



DEPARTMENT OF THE ARMY
CAMP STANLEY STORAGE ACTIVITY, RRAD
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January 10, 2013

U-016-13

Mr. Greg J. Lyssy
U.S. EPA, Region 6
1445 Ross Avenue (6SF-LT)
Dallas, TX 75202-2733

Subject: Period 41 Progress Report
Camp Stanley Storage Activity, Boerne, Texas
EPA Identification Number: TXD2210020739
US EPA Docket Number: RCRA-VI 002(h)99-H FY99

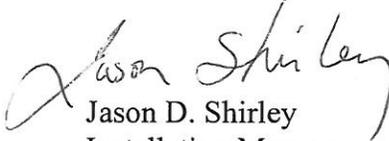
Dear Mr. Lyssy:

In accordance with the RCRA §3008(h), Administrative Order on Consent, signed 5 May 1999, Camp Stanley Storage Activity (CSSA) is submitting its 41st Progress Report, for the period from 1 July 2012 through 31 December 2012. Two hard copies of the progress report are included.

I certify that the information contained in and accompanying this submission is true, accurate, and complete to the best of my knowledge and information. As to those portions of this submission for which I cannot personally verify the truth and accuracy, I certify as the Facility Official having supervisory responsibility for the person(s) who, acting upon my direct instructions, made the verification, that this information is true, accurate, and complete.

If you have any questions or comments, please call Gabriel Moreno at (210) 295-7453 or Julie Burdey of Parsons at (512) 719-6062.

Sincerely,


Jason D. Shirley
Installation Manager

Enclosure

cc: Mr. Gabriel Moreno, CSSA (w/enc.)
Mr. Kirk Coulter, TCEQ (w/enc.)
Mr. Jorge Salazar, TCEQ (ltr only)
Ms. Julie Burdey, Parsons (ltr only)

PROGRESS REPORT

July 1, 2012 – December 31, 2012

(41st REPORT)



Camp Stanley Storage Activity

Boerne, Texas

USEPA ID No. TX2210020739

January 2013

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ACRONYMS AND ABBREVIATIONS

µg/l	micrograms per liter
1,1-DCE	1,1-dichloroethene
AOC	Area of Concern
APAR	affected property assessment report
APPL	Agriculture & Priority Pollutants Laboratories, Inc.
As	arsenic
Ba	barium
bgs	Below ground surface
BTOC	Below top of casing
CAH	chlorinated aliphatic hydrocarbons
Cd	cadmium
<i>cis</i> -1,2-DCE	<i>cis</i> -1,2-dichloroethene
COC	contaminant of concern
Cr	chromium
CSSA	Camp Stanley Storage Activity
Cu	copper
CY	cubic yard
DO	Dissolved oxygen
DQO	data quality objective
EM	electromagnetic
GAC	granular activated carbon
Hg	mercury
IEUBK	Integrated Exposure and Uptake Biokinetic
IRA	Interim removal action
I/SM	interim/stabilization measures
ISCO	in-situ chemical oxidation
LGR	Lower Glen Rose
LTMO	long-term monitoring optimization
MCL	maximum contaminant level
MD	munitions debris
MEC	munitions and explosives of concern
Mn	manganese
MPMW	multi-port monitoring well
NFA	No Further Action
NH	nonhazardous
Ni	nickel
O&M	operations and maintenance
Order	§3008(h) Administrative Order on Consent
Pb	lead
PBR	permit-by-rule
PCE	tetrachloroethene
PCL	protective concentration level
QAPP	Quality Assurance Program Plan
RAL	Residential Action Level
RCRA	Resource Conservation and Recovery Act
RFI	RCRA facility investigation

RIR	Release Investigation Report
RL	reporting limit
RMU	Range Management Unit
SCADA	supervisory control and data acquisition
SIW	steam injection well
SVE	soil vapor extraction
SVOC	semi-volatile organic compound
SWMU	Solid Waste Management Unit
TAC	Texas Administrative Code
TCE	trichloroethene
TCEQ	Texas Commission on Environmental Quality
<i>trans</i> -1,2-DCE	<i>trans</i> -1,2-dichloroethene
TSW	Treatability study well
UGR	Upper Glen Rose
UIC	underground injection control
USEPA	United States Environmental Protection Agency
USGS	United States Geological Survey
UXO	unexploded ordnance
VC	vinyl chloride
VEW	vapor extraction well
VOC	volatile organic compound
WP	work plan
WWTP	wastewater treatment plant
XRF	x-ray fluorescence
Zn	zinc

PROGRESS REPORT

JULY 1, 2012 – DECEMBER 31, 2012

(41st PERIOD)

INTRODUCTION

This 41th 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, 2012 through December 31, 2012. 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, 2012, significant activities related to the Order included:

- Continuation of Solid Waste Management Unit (SWMU) B-3 bioreactor treatability studies;
- Continuation of Area of Concern (AOC)-65 Soil Vapor Extraction (SVE) and Operations and Maintenance (O&M) of the SVE system treatability study, until it ceased, with USEPA approval, in August 2012;
- Continuation of AOC-65 in-situ chemical oxidation (ISCO) treatability study;
- Continuation of the groundwater monitoring program under the regulator-approved data quality objectives (DQO);
- Began closure investigations of SWMUs, AOCs, and Range Management Units (RMUs) including SWMU B-13, AOC-75, RMU-3, and RMU-4;
- Submitted a Release Investigation Reports (RIR) to the Texas Commission on Environmental Quality (TCEQ) for AOC-51;
- Received closure approval based on submitted RIRs from the TCEQ for AOC-51 and RMU-5;
- Provided review comments on the SWMU B-4 Affected Property Assessment Report (APAR) to Weston;
- TCEQ “conditionally approved for construction” Well CS-13 as a potable water supply. In November, Parsons began preparing the necessary Engineering Plans and Specifications documentation for a January 2013 submittal for approval by the TCEQ;
- Sampled deer and feral hog tissues collected through CSSA’s hunting program for lead;
- Continued maintenance of off-post granular activated carbon (GAC) systems; 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, 2012 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, AOCs, and RMUs 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, AOCs, and RMUs at CSSA. **Attachment 6** includes the results of tissue sampling conducted this period 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 P41
Interim Measures		30%				99%	
Interim Measures Work Plan	Mitigate a current or potential threat to human health and/or the environment.		7%	99%	7%		No
Interim Measures Implementation			70%	99%	70%		No
Reports			23%	99%	23%		No
RCRA Facility Investigation		30%				92%	
Preliminary Report	Characterize the environmental setting of CSSA; define the sources of contamination; define the degree and extent of contamination; identify actual or potential receptors; and assess whether any additional interim/stabilization measures may be warranted.		5%	100%	5%		No
RFI Work Plan			5%	100%	5%		Yes
Facility Investigation			40%	96%	39%		Yes
Risk Assessment			10%	91%	9%		Yes
Investigation Analysis			10%	91%	9%		Yes
Groundwater Investigation			15%	92%	14%		Yes
Treatability Studies			10%	74%	7%		Yes
Progress Reports			5%	70%	4%		Yes
Corrective Measures Study		10%				0%	
Identify and Develop Alternatives	Identification, screening, and development of alternatives for removal, containment, treatment, and/or other remediation of the contamination.		15%	0%	0%		No
Evaluate Alternatives			60%	0%	0%		No
Reports			25%	0%	0%		No
Corrective Measures Implementation		30%				0%	
Implementation Program Plan	Design, construct, operate, maintain, and monitor the performance of corrective measure(s) selected to protect human health and the environment.		5%	0%	0%		No
Corrective Measure Design			15%	0%	0%		No
Corrective Measure Construction			70%	0%	0%		No
Reports			10%	0%	0%		No
% of All Phases Complete						57%	

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, treatability studies, and an interim removal action at AOC-65;
- Continuation of bioreactor operation and other treatability studies at SWMU B-3;
- Investigations and/or interim removal actions at SWMU B-13, AOC-75, and RMU-3.

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. The Environmental Encyclopedia will continue to be updated as WPs for 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 2012. The website serves as CSSA's Administrative Record as required under the Order. The Environmental Encyclopedia was updated with all final reports through December 2012. Updates made in Period 41 (and late Period 40) included the following:

July 2012:

- 2011 Annual Groundwater Report
- Release Investigation Report for AOC-51
- AOC-51 Release Investigation Report Cover Letter to TCEQ
- ISCO Work Plan
- Annual Bioreactor Performance Status Report (Q20)
- Progress Report Period 40 Cover Letter
- Semi-Annual EPA Progress Report
- TW-2/CS-13 Well Installation Report
- Biannual Status Report Months 55 – 60

August 2012:

- USFWS PBO Concurrence of GCWA Mitigation Credits
- June 2012 Well Owner Letters
- September 2012 Groundwater Sample Notification

September 2012:

- 2012 September 20 RMU-5 Release Investigation Report Approval
- Work Plan/Sampling and Analysis Plan for SWMU B-13
- Storm Water Pollution Prevention Plan for SWMU B-13
- RFI and Interim Measures Waste Management Plan for SWMU B-13
- AOC-51 UXO Tech Memo

October 2012:

- Storm Water Pollution Prevention Plan for AOC-75
- June 2012 Off-Post Groundwater Report
- Work Plan/Sampling and Analysis Plan for RMU-4
- Storm Water Pollution Prevention Plan for RMU-4
- RFI and Interim Measures Waste Management Plan for RMU-4
- 2012 October 15 AOC-51 Release Investigation Report Approval

November 2012:

- Work Plan/Sampling and Analysis Plan Addendum for AOC-75
- December Groundwater Sample Notification Letter
- September 2012 Well Owner Letters

December 2012:

- Groundwater SAP Update 2012
- SWMU B3-EXW05-LGR Installation Report
- AOC-65 SVE O&M Assessment Report 2012 Update

Throughout Period 41:

- Various correspondence to and from CSSA (see Summary of Contacts for more information);
- Various meeting minutes; and
- Various tables of contents, site chronologies, and indices.

Facility Investigations

An investigation of the facility is being conducted to:

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

In some cases, multiple investigational phases may be necessary. Investigation results will be used to develop and evaluate alternatives during the Corrective 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 41, this task is approximately 96 percent complete.

A total of 84 SWMUs, AOCs, and 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 71 CSSA sites has been approved by TCEQ, and of these, 27 sites were either delisted or granted No Further Action (NFA) status.

The remaining sites are listed in the table below, and additional information regarding recent actions are provided in the following paragraphs.

Remaining Sites at CSSA

Site Name	Status
1. SWMU B-3 2. AOC-65	Ongoing treatability study for groundwater.
3. SWMU B-13	Remediation effort completed and closure report currently being prepared.
4. AOC-75 5. RMU-3 6. RMU-4	Remediation effort started and closure report planned to be submitted to the TCEQ during next Period.
7. SWMU B-34	Closure report to be prepared in next Period.
8. SWMU B-2 9. SWMU B-8 10. SWMU B-20/21 11. SWMU B-24 12. RMU-1	Sites located in current active range fan. Closure to be deferred to when range closes, per USEPA Memo re: CSSA North Pasture Fencing (February 29, 2012).

Site Closure Investigations

During Period 41, CSSA continued to conduct field investigations and interim removal actions at a number of the remaining open sites, and met the goal of closing approximately one site per quarter. Investigations and/or interim removal actions were conducted at four sites during this period, one NFA RIR was submitted to the TCEQ for approval (AOC-51) and TCEQ approval was received for the closure of two sites (RMU-5 and AOC-51). Detailed discussions on each of these sites are included below.

CSSA plans to continue to close as many sites as possible to background or Tier 1 Protective Concentration Levels (PCLs). At sites where Tier 1 PCLs cannot be met, closure under Tier 2 requirements will be sought. Upon completion of site investigation activities, CSSA will submit either an RIR or an Affected Property Assessment Report (APAR) depending on the results of the investigation and the type of closure sought for the site. CSSA plans to

combine appropriate sites together in APARs to minimize redundant documentation requirements. Field activities at the remaining open sites, shown in Attachment 5, are anticipated to potentially include interim removal actions, and soil sampling and laboratory analysis.

AOC-51

Investigations and/or interim removal actions at AOC-51 were completed during Period 40. An RIR requesting NFA for AOC-51 was submitted to the TCEQ on July 13, 2012 and interim documentation (Tech Memo) for a UXO Investigation was submitted on September 11, 2012. Closure of AOC-51 was approved by TCEQ on October 15, 2012.

