

PROGRESS REPORT

July 1, 2011 – December 31, 2011

(39th REPORT)



Camp Stanley Storage Activity

Boerne, Texas

USEPA ID No. TX2210020739

January 2012

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ACRONYMS AND ABBREVIATIONS

| | |
|---------------------|--|
| µg/l | micrograms per liter |
| 1,1-DCE | 1,1-dichloroethene |
| 2,4-DNT | 2,4-dinitrotoluene |
| 3D | three-dimensional |
| AEM | aerial electromagnetic |
| AL | action level |
| AOC | Area of Concern |
| APAR | affected property assessment report |
| APPL | Agriculture & Priority Pollutants Laboratories, Inc. |
| As | arsenic |
| CAH | chlorinated aliphatic hydrocarbons |
| <i>cis</i> -1,2-DCE | <i>cis</i> -1,2-dichloroethene |
| COC | contaminant of concern |
| CSSA | Camp Stanley Storage Activity |
| CY | cubic yard |
| DQO | data quality objective |
| EM | electromagnetic |
| GAC | granular activated carbon |
| 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 |
| NFA | No Further Action |
| O&M | operations and maintenance |
| Order | §3008(h) Administrative Order on Consent |
| PBR | permit-by-rule |
| PCE | tetrachloroethene |
| PCL | protective concentration level |
| PIMS | Phosphate Induced Metal Stabilization |
| ppbv | parts per billion by volume |
| QAPP | Quality Assurance Program Plan |
| RCRA | Resource Conservation and Recovery Act |
| RFI | RCRA facility investigation |
| RIR | Release Investigation Report |
| RL | reporting limit |
| RMU | Range Management Unit |
| SAWS | San Antonio Water System |
| 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 |
| TPDES | Texas Pollution Discharge Elimination System |
| <i>trans</i> -1,2-DCE | <i>trans</i> -1,2-dichloroethene |
| UCL | upper confidence limit |
| 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 |

PROGRESS REPORT JULY 1, 2011 – DECEMBER 31, 2011 (39th PERIOD)

INTRODUCTION

This 39th 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, 2011 through December 31, 2011. 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, 2011, 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;
- Collection of groundwater samples in the vicinity of AOC-65;
- Continuation of the groundwater monitoring program under the regulator-approved data quality objectives (DQO);
- Continuation of investigations of SWMUs, AOCs, and Range Management Units (RMUs) including SWMU B-4, AOC-51, AOC-72, AOC-74, and RMU-5;
- Completed investigations and submitted Release Investigation Reports (RIRs) to the Texas Commission on Environmental Quality (TCEQ) for SWMU B-27, SWMU B-28, AOC-42, AOC-45, AOC-52, AOC-57, AOC-58, AOC-59, AOC-62, and RMU-2 ;
- Continued maintenance of on- and off-post granular activated carbon (GAC) systems and on-post permitted outfalls;
- Installed a GAC at an additional off-post private well (LS-5);
- Conducted surface water and geological modeling; 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, 2011 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** shows the metal levels in supply well CS-1 as part of the Period 39 investigation.

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 P39 |
|---|--|-----------------------------------|-----------------------------|---------------------------------------|--|-------------------------------------|--------------------------|
| Interim Measures | | 30% | | | | 99% | |
| Interim Measures Work Plan | Mitigate a current or potential threat to human health and/or the environment. | | 7% | 100% | 7% | | No |
| Interim Measures Implementation | | | 70% | 99% | 69% | | No |
| Reports | | | 23% | 99% | 23% | | No |
| RCRA Facility Investigation | | 30% | | | | 89% | |
| 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% | 93% | 37% | | Yes |
| Risk Assessment | | | 10% | 91% | 9% | | No |
| Investigation Analysis | | | 10% | 91% | 9% | | Yes |
| Groundwater Investigation | | | 15% | 90% | 14% | | Yes |
| Treatability Studies | | | 10% | 74% | 7% | | Yes |
| Progress Reports | | | 5% | 68% | 3% | | 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 and treatability studies at AOC-65;
- Continuation of bioreactor operation and other treatability studies at SWMU B-3;
- Investigations and/or interim removal actions at SWMU B-4, SWMU B-27, SWMU B-28, AOC-42, AOC-45, AOC-51, AOC-52, AOC-58, AOC-59, AOC-62, AOC-72, AOC-74, RMU-2 and RMU-5.

