<0.19	<0.23
CS-WB04-LGR-03	9/3/2010	<0.30	<0.16	<0.16	<0.15	<0.19	<0.23
CS-WB04-LGR-04	9/3/2010	<0.30	<0.16	<0.16	<0.15	<0.19	<0.23
CS-WB04-LGR-06	9/3/2010	<0.30	**2.8**	**15**	**11**	**0.53F**	<0.23
CS-WB04-LGR-07	9/3/2010	<0.30	**13**	**18**	**1.7**	**1.2**	<0.23
CS-WB04-LGR-08	9/3/2010	<0.30	<0.16	**0.92F**	**0.31F**	<0.19	<0.23
CS-WB04-LGR-09	9/3/2010	<0.30	<0.16	**8.4**	**11**	<0.19	<0.23
CS-WB04-LGR-10	9/3/2010	<0.30	<0.16	**0.76F**	**0.78F**	<0.19	<0.23
CS-WB04-LGR-11	9/3/2010	<0.30	<0.16	<0.16	<0.15	<0.19	<0.23

Data Qualifiers
F-The analyte was positively identified; the quantitation is an estimation.
* The analyte was run at a dilution of 100.
All values are reported in µg/L.

BOLD ≥ Above the MDL.
BOLD ≥ Above the RL.
BOLD ≥ Above the MCL.

ATTACHMENT 5

SUMMARY OF CURRENT AND UPCOMING REMEDIAL ACTIVITIES AT SWMUS AND AOCS

Attachment 5
Summary of Current and Upcoming Remedial Activities at SWMUs and AOCs