AOC-75

Excavation of contaminated soils at AOC-75 began on November 28, 2012. On December 3, a new trench was encountered in the northern portion of the site with the approximate dimensions of 100 feet long by 12 feet wide by five to seven feet deep. Excavation of the new trench took place on December 3 and 4, and resulted in the recovery of approximately 150 cubic yards (CY) of soils with styrofoam materials and 50 CY containing metal cabinets. The excavation of the remainder of AOC-75 was completed on December 6. Waste characterization samples were collected from the approximately 3,000-CY of soil excavated from the original excavation area and the new trench. Confirmation samples were collected from the excavation footprint and the new trench area on December 18. Based on the results of the confirmation samples, the excavation is expected to be completed in the first part of Period 42 and the completion and submission of the RIR requesting NFA will follow thereafter. Additionally, a suspect trench to the north of AOC-75 (that is not, however, included in the AOC-75 boundary) will be investigated in Period 42.

SWMU B-13

Excavation activities to remove the landfill material and the associated soils with metal concentrations above Tier 1 PCLs were conducted at SWMU B-13 between September 24 and November 7, 2012. During this period, approximately 7,520 CY of material and associated soils were excavated from the site. Approximately 4,980 CY of soil and associated materials were transported and disposed of as non-hazardous soil to a nonhazardous (NH) Class 2 landfill at Covell Garden Landfill in San Antonio, Texas. Of this volume, 1,620 CY contained less than 5% non-friable transit tiling which was also classified for disposal as non-hazardous soil. Approximately 2,500 CY of soil remain onsite for management at the CSSA East Pasture Berm during the next Period.

Following completion of the excavation, 18 confirmation samples were collected from the bottom and side walls of the excavated area. All the samples were analyzed for CSSA 9 metals (arsenic [As], barium [Ba], cadmium [Cd], chromium [Cr], copper [Cu], lead [Pb], mercury [Hg], nickel [Ni], and zinc [Zn]) and approximately ten percent were also analyzed for volatile organic compounds (VOCs) and semivolatile organic compounds (SVOCs). An additional sample was collected beneath the area that contained the non-friable asbestos tiling and was analyzed for asbestos. This sample did not contain asbestos. All of the confirmation samples, with the exception of one, came back with levels below Tier 1 PCLs. The area in the vicinity of the sample which showed elevated levels of zinc and lead in the soil was re-excavated, re-

sampled and subsequently showed clean confirmation of the re-excavation. An RIR requesting NFA for B-13 is being prepared and will be submitted to TCEQ during the next Period.

RMU-3

On December 5, 2012, pre-excavation preparation began at the site with the clearance of cacti and brush from the excavation footprint. Excavation activities started on December 10 and continued through December 18. Confirmation samples were collected at the site on December 19. Based on the results of the confirmation samples, the excavation is expected to be completed in the first part of Period 42 and the completion and submission of the RIR requesting NFA will follow thereafter. Waste characterization samples were also collected from the excavated soil for analysis and it is expected that approximately 3,000 CY of soil will be transported to CSSA's east pasture for management during the next Period.

RMU-4

From October 8 through 18, the unexploded ordnance (UXO) team conducted a surface clearance for UXO within the proposed staging areas, the parking area, and the excavation footprint of the site. The week of October 22, the excavation footprint and the working areas were cleared of vegetation in preparation of excavation activities which are scheduled to begin in the next Period. On October 26, the EOD team from Lackland AFB detonated-in-place seven fused mortars found on the surface of the excavation footprint.

RMU-5

An RIR requesting NFA for RMU-5 was prepared and submitted to TCEQ during Period 40 on June 15, 2012. Closure of RMU-5 was approved by TCEQ on September 20, 2012.

East Pasture Well CS-13

In spring 2012, Parsons installed test well (TW-2) in the East Pasture of CSSA. The well was drilled through the entire thickness of the Middle Trinity Aquifer to a depth of 578 feet below ground surface (bgs). Groundwater samples were collected from the test well and submitted for chemical and microbial analysis to determine if the groundwater met regulatory requirements for safe drinking water. No organic, inorganic, radionuclide results exceeded any regulatory standard. Following a 36-hour pumping test, CSSA concluded that the well location met the expectations of a fire suppression system for the East Pasture. CSSA opted to convert the test well into a fully constructed fire suppression supply well, now designated CS-13.

During the summer months of 2012, CSSA entered into discussions with the TCEQ to consider CS-13 as a potential source for potable water for the post. After a series of meetings and data submittals, the TCEQ notified CSSA on October 30, 2012 that CS-13 was "conditionally approved for construction" as a potable water supply. In November, Parsons began preparing the necessary *Engineering Plans and Specifications* documentation for a January 2013 submittal for approval by the TCEQ. Once the design plans are approved, CSSA will construct the new well facility.

Human/Ecological Risk Assessment Efforts

On February 29, 2012, USEPA sent a memorandum to CSSA regarding disposition of the SWMUs in the North Pasture which are situated within the safety fan of the active East Pasture range. In the memo, USEPA stated, "It is also recommended that an ecological risk assessment be conducted, where the waste is remaining in place, on wildlife species that are being harvested, to

ensure that there are not any potential exposures above acceptable risk levels.” As a result of this comment, CSSA contracted Parsons to collect tissue samples for lead analysis. The goal of this task is to collect tissue samples from animals harvested at CSSA for human consumption (i.e., deer, turkeys, and feral hogs) to support a future human health risk assessment to determine the risk associated with consumption of animals that have been exposed to lead contaminated soil. As of December 20, 2012, samples were collected from 18 individual animals; 17 deer and one feral hog. Samples collected from each animal included a muscle tissue sample, a liver tissue sample, and a bone sample.

Muscle tissue samples are expected to represent potential human exposure, as this is the tissue most consumed by humans. Therefore, the muscle tissue results are anticipated to be used to estimate the risk associated with consumption of animals harvested at CSSA. In order to evaluate the potential exposure of animals harvested at CSSA to lead-contaminated soil, liver and bone samples were also collected, although it is not anticipated that these tissues would be consumed by human receptors. The presence of lead in liver samples would indicate potential recent (i.e., short-term) exposure of the animal to lead. Lead present in contaminated soil would enter the blood stream following ingestion, and then pass through the liver before moving to the rest of the body (first-pass effect). The lead can then be eliminated from the liver through the feces. However, lead that moves through the liver and into the rest of the animal’s body can be sequestered into bone, due to the chemical similarities between lead and calcium (both are divalent cations). Lead that is sequestered into the bone tends to remain in the animal for extended periods of time. Therefore, the presence of lead in bone samples could be indicative of past exposure, but not necessarily recent exposure.

Using USEPA’s Integrated Exposure and Uptake Biokinetic (IEUBK) Model to estimate an acceptable exposure to lead in animal tissue resulted in the following acceptable levels of lead in muscle tissue. Assuming an acceptable blood lead level of 10 micrograms per deciliter ($\mu\text{g/dL}$), and assuming that a child obtains 1% of their meat diet (i.e., the child eats meat obtained from an animal harvested at CSSA for four days out of the year), the acceptable concentration of lead in muscle tissue would be 150 milligrams of lead per kilogram (mg Pb/kg) tissue. If the assumption is changed to 10% of the child’s meat consumption for the year is obtained from an animal harvested at CSSA, the acceptable concentration of lead in muscle tissue would be reduced to 15 mg Pb/kg tissue.

Analytical results indicate that lead (at a detection limit of approximately 0.5 mg Pb/kg tissue) was not detected in any of the muscle or liver samples. However, lead was detected in 5 of 18 bone samples, ranging from 0.71 mg Pb/kg bone to 2.7 mg Pb/kg bone. The data are currently being spatially evaluated to determine if there is a correlation between animals that were found to have lead in bone samples and the location those animals were harvested. Additionally, literature reviews are being conducted to determine the naturally-occurring concentrations of lead in bone. Analytical results are provided in Attachment 6.

Groundwater Investigation

The groundwater investigation subtask makes up approximately 15 percent of the RFI phase. As of the end of Period 41, this task is approximately 92 percent complete.

On- and off-post groundwater monitoring was conducted in accordance with regulator-approved DQOs during Period 41. Sampling frequencies for on-post and off-post wells are currently determined by the long-term monitoring optimization (LTMO) study updated in

November 2010, as approved by TCEQ and USEPA. 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 work plans and DQOs. On- and off-post monitoring wells and Westbay-equipped wells were sampled for the SW-846 Method 8260B VOCs 1,1-dichloroethene (1,1-DCE), *cis*-1,2-dichloroethene (*cis*-1,2-DCE), *trans*-1,2-dichloroethene (*trans*-1,2-DCE), tetrachloroethene (PCE), trichloroethene (TCE), and vinyl chloride (VC). On-post monitoring wells were sampled for the SW-846 Method 6010/6020 metals Pb, Cd, Hg, and Cr. On-post drinking water wells were also sampled for four additional metals: Ba, As, Cu, and Zn. Additional samples were collected off-post from wells with GAC filtration systems. Samples were analyzed by Agriculture & Priority Pollutants Lab Inc. (APPL) in Clovis, California. 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 2012 Sampling

Six on-post wells were scheduled for sampling in June 2012. Off-post wells scheduled for sampling in June 2012 included 11 private and public drinking water wells. No Westbay zones from four multi-port wells (WB01-WB04) are scheduled for sampling.

Sampling was conducted June 4-15, 2012. Analytical results from the June 2012 sampling event are included in Attachment 4. The average groundwater elevation in June 2012 decreased 30.64 feet from that measured in March 2012. In San Antonio, water restrictions are currently at Stage 2; as of May 1, 2012. The Trinity Glen Rose Groundwater Conservation District remains under stage 2 severe drought water restrictions, which went into effect June 1, 2011. The average depth to water in the Lower Glen Rose (LGR) screened wells was 267.53 feet below top of casing (BTOC) or 984.23 feet above mean sea level (msl).

The maximum contaminant level (MCL) was exceeded in on-post monitoring well CS-MW36-LGR for PCE in June 2012. No zones in Westbay Wells (WB01-WB04) in the vicinity of AOC-65 were sampled in June 2012. However, these wells were profiled to collect water level data in the area.

Analyses indicated that three off-post wells, I10-4 OFR-3, and RFR-10, exceeded the MCL for PCE and/or TCE. Well I10-4 is not in use. Six other wells (I10-9, LS-5, LS-6, LS-7, and RFR-11) had PCE or TCE detections above the reporting limit, but below the MCL. Two other wells had no VOC detections.

Semi-annual GAC maintenance was performed July 18, 2012. This involved replacing the first carbon canister in each GAC unit and other routine maintenance. This carbon exchange is performed semi-annually; the next carbon change-out will be due in January 2013.

September 2012 Sampling

Fifteen on-post wells and 10 private and public off-post wells with 7 post-GAC samples were scheduled for sampling in September 2012 in accordance with the LTMO schedule. All samples were analyzed for VOCs. In addition, the on-post samples were analyzed for selected metals. Analytical results from the September 2012 sampling event are included in Attachment 4.

Sampling was conducted September 4-14, 2012. Average groundwater elevations in September 2012 decreased 35.29 feet from the elevations measured in June 2012. The average depth to water in the LGR screened wells was approximately 300 feet below ground surface.

Eleven of fifteen on-post wells scheduled for monitoring in September 2012 were sampled. Wells CS-MW10-LGR, CS-4, and CS-D were not sampled due to low water levels. Well CS-1 was not sampled because it was shut down for well house rehabilitation. All wells were analyzed for selected VOCs (CSSA short list) and metals (Cr, Cd, Hg, and Pb) additional metals (As, Ba, Cu, and Zn) were collected from the drinking water wells. Nine of the 10 wells scheduled for sampling off-post were collected, one well (I10-9) was not sampled due to electrical disconnection. Seven post-GAC samples were also collected. Forty-six Westbay Well zones were scheduled for sampling in September, but 7 of those zones were not sampled because they were dry.

The MCLs for PCE and TCE were exceeded in monitoring wells CS-MW1-LGR and CS-MW36-LGR in September 2012. The AL for Pb (0.015 mg/L) was exceeded in well CS-9 (0.028 mg/L) and the MCL for Hg was also exceeded (0.0041 mg/L). Thirty-nine of the 46 Westbay well zones, from WB01-WB04, in the vicinity of AOC-65 were sampled in September 2012. The MCL for PCE and/or TCE was exceeded in 14 of the 39 zones sampled. These wells were also profiled to collect water level data in the area. The Westbay wells are scheduled to be sampled again in March 2013, in accordance with the LTMO schedule.

A total of seven off-post wells reported detections of PCE and/or TCE during the September 2012 event. Two of those wells (OFR-3 and RFR-10) exceeded the MCL for PCE and/or TCE. Both of these wells are equipped with GAC filtration systems. Five wells (I10-4, LS-5 LS-6, LS-7, and RFR-11) reported concentrations below the MCL, but above the RL.

GAC-filtered samples were also collected in September 2012. No VOCs were detected in any of these samples, indicating the GAC systems are functioning properly. GAC-filtered samples will be collected again during the March 2013 event.