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 CSSA Environmental Encyclopedia will continue to be updated as WPs for any new projects are finalized.

Environmental Encyclopedia Updates

The CSSA website (www.stanley.army.mil) was updated with documents added to the Environmental Encyclopedia through the end of December 2011. The website serves as CSSA's Administrative Record as required under the Order. The Environmental Encyclopedia was updated with all final reports through December 2011. Updates made in Period 39 included the following:

- Semi-Annual USEPA Progress Report for Period 38;
- March 2011 Well Owner Letters;
- December 2010 Well Owner Letters;
- June 2011 Well Owner Letters;
- September 2011 Groundwater Sample Notification Letter, August 4, 2011;
- AOC-45 RIR, August 2011;
- AOC-59 RIR, August 2011;

- SWMU B-28 RIR, August 2011;
- Work Plan and Sampling and Analysis Plan Addendum for SWMU B-4, August 2011;
- Storm Water Pollution Prevention Plan for SWMU B-4, August 2011;
- RFI and Interim Measures Waste Management Plan Addendum for SWMU B-4, August 2011;
- March 2011 Quarterly Groundwater Report, July 2011;
- June 2011 Quarterly Off-Post Groundwater Report, August 2011;
- CSSA B-3 Bioreactor Operations Annual Performance Status Report, Quarters 13 - 16, May 2010 - April 2011, August 2011;
- 2011 Bird Survey Report, September 2011;
- SWMU B-27 RIR, September 2011;
- June 2011 Quarterly On-Post Groundwater Report, September 2011;
- Interim Removal Action for Metals-Impacted Sand Bedding Material at AOC-65 Tech Memo, September 2011;
- 2011 Well Installation Report, September 2011;
- September 2011 Well Owner Letters
- Work Plan for Water Line Investigation/Repair near Building 90, October 2011;
- SWMU B-3 Bioreactor Operation and Maintenance Manual, November 2011 Update, November 2011;
- December 2011 Groundwater Sample Notification, November 1, 2011;
- Work Plan and Sampling and Analysis Plan for AOC-74, November 2011;
- Storm Water Pollution Prevention Plan for AOC-74, November 2011;
- Various correspondence to and from CSSA;
- Various meeting minutes; and
- Various tables of contents, site chronologies, and indices.

Facility Investigations

An investigation of the facility is being conducted to:

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

In some cases, multiple investigational phases may be necessary. Investigation results will be used to develop and evaluate alternatives during the Corrective 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 39, this task is approximately 91 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 61 CSSA sites has been approved by TCEQ, and of these, 19 sites were either delisted or granted No Further Action (NFA) status.

SWMU, AOC, and RMU Investigations

During Period 39, CSSA continued to conduct field investigations and interim removal actions at a number of the remaining open sites, and exceeded the goal of closing approximately one site per quarter. Investigations and/or interim removal actions were conducted at eight sites during this period, six NFA RIRs were submitted to the TCEQ for approval, and TCEQ approval was received for the closure of five sites. 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 x-ray fluorescence (XRF) sampling, geophysical surveying, exploratory trenching, soil sampling and laboratory analysis, and interim removal actions.

SWMU B-4

During Period 39, approximately 3,000 cubic yards (CY) of media remaining from interim removal actions at SWMU B-4 conducted during Period 38, was sorted and managed. The media contained a mix of munitions debris (MD), munitions and explosives of concern (MEC), metal scrap, rocks, and other miscellaneous debris. Approximately 1,500 CY of soil was transported to the CSSA East Pasture berm; approximately 0.5 CY of MEC and 1,000 CY of munitions-related debris were placed in locked storage containers onsite for future disposal; six rolloffs of recyclable material were sent off-post for recycling; and approximately 6,000 pounds of MD were taken to Bonetti Explosives for disposal.

