PROGRESS REPORT

January 1, 2010 – June 30, 2010 (36th REPORT)



Camp Stanley Storage Activity Boerne, Texas

USEPA ID No. TX2210020739

July 2010

EXECUTIVE SUMMARY

This 36th Progress Report for Camp Stanley Storage Activity (CSSA), Boerne, Texas, U.S. Environmental Protection Agency (USEPA) Identification Number TX2210020739, is submitted in accordance with the Administrative Order on Consent (Order) issued to CSSA on May 5, 1999, pursuant to §3008(h) of the Safe Drinking Water Act, as amended by the Resource Conservation and Recovery Act (RCRA), and further amended by the Hazardous and Solid Waste Act of 1984, 42 United States Code §6928(h). This report addresses the project progress from January 1, 2010 through July 31, 2010. In June 2006, CSSA switched from quarterly to semi-annual progress reporting, as approved by USEPA. Subsequent progress reports will continue to be submitted on a semi-annual basis.

Summary of Activities this Period

Between January 1 and June 30, 2010, significant activities related to the Order included:

- Continuation of Solid Waste Management Unit (SWMU) B-3 bioreactor treatability studies and submittal of the SWMU B-3 Bioreactor Operations & Maintenance (O&M) Manual on April 2, 2010;
- Continuation of Area of Concern (AOC)-65 Soil Vapor Extraction (SVE) and O&M of the SVE system treatability study;
- Continuation of the groundwater monitoring program under the regulator-approved data quality objectives (DQO);
- Continuation of investigations of SWMUs and AOCs including SWMU B-2, SWMU B-8, SWMU B-15/16, SWMU B-20/21, and SWMU B-24:
 - o Approximately 500 locations at SWMU B-2 and B-8 were analyzed for metals concentrations with a field potable x-ray fluorescence (XRF) analyzer, and 52 samples were submitted for laboratory analysis to confirm the XRF results.
 - Parsons conducted excavation of a trench at SWMU B-15/16 where numerous buried items were found; the cost and effort to complete the excavation and certification is currently being determined.
 - O A baseline Munitions and Explosives of Concern (MEC) Hazard Assessment (HA) for both SWMU B-20/21 and B-24, as well as an assessment of remediation alternatives were performed; XRF was used at both SWMU B-20/21 and B-24 to delineate the extent of metals contamination at the SWMU boundaries; and samples were collected in the northern portion of SMWU B-20/21 to evaluate current conditions in the areas where contaminated soil was previously removed.
- Continued maintenance of on-post and off-post granular activated carbon (GAC) systems and on-post permitted outfalls;
- One status update meeting with USEPA and the Texas Commission on Environmental Quality (TCEQ); and
- Continuation of administrative record maintenance.

Details regarding these activities are summarized in this report.

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ACRONYMS AND ABBREVIATIONS

°C Degrees Celsius

1,1-DCE 1,1-dichloroethene

AOC Area of Concern

AL action level

APAR affected property assessment report

APPL Agriculture & Priority Pollutants Laboratories, Inc.

cis-1,2-DCE cis-1,2-dichloroethene

CAH chlorinated aliphatic hydrocarbons

COC chemical of concern

CSSA Camp Stanley Storage Activity

CY cubic yard

DQO data quality objective

GAC granular activated carbon

gpm gallons per minute

H&A Hankins and Anderson

I/SM interim/stabilization measures

LTMO long-term monitoring optimization

MCL Maximum Contaminant Level

MD munitions debris

MEC munitions and explosives of concern

μg/l micrograms per liter

NFA No Further Action

O&M operations and maintenance

Order §3008(h) Administrative Order on Consent

PCL Protective Concentration Limit

PCE tetrachloroethene

QAPP Quality Assurance Program Plan

RCRA Resource Conservation and Recovery Act

RFI RCRA facility investigation

RIR Release Investigation Report

SCL Secondary Contaminant Levels

SVE coil vapor extraction

SVOC semi-volatile organic compound

SWMU solid waste management unit

TCE trichloroethene

TCEQ Texas Commission on Environmental Quality

TO task order

TRRP Texas Risk Reduction Program

UIC underground injection control

USACE United States Army Corps of Engineers

USEPA United States Environmental Protection Agency

UXO unexploded ordnance

VC vinyl chloride

VOC volatile organic compound

WP work plan

PROGRESS REPORT JANUARY 1, 2010 – JUNE 30, 2010 (36th PERIOD)

INTRODUCTION

This 36th Progress Report for Camp Stanley Storage Activity (CSSA), Boerne, Texas, U.S. Environmental Protection Agency (USEPA) Identification Number TX2210020739, is submitted in accordance with the Administrative Order on Consent (Order) issued to CSSA on May 5, 1999, pursuant to §3008(h) of the Safe Drinking Water Act, as amended by the Resource Conservation and Recovery Act (RCRA), and further amended by the Hazardous and Solid Waste Act of 1984, 42 United States Code §6928(h). This report addresses the project progress from January 1, 2010 through July 31, 2010. In June 2006, CSSA switched from quarterly to semi-annual progress reporting, as approved by USEPA. Subsequent progress reports will continue to be submitted on a semi-annual basis.

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- Continuation of the groundwater monitoring program under the regulator-approved data quality objectives (DQO);
- Continuation of investigations of SWMUs and AOCs including SWMU B-2, SWMU B-8, SWMU B-15/16, SWMU B-20/21, and SWMU B-24;
- Continued maintenance of on-post and off-post granular activated carbon (GAC) systems and on-post permitted outfalls;
- CSSA entered into an agreement with the United States Geologic Survey (USGS) to develop a three dimensional EarthVisionTM multilayer geologic model of the post. This model will integrate existing airborne helicopter electromagnetic (HEM) data with detailed evaluation of area electrical logs and core data.
- One status update meeting with USEPA and the Texas Commission on Environmental Quality (TCEQ); 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 January 1 through June 30, 2010 is provided in this report. No current information is provided for tasks that are not active; however, a summary of all tasks, subtasks, and their status has been presented in previous reports. Details of the evaluation of the percent complete by awarded projects are included in **Table 2**. An updated project team contact information chart with telephone numbers and addresses is included in **Table 3**.

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

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 P35
Interim Measures	• • • • • • • • • • • • • • • • • • • •	30%				99%	
Interim Measures Work Plan	Mitigate a current or potential threat to human		7%	100%	7%		No
Interim Measures Implementation	health and/or the environment.		70%	99%	69%		No
Reports			23%	99%	23%		No
RCRA Facility Investigation		30%				78%	
Preliminary Report	Characterize the environmental setting of		5%	100%	5%		No
RFI Work Plan	CSSA; define the sources of		5%	100%	5%		Yes
Facility Investigation	contamination; define the degree and extent of		40%	79%	32%		Yes
Risk Assessment	contamination; identify		10%	89%	9%		No
Investigation Analysis	actual or potential receptors; and assess		10%	84%	8%		No
Groundwater Investigation	whether any additional interim/stabilization		15%	85%	13%		Yes
Treatability Studies	measures may be warranted.		10%	46%	5%		Yes
Progress Reports			5%	30%	1%		Yes
Corrective Measures Study	Identification, screening,	10%				0%	
Identify and Develop Alternatives	and development of alternatives for removal,		15%	0%	0%		No
Evaluate Alternatives	containment, treatment, and/or other remediation		60%	0%	0%		No
Reports	of the contamination.		25%	0%	0%		No
Corrective Measures Implementation	Design, construct,	30%				0%	
Implementation Program Plan	operate, maintain, and monitor the performance		5%	0%	0%		No
Corrective Measure Design	of corrective measure(s) selected to protect human health and the environment.		15%	0%	0%		No
Corrective Measure Construction			70%	0%	0%		No
Reports	O.T. T. O.T. T. O.T. T.		10%	0%	0%		No
				% of All Pha	ases Complete	53%	

RCRA FACILITY INVESTIGATION

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

- Groundwater monitoring of on- and off-post wells;
- Groundwater monitoring of Westbay®-equipped wells;
- Verification and validation of analytical data;
- SVE system O&M and soil vapor investigation at AOC-65;
- Continuation of bioreactor operation and other treatability studies at SWMU B-3; and
- Investigations of SWMU B-2, SWMU B-4, SWMU B-8, SWMU B-15/16, SWMU B-20/21, and SWMU B-24.

RFI Work Plan

The Order requires the RFI wok plan (WP) task to include a Project Management Plan, Data Collection Quality Assurance Plan, Health and Safety Plan, and a Community Relations Plan. As previously agreed by USEPA, because the CSSA Environmental Encyclopedia includes all information required by the Order, it is used to fulfill this requirement. The RFI WP task makes up approximately 5 percent of the RFI phase. Estimation of percent complete is difficult due to the continuing need for plan addenda as new projects are identified and awarded. As of the end of Period 36, WPs currently under scope are 100 percent complete. The CSSA Environmental Encyclopedia will continue to be updated as WPs for any new projects are finalized

Environmental Encyclopedia Updates

The CSSA website (<u>www.stanley.army.mil</u>) was updated with documents added to the Environmental Encyclopedia through the end of June 2010. The website includes CSSA's Administrative Record as required under the Order. The electronic encyclopedia and hard copy encyclopedia were updated with all final reports through June 2010. Updates made in Period 36 included the following:

- Period 35 USEPA Progress Report;
- Final DO11 Groundwater Work Plan Addendum;
- Final June 2009 Off-Post Groundwater Monitoring Report:

- Final September 2009 Off-Post Groundwater Monitoring Report;
- September 2009 Off-Post Well Owner Letters;
- December 2009 Off-Post Well Owner Letters;
- Final September 2009 On-Post Groundwater Monitoring Report;
- Final DQO Groundwater Monitoring Report, Revised November 2009;
- Various correspondence to and from CSSA;
- Various meeting minutes; and
- Various tables of contents, site chronologies, and indices.

Documents completed during Period 36 will be added to the Environmental Encyclopedia in July 2010.

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

Facility Investigations

An investigation of the facility is being conducted to:

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

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

Completion of the facility investigations for the planned RFI tasks is partially funded. **Attachment 2** indicates the sites for which investigations have been initiated with site status as well as sites that have been identified, but not yet investigated. The Facility Investigations subtask makes up approximately 40 percent of the RFI phase. As of the end of Period 36, this task is approximately 79 percent complete.

A total of 82 SWMUs, AOCs, and Range Management Units (RMUs) have been identified at CSSA, and investigations have been conducted at 69 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 38 CSSA sites has been approved by TCEQ, and 13 sites were either delisted or granted No Further Action (NFA) status.

SWMU and AOC Investigations

The Facility Investigation subtask makes up approximately 40 percent of the RFI phase. As of the end of Period 36, this task is approximately 79 percent complete.

SWMUs B-2 and B-8

Work plans were completed in Period 36 for additional investigation at SWMUs B-2 and B-8 to determine the extent of lead contamination. Grid sampling and XRF analysis, in combination with laboratory analysis, was conducted in June 2010.

Approximately 500 locations at SWMU B-2 and B-8 were analyzed for metals concentrations with a field potable x-ray fluorescence (XRF) analyzer. Results indicate several areas with contaminates of concern (COC) including barium, copper, lead, and zinc above background levels. A total of 52 samples were collected for laboratory analysis to provide confirmation of the XRF analyzer results. Laboratory results are pending; however, it is anticipated that the horizontal extent of contamination has been identified for COCs.

SWMU B-4

SMWU B-4 has been undergoing surface soil sampling of metals (mercury, barium, cadmium, chromium, copper, lead, nickel and zinc) and explosives to delineate the boundaries of the site and eco-risk areas; and excavation of test pits along the longitudinal extent of the suspected trenches to collect samples from the landfill materials and bottom of the trenches for COC determination and *in-situ* waste characterization. The test pits were widened at the bottom to expose the trench limits at depth. The soils located within the test pits were analyzed for metals (barium, cadmium, chromium, copper. lead, mercury, nickel, and zinc), VOCs, SVOCs and explosives. Results from the exploratory and *in-situ* waste characterization have been received and Weston is currently coordinating with CSSA and Waste Management on the removal and disposition of the non-contaminated and Class II materials removed from SWMU B-4.