December 2012 Sampling

All 48 on-post wells were scheduled for sampling during the ‘snapshot’ event in December 2012. Off-post wells scheduled for sampling in December 2012 included 56 private and public drinking water wells. Eight Westbay zones from four multi-port wells (WB01-WB04) are also scheduled for sampling. Sampling was conducted December 3-21, 2012. Laboratory results will be received in January 2013 and summarized in the next progress report.

Off-Post GAC Systems

Based on sampling results received in 2001, 2002, and 2011 indicating VOC levels above or approaching the MCL, GAC filtration systems were installed at six 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-5, 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 during the September 2012 event. All VOC results for the post-GAC water samples were non-detect. Carbon canister

exchange was completed in July 2012 for the off-post GAC systems and will be due again in January 2013.

Data Validation and Verification

Laboratory results from sampling efforts and investigations are validated and verified by chemists to ensure results are in compliance with CSSA QAPP requirements. Data validation and verification continued during Period 41.

Treatability Studies

The Treatability Study subtask makes up approximately 10 percent of the RFI phase. As of the end of Period 41, this task is approximately 74 percent complete.

SWMU B-3 Bioreactor

A major upgrade to the SMWU B-3 Bioreactor system was completed in the reporting period. A new building for collecting and distributing the groundwater was constructed, and new plumbing was installed to convey the groundwater from the wells to the building and trenches. In addition, the infrastructure for three new wells (B3-EXW03, -EXW04, and EXW05) was completed and the wells were brought on-line in December 2012.

SWMU B-3 Bioreactor Performance Status Reports were not submitted to CSSA, TCEQ and USEPA during this period. The reporting frequency has changed from a semi-annual to an annual basis and next performance status report is scheduled for submission in Period 42. Approximately 61,554,712 gallons of groundwater extracted from CS-MW16-LGR, CS-MW16-CC, CS-B3-EXW01, CS-B3-EXW02, CS-B3-EXW03, CS-B3-EXW04 and CS-B3-EXW05 have been injecting into the bioreactor trenches since the start of injection in 2007. A annual 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 June 2012.

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 quarterly and monitoring samples from Westbay-equipped monitoring wells, injection trench sumps, and additional performance samples are collected semi-annually. 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 on an annual basis with the next report due for submission in Period 42. Analytical data collected for performance parameters include;

- Dissolved Organic Carbon;
- Methane, Ethane, and Ethene;
- Hydrogen;
- Temperature, pH, and specific conductivity;
- Oxidation Reduction Potential;
- Dissolved Oxygen;
- Total Organic Carbon;
- Carbon Dioxide;

- Hydrogen;
- Sulfide;
- Additional ions including Sulfate, Chloride, Ferrous Iron, and Manganese; and
- Dehalococcoides populations.

Several bioreactor system updates were completed during Period 41. These system updates are expected to significantly change bioreactor O&M activities. A bioreactor control building was completed that houses system controls, storage tanks, transfer pump, and the bag filter. The repositioning of the injection equipment in this new building required the rerouting of water lines from extraction wells and utilities, and relocating supervisory control and data acquisition (SCADA) controls. Two 10,000-gallon tanks were installed in series in the new building replacing the 6,000-gallon trailer mounted tank previously used.

Two new extraction wells west of the bioreactor (B3-EXW03 and B3-EXW-04), and one extraction wells east of the bioreactor (B3-EXW-05), previously drilled, were incorporated into the system during Period 41. Surface completions, utility service connections, installation of electrical boxes, and water line connections have been completed for EXWs -03, -04, and -05. The goal of these three wells is to provide additional reliable water sources for the bioreactor and provide a measure of protection against the migration of contaminants in groundwater away from B-3.

Additionally, bioreactor trenches 1, 2, and 6 were recharged with deciduous tree mulch and pea-sized gravel in Period 41. The new mulch provides organic carbon for anaerobic reductive dechlorination of contaminants through dehalorespiration. New injection lines were installed approximately 18 inches below the surface and covered with new geotextile fabric in these trenches. The new lines allow the upper portion of trenches to be saturated. Additionally, the sumps in these trenches were extended so they rise above the elevated ground surface and berm located on the west side of the bioreactor.

A small amount of lactate was added to active bioreactor trenches to determine the efficacy of lactate injections (addition of electron donor) as a means to reduce dissolved oxygen (DO) concentrations within the bioreactor, thus ensuring optimal anaerobic conditions can be maintained following a large influx of oxygenated water. Lactate injection activities were completed on October 10, 2012. A total of 55 gallons of WilClear Sodium Lactate 60% Solution were applied to trenches 1 and 6 via an injection port installed within the newly-constructed Bioreactor Building injection system. Only slight variations in DO concentrations were observed within trench sumps prior to and following lactate injection. Slight decreases in DO concentrations were observed in all three trenches, and only sump 1-1 (in Trench 1) indicated an increase in DO immediately following lactate injection. Additionally, DO concentrations remained below the 0.50 milligrams per liter (mg/L) threshold for optimal reductive dechlorination following injections with two exceptions (T 1-2 at 0.55 mg/L on 11/15/12 and T 6-1 at 0.70 mg/L on 11/30/12). Based on the current DO concentrations and due to the recent addition of mulch to the trenches, Parsons concludes that availability of electron donor is currently not the rate-limiting factor in anaerobic reductive dechlorination and recommends no further additions of lactate within the Bioreactor in the near future. However, if DO concentrations above 1 mg/L are sustained within active trench sumps for 6 months it is possible that electron donor availability is limited and lactate injection may be considered to restore anaerobic conditions.

During Period 41, the bioreactor remained at saturated conditions due to the continued supply of water from wells CS-MW16-CC, CS-MW16-LGR, B3-EXW01, B3-EXW02, B3-EXW03, B3-EXW04 and B3-EXW05 less so from rainfall. Approximately 6,168,836 gallons of water were injected into bioreactor trenches 1 and 6 during Period 41.

Monitoring results continue to indicate that effective treatment of injected groundwater in the bioreactor is occurring; however, VOC components continue to remain in strata adjacent to 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 41 (data available through October 2012), degradation products, VC and ethene, were identified within the bioreactor (VC as high as 23 µg/L and ethene as high as 10 µg/L); and in significant concentrations, respectively, within shallow Upper Glen Rose (UGR) wells: MW26-UGR (18 µg/L and 13 µg/L), MW27-UGR (8.1 µg/L and 2 µg/L), and MW34-UGR (63 µg/L and 19 µg/L); and in Westbay-equipped wells WB08-UGR-01 (41 µg/L and 36 µg/L), and CS-WB06-UGR01 (2.2 µg/L VC only). Ethane is present in samples from B3-MW26, -27 and -34, and WB08-UGR-01 (5.7, 0.8, 6.7 and 3.0 µg/L, respectively).

Additionally, end products VC and ethene are observed at depth in the WB05-LGR-03B (6.3 µg/L VC only), -04A (40 µg/L and 1.0 µg/L), and -04B zones (223 µg/L and 17 µg/L) and WB07-LGR-01 (24 µg/L and 2.2 µg/L) and -02 zones (5.1 µg/L and 1.3 µg/L), as well as CS-B3-MW01 (69 µg/L VC and 15.4 µg/L ethene). These wells are located north and west of the bioreactor indicating reduction byproducts are migrating vertically in these areas. Ethene represents one of the final degradation products of attenuated chlorinated solvents. In addition, elevated levels of manganese (Mn) suggest biotic anaerobic oxidation of chlorinated aliphatic hydrocarbons (CAHs) to carbon dioxide, and elevated levels of iron and *trans*-1,2-DCE suggest abiotic reductive dechlorination may also be occurring.

VOC analytical results from bioreactor trench sump samples indicate a decrease in contaminant mass (total molar concentration) in trench sumps T1-1, T1-3 and T6-1 through the year. Increases in total molar concentrations were observed in samples from T1-2, and T6-2 through the year. Over the bioreactor operational period (5.5 years), contaminant mass appears stable or decreasing.

In addition, minor amounts of toluene and other fuel related compounds were identified during monitoring of bioreactor sumps from trench 1 during Period 41.

Arsenic (As) was detected in concentrations exceeding the MCL (10 µg/L) in one Westbay well zone, CS-WB05-LGR04B (15 µg/L) during Period 41. Mn was reported in bioreactor trench water samples at concentrations ranging from 5.4 to 898 µg/L (MCL is 50 µg/L). Seven of the eight shallow UGR wells sampled during Period 41 had elevated levels of Mn with concentrations ranging from 21 to 956 µg/L. One of the shallow UGR wells did not produce enough water to sample during Period 41. An elevated level of Mn was reported in CS-B3-MW01 (164 µg/L) during this Period. Elevated levels of Mn were reported in CS-WB05-LGR-04B (54 µg/L), CS-WB06-UGR-01 (1,270 µg/L), WB07-LGR-01 (693 µg/L) and -LGR-02 (77 µg/L), and CS-WB08-UGR-01 (1,420 µg/L) and -LGR-04 (82 µg/L), all other multi-port monitoring well (MPMW) zones reported Mn and As levels below the MCL. The elevated levels are likely due to changing pH conditions of the groundwater and the reduction of naturally occurring As and Mn within the limestone media to more soluble forms. Additionally, the biotic anaerobic oxidation pathway of CAHs may also be contributing to the elevated levels of Mn within the treatment system.

AOC-65 SVE System/In-Situ Chemical Oxidation

Monthly monitoring and semi-annual sampling of the AOC-65 SVE system was suspended during Period 41 to accommodate the implementation of an ISCO treatability study. After the completion of the ISCO treatability study, the SVE system remained off, due to a reduction in efficacy as identified from the analysis of Period 39-40 data. Evaluation of previous monitoring results indicated the SVE system removed approximately 0.83 gallons of PCE during the 18 months prior to system shutdown and no exceedances of permit-by-rule (PBR) limits occurred for the SVE system. In light of this result, it was determined that vapor extraction wells (VEWs) within Building 90 had no future use, and thus were plugged and abandoned on September 19, 2012.

ISCO treatability study activities including the injection of ISCO and activator solutions and monitoring efforts were completed at AOC-65 during Period 41. A 20% sodium persulfate solution was injected into an infiltration gallery installed within the 320-foot long trench created from Interim Removal Action (IRA) efforts completed in Period 40. A total of 10,500 gallons of the oxidant solution and approximately 3,500 gallons of 25% sodium hydroxide activator solution were injected into three zones within the infiltration gallery and into a steam injection well (SIW-01) located within Building 90. Ensuing groundwater monitoring of off-post wells with GACs included analyses for metals, VOCs, and anions (chloride, sulfate, and bicarbonate), and occurred 1, 5, 15, 30, and 60 days following injection. Additional sampling was completed for on-post VEWs, treatability study wells (TSWs), and Westbay wells within AOC-65.

Meetings

A meeting was held with USEPA on September 11, 2012 to discuss the progress and future of ISCO operations at AOC-65.

Summary of Contacts

Letters summarizing the results of the June 2012 and September 2012 off-post groundwater monitoring events were mailed to owners of the off-post wells in Period 41. Groundwater sampling notification letters were sent to the USEPA and TCEQ one month prior to the start of the September 2012 and December 2012 sampling events. Other Order-related correspondence during Period 41 included:

- Submittal of Final March 2012 On-Post Groundwater Report (July 3, 2012)
- June 2012 Well Owner letters (August 22, 2012)
- Notification to USEPA of Groundwater Monitoring Activities (August 3, 2012)
- Notification to USEPA of Groundwater Monitoring Activities (November 6, 2012)
- Submittal of Final June 2012 On-Post Groundwater Report (September 4, 2012)
- Submittal of Final June 2012 Off-Post Groundwater Report (September 8, 2012)
- September 2012 Well Owner Letters (November 5, 2012)
- Submittal of Groundwater Work Plan Update (December 12, 2012)
- Submittal of Groundwater Sampling and Analysis Plan Update (December 20, 2012)

PROJECTED WORK FOR THE NEXT PERIOD

SWMU, AOC, and RMU Investigations

Investigations, interim removal actions, and/or reporting will be continued for AOC-75, SWMU B-34, RMU-3, and RMU-4. Reports summarizing investigation results will be submitted upon completion. ISCO treatability studies will continue at AOC-65. A summary of upcoming remedial activities at several SWMUs, AOCs, and RMUs is included as Attachment 5.

Groundwater Monitoring

Continued sampling of on- and off-post monitoring and water supply wells will continue in December 2012 and March 2013. Quarterly and annual groundwater monitoring reports will be submitted next period. O&M at the residential GAC filtration systems (LS-5, LS-6, LS-7, OFR-3, RFR-10, and RFR-11) will be conducted every three weeks during Period 42. The semi-annual carbon exchange will be performed in January 2013.

SWMU B-3 Bioreactor

Monitoring of the bioreactor at SWMU B-3 will continue during Period 42. 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.