While scraping the surface of the site in September 2011, additional partially-buried guns and magazines were discovered in an area between two of the previously-excavated trenches. A Schonstedt hand-held magnetometer was used by the unexploded ordnance (UXO) team to help delineate the boundaries of a new trench. This trench was added to the AOC-75 site. An APAR for SWMU B-4 is expected to be submitted to TCEQ during Period 40.

SWMU B-27

In Period 39, eight waste disposal trenches were excavated to remove munitions debris, scrap metal, miscellaneous debris, and contaminated soil. Approximately 9,150 CY of soil and debris were removed during this effort, including 20 CY of metal debris which was recycled. Confirmation sampling was performed at the excavation extent. In total, six samples exceeded Tier 1 PCLs. Two of these six sample locations were over-excavated to below Tier 1 PCLs. Three samples exceeded the PCL for methylene chloride, a common laboratory contaminant. Additional samples collected from the original sample locations confirmed that the contaminant

was not present in the soils. Per TAC §350.79(2)(A), a 95% upper confidence limit (UCL) may be calculated to determine if there is a statistical basis for no further action on a particular contaminant of concern (COC). A 95% UCL of 40.32 mg/kg for zinc was calculated for the site to account for one sample with a zinc concentration above the Tier 1 PCL. An RIR requesting NFA for SWMU B-27 was prepared and submitted to TCEQ in September 2011.

After the completion of the excavation effort, the site was re-graded to support the retention of stormwater. This included the construction of a retention berm along the south side of the site.

SWMU B-28

Investigations and/or interim removal actions at SWMU B-28 were completed during Period 38. An RIR requesting NFA for SWMU B-28 was prepared and submitted to TCEQ during Period 39. Closure of SWMU B-28 was approved by TCEQ on November 17, 2011.

Salado Creek Area (AOC-42, AOC-52, AOC-58, and AOC-62)

Investigation and/or interim removal actions took place in Period 38 at four adjacent sites in the northeast portion of the Inner Cantonment: AOC-42, AOC-52, AOC-58, and AOC-62. Due to their proximity and similarity, they were grouped together as the “Salado Creek Area” sites. Investigations and interim removal actions were completed during Period 38.

In July 2011, a final geophysical survey of the Salado Creek Area was performed to ensure the removal of all waste trenches. A single RIR requesting NFA for the Salado Creek Area sites was prepared and submitted to TCEQ in September 2011.

AOC-45

Investigations and/or interim removal actions at AOC-45 were completed during Period 38. An RIR requesting NFA for AOC-45 was prepared and submitted to TCEQ during Period 39. Closure of AOC-45 was approved by TCEQ on October 20, 2011.

AOC-51

In Period 39, soil samples were collected at AOC-51 to follow up on results from the XRF field investigation conducted in December 2010. Samples were analyzed for metals and explosives. No explosives were detected; however results showed elevated copper and lead in the soils in one small area of the site (approximately 2 acres).

AOC-57

Investigations and/or interim removal actions at AOC-57 were completed during Period 38. An RIR requesting NFA for AOC-57 was prepared and submitted to TCEQ during Period 38. Closure of AOC-57 was approved by TCEQ on September 13, 2011.

AOC-59

Investigations at AOC-59 were completed during Period 38. An RIR requesting NFA for AOC-59 was prepared and submitted to TCEQ during Period 39. Closure of AOC-59 was approved by TCEQ on October 20, 2011.

AOC-72

The interim removal action at AOC-72 was initiated in November 2011. Exploratory excavations showed that the buried material consisted of construction material and what

appeared to be non-friable asbestos mixed throughout the soil. Samples of the soil matrix were sent to the laboratory for waste and soil characterization purposes showed that the soil matrix was nonhazardous and did not contain friable asbestos, volatile organic compounds (VOCs), semivolatile organic compounds (SVOCs), or metals above Tier 1 PCLs.