SWMU B-15/16

Parsons conducted excavation of a trench at SWMU B-15/16. Numerous munitions debris (MD) items were found, as well as an empty drum labeled "perchloroethyelene," some asbestoscontaining material, discarded tires, and much metal waste. Samples were collected for waste characterization, and results indicated the soil meets background conditions. Soil samples were also collected along the trench bottom, and all analytes for these samples meet background concentrations with the exception of zinc at three locations. Zinc concentrations at these locations ranged from 77.9mg/kg to 215 mg/kg; the background concentration for zinc in soil at CSSA is 73.2 mg/kg. The soil sample collected directly beneath the location where the drum was found to contain no PCE or any other VOCs.

Due to the clayey nature of soils at SWMU B-15/16, which is located along the banks of Salado Creek, it is difficult to identify all MD/MEC/UXO items in the clay matrix. It was planned that soil excavated from SWMU B-15/16 would be placed on CSSA's East Pasture berm. Prior to placing it there or back into the excavation at SWMU B-15/16, additional efforts, beyond what was originally planned, must be taken to allow certification that the material does not contain Munitions and Explosives of Concern (MEC). The cost and effort to complete the excavation and certification is currently being determined. Storm Water Pollution Prevention Plan (SWPPP) inspection and maintenance requirements are being met at SWMU B-15/16, pending completion of the excavation.

SWMUs B-20/21 and B-24

During Period 36, work began on a report describing a "roadmap" for SWMUs B-20/21 and B-24 to guide future investigations and remediation efforts. This included a baseline MEC Hazard Assessment (HA) for both SWMUs and an assessment of remediation alternatives. The alternatives assessment looked at post-remediation MEC HAs and cost estimates for a range of alternatives from access restriction to a full removal effort. A Treatability Study was proposed to help define the proposed remediation effort. The results of the Roadmap Report and the proposed components of the Treatability Study were shared with the EPA and TCEQ in the February meeting. The evaluation of alternatives will continue through Period 37.

Most recently in June, surface soil samples were collected using XRF at both SWMU B-20/21 and B-24 to delineate the extent of metals contamination at the SWMU boundaries. Additional samples were also collected in the northern portion of SMWU B-20/21 to evaluate current conditions in the areas where contaminated soil was previously removed.

SWMU B-71 and AOC-64.

Weston is currently composing an Affected Property Assessment Report (APAR) for AOC-64 and SWMU B-71. The two sites are located within close proximity and the remediation activities were identical, thus one APAR is being composed to include both sites.

AOC-67 and AOC-68

A RIR requesting no further action for AOC-67/68 was completed and is currently being reviewed by CSSA. It is expected to be submitted to TCEQ for approval in July 2010.

Groundwater Investigation

The groundwater investigation subtask makes up approximately 15 percent of the RFI phase. As of the end of Period 36, this task is approximately 85 percent complete.

On- and off-post groundwater monitoring was conducted in accordance with the regulator-approved DQOs during Period 36. Sampling frequencies for on-post wells are determined by the long term monitoring optimization (LTMO) study completed in May 2005, as approved by TCEQ and USEPA. Based on the LTMO recommendations, on-post wells are sampled quarterly, semi-annually, or biennially (every two years). Off-post wells are not included in the

LTMO recommendations and are sampled quarterly under the DQOs and the CSSA Off-Post Monitoring and Response Plan. A map of the well locations is provided in **Attachment 1** of this report.

The analyte list for each monitoring event was in accordance with the applicable WPs and DQOs. On- and off-post monitoring wells and Westbay-equipped wells were sampled for the SW-846 Method 8260B volatile organic compounds (VOCs) 1,1-dichloroethene (1,1-DCE), *cis*-1,2-dichloroethene (*cis*-1,2-DCE), *trans*-1,2- dichloroethene, tetrachloroethene (PCE), trichloroethene (TCE), and vinyl chloride (VC). On-post monitoring wells were sampled for the SW-846 Method 6010/6020 metals lead, cadmium, mercury, and chromium. On-post drinking water wells are sampled for four additional metals: barium, arsenic, copper, and zinc. Additional samples were collected off-post from the wells with GAC filtration systems. Samples were analyzed by APPL in Fresno, California. Parsons' chemists validated and verified the data in accordance with the CSSA Quality Assurance Program Plan (QAPP). All detected concentrations of VOCs and metals are presented in **Attachment 4**.

December 2009 Sampling

Based on the LTMO recommendations, twelve on-post wells were scheduled to be sampled in December 2009. However, to get a more comprehensive look at ground water plume conditions, it was agreed that one sampling event per year should include as many wells as possible. To accomplish this 43 of 46 on-post wells were sampled in December 2009. Off-post wells sampled in December 2009 included 26 private and public off-post drinking water wells. Sampling was conducted between November 30 and December 21, 2009.

In December 2009, no metals exceeded MCLs on-post. MCLs for PCE, TCE, and *cis*-1,2-DCE were exceeded in on-post wells CS-MW1-LGR, CS-MW16-LGR, CS-D and CS-4. Off-post wells I10-4 and RFR-10 exceeded the MCL for PCE and/or TCE. Well RFR-10 is equipped with a GAC treatment system. Well I10-4 sits on a vacant lot, is not currently being used, and is not equipped with a pump. In January 2010 the carbon was exchanged and other routine maintenance was performed on off-post GAC treatment systems installed at LS-6, LS-7, OFR-3, RFR-10, and RFR-11.

March 2010 Sampling

Eleven on-post monitoring and drinking water wells and the LGR zones of the four AOC-65 Westbay-equipped wells were sampled in March 2010. Off-post wells sampled in March 2010 included 39 private and public off-post drinking water wells with six post-GAC samples. All samples were analyzed for VOCs. In addition, the on-post samples were analyzed for selected metals. No VOCs exceeded the MCL in on-post monitoring wells. Westbay-equipped wells CS-WB01, CS-WB02, CS-WB03, and CS-WB04 had exceedances of either PCE and/or TCE in various intervals. Of the off-post wells sampled, PCE and TCE exceeded MCLs in RFR-10. Metals analyses indicated two on-post wells, proposed drinking water well CS-12 and inactive drinking water well CS-9, equaled or exceeded the Action Levels for lead of 15 μg/L.

June 2010 Sampling

Twenty-six on-post wells were scheduled for sampling in June 2010. Off-post wells sampled in June 2010 included 31 private and public drinking water wells. Sampling was conducted between June 1 and 14, 2010. Laboratory results will be received in July 2010 and summarized in the next progress report.

On-Post GAC Systems

CSSA operated and maintained the permitted on-post GAC unit at Outfall 002 and the permitted discharge at Outfall 004 this period. A Discharge Monitoring Report is submitted each month the system operates to comply with Texas Pollution Discharge Elimination System permit requirements. No discharge occurred at either outfall this period.

Off-Post GAC Systems

Based on sampling results received in 2001 and 2002 indicating VOC levels above or approaching the MCL, GAC filtration systems were installed at five off-post wells. In accordance with the CSSA Off-Post Monitoring Program Response Plan dated June 2002 and the Groundwater Monitoring DQOs, the off-post GAC filtration systems are maintained by CSSA and sampled every six months. Monthly O&M activities for the off-post residential GAC filtration systems were performed this period. Work included inspection and replacement, as needed, of the pre- and post-GAC filters at wells LS-6, LS-7, RFR-10, RFR-11, and OFR-3. Post-GAC confirmation samples from all of the off-post GAC systems were collected in March 2010. All VOC results for the post-GAC water samples were non-detect. Carbon canister exchange will be completed in July 2010 for the off-post GAC systems.

Data Validation and Verification

Laboratory results from sampling efforts and investigations are validated and verified by Parsons' chemists to ensure results are in compliance with CSSA QAPP requirements. Data validation and verification continued during Period 36.

Treatability Studies

The Treatability Study subtask makes up approximately 10 percent of the RFI phase. As of the end of Period 36, this task is approximately 46 percent complete.

SWMU B-3 Bioreactor Treatability Study

SWMU B-3 Bioreactor Performance Status Reports were submitted to CSSA, TCEQ and USEPA on a quarterly basis during Period 36. Approximately 23,821,433 gallons of groundwater extracted from CS-MW16-LGR and CS-MW16-CC have been injected into the bioreactor trenches since the start of injection in 2007. A semiannual Underground Injection Control (UIC) report for the period, in accordance with CSSA's Class V Aquifer Remediation

Injection Well Permit, TCEQ Authorization No. 5X2600431; WWC12002216 was submitted to the TCEQ on May 5, 2010.

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

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

During Period 36, the bioreactor remained at saturated conditions due to rainfall and the continued supply of supplemental water from wells CS-MW16-CC, CS-MW16-LGR, and B3-EXW01. In addition, from January through early February, 2010, VOC-free water from proposed drinking water well CS-12 was also pumped to the bioreactor. This was done as a continuation of the bioreactor flood test that was conducted in Period 35. A total of 2,035,604 gallons of water was added to the bioreactor during Period 36. This compares to 4,629,000 and 4,727,693 gallons added in Periods 34 and 35, respectively. Due to a large amount of rainfall during Period 36, and the continued pumping from CS-12, it was not necessary to pump as much water from the extraction wells into the bioreactor compared with previous periods.

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

The "tracer" study which involved injecting water into bioreactor trench 6 continued in Period 36. Data collection and monitoring for this effort included collection geochemical parameters of water being injected from CSSA's well CS-12. The draft technical report on the

Flood Test consisting of data tables, graphics, and interpretative text continued and was submitted on March 1, 2010. In addition, a poster presentation summarizing the findings of the Flood Test was prepared during Period 36 and presented at the BattelleTM Conference on remediation of Chlorinated and Recalcitrant Compounds.

Monitoring results continue to indicate that effective treatment of injected groundwater in the bioreactor is occurring; however, a significant amount of VOC components continues to remain in strata adjacent and beneath the trenches. Breakdown products of highly chlorinated species, such as PCE and TCE, and minor amounts of fuel components, like toluene, are identified in groundwater samples from locations surrounding the bioreactor. During Period 36 (data available through April 2010), the degradation products vinyl chloride and ethene were identified within the bioreactor (vinyl chloride as high as 18 µg/L and ethene as high as 3.8 µg/L); and significant amounts of vinyl chloride were observed in Westbay-equipped wells in zones CS-WB05-LGR04A (28 µg/L) and CS-WB07-UGR01 (56 µg/L). Less significant amounts of vinyl chloride were identified in zones WB05-LGR04B, WB05-CC2, WB06-UGR01, WB07-UGR01, and WB08-UGR01. Ethene represents one of the final degradation products of attenuated chlorinated solvents. In addition, elevated levels of manganese suggest biotic anaerobic oxidation of chlorinated aliphatic hydrocarbons (CAHs) to carbon dioxide, and elevated levels of iron and trans-DCE suggest abiotic reductive dechlorination may also be This period, nine new shallow monitoring wells were installed surrounding the bioreactor to better monitor the influence of the bioreactor on the UGR. Results from these new wells are pending laboratory analysis.

AOC-65 SVE System

Monthly monitoring including semi-annual sampling of the AOC-65 SVE system has been ongoing since April 2008. Initial monitoring results indicate no exceedances of permit-by-rule (PBR) limits occurred for the SVE system. Soil vapor samples were collected from the AOC-65 SVE system during Period 36 and analyzed for VOCs. Results indicated that PCE emissions were 134.59 lb/year, which is well below the permitted level of 0.268 lbs/hr or 2347.68 lbs/year.

To evaluate vapor intrusion potential resulting from the AOC-65 VOC source areas, a total of 12 soil gas samples were collected in March 2010 near CSSA's boundary, west of Building 90. Soil gas samples were collected at depths ranging from 3.5 to 5 feet and were spaced approximately 50 feet apart along CSSA's western boundary along Ralph Fair Road. Analytical results from this soil vapor investigation indicate PCE concentrations ranged from non-detect (3.4 micrograms per cubic meter [μ g/m³]) to 12 μ g/m³. The USEPA's Regional Screening Level (RSL) for PCE within residential indoor air, published in May 2010, is 0.41 μ g/m³. This USEPA RSL is associated with residential indoor breathing air, and due to attenuation and dilution of the vapor as it migrates from the subsurface upwards through soil and into a ventilated building, it is not directly comparable to analyzed soil gas values. Because of this attenuation and dilution, indoor air concentrations resulting from vapor intrusion are expected to be considerably less than the subsurface concentrations. To assess the potential of soil vapor from AOC-65 to impact indoor air, site specific attenuation factors will be calculated using appropriate soil property data. A report summarizing the findings will be generated during Period 37.