Various bioreactor system controls and components have been re-designed and installed within the new Bioreactor Control Building during Period 41. Additionally, three extraction wells (EXW-03, EXW-04, and EXW-05) were integrated into the system and will be brought online to deliver groundwater to the bioreactor in late December (Period 41) or early January, 2013 (Period 42). CSSA discussed these plans with USEPA on January 24, 2012 and these improvements to the bioreactor were agreed on.

AOC-65 ISCO Treatability Study

An ISCO treatability study was completed in Period 41. This effort included the injection of an oxidant (10,500 gallons of 20% sodium persulfate) and an activator (3,270 gallons of 25% sodium hydroxide) into an infiltration gallery. The injections were followed by several rounds of groundwater sampling (days 1, 5, 15, and 30 following injections) at wells both on and off post and daily and weekly field parameter collection (pH, dissolved oxygen, oxidation reduction potential, salinity and water levels) at VEWs and newly installed TSWs within AOC-65.

Additional rounds of ISCO injections are planned for Period 42. These ISCO applications will include injecting larger volumes of both oxidant and activator solutions into the infiltration gallery installed at AOC-65. ISCO treatability study monitoring will include groundwater sample collection and field parameter collection from both on and off-post wells throughout the Period.

A vapor intrusion study (VIS) is scheduled to be performed early in Period 42. Completion of this VIS includes collecting indoor air (IA) samples from 10 locations on and off-post, including residences, to determine if vapor intrusion, from the AOC-65 PCE/TCE plume, is negatively impacting residential indoor air quality.

Meetings

A status meeting will be held with TCEQ and USEPA on January 24, 2013. Quarterly groundwater meetings will be held prior to quarterly events scheduled in March and June 2013.

**Table 2, Project Task Completion to Date for Open Projects Only
 (Values updated through December 31, 2012)**

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, 2012)**

Project Number	Description of Task	Relation to Order	Percent Complete	Percent Spent
DY02 (Weston)	Removal Action at AOC-64, B-71	RFI	100%	100%
H&A (Parsons)	Administrative Support and Environmental Services	Other/RFI	100%	100%
DO50 (Parsons)	Environmental and Groundwater Investigations	RFI	100%	100%
Army Contract (Parsons)	Environmental and Groundwater Investigations	RFI	100%	99%
DO07 (Parsons)	Environmental Program Support	RFI	100%	100%
Army Contract TO1 (Parsons)	Program Management			
	Project Management, Sept '11-Sept '12	RFI	100%	100%
	Project Management, Sept '12-Sept '13	RFI	21%	11%
	Environmental, Safety, and Occupational Health Support, Sept '11-Sept '12	RFI	100%	100%
	Environmental, Safety, and Occupational Health Support, Sept '12-Sept '13	RFI	17%	8%
	Data & Information Management Support, Sept '11-Sept '12	RFI	99%	99%
	Data & Information Management Support, Sept '12- Sept '13	RFI	25%	8%
Army Contract TO2 (Parsons)	O&M, Compliance, & Monitoring			
	Treatability Study Systems Operation, Sept '11-Sept '12	RFI	98%	98%
	Treatability Study Systems Operation, Sept '12-Sept '13	RFI	19%	13%
	Compliance and Sampling, Sept '11-Sept '12	RFI	94%	94%
	Compliance and Sampling, Sept '12-Sept '13	RFI	0%	0.4%
	Groundwater Monitoring, Sept '11-Sept '12	RFI	100%	100%
	Groundwater Monitoring, Sept '12-Sept '13	RFI	14%	6%
Army Contract TO3 (Parsons)	Site Investigations and Closures			
	AOC-51	RFI	100%	100%
	AOC-74	RFI	100%	100%
	RMU-5	RFI	100%	100%
	SWMU B-27	RFI	100%	100%
	AOC-72	RFI	100%	100%
	SWMU B-4	RFI	100%	100%
	SWMU B-13	RFI	78%	47%
	AOC-75	RFI	40%	9%
	RMU-4	RFI	25%	7%

**Table 2 Continued, Project Task Completion to Date for Open Projects Only
 (Values updated through December 31, 2012)**

Project Number	Description of Task	Relation to Order	Percent Complete	Percent Spent
	RMU-3	RFI	18%	4%
	SWMU B-34	RFI	0%	0%
Army Contract TO4 (Parsons)	Environmental Studies			
	AOC-65	RFI	98%	98%
	AOC-51	RFI	99%	98%
	AOC-65 Water Line Investigation	RFI	100%	98%
Army Contract TO5 (Parsons)	SWMU B-3 EXW-05 Installation			
	Well Installation	RFI	100%	91%
	Infrastructure & Facilities	RFI	100%	72%
Army Contract TO6 (Parsons)	Building 95 Controls			
	Design/Install Bldg 95 Controls	Other/RFI	8%	3%

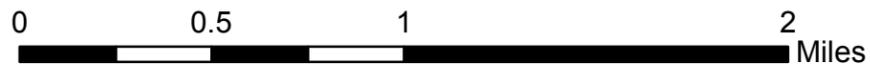
Table 3, Project Team Contact Information

Name	Organization/Role	Street Address	City, State, Zip	Phone No.	Fax No.	E-mail
Burdey, Julie	Parsons, Project Mgr	8000 Centre Park Dr., Suite 200	Austin, TX 78754	(512) 719-6062	(512) 719-6099	julie.burdey@parsons.com
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Salazar, Jorge	TCEQ	14250 Judson Road	San Antonio, TX 78233	(210) 403-4059		jsalazar@tceq.state.tx.us
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ATTACHMENT 1
ON-POST AND OFF-POST SAMPLED WELLS FIGURE



Aerial Photo Date: January 2012



- Sampled Well
- - - Fence Line

Attachment 1

June 2012 and September 2012 Sampled
On-Post and Off-post Groundwater Wells
Camp Stanley Storage Activity

PARSONS

ATTACHMENT 2
SUMMARY OF STATUS OF EACH SWMU/AOC/RMU SITE

Attachment 2
Summary of SWMUs, AOCs, and RMUs Status Table

Unit No.	Description	Investigation Report(s)	Recommendations	Requested Action				Closure Approved	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	Closure						
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	Closure				X		
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	Excavate as necessary						
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)	RIR June 2011	NA		X			September-11	NFA
B-19	Solid waste disposal area (metals and weapons).	RFI/Closure Report June 2002	NA	X				September-02	RRS1

Attachment 2
Summary of SWMUs, AOCs, and RMUs Status Table

Unit No.	Description	Investigation Report(s)	Recommendations	Requested Action				Closure Approved	Closure Type
				RRS1	NFA	Delisting	TRRP		
B-20/21	Former OB/OD area & ammunition disposal areas - North Pasture	RFI Report July 2002	Closure						
		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	MC removal						
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 RIR September 2011	NA		X			December-11	NFA
B-28	Disposal trenches (molten metal, ammo, ammo parts)	RFI Report April 2002 RIR July 2011	NA		X			November-11	NFA
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 contamination, disposal of soil						
B-71	Livestock area. Inner cantonment, SW of Well 16.	APAR	NA				X	October 2011	TRRP
AOC-64	Area east of SWMU B-4; flares observed in the area	APAR	NA				X	October 2011	TRRP
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 SWMUs, AOCs, and RMUs Status Table

Unit No.	Description	Investigation Report(s)	Recommendations	Requested Action				Closure Approved	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	NA				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.	NFA 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 RIR August 2011	NA		X			December-11	NFA
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.	RIR July 2011	NA		X			October-11	NFA

Attachment 2
Summary of SWMUs, AOCs, and RMUs Status Table

Unit No.	Description	Investigation Report(s)	Recommendations	Requested Action				Closure Approved	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	NA	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	RIR July 2012	Closure		X			October-12	NFA
AOC 52	Area west of B-4 towards Salado Creek near trees, two trenches	RIR August 2011	NA		X			December-11	NFA
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	NA	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	RIR May 2011	NA		X			September-11	NFA
AOC 58	Suspected disposal trench within Inner Cantonment	RFI Report October 2002 RIR August 2011	NA		X			December-11	NFA
AOC 59	Trench-type anomaly located west Test Pad in the East Pasture	RIR July 2011	NA		X			October-11	NFA
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 SWMUs, AOCs, and RMUs Status Table

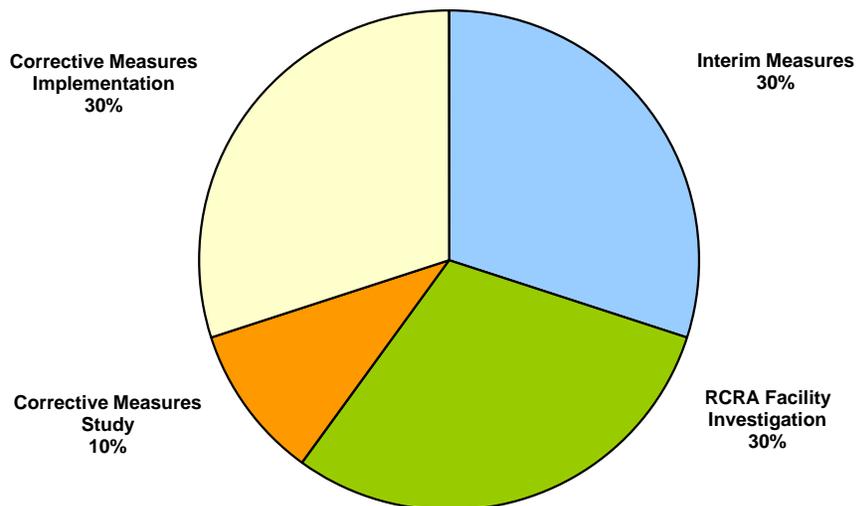
Unit No.	Description	Investigation Report(s)	Recommendations	Requested Action				Closure Approved	Closure Type
				RRS1	NFA	Delisting	TRRP		
AOC 62	Located west of monitoring well MW-2 and east of Salado Creek.	RIR August 2011	NA		X			December-11	NFA
AOC 63	Area consisting of 3 barrels containing rocks, south of deer stand 41 in the East Pasture.	APAR October 2008	NA				X	July-09	TRRP
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				February-05	NFA
AOC 67	Concrete pad near Building 90 housed a vat containing cleaning solvents.	RIR July 2010	NA		X			September-10	NFA
AOC 68	Area includes metal slag/debris storage area from Wheelabrator operations next to Building 90-2.	RIR July 2010	NA		X			September-10	NFA
AOC 69	Located on west side of CSSA.	RIR June 2009	NA				X	October-09	TRRP
AOC 70	Building used to mix pesticides. Near Building 1.	RIR June 2011	NA		X			September-11	NFA
AOC 72	Area containing concrete, possible asbestos. Located east of Building 94, in SW CSSA.	RIR March 2012	Closure		X			May-12	NFA
AOC 73	Ranch landfill with overgrown trenches. Near Well I1, in northwest corner of CSSA.	RIR September 2008	NA				X	January-09	TRRP
AOC 74	Area with scattered building debris near Building 605 in the inner cantonment.	RIR February 2012	Closure		X			May-12	NFA
AOC 75	Area with high levels of mercury and barium.	--	Excavate as necessary						
RMU1	Active firing range in the East Pasture	--	Investigation once range is inactive.						
RMU2	Rifle range located in the inner cantonment.	RIR November 2011	NA		X			February-12	NFA
RMU3	Firing range berm.	--	Excavate as necessary						
RMU4	Former rifle range in East Pasture.	--	Field mapping.						
RMU5	Former rocket range in North Pasture.	RIR June 2012	Closure		X			September-12	NFA

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%	99%	6.9%	
Interim Measures Implementation Reports		70%	99%	69.5%	
		23%	100%	22.9%	
RCRA Facility Investigation	30%				92%
Preliminary Report		5%	100%	5%	
RFI Workplan		5%	100%	5%	
Facility Investigation		40%	96%	39%	
Risk Assessment		10%	91%	9%	
Investigation Analysis		10%	91%	9%	
Groundwater Investigation		15%	92%	14%	
Treatability Studies		10%	74%	7%	
Progress Reports		5%	70%	4%	
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					57.26%