AOC-74

An XRF meter was used at the site in June 2011 to help delineate metal contamination at the site. The removal effort began at AOC-74 in November with the collection of soil samples to confirm the proposed excavation extent which was based on XRF analysis results. The samples, which were analyzed for metals, VOCs, and SVOCs, and herbicides contained arsenic, chromium, cadmium, lead, nickel, and zinc above their Tier 1 PCLs. The sample containing elevated levels of arsenic was additionally analyzed for herbicides and pesticides. However, no herbicides or pesticides were detected. In November 2011, approximately 2,200 CY of contaminated soil and waste materials were removed. Excavation activities at the site were completed on December 8, 2011. An RIR requesting NFA for AOC-74 will be prepared and submitted to TCEQ in Period 40.

RMU-2

Interim removal actions for RMU-2 began in Period 38 and continued into Period 39 with three additional rounds of excavation, removal, and confirmation sampling. The second round of excavation was initiated on August 1, 2011 and removed approximately 1,350 CY of soil in order to address lead contamination to the northeast of the original excavation boundary. Additional confirmation sampling showed one sample exceeding the Tier 1 PCL for the explosive compound 2,4-dinitrotoluene (2,4-DNT) and multiple samples exceeding the Tier 1 PCL for lead. A third round of excavation was initiated on August 24, 2011 and removed approximately 2,160 CY of contaminated soil. In the third round of confirmation sampling, three soil samples exceeded the Tier 1 PCL for lead. The areas around two of these samples were over-excavated. Approximately 380 CY of soil were removed during the final round of excavation. Final confirmation sampling took place on September 13, 2011. A 95% UCL of 71.53 mg/kg was calculated (per TAC §350.79(2)(A)) for the lead concentrations remaining in site soils, which does not exceed the Tier 1 PCL of 84.5 mg/kg. An RIR requesting NFA for RMU-2 was prepared and submitted to TCEQ in November 2011.

Wastewater Treatment Plant (WWTP)

The WWTP was built at the southern end of CSSA in the early 1940s. The plant discharged to an unnamed tributary of Upper Leon Creek, under State of Texas Pollutant Discharge Elimination System (TPDES) Permit Number WQ0003849000. The WWTP served CSSA from the 1940s until it was removed from service on June 24, 2011 when CSSA connected its wastewater collection system to the San Antonio Water System (SAWS) wastewater collection system.

In August 2011, all wastewater and sludge was removed from the WWTP components and all surfaces in each of the WWTP components were disinfected with bleach. The wastewater within the WWTP units was discharged to SAWS, and the sludge removed from the WWTP was moved to the sludge drying bed to dry. The sludge was sampled for TCLP, total metals, TPH, and nitrates and nitrates to determine criteria for identification of waste classification and waste materials per TCEQ municipal closure requirements and CSSA's Closure Plan.

Following demolition, the soil adjacent to the WWTP units was over-excavated to ensure removal of possible contamination. All demolition and excavation activities were conducted by Heartland Midwest, LLC. During this period, approximately 950 cubic yards CY of waste material, soil media, and construction debris were excavated from the site. Excavated soil was disposed of at Covell Gardens Landfill in San Antonio, Texas.

Following completion of the demolition and excavation, confirmation samples were collected from the bottoms and sidewalls of the excavated areas. No VOCs were detected; however, three samples exceeded Tier 1 PCLs for mercury, copper, and nitrate. The areas exceeding Tier 1 PCLs were over-excavated and two confirmation samples were collected. Results for the two re-sampled locations were below Tier 1 PCLs with the exception of nitrate. Soil boring will be performed in early January 2012 to evaluate nitrate concentrations in site bedrock. An RIR requesting NFA for the WWTP will be prepared and submitted to TCEQ in Period 40.