SUMMARY OF CONTACTS

Letters summarizing results of the December 2009 and March 2010 off-post groundwater monitoring events were mailed to owners of the off-post wells in Period 36. No contact with TCEQ or USEPA regarding Order-related activities occurred this period.

PROJECTED WORK FOR THE NEXT PERIOD

Groundwater Monitoring

Continued sampling of on- and off-post monitoring and water supply wells will continue in September and December 2010. Quarterly and annual groundwater monitoring reports will be submitted next period. The O&M at the residential GAC filtration systems (LS-6, LS-7, OFR-3, RFR-10, and RFR-11) will be conducted every three weeks during Period 37. The semi-annual carbon exchange will be performed in July 2010. The LTMO update will be completed during Period 37.

AOC-65 SVE System Operations

AOC-65 SVE system O&M will continue in Period 37. The system includes four blowers operating continuously, and O&M of those systems will be performed in accordance with the Updated O&M Manual for SVE Systems at CSSA. Monitoring is expected to occur twice monthly, monthly, and semi-annually.

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

SWMU and **AOC** Investigations

Investigations, interim removal actions, and/or reporting will be continued for SWMUs B-2, B-4, B-8, B-15/16, B-20/21, and B-24. Reports summarizing investigation results will be submitted.

SWMU B-3 Bioreactor Treatability Study Monitoring

Monitoring of the bioreactor at SWMU B-3 will be continued during Period 37. 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. In addition, it is planned to pump water from Trench 1 into Trench 6. This will be done to increase desorption of VOCs into the perched UGR aquifer zone and to hopefully seed this portion of the bioreactor with VOC degrading microbes.

Also, it is anticipated that the new bioreactor extraction well, EXW-02 will be brought online during Period 37. This work will include bringing electric to the well pump, setting up SCADA controls, and plumbing the well to the bioreactor injection system.

The results of ground water samples collected from the new UGR monitoring wells that surround the bioreactor will be received during Period 37. In addition, these wells will be surveyed and gradient maps generated. Incorporation of this data into the bioreactor study will enhance understanding characteristics of shallow ground water near the bioreactor.

MEETINGS

A status meeting will be held with TCEQ and USEPA in July 2010. Quarterly groundwater meetings will be held prior to the quarterly events scheduled in September and December 2010.

Table 2, Project Task Completion to Date for Open Projects Only (Values updated through December 31, 2009)

Project Number	Description of Task	Relation to Order	Percent Complete	Percent Funds Expended	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
DY02 (Parsons)	Environmental Compliance, SWMU and AOC closure Investigations	I/SM/RFI	100%		2007-2009

Table 2 Continued, Project Task Completion to Date for Open Projects Only (Values updated through December 31, 2009)

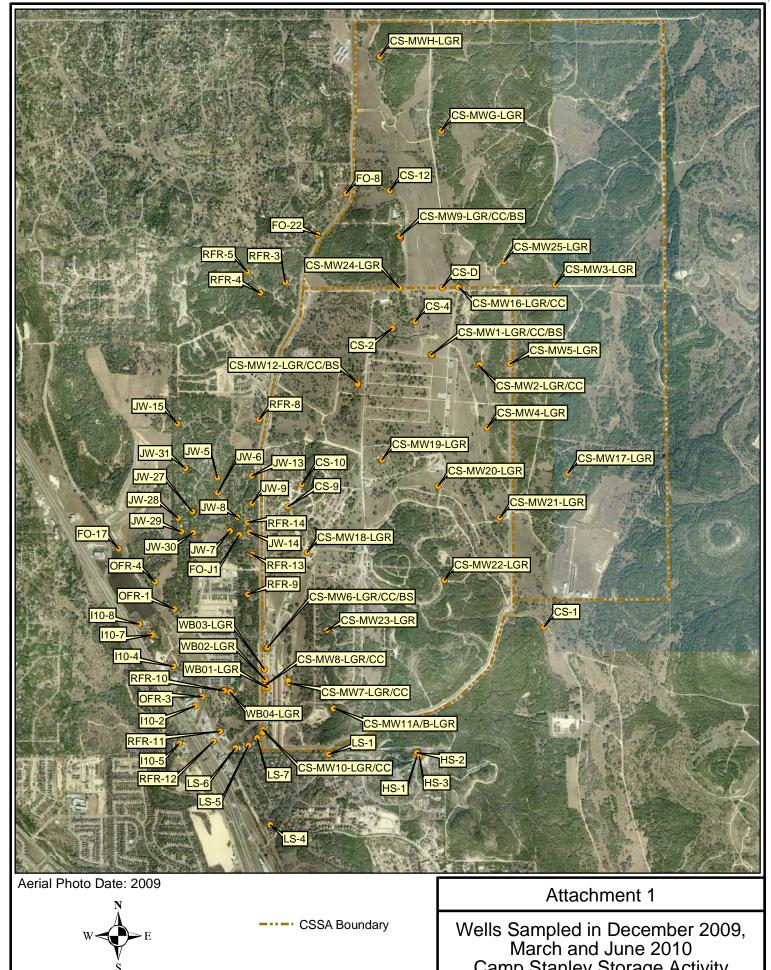
Project Number	Description of Task	Relation to Order	Percent Complete
DY01 (Parsons)	Environmental Compliance, SWMU and AOC closure Investigations	RFI	
	Kickoff meeting/Data Management	RFI	100%
	Work Plans	RFI	100%
	Inner Cantonment Site Investigation	RFI	90%
	North Pasture Site Investigations	RFI	85%
	Environmental Support	RFI	36%
	Recordkeeping	RFI	54%
	Title 2 Services	RFI	99%
	Project mgmt	RFI	64%
	Bioaugmentation Injection	RFI	100%
	Bird Survey	Other	100%
	Hazardous Waste Management Plan	Other	100%
	EMS Documentation	Other	37%
	Ecological Risk Assessment	RFI	80%
DY02 (Weston)	Removal Action	RFI	
· · · · · · · · · · · · · · · · · · ·	Plan Preparation and Mobilization	RFI	100%
	AOC-64 Interim Removal Action	RFI	100%
	Interim Removal Action Reporting	RFI	0%
H&A (Parsons)	Administrative Support and Environmental Services		
	Administrative Record, LAN & GIS and USEPA Progress Reports	RFI	100%
	Miscellaneous Sampling	Other/RFI	99%
	Project Management	RFI	100%
	Environmental and Groundwater Investigations		
	Groundwater Monitoring	RFI	99%
(Parsons) DO11 (Parsons)	Treatability Study Systems Operation	RFI	100%
	Permit Support	Other	87%
	Administrative Record and Progress Reports	RFI	100%
	Site Investigations/Closures	RFI	100%
	Environmental Program Support	RFI	100%
	Environmental Infrastructure	RFI	100%
	Task Order Mgmt	RFI	100%
DO50 (Parsons)	Environmental and Groundwater Investigations		
· · · · · · · · · · · · · · · · · · ·	Administrative Order Recording and Management	RFI	42%
	Compliance and Sampling	RFI	3.5%

Project Number	Description of Task	Relation to Order	Percent Complete
	Environmental Program Support	RFI	6%
	Groundwater Monitoring	RFI	33%
	Site Investigations and Closure	RFI	23%
	Treatability Study Systems Operation	RFI	41%
	Project Management	RFI	48%

Table 3, Project Team Contact Information

Name	Organization/Role	Street Address	City, State, Zip	Phone No.	Fax No.	E-mail
Beal, Christopher	CSSA/Portage Environmental, Geologist and Environmental Assistant	c/o Environmental Office, 25800 Ralph Fair Road	Boerne, TX 78015-4800	(210) 336-1171	(210) 295-7386	bealc@envirodept.net
Burdey, Julie	Parsons, Project Mgr. TO0019, TO0098, DY01	8000 Centre Park Dr., Suite 200	Austin, TX 78754	(512) 719-6062	(512) 719-6099	julie.burdey@parsons.com
Chang, Tammy	Parsons, Senior Scientist	8000 Centre Park Dr., Suite 200	Austin, TX 78754	(512) 719-6092	(512) 719-6099	tammy.chang@parsons.com
Edwards, Bob	Noblis, Environmental Chemist	16414 San Pedro, Suite 340	San Antonio, TX 78232	(210) 408-5552	(210) 479-0482	Robert.edwards@noblis.org
Elliott, Wayne	USACE, Program Mgr	819 Taylor Street, Room 3A12	Fort Worth, TX 76102-0300	(817) 886-1666	(817) 886-6490	Wayne.c.elliott@usace.army.mil
Lyssy, Greg	USEPA, Project Manager	1445 Ross Avenue (6PD-N)	Dallas, TX 75202-2733	(214) 665-8317	(214) 665-6660	lyssy.gregory@epa.gov
Mitchell, Stephen	Weston, Project Manager	2705 Bee Caves Road, Suite 100	Austin, TX 78746	(512) 651-7100	(512) 641-7101	s.mitchell@westonsolutions.com
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Rayos, Sonny	TCEQ, Project Mgr	P.O. Box 13087, MC-127	Austin, TX 78711-3087	(512) 239-2371		Srayos@tceq.state.tx.us
Rice, Ken	Parsons, Task Mgr	8000 Centre Park Dr., Suite 200	Austin, TX 78754	(512) 719-6050	(512) 719-6099	ken.r.rice@parsons.com
Salazar, Jorge	TCEQ	14250 Judson Road	San Antonio, TX 78233	(210) 403-4059		jsalazar@tceq.state.tx.us
Sanchez, Glaré	CSSA Environmental Program Manager	25800 Ralph Fair Road	Boerne, TX 78015-4800	(210) 698-5208	(210) 295-7386	sanchezg@envirodept.net
Shirley, Jason (LTC, retired)	CSSA Installation Manager	25800 Ralph Fair Road	Boerne, TX 78015-4800	(210) 295-7416	(210) 295-7386	
Vanderglas, Brian	Parsons, Project Mgr. for AETC DO5084, TO0058	8000 Centre Park Dr., Suite 200	Austin, TX 78754	(512) 719-6059	(512) 719-6099	brian.vanderglas@parsons.com
Vaughn, Kimberly	Parsons, Project Mgr.	8000 Centre Park Dr., Suite 200	Austin, TX 78754	(512) 719-6816	(512) 719-6099	kimberly.vaughn@parsons.com

ATTACHMENT 1 ON-POST AND OFF-POST SAMPLED WELLS FIGURE



■ Miles 0.75 0.25 0.5

Camp Stanley Storage Activity

PARSONS

ATTACHMENT 2 SUMMARY OF STATUS OF EACH SWMU/AOC SITE

		Investigation		Requested Action				Closure	Closure
Unit No.	Description	Report(s)	Recommendations	RRS1	NFA	Delisting	TRRP	Approved by	Туре
B-1	Powder and ammo burn area (1954).	RFI/Closure Report July 2002	NA	X				November-02	RRS1
B-2	Small arms ammunition burning area (1954) - North Pasture	RFI/closure Report June 2002 Closure Report March 2005	Currently under investigation						
B-3	Landfill area (garbage disposal and burning trash); filled in 1990-91.	RFI Report March 2005	Continue bioreactor treatability study						
B-4	Classified burn area (documents and trash).	June 2002	Removal of waste in trench and confirmation sampling						
B-5	Possible fired small arms ammo brass area. Not located.	RFI/Closure Report July 2002	NA	Х				October-02	RRS1
B-6	Possible solid waste disposal area.	RFI/Closure Report July 2002	NA	X				October-02	RRS1
B-7	Possible fired small arms ammunition brass disposal area	RFI/Closure Report July 2002	NA	X				October-02	RRS1
B-8	Fired small arms ammo brass disposal area (piles of fire bricks, ammo shells) - North Pasture	RFI Report December 2003	Currently under investigation						
B-9	Miscellaneous solid waste (metal and weapons) disposal area.	RFI/Closure Report September 2002	NA	X				March-03	RRS1
B-10	Ammunition disposal area.	RFI/Closure Report May 2003	NA	X				January-04	RRS1
B-11	Miscellaneous solid waste disposal (ammo, scrap metal, const. debris).	RFI Closure Report June 04	NA	X				September-04	RRS1
B-12	Landfill, WPA trash when igloos were being built	RFI Report April-05	NA	X				July-05	RRS1
B-13	Trash dump area.	RFI Report June 2002	Excavation of waste and surface sampling.						
B-14	Possible fired brass area - not located.	Delisting Request November 2007	NA			X		February-08	Delisting
B-15/16	Landfill (target vehicles, weapons mounts)	RFI Report October 2002	Removal of debris and sampling						
B-19	Solid waste disposal area (metals and weapons).	RFI/Closure Report June 2002	NA	х				September-02	RRS1