Section 3008(h) Order Tasks



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%					98.8%	
Draft IM Workplan		80%	100%	80%	0%		
Draft Final IM Workplan		15%	100%	15%	0%		
Final IM Workplan		5%	75%	4%	25%		
2 Interim Measures Implementation	70%					99.3%	
Sample 3 Off-Site Wells		1%	100%	1%	0%		
Sample 20 Off-Site Wells (6 events)		6%	100%	6%	0%		(remaining off-post sampling conducted under the RFI task)
2000 Groundwater Monitoring (4 events)		3%	100%	3%	0%		
2001 Groundwater Monitoring (4 events)		3%	100%	3%	0%		
2002 Groundwater Monitoring (4 events)		3%	100%	3%	0%		
2003 Groundwater Monitoring (4 events)		3%	100%	3%	0%		
2004 Groundwater Monitoring (4 events)		3%	100%	3%	0%		
2005 Groundwater Monitoring (4 events)		3%	100%	3%	0%		
2006 Groundwater Monitoring		3%	100%	3%	0%		
2007 Groundwater Monitoring		3%	100%	3%	0%		
2008 Groundwater Monitoring		3%	100%	3%	0%		
2009 Groundwater Monitoring		3%	100%	3%	0%		
2010 Groundwater Monitoring		3%	100%	3%	0%		
2011 Groundwater Monitoring		3%	100%	3%	0%		
2012 Groundwater Monitoring		3%	100%	3%	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%					99.7%	
Quarterly Progress Report 1 (August 1999)		0.66%	100%	0.67%	0%		
Quarterly Progress Report 2 (November 1999)		0.66%	100%	0.67%	0%		
Quarterly Progress Report 3 (February 2000)		0.66%	100%	0.67%	0%		
Quarterly Progress Report 4 (May 2000)		0.66%	100%	0.67%	0%		
Quarterly Progress Report 5 (August 2000)		0.66%	100%	0.67%	0%		
Quarterly Progress Report 6 (November 2000)		0.66%	100%	0.67%	0%		
Quarterly Progress Report 7 (February 2001)		0.66%	100%	0.67%	0%		
Quarterly Progress Report 8 (May 2001)		0.66%	100%	0.67%	0%		
Quarterly Progress Report 9 (August 2001)		0.66%	100%	0.67%	0%		
Quarterly Progress Report 10 (November 2001)		0.66%	100%	0.67%	0%		
Quarterly Progress Report 11 (February 2002)		0.66%	100%	0.67%	0%		
Quarterly Progress Report 12 (May 2002)		0.66%	100%	0.67%	0%		
Quarterly Progress Report 13 (August 2002)		0.66%	100%	0.67%	0%		
Quarterly Progress Report 14 (November 2002)		0.66%	100%	0.67%	0%		
Quarterly Progress Report 15 (February 2003)		0.66%	100%	0.67%	0%		
Quarterly Progress Report 16 (May 2003)		0.66%	100%	0.67%	0%		
Quarterly Progress Report 17 (August 2003)		0.66%	100%	0.67%	0%		
Quarterly Progress Report 18 (November 2003)		0.66%	100%	0.67%	0%		
Quarterly Progress Report 19 (February 2004)		0.66%	100%	0.67%	0%		
Quarterly Progress Report 20 (May 2004)		0.66%	100%	0.67%	0%		
Quarterly Progress Report 21 (August 2004)		0.66%	100%	0.67%	0%		
Quarterly Progress Report 22 (November 2004)		0.66%	100%	0.67%	0%		
Quarterly Progress Report 23 (February 2005)		0.66%	100%	0.67%	0%		
Quarterly Progress Report 24 (May 2005)		0.66%	100%	0.67%	0%		
Quarterly Progress Report 25 (August 2005)		0.66%	100%	0.67%	0%		
Quarterly Progress Report 26 (October 2005)		0.66%	100%	0.67%	0%		
Quarterly Progress Report 27 (January 2006)		0.66%	100%	0.67%	0%		
Quarterly Progress Report 28 (April 2006)		0.66%	100%	0.67%	0%		
Semi-annual Progress Rpt 29 (Dec 2006)		0.66%	100%	0.67%	0%		
Semi-annual Progress Rpt 30 (July 2007)		0.66%	100%	0.67%	0%		
Semi-annual Progress Rpt 31 (Dec 2007)		0.66%	100%	0.67%	0%		
Semi-annual Progress Rpt 32 (July 2008)		0.66%	100%	0.67%	0%		
Semi-annual Progress Rpt 33 (Dec 2008)		0.66%	100%	0.67%	0%		
Semi-annual Progress Rpt 34 (July 2009)		0.66%	100%	0.67%	0%		
Semi-annual Progress Rpt 35 (Dec 2009)		0.66%	100%	0.67%	0%		
Semi-annual Progress Rpt 36 (July 2010)		0.66%	100%	0.67%	0%		
Semi-annual Progress Rpt 37 (Dec 2010)		0.66%	100%	0.67%	0%		
Semi-annual Progress Rpt 38 (July 2011)		0.66%	100%	0.67%	0%		
Semi-annual Progress Rpt 39 (Dec 2011)		0.66%	100%	0.67%	0%		
Semi-annual Progress Rpt 40 (July 2012)		0.66%	100%	0.67%	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						99.35%	

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 Investigation¹	40%					96.5%	
Small Areas (0-2 acres in size)	74%						
B-3 Investigation/Report		1.24%	95%	1.178%	5%		Final report submitted, additional work required.
B-4 Investigation/Report		1.24%	99%	1.228%	1%		Final report submitted. Weston to submit APAR to TCEQ.
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%	75%	0.930%	25%		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%	75%	0.930%	25%		Final report underway
B-15/16 Investigation/Report		1.24%	100%	1.240%	0%		NFA Closure Approved Sept 11
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%	100%	1.240%	0%		NFA closure approved Dec 11
B-28 Investigation/Report		1.24%	100%	1.240%	0%		NFA Closure approved Nov 11
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%	75%	0.930%	25%		Final report and Addendum report submitted, additional work required
B-71 Investigation/Report		1.24%	100%	1.240%	0%		TRRP closure approved Oct 11
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%	100%	1.240%	0%		Closure approved Nov 08
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%	100%	1.240%	0%		NFA Closure Approved Oct 11
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%	100%	1.240%	0%		NFA closure approved Dec 11
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%	100%	1.240%	0%		NFA closure approved Dec 11
AOC 59 Investigation/Report		1.24%	100%	1.240%	0%		NFA Closure Approved Oct 11
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%	100%	1.240%	0%		NFA closure approved Dec 11
AOC 63 Investigation/Report		1.24%	100%	1.240%	0%		Closure approved Aug 09.
AOC 64 Investigation/Report		1.24%	100%	1.240%	0%		TRRP closure approved Oct 11
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%	100%	1.240%	0%		TRRP closure approved Oct 09
AOC 70 Investigation/Report		1.24%	100%	1.240%	0%		NFA closure approved Sept 11
AOC 72 Investigation/Report		1.24%	100%	1.240%	0%		Closure approved May 12
AOC 73 Investigation/Report		1.24%	100%	1.240%	0%		Closure approved July 2009
AOC 74 Investigation/Report		1.24%	100%	1.240%	0%		Closure approved May 12
AOC 75 Investigation/Report		1.24%	75%	0.930%	25%		Final report underway
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%	75%	0.915%	25%		Investigation underway
B-22 Investigation/Report		1.2%	100%	1.220%	0%		Closure approved Dec 02
							Final report submitted, additional
B-24 Investigation/Report		1.2%	80%	0.976%	20%		work recommended
B-29 Investigation/Report		1.2%	100%	1.220%	0%		Closure approved
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%	100%	1.220%	0%		NFA closure approved Dec 11
AOC 48 Investigation/Report		1.2%	100%	1.220%	0%		Delisting approved Nov 04
AOC 57 Investigation/Report		1.2%	100%	1.220%	0%		NFA closure approved Sept 11
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%	100%	1.220%	0%		NFA Closure approved Oct 12
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%		Active range
RMU-5 Investigation/Report		1.2%	100%	1.220%	0%		NFA Closure approved Sept 12
							Final report submitted, additional
AOC 65 Investigation/Report		1.2%	75%	0.915%	25%		work recommended
AOC 69 Investigation/Report		1.2%	100%	1.220%	0%		Closure approved Oct 09
Coal Bins Investigation/Report		1.2%	100%	1.220%	0%		Site de-listed as a SWMU
RMU-2 Investigation/Report		1.2%	100%	1.220%	0%		NFA closure approved Feb 12
RMU-3 Investigation/Report		1.2%	75%	0.915%	25%		Final report underway
RMU-4 Investigation/Report		1.2%	25%	0.305%	75%		Investigation underway
Groundwater Investigation							
	15%					92%	
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%		
Groundwater Monitoring 2011		3.0%	100%	3%	0%		
Groundwater Monitoring 2012		3.0%	50%	2%	50%		
Conceptual Site Model (CSM)		20.0%	100%	20%	0%		
CSM Update		4.0%	90%	4%	10%		
LTMO 2005 (optimization study)		10%	100%	10%	0%		Complete
LTMO 2010 (review of optimization)		10%	100%	10%	0%		Complete
Risk Assessment	10%					91%	
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%	70%	7%	30%		
Final CSM		5%	0%	0%	100%		
Investigation Analysis	10%					91%	
Collect Background Data		10%	100%	10%	0%		Information included in facility investigation reports; percent complete based on overall percent complete of facility investigation tasks.
Draft Investigation Analysis		85%	90%	77%	10%		
Final Investigation Analysis		5%	85%	4%	15%		
Treatability Studies	10%					74%	
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%	95%	10%	5%		
Draft Treatability Study & Technology Evaluation Reports		10%	100%	10%	0%		
Final Treatability Study		25%	99%	25%	1%		
Recharge Study		25%	100%	25%	0%		
Progress Reports	5%					70.2%	
Quarter 1 (August 1999)		1.75%	100%	1.75%	0%		
Quarter 2 (November 1999)		1.75%	100%	1.75%	0%		
Quarter 3 (February 2000)		1.75%	100%	1.75%	0%		
Quarter 4 (May 2000)		1.75%	100%	1.75%	0%		
Quarter 5 (August 2000)		1.75%	100%	1.75%	0%		
Quarter 6 (November 2000)		1.75%	100%	1.75%	0%		
Quarter 7 (February 2001)		1.75%	100%	1.75%	0%		
Quarter 8 (May 2001)		1.75%	100%	1.75%	0%		
Quarter 9 (August 2001)		1.75%	100%	1.75%	0%		
Quarter 10 (November 2001)		1.75%	100%	1.75%	0%		
Quarter 11 (February 2002)		1.75%	100%	1.75%	0%		
Quarter 12 (May 2002)		1.75%	100%	1.75%	0%		
Quarter 13 (August 2002)		1.75%	100%	1.75%	0%		
Quarter 14 (November 2002)		1.75%	100%	1.75%	0%		
Quarter 15 (February 2003)		1.75%	100%	1.75%	0%		
Quarter 16 (May 2003)		1.75%	100%	1.75%	0%		
Quarter 17 (August 2003)		1.75%	100%	1.75%	0%		
Quarter 18 (November 2003)		1.75%	100%	1.75%	0%		
Quarter 19 (February 2004)		1.75%	100%	1.75%	0%		
Quarter 20 (May 2004)		1.75%	100%	1.75%	0%		
Quarter 21 (August 2004)		1.75%	100%	1.75%	0%		
Quarter 22 (November 2004)		1.75%	100%	1.75%	0%		
Quarter 23 (February 2005)		1.75%	100%	1.75%	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)		1.75%	100%	1.75%	0%		
Quarter 25 (August 2005)		1.75%	100%	1.75%	0%		
Quarter 26 (November 2005)		1.75%	100%	1.75%	0%		
Quarter 27 (February 2006)		1.75%	100%	1.75%	0%		
Quarter 28 (May 2006)		1.75%	100%	1.75%	0%		
Semi-Annual 29 (December 2006)		1.75%	100%	1.75%	0%		
Semi-Annual 30 (July 2007)		1.75%	100%	1.75%	0%		
Semi-Annual 31 (December 2007)		1.75%	100%	1.75%	0%		
Semi-Annual 32 (July 2008)		1.75%	100%	1.75%	0%		
Semi-Annual 33 (December 2008)		1.75%	100%	1.75%	0%		
Semi-Annual 34 (July 2009)		1.75%	100%	1.75%	0%		
Semi-Annual 35 (December 2009)		1.75%	100%	1.75%	0%		
Semi-Annual 36 (July 2010)		1.75%	100%	1.75%	0%		
Semi-Annual 37 (December 2010)		1.75%	100%	1.75%	0%		
Semi-Annual 38 (July 2011)		1.75%	100%	1.75%	0%		
Semi-Annual 39 (December 2011)		1.75%	100%	1.75%	0%		
Semi-Annual 40 (July 2012)		1.75%	100%	1.75%	0%		
Semi-Annual 41 (December 2012)		1.75%	100%	1.75%	0%		
(Additional Reports - rows hidden)							
% of Phase Complete						91.52%	
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 4