United States Geological Survey (USGS) Investigations and Modeling

CSSA contracted with the USGS to perform geophysical surveys and develop a three-dimensional (3D) geologic model for Camp Stanley and the immediate surrounding area. During Period 38, SWMUs B-20/21 and B-27 underwent geophysical surveys as a demonstration test of the USGS ALLTEM system. The ALLTEM system was used to pick out anomalies on surveyed sites and to generate a corresponding dig list for SWMU B-24. USGS also produced a polarized target map which specifically detailed the depth, horizontal extent, and density of anomalies on the site to further aid excavation efforts.

Additionally, CSSA has contracted with the USGS to demonstrate their 3D EM surface geophysical tools which are currently under development. The USGS has developed a new methodology by which standard electromagnetic (EM) technology is processed into a 3D image of conductive materials buried in the subsurface. The potential applications of this technology include the in-situ detection and identification of munitions or other UXO/MEC items.

The USGS conducted borehole geophysics in a select number of both on- and off-post wells in Period 38 in order to further define hydrostratigraphic model of the Middle Trinity Aquifer. The borehole logging activities included the standard suite of geophysical methods, advanced video imaging, and nuclear logging tools to aid in the estimation of stratigraphy, porosity, and permeability. Based upon the final data, USGS has made lithologic “picks” from the drilled locations to incorporate and visualize the subsurface in a 3D model.

During Period 39, USGS has developed a preliminary model that represents the major formational members of the study area stratigraphy. This geologic model is compatible with groundwater modeling programs that can be used to model Middle Trinity Aquifer ground water present at the facility. The newly-funded work builds upon previous USGS work including surface geologic mapping, aerial electromagnetic (AEM) surveys, and borehole EM surveys. The work conducted at CSSA will become the framework for a larger USGS study conducted on the Trinity Aquifer in Northern Bexar County. The accuracy of the input data is being verified and data gaps are being filled. Activities in Period 40 will include peer review and possibly verifying the positional accuracy and elevation of non-CSSA wells used in the model. Structural controls such as faults will be fully evaluated and adjusted as needed to match the lithologic data ascertained from the drilling records. USGS will also incorporate AEM data collected previously to further refine the structure of the model area, including faults and reefal structures.

Once these phases of the modeling effort are complete, the model will be subdivided into its 16 lithologic layers.

It is anticipated that the model will help define the regional structure of the aquifer and assist in identifying preferential pathways along faults, grabens, or relay ramps, and guide future characterization activities. Ultimately, the model will visually depict the hydrostratigraphic and structural features of model area and can form the basis for a numerical groundwater flow model.

Stormwater Modeling

A stormwater evaluation was performed during Period 39 to evaluate the existing stormwater management facilities, and to suggest potential improvements for the two main tributaries at CSSA: Leon Creek and Salado Creek. In order to determine the areas of greatest concern and where improvements could be made, dynamic hydraulic modeling was performed. The purpose of the hydraulic modeling was to understand surface water flow under the current conditions, as well as to model the performance of the system and protections the proposed flood control system will provide to base buildings, roads, and sensitive areas. The objective was to use the model to run several alternatives and to iteratively select the appropriate infrastructure to meet the appropriate criteria and provide an added level of flood protection.

The scope for the project included six tasks: Drainage Basin Characterization and Delineation, Data Collection and Validation, creation of a Digital Elevation Model, developing a One-Dimension (1D)/Two-Dimension (2D) Hybrid Model, Scenario Analysis, and Drainage Modification Recommendations. The evaluation identified areas of 25-year and 100-year inundation, and provided recommendations based on the findings. A Stormwater Evaluation Report with specific findings will be submitted.

Groundwater Investigation

The groundwater investigation subtask makes up approximately 15 percent of the RFI phase. As of the end of Period 39, this task is approximately 91 percent complete.