		Investigation			Reque	sted Action		Closure	Closure
Unit No.	Description	Report(s)	Recommendations	RRS1	NFA	Delisting	TRRP	Approved by	Type
	Former OB/OD area & ammunition disposal	RFI Report							
B-20/21	areas - North Pasture	July 2002	Currently under						
		Combined with B-20	investigation						
B-22	Burn area (artillery shells).	RFI/Closure Report						D 1 00	5504
		August 2002	NA	Х				December-02	RRS1
D 22	Diamond transhop (two proper againtage)	DEL Donort							
B-23	Disposal trenches (two green canisters)	RFI Report April 2005	NA	Х				July-05	RRS1
		RFI Closure Report	INA	^				July-03	IXIXOT
B-23A	Disposal Trench (glass ampoules of liquid)	September 2004	NA	X				March-05	RRS1
		RFI Report	Currently under					Waren 66	11101
B-24	Spent ammo/rockets area - North Pasture	May 2002	investigation						
		,	gamen						
D 05	Described for each to the								
B-25	Possible disposal trench	RFI Report							
		April 2005	NA	X				July-05	RRS1
B-26	Possible disposal trench	Delisting Report							
B-20	'	August 2004	NA			Х		November-04	Delisting
B-27	Sanitary landfill, consisting of 5-6 trenches	RFI Report	Removal of waste and						
D-Z1	(6 ft deep, 3 ft wide).	July 2002	confirmation sampling						
B-28	Disposal trenches (molten metal, ammo,	RFI Report	Remediation of						
D 20	ammo parts)	April 2002	stockpile soils						
B-29	Solid waste disposal area (in old quarry)	RFI Report						5 1 00	5504
	1	April 2005	NA	Х				February-08	RRS1
B-30	Solid waste disposal area	RFI Report September 2004	NA	Х				February-05	RRS1
	·	RFI/Closure Report	INA	^				rebluary-05	KKOI
B-31	Lead shot/sand pipe bedding	July 2002	NA	Х				November-02	RRS1
		RFI/Closure Report	INA					November-02	IXIXOT
B-32	Lead shot/sand pipe bedding	January 2003	NA	Х				November-03	RRS1
		RFI Report	107					110101111001 00	11101
B-33	Lead shot/sand pipe bedding	September 2004	NA	X				November-04	RRS1
				·					
B-34	Maintenance pit floor drain and discharge	RFI Report	Delineate contamina-						
	point	August 2002	tion, disposal of soil						
B-71	Livestock area. Inner cantonment, SW of								
D-/ I	Well 16.	(Weston)	Closure				X		
Bldg 40	less-than 90-day accumulation container	RFI/Closure Report						January-04 and	
Diug 40	storage area	September 2003	NA	X				January-06	RRS1
Bldg 43	Inactive makeshift ammo demolition facility	RFI Report							
Diag 70	madivo makeonin animo demonion facility	April 2005	NA	Х				August-05	RRS1

		Investigation			Reque	sted Action		Closure	Closure
Unit No.	Description	Report(s)	Recommendations	RRS1	NFA	Delisting	TRRP	Approved by	Туре
DD	Dud ammunition disposal area	RFI Report January 2005	NA	X				April-05	RRS1
F-14	Hazardous waste storage area (<90-day)	RFI/Closure Report, 1995	NA	X				November-95	RRS1
I-1	Inactive incinerator (built in 1943), currently used for transformer storage	RFI Report February 2003	Investigated 2007/2008 (Parsons)				Х	November-08	NFA
0-1	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	Х				August-02	RRS1
AOC 37	Livestock area. NW of Well 16 and N of Well D.	RFI/Closure Report June 2004	NA	Х				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	Х				August-02	RRS1
AOC 41	Gate area east of well 16. North Pasture, north of gate 6.	No Further Action Report April 2005	NA		х			July-05	NFA
AOC 42	None. South of SWMUs B-28 and B-19, west of B-4.	RFI Report October 2002	Excavation and sampling.						
AOC 43	Shallow trench without mounds. Metal, UXO. Located 50 ft south of B-7.	RFI/Closure Report October 2002	NA	х				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			х		July-05	Delisting
AOC 45	Flat area with spent and undamaged bullets. Located east of B-31, near bend in road.								

		Investigation		Requested Action				Closure	Closure
Unit No.	Description	Report(s)	Recommendations	RRS1	NFA	Delisting	TRRP	Approved by	Туре
AOC 46	Bermed area with stockpile of lead shot and sand. Located south of Engineering on east side of Thompkins Road.	RFI/Closure Report April 2005	-	X				July-05	RRS1
AOC 47	Area of trenches and mounds (similar to B-15/16). South of B-15/16, in SW area of East Pasture.	RFI/Closure Report June 2002	NA	X				September-02	RRS1
AOC 48	Three N-S trending mounds and a construction debris pile. Located north of B-15/16.	Delisting Report August 2004	NA			x		November-04	Delisting
AOC 49	Trench (4 x 7 ft) without surficial debris. Located SW of deer stand 41 in central East Pasture.	Delisting Report April 2005	NA			х		July-05	Delisting
AOC 50	Area with orange discolored material (most likely nickel penetrate) at ground surface. South of B-30 along gravel road.	RFI/Closure Report January 2005	NA	x				April-05	RRS1
AOC 51	East pasture, east of active range, approximately 25 acres, area around B-9		-						
AOC 52	Area west of B-4 towards Salado Creek near trees, two trenches								
AOC 53	Building foundation near B-27 at Central Road and road to "D" Tank, batteries at rear of slab	RFI/Closure Report April 2005	NA	х				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	х				November-04	RRS1
AOC 55	Landfill, south of Tenberg Drive, east of Salado Creek	RFI/Closure Report Feb 04	Closure	Х				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	х				September-04	RRS1
AOC 57	East of Building 98 and KOA Area, cleaning/maintenance activities performed at temporary structures								
AOC 58	Suspected disposal trench within Inner Cantonment	RFI Report October 2002	Investigate anomaly						
AOC 59	Trench-type anomaly located west Test Pad in the East Pasture		Closure		х				
AOC 60	Trench located west of tunnel and entrance roadway in the East Pasture.	Delisting Report April 2005	NA			х		July-05	Delisting
AOC 61	Suspected landfill	RFI/Closure Report October 2002	NA	Х				February-03	RRS1

		Investigation			Reque	sted Action		Closure	Closure
Unit No.	Description	Report(s)	Recommendations	RRS1	NFA	Delisting	TRRP	Approved by	Type
AOC 62	Located west of monitoring well MW-2 and east of Salado Creek.								
AOC 63	Area consisting of 3 barrels containing rocks, south of deer stand 41 in the East Pasture.	APAR October 2008	Closure				х	July-09	TRRP
AOC 64	Area east of SWMU B-4; flares observed in the area	 (Weston)	Closure				х		
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	Х					NFA
AOC 67	Concrete pad near Building 90 housed a vat containing cleaning solvents.	RFI Report August 2002	Closure		Х				
AOC 68	Area includes metal slag/debris storage area from Wheelabrator operations next to Building 90-2.		Closure		х				
AOC 69	Located on west side of CSSA.	Release Investigation Report June 2009	Closure				X	October-09	TRRP
AOC 70	Building used to mix pesticides. Near Building 1.								
AOC 72	Area containing concrete, possible asbestos. Located east of Building 94, in SW CSSA.								
AOC 73	Ranch landfill with overgrown trenches. Near Well I1, in northwest corner of CSSA.	Release Investigation Report September 2008	Closure				х	January-09	TRRP

ATTACHMENT 3 OVERALL H ORDER PERCENT COMPLETE

Tool Nove	% of	% of Phase	%	% of Activity	% of Task
Task Name	Project	Phase	Complete	Complete	Complete
Interim Measures	30%	70/	4000/	7.00/	99%
Interim Measures Work Plan		7%	100%	7.0%	
Interim Measures Implementation		70%	99%	69.2%	
Reports		23%	99%	22.8%	
RCRA Facility Investigation	30%				78%
Preliminary Report		5%	100%	5%	
RFI Workplan		5%	100%	5%	
Facility Investigation		40%	79%	32%	
Risk Assessment		10%	89%	9%	
Investigation Analysis		10%	84%	8%	
Groundwater Investigation		15%	85%	13%	
Treatability Studies		10%	46%	5%	
Progress Reports		5%	30%	1%	
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 Phas	se Complete		53.06%

Tool: Name	% of Phase	% of Task	%	% of Activity	% of Activity	% of Task	Comments/Status
Task Name Interim Measures Work Plan	7%	iask	Complete	Complete	Remaining	Complete 100.0%	Comments/Status
Draft IM Workplan	170	80%	100%	80%	0%	100.0%	
Draft Final IM Workplan		15%	100%	15%	0%		
Final IM Workplan		5%	100%	5%	0%		
Interim Measures Implementation	70%					98.9%	
Sample 3 Off-Site Wells		1%	100%	1%	0%		
Sample 20 Off-Site Wells (6 events)		6%	100%	6%	0%		(remaining off-post sampling
2000 Groundwater Monitoring (4 events)		4%	100%	4%	0%		conducted under the RFI task)
2001 Groundwater Monitoring (4 events)		4%	100%	4%	0%		
2002 Groundwater Monitoring (4 events)		4%	100%	4%	0%		
2003 Groundwater Monitoring (4 events)		4% 4%	100% 100%	4%	0%		
2004 Groundwater Monitoring (4 events) 2005 Groundwater Monitoring (4 events)		4% 4%	100%	4% 4%	0% 0%		
2006 Groundwater Monitoring (4 events)		4%	100%	4%	0%		
2007 Groundwater Monitoring		4%	100%	4%	0%		
2008 Groundwater Monitoring		4%	100%	4%	0%		
2009 Groundwater Monitoring		4%	100%	4%	0%		
2010 Groundwater Monitoring		4%	50%	2%	50%		
Locate and map off-site wells		1%	100%	1%	0%		
O-1 Soil Borings		3%	100%	3%	0%		
O-1 Excavation, Stabilization, Diposal		12%	100%	12%	0%		
Establish Treatment Unit	_	1%	0%	0%	100%		may or may not be necessary.
Determine appropriate disposition of soil pile: Treat/dispose of soil piles	S	5%	100%	5%	0%		After treatability studies. Unfunded CSSA future work.
AOC 50 Excavation and Disposal		20% 3%	100% 100%	20% 3%	0% 0%		Not included as IM in the Order.
AOC 65 Excavation and Disposal		8%	100%	8%	0%		Not included as livini the Older.
Reports	23%	070	10070	070	070	99.3%	
Quarterly Progress Report 1 (August 1999)	2070	0.73%	100%	0.73%	0%	00.070	
Quarterly Progress Report 2 (November 199	9)	0.73%	100%	0.73%	0%		
Quarterly Progress Report 3 (February 2000)	,	0.73%	100%	0.73%	0%		
Quarterly Progress Report 4 (May 2000)		0.73%	100%	0.73%	0%		
Quarterly Progress Report 5 (August 2000)		0.73%	100%	0.73%	0%		
Quarterly Progress Report 6 (November 200	,	0.73%	100%	0.73%	0%		
Quarterly Progress Report 7 (February 2001))	0.73%	100%	0.73%	0%		
Quarterly Progress Report 8 (May 2001)		0.73%	100%	0.73%	0%		
Quarterly Progress Report 9 (August 2001) Quarterly Progress Report 10 (November 20	01)	0.73% 0.73%	100% 100%	0.73% 0.73%	0% 0%		
Quarterly Progress Report 11 (Rebruary 200)		0.73%	100%	0.73%	0%		
Quarterly Progress Report 12 (May 2002)	_,	0.73%	100%	0.73%	0%		
Quarterly Progress Report 13 (August 2002)		0.73%	100%	0.73%	0%		
Quarterly Progress Report 14 (November 20		0.73%	100%	0.73%	0%		
Quarterly Progress Report 15 (February 200)	3)	0.73%	100%	0.73%	0%		
Quarterly Progress Report 16 (May 2003)		0.73%	100%	0.73%	0%		
Quarterly Progress Report 17 (August 2003)		0.73%	100%	0.73%	0%		
Quarterly Progress Report 18 (November 20		0.73%	100%	0.73%	0%		
Quarterly Progress Report 19 (February 2004)	4)	0.73%	100%	0.73%	0%		
Quarterly Progress Report 20 (May 2004)		0.73%	100% 100%	0.73%	0%		
Quarterly Progress Report 21 (August 2004) Quarterly Progress Report 22 (November 20		0.73% 0.73%	100%	0.73% 0.73%	0% 0%		
Quarterly Progress Report 23 (February 200		0.73%	100%	0.73%	0%		
Quarterly Progress Report 24 (May 2005)	-,	0.73%	100%	0.73%	0%		
Quarterly Progress Report 25 (August 2005)		0.73%	100%	0.73%	0%		
Quarterly Progress Report 26 (October 2005)	0.73%	100%	0.73%	0%		
Quarterly Progress Report 27 (January 2006)	0.73%	100%	0.73%	0%		
Quarterly Progress Report 28 (April 2006)		0.73%	100%	0.73%	0%		
Semi-annual Progress Rpt 29 (Dec 2006)		0.73%	100%	0.73%	0%		
Semi-annual Progress Rpt 30 (July 2007)		0.73%	100%	0.73%	0%		
Semi-annual Progress Rpt 31 (Dec 2007)		0.73%	100%	0.73%	0%		Hafriadad CCCA fotos condi
Semi-annual Progress Rpt 32 (July 2008)		0.73%	100% 100%	0.73%	0% 0%		Unfunded CSSA future work. Unfunded CSSA future work.
Semi-annual Progress Rpt 33 (Dec 2008) Semi-annual Progress Rpt 34 (July 2009)		0.73% 0.73%	100%	0.73% 0.73%	0% 0%		omunucu OSSA ruture WORK.
Semi-annual Progress Rpt 34 (July 2009) Semi-annual Progress Rpt 35 (Dec 2009)		0.73%	100%	0.73%	0%		
Semi-annual Progress Rpt 35 (Dec 2009)		0.73%	100%	0.73%	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%		
		12%	100%	12%	0%		
Draft Final Soil Pile IM Report Final Soil Pile IM Report		5%	100%	5%	0%		