Site	Area	Work Needed	Current Status	Progress	estimated excavation time	Description	Type of Closure Report	Potential COCs	Notes
SWMU B-28	**Inner Cantonment, Salado Creek**	-make sure BOT samples below TRRP criteria -Estimated completion of field effort - 1/31/2011	awaiting BOT sample results - 21 day TAT. RIR prep begun (SS)	Surface soil samples collected on 11/15 (37 samples). Additional soil samples collected to N. of site 11/22 (3 samples). Erosion control put in place 11/29. Surface soils excavated 11/30-12/2 (Volume removed = 2200 CY). Waste characterization samples, ditch samples sent to the lab 12/1. XRF used to verify vertical excavation on 12/1 (36 samples) and 12/02 (9 samples). Waste Characterization sample back non-hazardous (12/9). Excavation of high ditch levels (12/14). Hauled dirt 12/13-17. BOT samples collected 12/27.	3 weeks	1.4 acres Former trenches, already excavated. TRRP: residential, eco, Tier 1	RIR	Barium, Zinc	
SWMU B-2	**North Pasture**	-remove soil pile from DNT excavation -Estimated site competion - 12/31/2010.	need to run 95% UCL calculations again w/ latest Zinc results.	12/6 excavated DNT location. Collected 26 surface soil samples on 12/6. 12/16 collected additional ss for Zinc (7 samples).	NA	2.6 acres former burn area TRRP: residential, eco, Tier 2	North Pasture APAR	Lead, Zinc, DNT (1 bot sample)	Lead all below tier 2, 95%UCL of zn levels below teir 2. DNT resample now clean.
SWMU B-15/16	**East Pasture**	-Phase I: excavate trenches to Tier 1 -Phase 2: groundsifting operation -sample mounds for disposal or use at site -Estimated Completion -4/8/2011.	Phase I began 1/4/2011. Currently excavating trenches.	Site mowed 12/20 (USA). Silt Fencing completed 12/21 (USA). SWPPP finalized 12/27. WP/SAP finalized 12/30. Excavation began 1/4 with the middle trench, then southern trench. Estimated soils (1600CY trench 1, 1000 CY trench 2, _____ trench 3).	14 weeks Phase I: 1/3 Phase 2: 1/17	3.3 acres Range landfill trenches, one trench already excavated. Mounds at the end of trenches investigated (pushed over) but not sampled. TRRP: residential, eco, Tier 1.	RIR	Zn. 9 metals plus BOTs w/ VOCs, and SVOCs	
SWMU B-24	**North Pasture**	- Create Map w/ previous samples results and XRF. Plot additional surface soil samples. (GP) -collect additional surface soil samples -draft SWPPP -draft WP/SAP -sort overage pile - SWPPP BMPs - remove soil piles -anomaly id and mag n dig in excavation area -Excavate soils, if necessary. -Estimated Completion - unknown.	Awaiting soil sampling map (GP) (1/6)	12/6 flagged XRF sites. 12/7- 8 completed XRF survey (67 of points).	4 weeks for overage pile. ___ for excavation.	3.4 acres Disposal area. Need soil excavation to get closure for MC. MEC will be addressed seperately. Overage pile removal is estimated at 4 weeks TRRP: residential, eco, Tier 2	North Pasture APAR	Ba, Cu, Pb, Zn	full suite of UXO for the overage pile effort (approx. 4 weeks). One sufficient afterwards.
SWMU B-27	**Inner Cantonment, Salado Creek**	-Exploratory trenching -draft SWPPP (KL) -draft WP/SAP (KL) -place BMPs for erosion control -Excavate trenches	drafting SWPPP and WP/SAP (KL)		35 weeks	2.14 acres reportedly former sanitary landfill - however contents unknown. Geophysical indicated 3 trenches, 10-13 ft bgs, - Soil borings. approx 17,800 CY of waste. TRRP: residential, eco, Tier 1	RIR, if possible	metals	Need security around site - chainlink fencing. Possibility of doubling up on excavators to reduce timeline. Possible USGS trench site full suite of UXO most likely.
AOC-62	**Inner Cantonment, Salado Creek**	'-exploratory trenching to estimate volume to remove and figure out contents - surface soil sampling based on anomaly and presumed excavation area -draft SWPPP -draft WP/SAP -place BMPs for erosion control -Excavate materials	12/21 completed XRF Survey (16 locations)		7 weeks	0.4 acres One of the Salado Creek Anomalies south of B-28, based on geophysical survey. 17,424 ft2. Estimate down to 5 feet the whole site = 87,120 ft3=3,300 CY TRRP: residential, eco, Tier 1	RIR, if possible	metals, VOCs	XRF survey showed no hits above Tier 1 PCLs. Possible USGS trench site.
AOC-58	**Inner Cantonment, Salado Creek**	-exploratory trenching to estimate volume to remove and figure out contents -draft SWPPP -draft WP/SAP -place BMPs for erosion control -Excavate materials			3 weeks	0.2 acres suspected disposal trench - 4 separate anomalies. Geophysical survey done, 3 surface soil samples collected on top of anomalies (mercury exceeded background at SS01). anomalous area found to be approx. 135 feet long by 25 feet wide. Estimating trench depth of 10 feet, so 33,750 ft3 = 1,250 CY. KC and BM familiar w/ site. TRRP:	RIR, if possible	metals	Possible USGS trench site.
AOC-52	**Inner Cantonment, Salado Creek**	-exploratory trenching to estimate volume to remove and figure out contents -draft SWPPP -draft WP/SAP -place BMPs for erosion control -Excavate materials			4 weeks	2 acres one of the Salado Creek anomalies. At least 2 trenches w/ metal debris. Exploritory trenching performed only. At least 2 trenches present in approximatley 0.1 acres. Estimate depth to 10ft =	RIR, if possible	metals, VOCs	currently staging area for B-4. Possible USGS trench site.
AOC-42	**Inner Cantonment, Salado Creek**	-exploratory trenching to estimate volume to remove and figure out contents -draft SWPPP -draft WP/SAP -place BMPs for erosion control -Excavate materials			12 weeks	2.5 acres One of the Salado Creek Anomalies south of B-28, based on geophysical survey. 6 anomalies found at this site in second geophysical survey. Soil gas, surface and subsurface soil samples. Two trenches	RIR, if possible	metals	Possible USGS trench site. May need shredder.
SWMU B-20/21	**North Pasture**	-draft SWPPP -draft WP/SAP -place BMPs for erosion control -anomaly id and mag n dig in excavation area -Excavate contaminate soils			8 weeks	35 acres OB/OD area, MEC and MC issues. MEC will need to be addressed seperately. Estimated 6,900 CY, but this includes 3,000 CY for PIMS area which doesn't need to be sifted.	North Pasture APAR	metals	Possible USGS scattered debris site. should be able to mag n dig ahead of excavation.