On- and off-post groundwater monitoring was conducted in accordance with regulator-approved DQOs during Period 39. 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 updated 2010 LTMO monitoring recommendations were implemented during the June 2011 sampling event for both on- and off-post wells.

The analyte list for each monitoring event was in accordance with the applicable work plans (WPs) 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 lead, cadmium, mercury, and chromium. On-post drinking water wells were also sampled for four additional metals: barium, arsenic, copper, and zinc. 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 2011 Sampling

Acceptance of the updated 2010 LTMO was received from the TCEQ and USEPA prior to the June 2011 sampling event. With the new sampling frequencies approved, the June event included all on- and off-post wells, and selected Westbay zones (referred to as a “snapshot” event). Forty-six on-post wells and two newly installed wells were scheduled for sampling in June 2011. However, because of depressed water levels associated with the ongoing drought, only 32 on-post wells could be sampled. Off-post wells scheduled for sampling in June 2011 included 52 private and public drinking water wells.

Sampling was conducted between May 31 and June 16, 2011. Analytical results from the June 2011 sampling event are included in Attachment 4. The average groundwater elevation in June 2011 decreased 41.80 feet from that measured in March 2011. Bexar County and surrounding areas were under an extreme to exceptional drought alert and the Trinity Glen Rose Groundwater Conservation District declared Stage 2 severe drought water restrictions effective June 1, 2011. The average depth to water in the Lower Glen Rose (LGR) screened wells was approximately 292 feet below ground surface.

The maximum contaminant level (MCL) was exceeded in on-post monitoring wells CS-MW1-LGR, CS-MW16-LGR, and CS-MW16-CC for PCE, TCE, and/or *cis*-1,2-DCE in June 2011. The action level (AL) for lead (0.015 mg/L) was slightly exceeded in well CS-MW9-BS (0.0751 mg/L). Lead and mercury also exceeded the AL/MCL in former drinking water well CS-9; this well has been offline since 2006. Eight LTMO-selected Westbay zones were sampled in June 2011 and 6 of the 8 zones had detections that exceeded the MCL for PCE and/or TCE. CS-WB03-LGR09 had an unusually high concentration of *cis*-1,2-DCE as compared to previous results with a concentration of 35.36 µg/L; this concentration is below the MCL of 70 µg/L.

Eight wells on the west side of IH-10 were sampled for the second consecutive quarter in June 2011. No VOCs were detected in these wells. In March 2011, wells OW-BARNOWL and OW-HH2 had low levels (less than the reporting limit) of PCE. These wells will be sampled for 4 consecutive quarters in accordance with project DQOs and the LTMO recommendations. Analyses indicated that only off-post well I10-4 exceeded the MCL for PCE. Well I10-4 is not in use. Five other wells (LS-5, LS-7, OFR-3, RFR-10, and RFR-11) had PCE or TCE detections above the reporting limit, but below the MCL. Nine other wells had trace detections of PCE below the reporting limit (RL). Updated PCE plume boundaries based on the June 2011 sampling even are shown in Attachment 1.

Semi-annual GAC maintenance was performed in July 2011. 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 2012. Additional maintenance was required at GAC unit OFR-3. The current landowner is adding an apartment to the existing building which will require some plumbing modifications. To prevent any future GAC bypasses the unit was moved to the wellhead.

September 2011 Sampling

Two on-post monitoring wells and four drinking water wells were sampled in September 2011 in accordance with the LTMO schedule. Off-post wells sampled in September 2011 included 18 private and public off-post drinking water wells with five post-GAC samples. All samples were analyzed for VOCs. In addition, the on-post samples were analyzed for selected

metals. Analytical results from the September 2011 sampling event are included in Attachment 4.

Sampling was conducted between September 6 and September 16, 2011. Due to the extreme drought, average groundwater elevations in September 2011 decreased 3 feet from the elevations measured in June 2011. The average depth to water in the LGR screened wells was approximately 295 feet below ground surface.