GROUNDWATER RESULTS SUMMARY

Attachment 4
June 2012 On-Post Quarterly Groundwater Results

Well ID	Sample Date	Arsenic	Barium	Cadmium	Chromium	Copper	Lead	Zinc	Mercury
CS-MW35-LGR	6/11/2012	NA	NA	0.0005U	0.001U	NA	0.0030F	NA	0.0001U
CS-MW36-LGR	6/11/2012	NA	NA	0.0005U	0.001U	NA	0.0027F	NA	0.0001U
CS-9	6/11/2012	NA	NA	0.0005U	0.001U	NA	0.0104F	NA	0.0015
CSSA Drinking Water Well System									
CS-1	6/11/2012	0.0002U	0.0358	0.0005U	0.001U	0.004F	0.0062F	0.214	0.0001U
CS-1 FD	6/11/2012	0.0002U	0.0361	0.0005U	0.001U	0.005F	0.0060F	0.218	0.0001U
CS-10	6/11/2012	0.0002U	0.0386	0.0005U	0.001U	0.006F	0.0019U	0.08	0.0001U
CS-12	6/11/2012	0.0002U	0.0307	0.0005U	0.001U	0.036	0.0050F	0.19	0.0001U

Well ID	Sample Date	1,1-DCE	cis-1,2-DCE	trans-1,2-DCE	PCE	TCE	Vinyl Chloride
CS-MW35-LGR	6/11/2012	0.12U	0.07U	0.08U	2.78	0.05U	0.08U
CS-MW36-LGR	6/11/2012	0.12U	0.07U	0.08U	7.71	1.85	0.08U
CS-9	6/11/2012	0.12U	0.07U	0.08U	0.06U	0.05U	0.08U
CSSA Drinking Water Well System							
CS-1	6/11/2012	0.12U	0.07U	0.08U	0.06U	0.05U	0.08U
CS-1 FD	6/11/2012	0.12U	0.07U	0.08U	0.06U	0.05U	0.08U
CS-10	6/11/2012	0.12U	0.07U	0.08U	0.06U	0.05U	0.08U
CS-12	6/11/2012	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
June 2012 Off-Post Groundwater Results

Well ID	Sample Date	1,1-DCE	cis-1,2-DCE	trans-1,2-DCE	PCE	TCE	Vinyl Chloride
I10-4	6/4/2012	0.12U	0.07U	0.08U	5.2	2.54	0.08U
I10-9	6/4/2012	0.12U	0.07U	0.08U	0.06U	1.42	0.08U
LS-5	6/4/2012	0.12U	0.07U	0.08U	1.16F	3.33	0.08U
LS-5 FD	6/4/2012	0.12U	0.07U	0.08U	1.14F	3.22	0.08U
LS-6	6/4/2012	0.12U	0.07U	0.08U	1.10F	3.37	0.08U
LS-7	6/4/2012	0.12U	0.07U	0.08U	3.1	0.42F	0.08U
OFR-3	6/4/2012	0.12U	0.07U	0.08U	6.51	6.61	0.08U
RFR-10	6/4/2012	0.12U	0.49F	0.08U	25.80M	14.24	0.08U
RFR-11	6/4/2012	0.12U	0.07U	0.08U	1.23F	1.99	0.08U
OW-BARNOWL	6/19/2012	0.12U	0.07U	0.08U	0.06U	0.05U	0.08U
OW-HH2	6/19/2012	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.

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.
M-Exceeds linear range.

**Attachment 4
September 2012 On-Post Groundwater Results**

Well ID	Sample Date	Arsenic	Barium	Cadmium	Chromium	Copper	Lead	Zinc	Mercury
CS-MW1-LGR	9/11/2012	NA	NA	0.0005U	0.01	NA	0.0019U	NA	0.0001U
CS-MW2-LGR	9/11/2012	NA	NA	0.0005U	0.001U	NA	0.0019U	NA	0.0002F
CS-MW8-LGR	9/11/2012	NA	NA	0.0005U	0.006F	NA	0.0019U	NA	0.0002F
CS-MW9-BS	9/11/2012	NA	NA	0.0005U	0.004F	NA	0.0019U	NA	0.0002F
CS-MW11A-LGR	9/11/2012	NA	NA	0.0005U	0.005F	NA	0.0019U	NA	0.0002F
CS-MW24-LGR	9/11/2012	NA	NA	0.0005U	0.002F	NA	0.0019U	NA	0.0002F
CS-MW35-LGR	9/12/2012	NA	NA	0.0005U	0.001U	NA	0.0019U	NA	0.0001U
CS-MW35-LGR FD	9/12/2012	NA	NA	0.0005U	0.002F	NA	0.0019U	NA	0.0001U
CS-MW36-LGR	8/30/2012	NA	NA	0.0005U	0.001U	NA	0.0019U	NA	0.0001U
CS-9	9/12/2012	NA	NA	0.0005U	0.004F	NA	0.028	NA	0.0041
CSSA Drinking Water Well System									
CS-10	9/12/2012	0.0002U	0.0407	0.0005U	0.012	0.003U	0.0019U	0.065	0.0001U
CS-12	9/12/2012	0.0002U	0.0312	0.0005U	0.003F	0.003U	0.0019U	0.121	0.0001U
CS-12 FD	9/12/2012	0.0002U	0.033	0.0005U	0.004F	0.004F	0.0019U	0.13	0.0001U

Well ID	Sample Date	1,1-DCE	cis-1,2-DCE	trans-1,2-DCE	PCE	TCE	Vinyl Chloride
CS-MW1-LGR	9/11/2012	0.12U	16.93	0.20F	13.01	28.05	0.08U
CS-MW2-LGR	9/11/2012	0.12U	0.53F	0.08U	0.06U	0.05U	0.08U
CS-MW8-LGR	9/11/2012	0.12U	0.07U	0.08U	1.83	0.05U	0.08U
CS-MW9-BS	9/11/2012	0.12U	0.07U	0.08U	0.06U	0.05U	0.08U
CS-MW11A-LGR	9/11/2012	0.12U	0.07U	0.08U	1.22F	0.05U	0.08U
CS-MW24-LGR	9/11/2012	0.12U	0.07U	0.08U	0.06U	0.05U	0.08U
CS-MW35-LGR	9/12/2012	0.12U	0.07U	0.08U	1.17F	0.05U	0.08U
CS-MW35-LGR FD	9/12/2012	0.12U	0.07U	0.08U	1.19F	0.05U	0.08U
CS-MW36-LGR	8/30/2012	0.12U	1.72	0.08U	20.94	55.22	0.08U
CS-9	9/12/2012	0.12U	0.07U	0.08U	0.06U	0.05U	0.08U
CSSA Drinking Water Well System							
CS-10	9/12/2012	0.12U	0.07U	0.08U	0.06U	0.05U	0.08U
CS-12	9/12/2012	0.12U	0.07U	0.08U	0.06U	0.05U	0.08U
CS-12 FD	9/12/2012	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 2012 Quarterly Off-post Groundwater Analytical Results

Subdivision	Well ID	Sample Date	1,1-DCE	cis-1,2-DCE	trans-1,2-DCE	PCE	TCE	Vinyl Chloride
IH-10	I10-4	8/30/2012	0.12U	0.07U	0.08U	4.49	2.23	0.08U
Leon Springs Villas	LS-5	8/30/2012	0.12U	0.07U	0.08U	0.84F	3.01	0.08U
	LS-5-A2	8/30/2012	0.12U	0.07U	0.08U	0.06U	0.05U	0.08U
	LS-6	8/30/2012	0.12U	0.07U	0.08U	0.55F	1.83	0.08U
	LS-6 FD	8/30/2012	0.12U	0.07U	0.08U	0.52F	2.04	0.08U
	LS-6-A2	8/30/2012	0.12U	0.07U	0.08U	0.06U	0.05U	0.08U
	LS-7	8/30/2012	0.12U	0.07U	0.08U	2.57	0.66F	0.08U
	LS-7-A2	8/30/2012	0.12U	0.07U	0.08U	0.06U	0.05U	0.08U
Old Fredericksburg	OFR-3	8/30/2012	0.12U	0.07U	0.08U	7.92	5.78	0.08U
	OFR-3-A2	8/30/2012	0.12U	0.07U	0.08U	0.06U	0.05U	0.08U
Ralph Fair Road	RFR-10	8/30/2012	0.12U	0.07U	0.08U	11.91	4.78	0.08U
	RFR-10-A2	8/30/2012	0.12U	0.07U	0.08U	0.06U	0.05U	0.08U
	RFR-10-B2	8/30/2012	0.12U	0.07U	0.08U	0.06U	0.05U	0.08U
	RFR-11	8/30/2012	0.12U	0.07U	0.08U	0.54F	2.92	0.08U
	RFR-11-A2	8/30/2012	0.12U	0.07U	0.08U	0.06U	0.05U	0.08U
The Oaks Water Supply	OW-BARNOWL	9/5/2012	0.12U	0.07U	0.08U	0.06U	0.05U	0.08U
	OW-HH2	9/5/2012	0.12U	0.07U	0.08U	0.06U	0.05U	0.08U
Laboratory Detection Limits & Maximum Contaminant Level								
Method Detection Limit (MDL)			0.12	0.07	0.08	0.06	0.05	0.08
Reporting Limit (RL)			1.2	1.2	0.6	1.4	1	1.1
Max. Contaminant Level (MCL)			7	70	100	5	5	2

BOLD	≥ MDL
BOLD	≥ RL
BOLD	≥ MCL

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

Abbreviations/Notes:
FD Field Duplicate
TCE Trichloroethene
PCE Tetrachloroethene
DCE Dichloroethene

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

Attachment 4
September 2012 Westbay 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	9/4/2012	<0.12	<0.07	0.18F	3.47	<0.08	<0.08
CS-WB01-LGR-02	9/4/2012	<0.12	<0.07	4.04	14.34	<0.08	<0.08
CS-WB01-LGR-03	9/4/2012	<0.12	<0.07	8.53	2.32	<0.08	<0.08
CS-WB01-LGR-04	9/4/2012	<0.12	<0.07	0.14F	<0.06	<0.08	<0.08
CS-WB01-LGR-05	9/4/2012	<0.12	<0.07	0.20F	0.12F	<0.08	<0.08
CS-WB01-LGR-06	9/4/2012	<0.12	0.31F	1.86	0.20F	<0.08	<0.08
CS-WB01-LGR-07	9/4/2012	<0.12	0.20F	12.49	14.67	<0.08	<0.08
CS-WB01-LGR-08	9/4/2012	<0.12	0.95F	6.85	3.15	<0.08	<0.08
CS-WB01-LGR-09	9/4/2012	<0.12	0.39F	19.23	14.79	<0.08	<0.08
CS-WB02-LGR-01	9/4/2012	<0.12	<0.07	1.18	0.55F	<0.08	<0.08
CS-WB02-LGR-03	9/4/2012	<0.12	<0.07	2.75	4.99	<0.08	<0.08
CS-WB02-LGR-04	9/4/2012	<0.12	<0.07	9.48	3.12	<0.08	<0.08
CS-WB02-LGR-05	9/4/2012	<0.12	<0.07	3.73	1.05F	<0.08	<0.08
CS-WB02-LGR-06	9/4/2012	<0.12	<0.07	4.01	1.53	<0.08	<0.08
CS-WB02-LGR-07	9/4/2012	<0.12	0.55F	0.47F	<0.06	<0.08	<0.08
CS-WB02-LGR-08	9/4/2012	<0.12	2.41	0.89F	0.68F	0.66	<0.08
CS-WB02-LGR-09	9/4/2012	<0.12	0.31F	12.02	13.55	<0.08	<0.08
CS-WB03-UGR-01	9/5/2012	<0.12	1.51	98.96	8081.86*	<0.08	<0.08
CS-WB03-LGR-03	9/5/2012	<0.12	0.26F	9.27	18.09	<0.08	<0.08
CS-WB03-LGR-04	9/5/2012	<0.12	<0.07	8.39	15.15	<0.08	<0.08
CS-WB03-LGR-05	9/5/2012	<0.12	<0.07	5.51	14.63	<0.08	<0.08
CS-WB03-LGR-06	9/5/2012	<0.12	0.71F	0.56F	3.29	<0.08	<0.08
CS-WB03-LGR-07	9/5/2012	<0.12	6.54	2.51	1.04F	<0.08	<0.08
CS-WB03-LGR-08	9/5/2012	<0.12	6.06	2.13	1.11F	<0.08	<0.08
CS-WB03-LGR-09	9/5/2012	<0.12	11.52	3.75	3.47	<0.08	<0.08
CS-WB04-LGR-01	9/6/2012	<0.12	<0.07	<0.05	0.57F	<0.08	<0.08
CS-WB04-LGR-03	9/6/2012	<0.12	<0.07	<0.05	0.25F	<0.08	<0.08
CS-WB04-LGR-04	9/6/2012	<0.12	0.10F	0.22F	0.41F	<0.08	<0.08
CS-WB04-LGR-06	9/6/2012	<0.12	2.59	8.63	26.13	0.20F	<0.08
CS-WB04-LGR-07	9/6/2012	<0.12	2.25	8.06	23.42	0.20F	<0.08
CS-WB04-LGR-08	9/6/2012	<0.12	<0.07	0.69F	0.38F	<0.08	<0.08
CS-WB04-LGR-09	9/6/2012	<0.12	<0.07	5.68	7.35	<0.08	<0.08
CS-WB04-LGR-10	9/6/2012	<0.12	<0.07	0.54F	1.20F	<0.08	<0.08
CS-WB04-LGR-11	9/6/2012	<0.12	<0.07	<0.05	0.27F	<0.08	<0.08
CS-WB04-BS-01	9/6/2012	<0.12	<0.07	<0.05	0.19F	<0.08	<0.08
CS-WB04-BS-02	9/6/2012	<0.12	0.10F	<0.05	0.33F	<0.08	<0.08
CS-WB04-CC-01	9/6/2012	<0.12	0.60F	<0.05	0.26F	<0.08	<0.08
CS-WB04-CC-02	9/6/2012	<0.12	<0.07	<0.05	0.47F	<0.08	<0.08
CS-WB04-CC-03	9/6/2012	<0.12	<0.07	<0.05	2.71	<0.08	<0.08

Data Qualifiers

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

* The analyte was run at a dilution of 200.