				% of	% of		
	% of	% of	%	Activity	Activity	% of Task	Comments (Status
Task Name	Phase 5%	Task	Complete	Complete	Remaining	Complete 100.0%	Comments/Status
Preliminary Report Draft DCC Report	5%	80%	100%	80%	0%	100.0%	
Draft Final DCC Report		15%	100%	15%	0%		
Final DCC Report		5%	100%	5%	0%		
RFI Workplan	5%	370	10070	370	070	100.0%	
Draft Community Relations Plan	3 /6	25%	100%	25%	0%	100.076	
Draft Final CRP		5%	100%	5%	0%		
Final CRP (2006)		10%	100%	10%	0%		
Draft RFI Workplans		20%	100%	20%	0%		
Draft Final RFI Workplan		5%	100%	5%	0%		
Final RFI Workplans		5%	100%	5%	0%		
Final Work Plans (DY01)		10%	100%	10%	0%		
Draft Work Plans (DY02)		10%	100%	10%	0%		
Final Work Plans (DY02)		10%	100%	10%	0%		
Facility Investigation ¹	40%					79.1%	
Small Areas (0-2 acres in size)							
P. 2 Investigation/Person		1.040/	F00/	0.0000/	F00/		Final report submitted, additional
B-3 Investigation/Report		1.24%	50%	0.620%	50%		work required.
P 4 Investigation/Penart		1 0 40/	000/	0.0000/	200/		Final report submitted. Additional
B-4 Investigation/Report		1.24%	80%	0.992%	20%		work required.
B-5 Investigation/Report		1.24% 1.24%	100%	1.240% 1.240%	0%		RRS1 closure approved Oct 02.
B-6 Investigation/Report B-7 Investigation/Report		1.24%	100% 100%	1.240%	0% 0%		RRS1 closure approved Oct 02. RRS1 closure approved Oct 02.
B-8 Investigation/Report		1.24%	90%	1.116%	10%		Investigation underway
B-9 Investigation/Report		1.24%	100%	1.240%	0%		RRS1 closure approved Mar 03
B-10 Investigation/Report		1.24%	100%	1.240%	0%		RRS1 closure approved Jan 04
B-11 Investigation/Report		1.24%	100%	1.240%	0%		RRS1 closure approved Sept 04
B-12 Investigation/Report		1.24%	100%	1.240%	0%		RRS1 closure approved July 05
- '							Final report submitted. Additional
B-13 Investigation/Report		1.24%	80%	0.992%	20%		work required.
B-15/16 Investigation/Report		1.24%	90%	1.116%	10%		Investigation underway
B-19 Investigation/Report		1.24%	100%	1.240%	0%		RRS1 closure approved Sept 02
B-23 Investigation/Report		1.24%	100%	1.240%	0%		RRS1 closure approved July 05
B-23A Investigation/Report		1.24%	100%	1.240%	0%		RRS1 closure approved Mar 05
B-25 Investigation/Report		1.24%	100%	1.240%	0%		RRS1 closure approved July 05
B-26 Investigation/Report		1.24%	100%	1.240%	0%		Delisting approved November 04 Final report submitted, additional
B-27 Investigation/Report		1.24%	80%	0.992%	20%		work required Final report submitted, additional
B-28 Investigation/Report		1.24%	80%	0.992%	20%		work required
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
9 1							Final report and Addendum report
							submitted, additional work
B-34 Investigation/Report		1.24%	80%	0.992%	20%		required
B-71 Investigation/Report		1.24%	99%	1.228%	1%		TRRP closure requested
BLDG-43 Investigation/Report		1.24%	100%	1.240%	0%		RRS1 closure approved Sept 05
Demo Dud Investigation/Report		1.24%	100%	1.240%	0%		RRS1 closure approved Apr 05
F-14 Investigation/Report		1.24%	100%	1.240%	0%		Closure approved Nov 95 Addt'l Investigation to be
I-1 Investigation/Report		1.24%	90%	1.116%	10%		performed (DY01)
AOC 35 Investigation/Report		1.24%	100%	1.240%	0%		RRS1 closure approved Feb 03
AOC 37 Investigation/Report		1.24%	100%	1.240%	0%		RRS1 closure approved Jan 05
AOC 39 Investigation/Report		1.24%	100%	1.240%	0%		RRS1 closure approved Sept 02
AOC 40 Investigation/Report		1.24%	100%	1.240%	0%		RRS1 closure approved Aug 02
AOC 43 Investigation/Report		1.24%	100%	1.240%	0%		RRS1 closure approved Feb 03
AOC 44 Investigation/Report		1.24%	100%	1.240%	0%		Delisting approved July 2005.
AOC 45 Investigation/Report		1.24%	0%	0.000%	100%		
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

				% of	% of		
Task Name	% of Phase	% of Task	% Complete	Activity Complete	Activity Remaining	% of Task Complete	Comments/Status
AOC 49 Investigation/Report			-	-		Complete	Delisting approved July 05
· ·		1.24%	100%	1.240%	0%		9 11
AOC 50 Investigation/Report		1.24%	100%	1.240%	0%		Closure approved Apr 05
AOC 52 Investigation/Report		1.24%	0%	0.000%	100%		0
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 Final RFI report submitted,
AOC 58 Investigation/Report		1.24%	80%	0.992%	20%		additional work recommended. RIR prepared requesting NFA
AOC 59 Investigation/Report		1.24%	90%	1.116%	10%		closure
AOC 60 Investigation/Report		1.24%	100%	1.240%	0%		Delisting approved July 05.
AOC 61 Investigation/Report		1.24%	100%	1.240%	0%		Closure approved Feb 03
AOC 62 Investigation/Report		1.24%	0%	0.000%	100%		
AOC 63 Investigation/Report		1.24%	100%	1.240%	0%		Closure approved Aug 09.
AOC 64 Investigation/Report		1.24%	99%	1.228%	1%		TRRP closure requested
AOC 67 Investigation/Report		1.24%	99%	1.228%	1%		RIR prepared requesting NFA closure RIR prepared requesting NFA
ACC 69 Investigation/Papart		1 240/	000/	1 0000/	40/		
AOC 68 Investigation/Report		1.24%	99%	1.228%	1%		closure
AOC 69 Investigation/Report		1.24%	0%	0.000%	100%		
AOC 70 Investigation/Report		1.24%	0%	0.000%	100%		
AOC 72 Investigation/Report		1.24%	0%	0.000%	100%		
AOC 73 Investigation/Report		1.24%	100%	1.240%	0%		Closure approved July 2009
Medium Areas (2-10 acres in size)							
B-1 Investigation/Report		1.2%	100%	1.220%	0%		Closure approved Nov 02
B-2 Investigation/Report		1.2%	90%	1.098%	10%		Investigation underway
B-22 Investigation/Report		1.2%	100%	1.220%	0%		Closure approved Dec 02 Final report submitted, additional
B-24 Investigation/Report		1.2%	80%	0.976%	20%		work recommended Final RRS1 closure report
B-29 Investigation/Report		1.2%	99%	1.207%	1%		submitted
AOC 36 Investigation/Report		1.2%	100%	1.220%	0%		Closure approved Aug 02
AOC 41 Investigation/Report		1.2%	100%	1.220%	0%		Closure approved July 05. Final report submitted, additional
AOC 42 Investigation/Report		1.2%	80%	0.976%	20%		work recommended
AOC 48 Investigation/Report		1.2%	100%	1.220%	0%		Delisting approved Nov 04
· ·							Delisting approved Nov 04
AOC 57 Investigation/Report		1.2%	0%	0.000%	100%		
Large Areas (>10 acres in size)		4.007	000/	4 0000/	400/		
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%	0%	0.000%	100%		
AOC 66 Investigation/Report		1.2%	100%	1.220%	0%		NFA Closure approved Feb 05
RMU-1 Investigation/Report		1.2%	0%	0.000%	100%		
RMU-5 Investigation/Report		1.2%	0%	0.000%	100%		Final report submitted, additional
AOC 65 Investigation/Report		1.2%	80%	0.976%	20%		work recommended
AOC 69 Investigation/Report		1.2%	100%	1.220%	0%		Closure approved Oct 09
AOC 70 Investigation/Report							Ciosule apployed Oct 09
		1.2%	0%	0.000%	100%		Cita haina da liatadasa CM/MI
Coal Bins Investigation/Report		1.2%	100%	1.220%	0%		Site being de-listed as a SWMU
RMU-2 Investigation/Report		1.2%	0%	0.000%	100%		
RMU-3 Investigation/Report		1.2%	0%	0.000%	100%		
RMU-4 Investigation/Report		1.2%	0%	0.000%	100%		
Groundwater Investigation	15%					85%	Well installations pending under
Well Installation		10%	80%	8%	20%		TO 08
Groundwater Monitoring 1999		4.2%	100%	4%	0%		-
Groundwater Monitoring 2000		4.2%	100%	4%	0%		
Groundwater Monitoring 2001		4.2%	100%	4%	0%		
Groundwater Monitoring 2002		4.2%	100%	4%	0%		
Groundwater Monitoring 2003		4.2%	100%	4%	0%		
Groundwater Monitoring 2004		4.2%	100%	4%	0%		