Attachment 5
Summary of Current and Upcoming Remedial Activities at SWMUs and AOCs

Site	Area	Work Needed	Current Status	Progress	estimated excavation time	Description	Type of Closure Report	Potential COCs	Notes
SWMU B-13	**Inner Cantonment**	-draft SWPPP -draft WP/SAP -place BMPs for erosion control -Excavate disposal area.			22 weeks	3 acres Construction waste disposal site. Geophysical survey, soil borings. buried materials - approximately 11,000 CYS	RIR, if possible	metals, VOCs	
AOC-72	**Inner Cantonment**	-Exploratory trenching to estimate volume to remove and figure out contents, - surface soil sampling to confirm ND in site soils. -draft SWPPP -draft WP/SAP -place BMPs for erosion control -excavate		XRF samples collected 12/15 (17 locations).	unknown - medium	4 acres Construction debris landfill. Not investigated yet.		VOCs, metals, and asbestos	XRF survey showed no Zn or Pb above background in surface soils.
SWMU B-8	**North Pasture**	-Confirm TRRP goad and resulting excavation extent -Estimate volume to remove -Confirm current SWPPP and update erosion control BMPs if necessary -draft WP/SAP -Excavate surface soils			14 weeks	1 acre former burn area	North Pasture APAR	lead	
AOC-70	**Inner Cantonment**	-identify surface soil sample location and create sample map -Collect surface soils for pesticides	awaiting soil sampling map (GP)		unknown - short	former pesticide storage building		pesticides	
AOC-59	**Inner Cantonment**	-look at previous sample depth and previous UXO work at site (LM). -estimate volume to move to berm -Collect surface soil samples if necessary -Decide on next step	evaluating volume to move to berm	XRF survey completed 12/20 (30 locations)	unknown - short	0.2 acres Trench-type anomaly observed on areal photo. Started RIR, but only 4 samples collected			RIR already started.
AOC-45	**Inner Cantonment**	estimate volume to excavate based on TRRP criteria. -Collect surface soil samples if necessary -Decide on next step		XRF samples collected 12/6, 12/7, 12/21 (69 locations). XRF results contoured 12/27.	unknown - short	0.1 acres area of disturbed soil. Nothing done to date		metals	XRF showed site is actually situated to the west of the original location, High Pb levels, minimal Zn above background.
AOC-57	**Inner Cantonment**	- create surface soil sampling map (GP) -Collect surface soil samples -Decide on next step	putting on proposed sampling locations	XRF samples completed 12/2, 12/3, and 12/21 (67 locations).	unknown - short	6.3 acres used for cleaning and maintenance activities at temporary structures. Soil gas survey done but nothing detected other than 1 low level of PCE east of Bldg 90.		metals, VOCs	One original XRF hit above tier 1 for lead. Above tier 1 regardless if commercial/residential/ or if eco is considered. But when re-sampled, it was lower. Include samples of this, and the PCE lcoation.
RMU-5	**North Pasture**	-Field effort complete for now. Will include w/ other north pasture sites.		XRF survey conducted 12/8-9 (45 points collected).	none	19.3 acres Former rocket range. Unclear if accurately located, near B-20, several MD items found during cedar clearing	figure out	explosives, metals	nothing in XRF above background. No evidence found during XRF survey of rocket range. Only MD suspected to be from B-20
SWMU B-34	**Inner Cantonment**	-Develop Tier 2 numbers (LA) -create surface soil map w/ previous sampling results and new XRF contours (LM/GP). -Collect confirmation surface soil samples	awaiting critical PCLs development and soil sampling map.	XRF sampled 12/1/2010 (40 locations). XRF results contoured 12/27.		0.5 acres Originally buried pipe, but soil contamination is problem. Surface and subsurface soil samples collected.	APAR	metals,TPH	commercial, no eco, tier 2
AOC-51	**East Pasture**	-contour XRF results -create XRF map (GP) -Surface soil samples based on results -Possible geophysical survey, MEC sweep?		XRF survey completed 12/28 (69 locations).	unknown	72 acres No specific records of waste management in area, yet ordnance have been found.		metals	