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, AOCS, AND RMUS**

Site	Area	Suspected Munitions	type of site	Work Needed	Current Status	Progress	Site Size (acres)	Estimated Excavation Extent (acres)	total estimated volume to remove CY	estimated excavation time	Original Description	Type of Closure Report	Potential COCs	Office data analysis to date	Notes
Field Effort in Progress															
SWMU B-13	Inner Cantonment	small arms munitions	construction debris site	-RIR	12/14 - 2500 CY awaiting transport to east pasture berm - which is scheduled for after first of the year.	6/21/11 XRF Survey performed across site: 9/24/12 Field plans finalized and began excavation. :10/11: collected confirmation samples and WC samples: 10/17 Hit pocket of non-friable asbestos tiling: 10/18 collected WC samples; 10/22 cleared additional vegetation to expand staging area, exploratory excavation performed to help assess landfill extent in se corner of site; 10/24 wc samples collected: 10/31/2012, confirmation samples collected from the northern portion of the excavation area; 11/1/2012, sample from below the asbestos tiling sent for asbestos analysis; 6500 CY excavated to date of 11/2/2012; 11/7 excavation complete. Hauling from 11/12 to 11/27; 11/13 confirmation samples collected from southern section of site; 11/27 Additional WC sample collected for soils bound for east pasture. moved equipment to AOC-75; 11/29 rescraped area around SW09. Collected new sample at same area for confirmation; Final volume to Covet gardens: 4980 CY, 1620 w/ non-friable asbestos tiling (see manifest for more details.	1.5		6000	11 weeks	Construction waste disposal site mixed w/ ammo boxes, etc. Geophysical survey, soil borings. buried materials - approximately 6,000 CYs	RIR	metals, possibly VOCs, SVOCs		
AOC-75	Inner Cantonment	none	surface soil contamination	-complete of excavate soils as necessary -RIR	12/14 awaiting confirmation sampling and additional excavation if necessary. Confirmation samples to be collected 12/18 and 19	1/10 Samples collected to help w/ horizontal and vertical contamination delineation and waste characterization purposes. 11/5/12 start tree clearing activities. 11/28/12 begin excavation of top layer of soil. 12/3/12 uncover trench (100ftx12ftx4ft) - begin excavation. continue and complete additional trench excavation on 12/4/12. Material includes soil media mixed w/ styrofoam (150 CY) and cabinets (50 CY). 12/5/12 collected WC samples from the newly excavated trench material and the top layer of soil from the site. Complete the excavation of soils on 12/6/12. 4000 CY excavated in all.	1.2	1.6		9 weeks	Elevated mercury and lead levels to the north of B-4.	pending	mercury		
RMU-3	Inner Cantonment	small arms munitions	rifle range	- complete/finalizr Field Plans -excavate soils -RIR	12/14- completing intial excavation. Confirmation samples to be collected 12/18 and 19	XRF survey completed 12/8, 12/14, 12/20. (80 locations). XRF results contoured 12/27. 2/25 collected surface soil samples (10) Results back 3/2. Collected soil samples 1/3/2012 and 1/10 to further delineate horizontal and verticle delineation. 12/5 began removing cacti from the excavation footprint. 12/10 Began excavation of soils from excavation footprint.	~1.5		3500	8 weeks	0.5 acres is old boundary, but more like 1.5 acres based on XRF results former rifle range, field survey done.	RIR	Pb		
RMU-4	East Pasture	small arms munitions, stokes mortars	rifle range	-complete excavation of soils as necessary -RIR	12/14 - on hold. Staging, parking, and excavation area were cleared by UXO surface/subsurface. Soils adjacent to wall are questionable due to rebar in the wall. No uparmoring necessary, but will need UXO support onsite during excavation.	XRF Survey completed 12/15, 12/17, and 12/21 (53 locations). XRF results contoured 12/27. Surface soil samples collected 6/23 and 6/24/2011 to confirm XRF survey results (21 day TAT). Collected soil samples 1/5/2012 to further delineate horizontal and vertical extent. 9/28 Field Plans finalized. 10/8/12 Donny mobs to site. 10/9/12 UXO team performing UXO surface clearance of the staging areas. 10/22 UXO investigating identified anomalies and clearing trees from the excavation area.	1.6			15.5 weeks	1.6 acres former rifle range, field survey done,MD found (3" stokes) during road investigation in 2006.	RIR	metals		Zig zag trenches in area.
Field Effort Suspended															
SWMU B-8	North Pasture	none	soil contamination		see TCEQ letter dated 2/29/2012	1/11 samples collected to help delineate vert and horz contamination plus waste characterization.	5.2 acres			6 weeks	former burn area	APAR	Ba, Cu, Pb, Zn		
SWMU B-20/21	North Pasture	various MEC/MD	soil contamination		see TCEQ letter dated 2/29/2012	'ESS finalized 3/14. XRF survey conducted 6/16/2011 to characterize Zn levels across the site. UCL calculations showed native soil calculations below PCLs (Tier 2).	36			6 weeks	OB/OD area, MEC and MC issues. MEC will need to be addressed seperately. PIMS area doesn't need to be sifted.	APAR	PIMS Treatment Area		Remove PIMS Treatment area only.
SWMU B-24	North Pasture	misc. small arms munitions, etc.	soil contamination w/ MEC		see TCEQ letter dated 2/29/2012	12/6 flagged XRF sites. 12/7- 8 completed XRF survey (67 of points). XRF samples mapped 1/10. 2/16, soil piles sampled for TCLP. 21-day TAT. Soil matrix of the the overage pile (now partially on B-27 staging area) sampled for berm appropriateness on 2/24. results back 3/2/2011 - good for East Pasture Berm. 2/28 week - looked through overage for MEC, etc. Deemed ok for berm. 3/3 - 8, overage pile moved completely to east pasture berm. ESS finalized 3/14. Surface soil samples collected 3/29 (SS15 - SS29). Results back 4/11 . Additional soil samples collected 1/5/2012 to delineate vertical and horizontal extent.	4.1			8 weeks	Disposal area. Need soil excavation to get closure for MC. MEC will be addressed seperately. TRRP: residential, eco, Tier 2	APAR	Ba, Cu, Pb, Zn		
Field Effort Compete - Site Open															
SWMU B-2	North Pasture	none	soil contamination		see TCEQ letter dated 2/29/2012	12/6 excavated DNT location. Collected 26 surface soil samples (lead, zinc) on 12/6. 12/16 collected additional ss for Zinc (7 samples). 1/26 ran 95%UCL calculations for all Zinc levels.	3.6	NA	NA	NA		APAR			
SWMU B-34	Inner Cantonment	none	soil contamination	APAR		XRF sampled 12/1/2010 (40 locations). XRF results contoured 12/27. Tentative Tier 2 PCL for lead developed. Collected addiitonal XRF survey locations 6/13 and 6/14/2011. Collected additional XRF and soil samples 1/16/2012.	0.2	NA	NA	NA	Originally buried pipe, but soil contamination is problem. Surface and subsurface soil samples collected. No MEC concerns.	APAR	metals, possibly explosives		commercial, no eco, tier 2
Field Effort Complete - Closed															

Site	Area	Suspected Munitions	type of site	Work Needed	Current Status	Progress	Site Size (acres)	Estimated Excavation Extent (acres)	total estimated volume to remove CY	estimated excavation time	Original Description	Type of Closure Report	Potential COCs	Office data analysis to date	Notes
SWMU B-4 - Extra Trench	Inner Cantonment	various MEC/MD	trench		Field effort complete.	8/3 Final WP/SAP, SWPPP, RFI IM/WMP Submitted to CSSA. 8/3 Began MEC identification and sorting. 9/7 Sorting of Metal Debris pile complete. Exposed additional trench during the cleaning of the site on September 27th. September 29, work stopped. UXO team worked at site from 10/31 to 11/4. 11/9 to 11/10. Began work moving overs on 2/1/12. Work halted week of 2/6 due to rain. Kickoff meeting for trench excavation on 2/15/12. Excavation of trench complete on 2/28/12. Trench samples collected 2/27 and 2/29. Additional surface zone trench samples were collected 3/8. Bottom samples came back and bottom rescraped. New bottom samples collected 3/12. Backfilling began week of 3/12 - 3/16. Used Soil pile 1 to refill up to 6 feet depth. then continued to the surface with borrow pit soils. 3/19 - re-excavated shallow sidewall in vicinity of US01. Re-collect sample after excavation - SU10. Backfilling complete on 3/26. Data packaged submitted to Weston - 4/18/2012. Geophysical performed week of 5/14. Hauling restarted on 5/23. Hauling completed on 5/30.						APAR - Weston			
SWMU B-15/16	East Pasture		trenches	None	Complete. Silt fencing still in place. CSSA PW to re-vegetate.	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, 500 CY trench 3). 1/10 Collected WC samples as follows: WC01 - 03: trench 1; WC04: gun parts trench 2; WC05: trash to be hauled off-post; and WC06: clean of metal debris. Rained out 1/10, 1/11. Collected BOT samples 1/13. 1/18 kicked off phase 2. Completed removal action March 1st. RIR completed May 2011. RIR submitted to TCEQ June 6, 2011. RIR approved - letter dated 9/7/2011						RIR			
SWMU B-27	Inner Cantonment, Salado Creek	37 mm projectiles	trenches	- RIR (JM)	Complete.	completed draft of WP/SAP and SWPPP - 1/2011. SWPPP and WP/SAP finalized on 2/25/2011. ESS finalized 3/14. Excavation began 6/15 with Trench 1. Mainly soil with minor amounts of tin cans, etc. Began excavation of trench 2 on 6/27. Still mainly soil w/ minor amounts of tin cans, bottles, 1 gallon containers marked chlorox. Collected Trench 1 confirmation samples on 6/28. Hot cooler issue and VOCs scraped. Recollected VOCs on 7/6. Sampled stockpile soils to be sifted and clean top soil cover from trench 1 on 6/29. Completed trench 2 on 7/6, began Trench 3. Trench 3 completed on 7/12, began work on trench 4. Collected samples from trench 2, 3, and 4 on 7/18 and 7/19. Trench 4 completed 7/14/ Trench 5 started 7/18. Trench 6 started 7/26. Trench 7 started 7/28. Trench 8 completed 8/3. Two locations above with metals above PCL - SW06 and SW67 - rescraped on 8/22/2011. Resampled on 8/23 for 7 day tat (9/2) (SW85 for cu and zn, SW86 for barium - see prelim data file for old locations). Also resample SS09, SS10, and SS14 for MC only - SS20, SS21, and SS22 collected on 8/31. All clean. 9/6 - ran UCL for Barium - good (79.78mg/kg). Sampled remaining topsoil pile on 9/7. Draft RIR submitted for CSSA review - 9/26/2011. Site reconstruction work continued through October 27. RIR approved - letter dated 12/29/2011.						RIR			
SWMU B-28	Inner Cantonment, Salado Creek	none	soil contamination	None	Complete. CSSA PW to re-vegetate.	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. BOT samples returned (1/26) - hits of Barium above Tier 1 PCL in 7/10 samples. 2/17, area of site slated for re-excavation 2 additional feet accomplished. Took additional BOT samples for Barium evaluation (2/25). 3/3 95%UCL calculated for remaining samples = 207.5. 3/24 - excavate drainage ditch. Remaining soil hauled to east pasture berm _____. Draft RIR submitted to CSSA on 7/22. Final submitted to CSSA on 8/3. RIR approved - Letter dated 11/17/2011.						RIR			
AOC-45	Inner Cantonment	none	soil contamination	None	Complete. Silt fencing still in place. Final top soil and revegetation to be done by CSSA PW. On hold until drainage plans for area are finalized.	XRF samples collected 12/6, 12/7, 12/21 (69 locations). XRF results contoured 12/27. Surface soil samples collected 4/7 (SS01 - SS14. all analyzed for metals, two analyzed for vocs, svocs, explosives). Results back 4/12. high lead issue at southern end of site. 4/20 collected additional samples for Pb analysis (SS15-SS17). All three came back clean so now have horizontal extent of excavation defined. Began excavation 5/11. Work halted 5/12 for weather. Picked back up 5/16. 5/16 confirmation samples collected. Excavation complete 5/16. Some hits above PCL, but not when using 95% UCL - one hot spot. re-excavation around hot spot 5/23. Confirmation sample collected 5/24. Draft RIR submitted to CSSA for review 7/21. Final submitted to CSSA 8/2. RIR Approved - Letter Dated 10/20/2011.						RIR			XRF showed site is actually situated to the west of the original location, High Pb levels, minimal Zn above background.