Task Name	% of Phase	% of Task	% Complete	% of Activity Complete	% of Activity Remaining	% of Task	Comments/Status
Groundwater Monitoring 2005		4.2%	100%	4%	0%		
Groundwater Monitoring 2006		4.2%	100%	4%	0%		
Groundwater Monitoring 2007		4.2%	100%	4%	0%		
Groundwater Monitoring 2008		4.2%	100%	4%	0%		
Groundwater Monitoring 2009		4.2%	50%	2%	50%		Incomplete
Conceptual Site Model (CSM)		20.0%	100%	20%	0%		
CSM Update		4.0%	80%	3%	20%		
LTMO 2005 (optimization study)		10%	100%	10%	0%		Complete
LTMO 2010 (review of optimization)		10%	0%	0%	100%		Incomplete
Risk Assessment	10%					89%	
Draft TAD		10%	100%	10%	0%		
Draft Final TAD		4%	100%	4%	0%		
							Complete when analytical data are
Final TAD		1%	0%	0%	100%		available for full evaluation.
Draft CSM		70%	100%	70%	0%		
Update to CSM		10%	50%	5%	50%		
Final CSM		5%	0%	0%	100%		
Investigation Analysis	10%					84%	
Collect Background Data		10%	100%	10%	0%		Information included in facility investigation reports; percent
Draft Investigation Analysis		85%	82%	70%	18%		complete based on overall percent complete of facility investigation tasks. Information included in facility investigation reports; percent complete based on overall percent complete of facility investigation
Final Investigation Analysis		5%	82%	4%	18%		tasks.
Treatability Studies	10%					46%	
Draft Treatability Study Report B-20		15%	100%	15%	0%		
Final Treatability Study Report B-20		5%	100%	5%	0%		
Continued O&M for B-3		10%	100%	10%	0%		
AOC-65 Treatability Studies		10%	90%	9%	10%		
Draft Treatability Study &							
Technology Evaluation Reports		10%	70%	7%	30%		
Final Treatability Study		25%	0%	0%	100%		
Recharge Study		25%	100%	25%	0%		
Progress Reports	5%					29.7%	
Quarter 1 (August 1999)		0.85%	100%	0.85%	0%		
Quarter 2 (November 1999)		0.85%	100%	0.85%	0%		
Quarter 3 (February 2000)		0.85%	100%	0.85%	0%		
Quarter 4 (May 2000)		0.85%	100%	0.85%	0%		
Quarter 5 (August 2000)		0.85%	100%	0.85%	0%		
Quarter 6 (November 2000)		0.85%	100%	0.85%	0%		
Quarter 7 (February 2001)		0.85%	100%	0.85%	0%		
Quarter 8 (May 2001)		0.85%	100%	0.85%	0%		
Quarter 9 (August 2001)		0.85%	100%	0.85%	0%		
Quarter 10 (November 2001)		0.85%	100%	0.85%	0%		
Quarter 11 (February 2002)		0.85%	100%	0.85%	0%		
Quarter 12 (May 2002)		0.85%	100%	0.85%	0%		
Quarter 13 (August 2002)		0.85%	100%	0.85%	0%		
Quarter 14 (November 2002)		0.85%	100%	0.85%	0%		
Quarter 15 (February 2003)		0.85%	100%	0.85%	0%		
Quarter 16 (May 2003)		0.85%	100%	0.85%	0%		
Quarter 17 (August 2003)		0.85%	100%	0.85%	0%		
Quarter 18 (November 2003)		0.85%	100%	0.85%	0%		
Quarter 19 (February 2004)		0.85%	100%	0.85%	0%		
Quarter 20 (May 2004)		0.85%	100%	0.85%	0%		
Quarter 21 (August 2004)		0.85%	100%	0.85%	0%		
Quarter 22 (November 2004)		0.85%	100%	0.85%	0%		
Quarter 23 (February 2005)		0.85%	100%	0.85%	0%		
Quarter 24 (May 2005)		0.85%	100%	0.85%	0%		

<u>Attachment 3</u> <u>Overall (H) Order Percent Complete</u>

Task Name	% of Phase	% of Task	% Complete	% of Activity Complete	% of Activity Remaining	% of Task Complete	Comments/Status
Quarter 25 (August 2005)		0.85%	100%	0.85%	0%	· ·	
Quarter 26 (November 2005)		0.85%	100%	0.85%	0%		
Quarter 27 (February 2006)		0.85%	100%	0.85%	0%		
Quarter 28 (May 2006)		0.85%	100%	0.85%	0%		
Semi-Annual 29 (December 2006)		0.85%	100%	0.85%	0%		
Semi-Annual 30 (July 2007)		0.85%	100%	0.85%	0%		
Semi-Annual 31 (December 2007)		0.85%	100%	0.85%	0%		
Semi-Annual 32 (July 2008)		0.85%	100%	0.85%	0%		
Semi-Annual 33 (December 2008)		0.85%	100%	0.85%	0%		
Semi-Annual 34 (July 2009)		0.85%	100%	0.85%	0%		
Semi-Annual 35 (December 2009)		0.85%	100%	0.85%	0%		
Semi-Annual 36 (July 2010)		0.85%	0%	0.00%	100%		
Semi-Annual 37 (December 2010)		0.85%	0%	0.00%	100%		
Addt'l Quarters - rows hidden)							

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.

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

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

ATTACHMENT 4 GROUNDWATER RESULTS SUMMARY

Attachment 4 December 2009 On-post Groundwater Analytical Results

Well ID	Sample Date	Arsenic	Barium	Cadmium	Chromium	Copper	Lead	Zinc	Mercury
CS-MW1-LGR	12/10/2009	NA	NA	0.0005U	0.001U	NA	0.0019U	NA	0.0001U
CS-MW1-CC	12/10/2009	NA	NA	0.0005U	0.001U	NA	0.0019U	NA	0.0001U
CS-MW1-BS	12/10/2009	NA	NA	0.0005U	0.012	NA	0.0019U	NA	0.0001U
CS-MW2-LGR	12/10/2009	NA	NA	0.0005U	0.001U	NA	0.0019U	NA	0.0001U
CS-MW2-CC	12/10/2009	NA	NA	0.0005U	0.001U	NA	0.0019U	NA	0.0001U
CS-MW2-CC FD	12/10/2009	NA	NA	0.0005U	0.001U	NA	0.0019U	NA	0.0001U
CS-MW3-LGR	12/16/2009	NA	NA	0.0005U	0.002F	NA	0.0019U	NA	0.0001U
CS-MW4-LGR	12/9/2009	NA	NA	0.0005U	0.001U	NA	0.0019U	NA	0.0001U
CS-MW5-LGR	12/9/2009	NA	NA	0.0005U	0.003F	NA	0.0019U	NA	0.0001U
CS-MW6-LGR	12/15/2009	NA	NA	0.0005U	0.001U	NA	0.0019U	NA	0.0001U
CS-MW6-CC	12/15/2009	NA	NA	0.0005U	0.001U	NA	0.0019U	NA	0.0001U
CS-MW6-BS	12/15/2009	NA	NA	0.0005U	0.001U	NA	0.0019U	NA	0.0001U
CS-MW7-LGR	12/8/2009	NA	NA	0.0005U	0.002F	NA	0.0019U	NA	0.0001U
CS-MW7-CC	12/8/2009	NA	NA	0.0005U	0.001U	NA	0.0019U	NA	0.0001U
CS-MW8-LGR	12/8/2009	NA	NA	0.0005U	0.001U	NA	0.0019U	NA	0.0001U
CS-MW8-CC	12/8/2009	NA	NA	0.0005U	0.001U	NA	0.0019U	NA	0.0001U
CS-MW9-LGR	12/16/2009	NA	NA	0.0005U	0.003F	NA	0.0019U	NA	0.0001U
CS-MW9-CC	12/16/2009	NA	NA	0.0005U	0.001U	NA	0.0019U	NA	0.0001U
CS-MW9-BS	12/16/2009	NA	NA	0.0005U	0.001U	NA	0.0130F	NA	0.0001U
CS-MW10-LGR	12/8/2009	NA	NA	0.0005U	0.003F	NA	0.0019U	NA	0.0001U
CS-MW10-CC	12/8/2009	NA	NA	0.0005U	0.001U	NA	0.0019U	NA	0.0001U
CS-MW11A-LGR	12/8/2009	NA	NA	0.0005U	0.004F	NA	0.0019U	NA	0.0001U
CS-MW12-LGR	12/11/2009	NA	NA	0.0005U	0.001U	NA	0.0019U	NA	0.0001U
CS-MW12-CC	12/11/2009	NA	NA	0.0005U	0.001U	NA	0.0019U	NA	0.0001U
CS-MW12-BS	12/11/2009	NA	NA	0.0005U	0.001U	NA	0.0019U	NA	0.0001U
CS-MW16-LGR	12/14/2009	NA	NA	0.0005U	0.001U	NA	0.0019U	NA	0.0001U
CS-MW16-LGR FD	12/14/2009	NA	NA	0.0005U	0.001U	NA	0.0019U	NA	0.0001U
CS-MW16-CC	12/14/2009	NA	NA	0.0005U	0.001U	NA	0.0019U	NA	0.0001U
CS-MW17-LGR	12/16/2009	NA	NA	0.0005U	0.006F	NA	0.0019U	NA	0.0001U
CS-MW18-LGR	12/17/2009	NA	NA	0.0005U	0.001U	NA	0.0019U	NA	0.0001U
CS-MW19-LGR	12/17/2009	NA	NA	0.0005U	0.001U	NA	0.0019U	NA	0.0001U
CS-MW20-LGR	12/10/2009	NA	NA	0.0005U	0.001U	NA	0.0019U	NA	0.0001U
CS-MW21-LGR	12/10/2009	NA	NA	0.0005U	0.001U	NA	0.0019U	NA	0.0001U
CS-MW22-LGR	12/10/2009	NA	NA	0.0005U	0.001U	NA	0.0019U	NA	0.0001U
CS-MW23-LGR	12/8/2009	NA	NA	0.0005U	0.001U	NA	0.0019U	NA	0.0001U
CS-MW24-LGR	12/9/2009	NA	NA	0.0005U	0.001U	NA	0.0019U	NA	0.0001U
CS-MW25-LGR	12/16/2009	NA	NA	0.0005U	0.002F	NA	0.0019U	NA	0.0001U
CS-MWG-LGR	12/16/2009	NA	NA	0.0005U	0.001U	NA	0.0019U	NA	0.0001U
CS-MWH-LGR	12/7/2009	NA	NA	0.0005U	0.001U	NA	0.0082F	NA	0.0001U
CS-D	12/9/2009	NA	NA	0.0005U	0.001U	NA	0.0019U	NA	0.0001U
CS-D FD	12/9/2009	NA	NA	0.0005U	0.001U	NA	0.0019U	NA	0.0001U
CS-2	12/9/2009	NA	NA	0.0005U	0.001U	NA	0.0019U	NA	0.0001U
CS-4	12/9/2009	NA	NA	0.0005U	0.001U	NA	0.0019U	NA	0.0001U
CS-12	12/14/2009	0.0012F	0.0323	0.0005U	0.001U	0.014J	0.0019U	0.223	0.0001U
CS-12 FD	12/14/2009	0.0013F	0.0328	0.0005U	0.001U	0.011J	0.0019U	0.228	0.0001U
					Well System				
CS-1	12/14/2009	0.0002U	0.0387	0.0005U	0.001U	0.003U	0.0019U	0.187	0.0001U
CS-9	12/14/2009	0.0002U	0.0376	0.0005U	0.002F	0.004F	0.0106F	2.535	0.0008F
CS-10	12/14/2009	0.0004F	0.0419	0.0005U	0.001U	0.003U	0.0019U	1.325	0.0001U