All six on-post wells scheduled for monitoring in September 2011 were sampled. Drinking water wells (CS-1, CS-10, and CS-12), two newly installed wells (CS-MW35-LGR and CS-MW36-LGR), and one former drinking water well (CS-9) were sampled. The two newly installed monitoring wells (CS-MW35-LGR and CS-MW36-LGR) were sampled for the first time in September 2011. The first sampling event for monitoring wells includes an expanded list of analytes, in accordance with groundwater DQOs. The other wells were analyzed for selected VOCs (CSSA short list) and arsenic, barium, chromium, copper, cadmium, lead, mercury, and zinc analyses.

The MCLs for PCE and TCE were exceeded in monitoring well CS-MW36-LGR, which is located at AOC-65, in September 2011. The AL for lead (0.015 mg/L) was slightly exceeded in well CS-1 (0.0294 mg/L). Lead and mercury also exceeded the AL/MCL in former drinking water well CS-9; this well has been offline since 2006. Westbay wells (WB01-WB04) in the vicinity of AOC-65 were not sampled in September 2011. These wells were profiled to collect water level data in the area. The Westbay wells are scheduled to be sampled in December 2011, in accordance with the LTMO schedule.

A total of 18 off-post wells and six GAC filtered samples were collected during the September 2011 monitoring event. All off-post wells scheduled for sampling that had current access agreements were sampled during this event.

Well LS-5 exceeded 90% of the applicable MCL during the September sampling event. A GAC treatment system was installed on this well on October 6, 2011, in accordance with the *Data Quality Objectives Groundwater Monitoring Program Report* (November 2010).

The eight Oaks Water Supply System wells on the west side of IH-10 were sampled for the third consecutive quarter in September 2011. Previously in March 2011, wells OW-BARNOWL and OW-HH2 had low levels (less than the reporting limit) of PCE. However, consistent with the results from June 2011, no VOCs were detected in these wells in September 2011. These wells will be sampled for 4 consecutive quarters (through December 2011) in accordance with project DQOs.

Eight privately owned wells were identified south and west of CSSA on the west side of IH-10. Two of these wells were sampled during this event: SLD-01 and I10-9 (Attachment 1). Well I10-9 reported a detection of PCE only, at a concentration below the RL (14.0 mg/L). This well will be sampled on a quarterly basis. Well SLD-01 was non-detect; this well is a significant distance west of CSSA (~ 2.5 miles) and could be considered for sampling in the future or on an as needed basis.

A total of eight off-post wells reported detections of PCE or TCE during the September event. Two 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. Wells LS-5, LS-7, and

RFR-11 were sampled on October 12, 2011 after a significant rain event in which the CSSA weather station at AOC-65 recorded 4.84 inches of rain on October 9, 2011. PCE and TCE levels were reduced in all three wells after the rainfall. I10-9 was the only well sampled this quarter that contained a trace concentration of TCE below the laboratory RL.

GAC-filtered samples were also collected in September 2011. 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 2012 event. Semi-annual GAC maintenance was performed in July 2011. 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 2012.

During the September sampling event, lead was detected in supply well CS-1 above the action level (15 parts per billion by volume [ppbv]). The well was resampled in November 2011 in order to confirm lead contamination and lead remained above the action level (Attachment 6). An investigation of the source of this lead contamination will continue into Period 40.

December 2011 Sampling

Fourteen on-post wells were scheduled for sampling in December 2011. Off-post wells scheduled for sampling in December 2011 included 17 private and public drinking water wells. At total of 37 Westbay zones from four multi-port wells are slated for sampling as well. Sampling was conducted between December 5 and December 16, 2011. Laboratory results will be received in January 2011 and summarized in the next progress report.

On-Post GAC Systems

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

Since the post has constructed a wastewater outfall to connect with the SAWS sanitary sewer system, CSSA will not be renewing their TPDES permit. Because the permit is going to be cancelled, Outfalls 002 and 004 will no longer be operated.

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.