Site	Area	Suspected Munitions	type of site	Work Needed	Current Status	Progress	Site Size (acres)	Estimated Excavation Extent (acres)	total estimated volume to remove CY	estimated excavation time	Original Description	Type of Closure Report	Potential COCs	Office data analysis to date	Notes	
AOC-42	Inner Cantonment, Salado Creek	radios, grease guns	trenches	None	Complete. CSSA PW to reseed area.	Final WP/SAP completed 3/14. 3/22 began conducting exploratory excavations. 3/23 encountered white substance. Collected sample to send to lab for identification. 3/23 pulled to the north of site to continue excavating. 4/7 collected soil pile sample (AOC42-SP01 for metals, SVOCs, VOCs, explosives). 4/12 SPO1 results came back clean. 4/19 2 samples collected from soil piles (SPO2 and SPO3), 3-day tat. 4/18 sampled asbestos-like material uncovered at trench 2. All trench samples and SPO3 are clean. Asbestos-like material is fibrous glass. Approximately 160 CY of Fibrous glass. Fibrous glass removed June 28th, samples confirmation samples collected 6/28. Two samples (SW13 and BOT03) had high levels of metals and need to be re-excavated. 7/12 overexcavated Trench 2 in the area where the fibrous glass was removed. Salado Creek area - done hauling sifted pile by June 30. Grading of site took place week of 7/5. Geophysical survey conducted the week of July 5th and July 18th. Survey complete. Draft RIR submitted to CSSA for review - 8/29. Final submitted to CSSA 9/6/2011. RIR Approved - letter dated 12/16/2011.										Excavated volume: Top soil = 2,300, Trench soil/metal debris = 1,400, Fiber Glass Area = 60.
AOC-51	East Pasture		Misc.		Complete.	XRF survey completed 12/28 (69 locations). Soil samples (SS10, 11, and 12) collected 11/15. UXO investigation began 12/2011 and wrapped up 1/2012. Surface soil samples collected 1/16/12. Areas B and C explored with XRF on 2/14/12 to help delineate contamination extent. UXO sweep of excavation/staging/roadway in to AOC51-A took place 3/5 - 3/7. Tree removal took place 3/12-3/16. 3/14 and 3/15 - collected samples across site and deeper in the AOC51-A area. Due back 3/23. Excavation effort began 4/16. Hauling began 5/21 and was completed on 5/23. RIR submitted July 13, 2012. AOC-51 UXO Investigation Tech Memo submitted 9/11/2012 - RIR approved - letter dated 10/15/2012.										
AOC-52	Inner Cantonment, Salado Creek	spring-filled clips	trenches	None	Complete. CSSA PW to reseed area.	Final WP/SAP completed 3/14. Began excavation 4/18. Pocket of medicaldebris found - est. >500 cy of it. Suspected Asbestos sampled collected 5/24. Confirmation samples collected 5/24 (due back 5/31 and 6/1). All confirmation samples came back clean. Medical debris excavated 6/28/2011. see Salado Creek description under AOC-42.										
AOC-57	Inner Cantonment	none	soil contamination	None	Complete.	XRF samples completed 12/2, 12/3, and 12/21 (67 locations). 1/12 collected 10 surface soil samples + QA/QC. 10 for CSSA 9 metals, + 3 of those for vocs and svocs). 2/14 lab results back. RIR submitted to CSSA for review in May, 2011. RIR submitted to TCEQ June, 2011. TCEQ approval recieved - 9/13,2011.										
AOC-58	Inner Cantonment, Salado Creek	bayonnetts	trenches	None	Complete. CSSA PW to reseed area.	Final WP/SAP completed 3/14. 4/4 Field effort began. 4/7 collected soil pile sample (AOC58-SP01 for metals, SVOCs, VOCs, explosives). 4/7 excavation complete. 4/12 SPO1 results came back clean. 4/19 sample taken of soil pile (SPO2) and trench - both trench and pile came back clean. Trench Backfilled. see Salado Creek description under AOC-42.										
AOC-59	East Pasture	unknown	trench-type anomaly/soil berm	None	Complete.	XRF survey completed 12/20 (30 locations). 1/13 collected surface soil samples for metals and explosives (4 samples collected +QA/QC). Completed draft WP/SAP 1/2011. Lab results back 2/14. 3/7 excavation began and wrapped up 3/8. Confirmation samples collected 3/29 (SS05-SS08; BOT05 - BOT-06). Results back 4/7. all below TRRP but one, slightly high. Additional samples collected 4/20 (SS09, SS10, BOT07 and BOT08) to enable 95%UCL calculation. Draft RIR submitted to CSSA for review 7/22. Final submitted to CSSA 8/2. RIR approved - letter dated 10/20/2011.										
AOC-62	Inner Cantonment, Salado Creek	20 mm guns	trenches	None	Complete. CSSA PW to reseed area.	12/21 completed XRF Survey (16 locations). 3/14 completed final WP/SAP. 3/14 began field effort. 3/22 completed excavation of materials w/ the excavation of 405 CY. Collected confirmation and WC samples 3/29 (SW01-SW16; BOT01-BOT04). Results clean, but need to resample SW14 and BOT02 again. WC01 also TRRP clean. 4/19 sampled SW14 and BOT02 - samples came back clean. Samples SW17 and SW18 - samples were clean.										
AOC-70	Inner Cantonment	none	soil contamination	None	Complete.	Surface soil samples collected 1/12 for pesticides (4 samples plus QA/QC). Lab results back 2/14. RIR submitted to CSSA for review in May, 2011. RIR submitted to TCEQ June 7, 2011. TCEQ Closure Letter dated September 1, 2011.										

Site	Area	Suspected Munitions	type of site	Work Needed	Current Status	Progress	Site Size (acres)	Estimated Excavation Extent (acres)	total estimated volume to remove CY	estimated excavation time	Original Description	Type of Closure Report	Potential COCs	Office data analysis to date	Notes
AOC-72	Inner Cantonment	none	construction debris		Complete.	XRF samples collected 12/15 (17 locations). Surface soil samples around the edge of the site collected 6/23 - all clean. 10/31 Tree clearing activities began. 11/3 tree removal efforts completed. 11/8 waste characterization and soil sample collection performed. soil samples due back 11/21. WC fro class I/II 11/21. WC for Class III 12/1. 11/23 WC sample results submitted to WM for verification. Verification came mid december. Began excavation on 1/23/12. Rain delays. 2/16/12 hauled out remaining soils and backfilled excavation area. Excavation complete. AOC-72 submitted to the TCEQ 3/6. TCEQ Closure Letter dated May 18, 2012.						RIR	VOCs, metals, and asbestos		XRF survey showed no Zn or Pb above background in surface soils.
AOC-74	Inner Cantonment	none	construction debris		Complete. Site needs top cover and revegetation - CSSA to take care of.	XRF samples collected in June 2011. Soil samples collected 11/7 (SS01 - SS10). Results due back 11/14. UXO investigation conducted 11/7 and 11/8. 11/15 rained out. 11/15 SS02 tested for herbs/pesticides. Came back clean. 11/16 collected samples SS11- SS14 and BOT01 and BOT02. Due back 11/21. 11/16 Began tree removal work at site. 11/21 still removing trees. 11/22 began excavation at site. 11/23 day off before thanksgiving. 11/28 collected ss16, 17, 18, and WC01. Excavation completed 11/30. Rain delays in December. Began Hauling soils 1/3/2012. Rain delays begin 1/9/2012. 1 pile remaining to haul. Hauling began again 1/16. Fence construction began 1/12, completed 1/18/12. Hauling completed 1/19/12. RIR submitted to TCEQ on 2/14/12. TCEQ Closure Letter dated May 8, 2012.	2					RIR			
RMU-2	Inner Cantonment	small arms munitions	rifle range	-RIR	Complete. Ready for topsoil and re-vegetation.	Basemap w/ XRF survey locations completed 12/29. Completed draft WP/SAP 1/2011. Samples collected 3/1/2011. WP/SAP finalized 3/8. Samples back from lab 3/23- high Pb throughout. TCLP results back 3/29 - hazardous soils. Plans finalized 5/26/ PIMS began arriving 5/26. XRF began May 31. Excavation began June 1. Samples collected 6/1, 6/2, 6/3. XRF perimeter 6/15. collect soil samples for lab analysis 6/16. Complete hauling of PIMS treated piles 6/16. Phase 2: Work started up on 8/1 to complete excavation to RIR standards. 8/16 - new excavation extent excavated. 8/16 - collected confirmation samples from the excavation floor. 8/24 Phase 3 excavation: re-excavated a number of locations w/ hits or boundary issues - SSS5, SS43/SS62, and SS44, SS65, and SS19. Additional samples collected 8/31 and 8/30 in newly re-excavated areas- SS69, 70, 71, 72, 73, and 74. Results due back 9/6. 9/8 Pb UCL run for all remaining samples minus SS70/SS74 (at the time - had not collected SS75 and SS76) = 69.43. Two too hot areas remain - SS 70 and sS74. Began Phase 4 excavation in those areas on 9/12. Compete with the collection of 2 additional ss's for Pb (SS75 and SS76) and 2 WC pile samples. All due back 9/19. Final RIR submitted to CSSA on 11/17/2011. RIR approved - letter dated 2/14/2012.						RIR			
RMU-5	North Pasture	Same as B-20/21	possible rocket range		Complete.	XRF survey conducted 12/8-9 (45 points collected). 10/3 NP UXO Investigation began. Survey continued intermittently through December. Lab samples collected on 2/7/12 to confirm XRF survey results. In addition, XRF survey and samples collected to the se of site in area of original arrow - 21 day TAT (2/27/12). RIR submitted to TCEQ 6/15/2012. TCEQ letter of approval dated 9/20/2012									

ATTACHMENT 6

HUMAN/ECOLOGICAL RISK ASSESSMENT EFFORTS

Attachment 6
Tissue Sampling Results

Date	Sample ID	Hunter	Animal	Stand	Weight Live (lb)	Weight Dressed (lb)	Age (years)	Bone (mg/kg)	Muscle (mg/kg)	Liver (mg/kg)
11/3/2012	GT12016	Martinez	Buck	44	125	--	5.5	2.7	0.50 U	0.50 U
11/3/2012	GT12018	Harris	Buck	13	--	--	4.5	0.50 U	0.50 U	0.50 U
11/4/2012	GT12012	Cannizzo	Buck	46	130	95	4.5	0.82	0.50 U	0.50 U
11/4/2012	GT12014	Priest	Buck	24	173	140	5.5	0.50 U	0.50 U	0.50 U
11/5/2012	GT12020	Snyder	Buck	11	136	109	4	0.50 U	0.50 U	0.50 U
11/7/2012	GT12021	Munns	Buck	11	155	130	3-4	0.50 U	0.50 U	0.50 U
11/9/2012	GT12022	Arguello	Buck	45	130	110	4	0.50 U	0.50 U	0.50 U
11/12/2012	GT12024	Stahl	Buck	42	160	135	6.5	0.50 U	0.50 U	0.50 U
11/12/2012	GT12023	Arguello	Doe	40	80	65	3	2.2	0.50 U	0.50 U
11/14/2012	GT12025	Valadez	Buck	39	130	116	3.5	0.50 U	0.50 U	0.50 U
11/14/2012	GT12026	Cannizzo	Pig	40	235	195	5.5	0.71	0.50 U	0.50 U
11/17/2012	GT12027	Terry	Buck	35	170	140	4.5	0.50 UJ	0.50 U	0.50 U
11/17/2012	GT12028	Garcia	Buck	10	160	140	5.5	0.50 UJ	0.50 U	0.50 U
11/17/2012	GT12029	Todd	Buck	46	120	100	3.5	1.2 J	0.50 U	0.50 U
11/24/2012	GT12030	McMullin	Buck	4	145	120	4.5	0.50 UJ	0.50 U	0.50 U
11/24/2012	GT12031	Lopez	Buck	10	160	140	5.5	0.50 UJ	0.50 U	0.50 U
11/28/2012	GT12032	Cannizzo	Doe	11	100	80	4.5	0.50 U	0.50 U	0.50 U
12/12/2012	GT12033	Guyott	Buck	14	138	115	3	0.50 U	0.50 U	0.50 U

-- no data recorded by hunter