Attachment 4
December 2009 On-post Groundwater Analytical Results

		cis-1,2-	trans-1,2-			Vinyl
Sample Date	1,1-DCE	DCE	DCE	PCE	TCE	Chloride
12/10/2009	0.12U	21.98	0.55F	13.76	31.57	0.08U
12/10/2009	0.12U	0.07U	0.08U	0.06U	0.05U	0.08U
12/10/2009	0.12U	0.62F	0.08U	0.06U	0.16F	0.08U
12/10/2009	0.12U	1.67	0.08U	0.06U	0.20F	0.08U
12/10/2009	0.12U	0.07U	0.08U	0.06U	0.05U	0.08U
12/10/2009	0.12U	0.07U	0.08U	0.06U	0.05U	0.08U
12/16/2009	0.12U	0.07U	0.08U	0.06U	0.05U	0.08U
12/9/2009	0.12U	0.07U	0.08U	0.06U	0.17F	0.08U
12/9/2009	0.12U	1.10F	0.08U	0.80F	1.12	0.08U
12/15/2009	0.12U	0.07U	0.08U	0.06U	0.05U	0.08U
12/15/2009	0.12U	0.07U	0.08U	0.06U	0.05U	0.08U
12/15/2009	0.12U	0.07U	0.08U	0.06U	0.05U	0.08U
12/8/2009	0.12U	0.07U	0.08U	0.37F	0.05U	0.08U
12/8/2009	0.12U	0.07U	0.08U	0.06U	0.05U	0.08U
12/8/2009	0.12U	0.07U	0.08U	2.6	0.17F	0.08U
12/8/2009	0.12U	0.07U	0.08U	0.37F	0.19F	0.08U
12/16/2009	0.12U	0.07U	0.08U	0.06U	0.05U	0.08U
12/16/2009	0.12U	0.07U	0.08U	0.06U	0.05U	0.08U
12/16/2009	0.12U	0.07U	0.08U	0.06U	0.05U	0.08U
12/8/2009	0.12U	0.07U	0.08U	2.15	0.70F	0.08U
12/8/2009	0.12U	0.07U		0.06U		0.08U
						0.08U
						0.08U
						0.08U
						0.08U
						0.08U
12/14/2009	0.12U	140.7	0.08U	149.91	163,82	0.08U
		36.54		4,54		0.08U
						0.08U
						0.08U
		0.07U				0.08U
		0.07U				0.08U
						0.08U
						0.08U
						0.08U
						0.08U
						0.08U
						0.08U
						0.08U
						0.08U
						0.08U
						0.08U
				43,44		0.08U
						0.08U
12/14/2009	0.12U	0.07U	0.08U			0.08U
					0.19F	0.08U
						0.08U
						0.08U
	12/10/2009 12/10/2009 12/10/2009 12/10/2009 12/10/2009 12/10/2009 12/10/2009 12/10/2009 12/15/2009 12/15/2009 12/15/2009 12/15/2009 12/15/2009 12/15/2009 12/8/2009 12/8/2009 12/8/2009 12/8/2009 12/8/2009 12/16/2009 12/16/2009 12/11/2009 12/11/2009 12/11/2009 12/11/2009 12/11/2009 12/11/2009 12/11/2009 12/11/2009 12/11/2009 12/11/2009 12/11/2009 12/11/2009 12/11/2009 12/11/2009 12/10/2009 12/10/2009 12/10/2009 12/10/2009 12/16/2009 12/14/2009 12/14/2009	12/10/2009 0.12U 12/16/2009 0.12U 12/9/2009 0.12U 12/15/2009 0.12U 12/15/2009 0.12U 12/15/2009 0.12U 12/15/2009 0.12U 12/8/2009 0.12U 12/16/2009 0.12U 12/16/2009 0.12U 12/16/2009 0.12U 12/11/2009 0.12U 12/16/2009 0.12U 12/14/2009 0.12U 12/14/2009 0.12U 12/14/2009 0.12U 12/14/2009 0.12U 12/14/2009 0.12U 12/14/2009 0.12U	Sample Date 1,1-DCE DCE 12/10/2009 0.12U 0.07U 12/10/2009 0.12U 0.62F 12/10/2009 0.12U 0.62F 12/10/2009 0.12U 0.07U 12/10/2009 0.12U 0.07U 12/10/2009 0.12U 0.07U 12/10/2009 0.12U 0.07U 12/9/2009 0.12U 0.07U 12/9/2009 0.12U 0.07U 12/9/2009 0.12U 0.07U 12/15/2009 0.12U 0.07U 12/15/2009 0.12U 0.07U 12/15/2009 0.12U 0.07U 12/8/2009 0.12U 0.07U 12/16/2009 0.12U 0.07U 12/8/2009 0.12U 0.07U 12/8/2009 0.12U 0.07U 12/8/2009 0.12U 0.07U 12/11/2009 0.12U 0.07U 12/10/2009 0.12U 0.07	Sample Date 1,1-DCE DCE 12/10/2009 0.12U 0.07U 0.08U 12/10/2009 0.12U 0.62F 0.08U 12/10/2009 0.12U 0.62F 0.08U 12/10/2009 0.12U 0.07U 0.08U 12/10/2009 0.12U 0.07U 0.08U 12/10/2009 0.12U 0.07U 0.08U 12/10/2009 0.12U 0.07U 0.08U 12/16/2009 0.12U 0.07U 0.08U 12/9/2009 0.12U 0.07U 0.08U 12/9/2009 0.12U 0.07U 0.08U 12/15/2009 0.12U 0.07U 0.08U 12/15/2009 0.12U 0.07U 0.08U 12/15/2009 0.12U 0.07U 0.08U 12/15/2009 0.12U 0.07U 0.08U 12/8/2009 0.12U 0.07U 0.08U 12/16/2009 0.12U 0.07U 0.08U 12/16/2009 0.12U 0.07U 0.08U 12/16/2009 0.12U 0.07U 0.08U 12/16/2009 0.12U 0.07U 0.08U 12/8/2009 0.12U 0.07U 0.08U 12/11/2009 0.12U 0.07U 0.08U 12/14/2009 0.12U 0.07U 0.08U 12/14/2009 0.12U 0.07U 0.08U 12/14/2009 0.12U 0.07U 0.08U 12/16/2009 0.12U 0.07U 0	Sample Date 1,1-DCE DCE DCE 12/10/2009 0.12U 0.07U 0.08U 0.06U 12/10/2009 0.12U 0.62F 0.08U 0.06U 12/10/2009 0.12U 0.07U 0.08U 0.06U 12/16/2009 0.12U 0.07U 0.08U 0.06U 12/9/2009 0.12U 0.07U 0.08U 0.06U 12/9/2009 0.12U 0.07U 0.08U 0.06U 12/15/2009 0.12U 0.07U 0.08U 0.06U 12/8/2009 0.12U 0.07U 0.08U 0.06U 12/8/2009 0.12U 0.07U 0.08U 0.06U 12/8/2009 0.12U 0.07U 0.08U 0.37F 12/8/2009 0.12U 0.07U 0.08U 0.37F 12/16/2009 0.12U 0.07U 0.08U 0.37F 12/16/2009 0.12U 0.07U 0.08U 0.06U 12/8/2009 0.12U 0.07U 0.08U 0.06U 12/8/2009 0.12U 0.07U 0.08U 0.06U 12/8/2009 0.12U 0.07U 0.08U 0.06U 12/16/2009 0.12U 0.07U 0.08U 0.06U 12/16/2009 0.12U 0.07U 0.08U 0.06U 12/11/2009 0.12U 0.07U 0.08U	Sample Date 1,1-DCE DCE DCE 12/10/2009 0.12U 21.98 0.55F 13.76 31.57 12/10/2009 0.12U 0.07U 0.08U 0.06U 0.05U 12/10/2009 0.12U 0.62F 0.08U 0.06U 0.16F 12/10/2009 0.12U 0.07U 0.08U 0.06U 0.05U 12/9/2009 0.12U 0.07U 0.08U 0.06U 0.05U 12/9/2009 0.12U 0.07U 0.08U 0.06U 0.05U 12/9/2009 0.12U 0.07U 0.08U 0.06U 0.05U 12/15/2009 0.12U 0.07U 0.08U 0.06U 0.05U 12/8/2009 0.12U 0.07U 0.08U 0.06U 0.05U 12/16/2009 0.12U 0.07U 0.08U 0.06U 0.05U 12/8/2009 0.12U 0.07U 0.08U 0.06U 0.05U 12/16/2009 0.12U 0.07U 0.08U 0.06U 0.05U 12/16/2009 0.12U 0.07U 0.08U 0.06U 0.05U 12/11/2009 0.12U 0.07U 0.08U 0.06U 0.05U 12/11/2

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.

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

Attachment 4 December 2009 Off-Post Groundwater Analytical Results

			cis-1,2-	trans-1,2-			Vinyl
Well ID	Sample Date	1,1-DCE	DCE	DCE	PCE	TCE	Chloride
JW-31	12/1/2009	0.12U	0.07U	0.08U	0.06U	0.05U	0.08U
JW-31 FD	12/1/2009	0.12U	0.07U	0.08U	0.06U	0.05U	0.08U
FO-J1	12/1/2009	0.12U	0.07U	0.08U	0.24F	0.05U	0.08U
HS-1	12/2/2009	0.12U	0.07U	0.08U	0.06U	0.05U	0.08U
HS-2	12/2/2009	0.12U	0.07U	0.08U	0.06U	0.05U	0.08U
I10-4	12/2/2009	0.12U	0.07U	0.08U	7.36	2.72	0.08U
I10-7	12/3/2009	0.12U	0.07U	0.08U	0.06U	0.17F	0.08U
I10-7 FD	12/3/2009	0.12U	0.07U	0.08U	0.06U	0.05U	0.08U
I10-8	12/2/2009	0.12U	0.07U	0.08U	0.06U	0.05U	0.08U
JW-7	12/14/2009	0.12U	0.07U	0.08U	0.46F	0.05U	0.08U
JW-8	12/1/2009	0.12U	0.07U	0.08U	0.36F	0.05U	0.08U
JW-14	12/1/2009	0.12U	0.07U	0.08U	0.06U	0.05U	0.08U
JW-28	12/3/2009	0.12U	0.07U	0.08U	0.06U	0.05U	0.08U
JW-29	12/2/2009	0.12U	0.07U	0.08U	0.06U	0.05U	0.08U
JW-30	12/2/2009	0.12U	0.07U	0.08U	0.06U	0.05U	0.08U
LS-1	12/2/2009	0.12U	2.55	0.08U	1.30F	0.63F	0.08U
LS-4	12/2/2009	0.12U	0.07U	0.08U	0.06U	0.05U	0.08U
LS-5	11/30/2009	0.12U	0.07U	0.08U	0.88F	2.82	0.08U
LS-6	11/30/2009	0.12U	0.07U	0.08U	1.19F	1.43	0.08U
LS-7	11/30/2009	0.12U	0.07U	0.08U	2.07	0.66F	0.08U
OFR-1	12/1/2009	0.12U	0.07U	0.08U	0.35F	0.05U	0.08U
OFR-3	11/30/2009	0.12U	0.07U	0.08U	4.77	2.51	0.08U
RFR-3	12/3/2009	0.12U	0.07U	0.08U	0.06U	0.05U	0.08U
RFR-4	12/3/2009	0.12U	0.07U	0.08U	0.06U	0.05U	0.08U
RFR-4 FD	12/3/2009	0.12U	0.07U	0.08U	0.06U	0.05U	0.08U
RFR-5	12/3/2009	0.12U	0.07U	0.08U	0.06U	0.05U	0.08U
RFR-9	12/21/2009	0.12U	0.07U	0.08U	0.06U	0.05U	0.08U
RFR-10	11/30/2009	0.12U	0.25F	0.08U	19.5	8.84	0.08U
RFR-11	11/30/2009	0.12U	0.07U	0.08U	1.08F	1.61	0.08U
RFR-14	12/3/2009	0.12U	0.07U	0.08U	0.06U	0.05U	0.08U

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BOLD	= Above the RL
BOLD	= Above the MCL

All samples were analyzed by APPL, Inc.

VOC data reported in ug/L.

Abbreviations/Notes:

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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.

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Attachment 4 March 2010 On-post Groundwater Analytical Results

Well ID	Sample Date	Arsenic	Barium	Cadmium	Chromium	Copper	Lead	Zinc	Mercury
CS-MW11B-LGR	3/8/2010	NA	NA	0.0005U	0.0022F	NA	0.0016U	NA	0.0001U
CS-MW11B-LGR FD	3/8/2010	NA	NA	0.0005U	0.0035F	NA	0.0016U	NA	0.0001U
CS-MW20-LGR	3/8/2010	NA	NA	0.0005U	0.0019F	NA	0.0016U	NA	0.0001U
CS-MW21-LGR	3/9/2010	NA	NA	0.0005U	0.0015F	NA	0.0016U	NA	0.0001U
CS-MW22-LGR	3/8/2010	NA	NA	0.0005U	0.0017F	NA	0.0016U	NA	0.0001U
CS-MW23-LGR	3/9/2010	NA	NA	0.0005U	0.001U	NA	0.0016U	NA	0.0001U
CS-MW24-LGR	3/8/2010	NA	NA	0.0005U	0.0011F	NA	0.0016U	NA	0.0001U
CS-MW25-LGR	3/9/2010	NA	NA	0.0005U	0.017	NA	0.0016U	NA	0.0001U
CS-12	3/9/2010	0.0025F	0.03	0.0006F	0.0023F	0.047	0.025	1.4	0.0001U
			CSSA Drin	king Water	Well System	1			
CS-1	3/8/2010	0.002U	0.041	0.0005U	0.001U	0.0057F	0.0016U	0.16	0.0001U
CS-9	3/8/2010	0.002U	0.04	0.0005U	0.0020F	0.0036F	0.015F	2.1	0.0005F
CS-10	3/8/2010	0.002U	0.044	0.0005U	0.001U	0.0083F	0.0016U	0.27	0.0001U

			cis-1,2-	trans-1,2-			Vinyl
Well ID	Sample Date	1,1-DCE	DCE	DCE	PCE	TCE	Chloride
CS-MW11B-LGR	3/8/2010	0.30U	0.16U	0.19U	0.94F	0.16U	0.23U
CS-MW11B-LGR FD	3/8/2010	0.30U	0.16U	0.19U	0.92F	0.16U	0.23U
CS-MW20-LGR	3/8/2010	0.30U	0.16U	0.19U	1.8	0.16U	0.23U
CS-MW21-LGR	3/9/2010	0.30U	0.16U	0.19U	0.15U	0.16U	0.23U
CS-MW22-LGR	3/8/2010	0.30U	0.16U	0.19U	0.15U	0.16U	0.23U
CS-MW23-LGR	3/9/2010	0.30U	0.16U	0.19U	0.15U	0.16U	0.23U
CS-MW24-LGR	3/8/2010	0.30U	0.16U	0.19U	0.15U	0.16U	0.23U
CS-MW25-LGR	3/9/2010	0.30U	0.16U	0.19U	0.15U	0.16U	0.23U
CS-12	3/9/2010	0.30U	0.16U	0.19U	0.15U	0.16U	0.23U
		CSSA Drinl	king Water	Well System	1		
CS-1	3/8/2010	0.30U	0.16U	0.19U	0.15U	0.16U	0.23U
CS-9	3/8/2010	0.30U	0.16U	0.19U	0.15U	0.16U	0.23U
CS-10	3/8/2010	0.30U	0.16U	0.19U	0.15U	0.24F	0.23U

BOLD	= Above the MDL
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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:

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TCE Trichloroethene
PCE Tetrachloroethene
DCE Dichloroethene
AL Action Level
SS Secondary Standard

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Data Qualifiers

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Attachment 4 March 2010 Off-post Groundwater Analytical Results

			cis-1,2-	trans-1,2-			Vinyl
Well ID	Sample Date	1.1-DCE	DCE	DCE	PCE	TCE	Chloride
FO-8	3/3/2010	0.30U	0.16U	0.19U	0.15U	0.16U	0.23U
FO-22	3/3/2010	0.30U	0.16U	0.19U	0.15U	0.16U	0.23U
FO-J1	3/2/2010	0.30U	0.16U	0.19U	0.21F	0.16U	0.23U
HS-2	3/3/2010	0.30U	0.16U	0.19U	0.19F	0.16U	0.23U
I10-2	3/3/2010	0.30U	0.16U	0.19U	0.19F	0.16U	0.23U
I10-4	3/2/2010	0.30U	0.16U	0.19U	0.69F	0.21F	0.23U
I10-4 FD	3/2/2010	0.30U	0.16U	0.19U	0.59F	0.20F	0.23U
I10-5	3/3/2010	0.30U	0.16U	0.19U	0.15U	0.16U	0.23U
I10-7	3/2/2010	0.30U	0.16U	0.19U	0.15U	0.16U	0.23U
I10-8	3/3/2010	0.30U	0.16U	0.19U	0.15U	0.16U	0.23U
JW-5	3/2/2010	0.30U	0.16U	0.19U	0.15U	0.16U	0.23U
JW-7	3/4/2010	0.30U	0.16U	0.19U	0.46F	0.16U	0.23U
JW-8	3/4/2010	0.30U	0.16U	0.19U	0.19F	0.16U	0.23U
JW-9	3/4/2010	0.30U	0.16U	0.19U	0.15U	0.16U	0.23U
JW-14	3/2/2010	0.30U	0.16U	0.19U	0.15U	0.16U	0.23U
JW-15	3/2/2010	0.30U	0.16U	0.19U	0.15U	0.16U	0.23U
JW-27	3/4/2010	0.30U	0.16U	0.19U	0.15U	0.16U	0.23U
JW-27 FD	3/4/2010	0.30U	0.16U	0.19U	0.15U	0.16U	0.23U
JW-28	3/4/2010	0.30U	0.16U	0.19U	0.15U	0.16U	0.23U
JW-29	3/4/2010	0.30U	0.16U	0.19U	0.15U	0.16U	0.23U
JW-30	3/2/2010	0.30U	0.21F	0.19U	0.15F	0.16U	0.23U
JW-31	3/2/2010	0.30U	0.16U	0.19U	0.15U	0.16U	0.23U
LS-1	3/1/2010	0.30U	0.36F	0.19U	0.35F	0.16U	0.23U
LS-4	3/1/2010	0.30U	0.16U	0.19U	0.17F	0.16U	0.23U
LS-5	3/1/2010	0.30U	0.16U	0.19U	1.1F	2.7	0.23U
LS-6	3/1/2010	0.30U	0.16U	0.19U	1.1F	0.23F	0.23U
LS-6-A2	3/1/2010	0.30U	0.16U	0.19U	0.15U	0.16U	0.23U
LS-7	3/1/2010	0.30U	0.16U	0.19U	0.99F	0.50F	0.23U
LS-7-A2	3/1/2010	0.30U	0.16U	0.19U	0.15U	0.16U	0.23U
LS-7-A2 FD	3/1/2010	0.30U	0.16U	0.19U	0.15U	0.16U	0.23U
OFR-1	3/3/2010	0.30U	0.16U	0.19U	0.31F	0.16U	0.23U
OFR-3	3/1/2010	0.30U	0.16U	0.19U	2.3	2.4	0.23U
OFR-3-A2	3/1/2010	0.30U	0.16U	0.19U	0.15U	0.16U	0.23U
OFR-4	3/5/2010	0.30U	0.16U	0.19U	0.15U	0.16U	0.23U
OFR-4 FD	3/5/2010	0.30U	0.16U	0.19U	0.15U	0.16U	0.23U
RFR-9	3/5/2010	0.30U	0.16U	0.19U	0.15U	0.16U	0.23U
RFR-10	3/1/2010	0.30U	0.21F	0.19U	13	7.5	0.23U
RFR-10-A2	3/1/2010	0.30U	0.16U	0.19U	0.15U	0.16U	0.23U
RFR-10-B2	3/1/2010	0.30U	0.16U	0.19U	0.15U	0.16U	0.23U
RFR-11	3/1/2010	0.30U	0.16U	0.19U	1.4	0.16U	0.23U
RFR-11-A2	3/1/2010	0.30U	0.16U	0.19U	0.15U	0.16U	0.23U
RFR-12	3/3/2010	0.30U	0.16U	0.19U	0.26F	0.38F	0.23U
RFR-14	3/3/2010	0.30U	0.16U	0.19U	0.21F	0.16U	0.23U

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

All samples were analyzed by APPL, Inc.

VOC data reported in ug/L.

Abbreviations/Notes:

FD Field Duplicate
TCE Trichloroethene
PCE Tetrachloroethene
DCE Dichloroethene

Data Qualifiers

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

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

Attachment 4 March 2010 Westbay Analytical Results

		(1,1-	cis-1,2-DCE			trans-1,2-DCE	
	Date	dichloroethene	(cis-1,2-	TCE	PCE	(trans-1,2-	Vinyl
Well ID	Sampled)	dichloroethene)	(trichloroethene)	(tetrachloroethene)	dichloroethene)	Chloride
CS-WB01-LGR-01	3/10/2010	< 0.30	< 0.16	< 0.16	3.7	< 0.19	< 0.23
CS-WB01-LGR-02	3/10/2010	< 0.30	< 0.16	2.6	8.0	< 0.19	< 0.23
CS-WB01-LGR-03	3/10/2010	< 0.30	< 0.16	15	4.6	< 0.19	< 0.23
CS-WB01-LGR-04	3/10/2010	< 0.30	< 0.16	0.23J	< 0.15	< 0.19	< 0.23
CS-WB01-LGR-05	3/10/2010	< 0.30	< 0.16	0.61J	0.17J	< 0.19	< 0.23
CS-WB01-LGR-06	3/10/2010	< 0.30	0.18J	1.7	0.54J	< 0.19	< 0.23
CS-WB01-LGR-07	3/10/2010	< 0.30	0.22J	16	19	< 0.19	< 0.23
CS-WB01-LGR-08	3/10/2010	< 0.30	< 0.16	3.4	1.5	< 0.19	< 0.23
CS-WB01-LGR-09	3/10/2010	< 0.30	0.21J	19	14	< 0.19	< 0.23
CS-WB02-LGR-01	3/11/2010	< 0.30	< 0.16	1.9	0.71J	< 0.19	< 0.23
CS-WB02-LGR-02	3/11/2010	< 0.30	< 0.16	0.37J	2.2	< 0.19	< 0.23
CS-WB02-LGR-03	3/11/2010	< 0.30	< 0.16	0.33J	3.7	< 0.19	< 0.23
CS-WB02-LGR-04	3/11/2010	< 0.30	< 0.16	14	4.2	< 0.19	< 0.23
CS-WB02-LGR-05	3/11/2010	< 0.30	< 0.16	4.1	1.2J	< 0.19	< 0.23
CS-WB02-LGR-06	3/11/2010	< 0.30	0.20J	5.9	9.0	< 0.19	< 0.23
CS-WB02-LGR-07	3/11/2010	< 0.30	< 0.16	2.2	2.1	< 0.19	< 0.23
CS-WB02-LGR-08	3/11/2010	< 0.30	0.33J	2.4	2.5	0.28J	< 0.23
CS-WB02-LGR-09	3/11/2010	< 0.30	< 0.16	11	11	< 0.19	< 0.23
CS-WB03-UGR-01	3/11/2010	<30.00*	<16.00*	45J*	4400*	<19.00*	<23.00*
CS-WB03-LGR-01	3/11/2010	<30.00*	<16.00*	30J*	430*	<19.00*	<23.00*
CS-WB03-LGR-03	3/11/2010	< 0.30	0.32J	13	27	< 0.19	< 0.23
CS-WB03-LGR-04	3/11/2010	< 0.30	< 0.16	8.0	24	< 0.19	< 0.23
CS-WB03-LGR-05	3/11/2010	< 0.30	< 0.16	5.9	22	< 0.19	< 0.23
CS-WB03-LGR-06	3/11/2010	< 0.30	< 0.16	0.98J	7.2	< 0.19	< 0.23
CS-WB03-LGR-07	3/11/2010	< 0.30	0.71J	20	10	< 0.19	< 0.23
CS-WB03-LGR-08	3/11/2010	< 0.30	< 0.16	1.3	9.3	< 0.19	< 0.23
CS-WB03-LGR-09	3/11/2010	< 0.30	< 0.16	6.5	6.6	< 0.19	< 0.23
CS-WB04-LGR-01	3/10/2010	< 0.30	< 0.16	< 0.16	0.60J	< 0.19	< 0.23
CS-WB04-LGR-02	3/10/2010	< 0.30	< 0.16	< 0.16	0.33J	< 0.19	< 0.23
CS-WB04-LGR-03	3/10/2010	< 0.30	< 0.16	0.18J	0.19J	< 0.19	< 0.23
CS-WB04-LGR-04	3/10/2010	< 0.30	< 0.16	0.24J	< 0.15	< 0.19	< 0.23
CS-WB04-LGR-06	3/10/2010	< 0.30	3.2	14	12	0.23J	< 0.23
CS-WB04-LGR-07	3/10/2010	< 0.30	32	6.8	0.34J	0.33J	< 0.23
CS-WB04-LGR-08	3/10/2010	< 0.30	< 0.16	1.0	0.40J	< 0.19	< 0.23
CS-WB04-LGR-09	3/10/2010	< 0.30	< 0.16	7.0	9.0	< 0.19	< 0.23
CS-WB04-LGR-10	3/10/2010	< 0.30	< 0.16	0.81J	0.59J	< 0.19	< 0.23
CS-WB04-LGR-11	3/10/2010	< 0.30	< 0.16	< 0.16	< 0.15	< 0.19	< 0.23

Data Qualifiers

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

* The analyte was run at a dilution of 100.

All values are reported in μg/L.

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