In September 2011, TCE was reported at concentration of 4.8 µg/L at well LS-5. This result exceeded the DQO threshold of 80 percent of the MCL, and therefore required a water treatment response from CSSA. Subsequent sampling on September 28, 2011 and October 12, 2011 resulted with TCE concentrations of 2.54 µg/L and 1.82 µg/L, respectively. The initial response included providing bottled drinking water to the residence within 48 hours of the original laboratory result. CSSA then installed a wellhead GAC filtration system on October 6, 2011.

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 on September 6, 2011. All VOC results for the post-GAC water samples were non-detect. Carbon canister exchange was completed in September 2011 for the off-post GAC systems and will be due again in January 2012.

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 39.

Treatability Studies

The Treatability Study subtask makes up approximately 10 percent of the RFI phase. As of the end of Period 39, this task is approximately 75 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 39. Approximately 48,619,868 gallons of groundwater extracted from CS-MW16-LGR, CS-MW16-CC, CS-B3-EXW01, and CS-B3-EXW02 have been injected into the bioreactor trenches since the start of injection in 2007. A semi-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 December 2011. Additionally, a request was made to TCEQ to reduce the frequency of data collection and reporting. A response from TCEQ is expected to be received in Period 40.

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

- Dissolved Organic Carbon;
- Methane, Ethane, 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.

Westbay well CS-WB07 was damaged in a March 2011 sampling event when the probe and samplers broke off the wireline approximately 245 feet below ground surface. The probe was successfully extracted, the damaged casing was removed, and new well materials were installed during Period 39. CS-WB07 was returned to service in July 2011.

Several bioreactor system updates are currently in the planning phase and/or in the early stages of construction. These system updates are expected to significantly change bioreactor O&M activities. The first of which is construction of a building on the east side of the bioreactor that will house system controls, storage tanks, the transfer pump, and bag filter. The repositioning of the injection equipment in this new building requires the rerouting of water lines from extraction wells and utilities, and moving supervisory control and data acquisition (SCADA) controls. Two 4,000-gallon tanks will be installed in series in the new building and will replace the 6,000-gallon trailer mounted tank currently in use.

Two new extraction wells (B3-EXW03 and B3-EXW-04), located to the west of the bioreactor, have been drilled and are being incorporated into the system. Surface completions, utility service connections, installation of electrical boxes, and water line connections are currently in the planning stages. The goal of these two wells is to provide additional reliable water sources for the bioreactor and provide a measure of protection against the westerly migration of contaminants in groundwater.

Additionally, bioreactor trenches will be recharged with deciduous tree mulch and pea-sized gravel. Both mulch and gravel have been procured and are currently staged near the bioreactor. The new mulch will provide organic carbon for anaerobic reductive dechlorination of contaminants through dehalorespiration. New injection lines will be installed approximately 18 inches below the surface and covered with new geotextile fabric. The new lines will allow the saturation of the upper portion of trenches. Additionally, the sumps currently installed will be extended so they will rise above ground surface once the trenches are filled and will also extend above the level of the berm located on the west side of the bioreactor. The extension of the sumps will require the repositioning of the float switch located in sump T1-1 and the associated power lines and communication wiring.

During Period 39, the bioreactor remained at saturated conditions due to the continued supply of water from wells CS-MW16-CC, CS-MW16-LGR, B3-EXW01, and B3-EXW02 and less so from rainfall. Approximately 7,220,579 gallons of water were injected into bioreactor trenches 1 and 6 during Period 39.

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 39 (data available through October 2011), degradation products, VC and ethene, were identified within the bioreactor (VC as high as 175 µg/L and ethene as high as 116 µg/L); and in significant concentrations, respectively, within shallow Upper Glen Rose (UGR) wells: MW26-UGR (107 µg/L and 19 µg/L), MW27-UGR (10 µg/L and 4 µg/L), MW34-UGR (134 µg/L and 15 µg/L); and in Westbay-equipped wells WB08-

UGR-01 (86 µg/L and 12 µg/L), CS-WB07-UGR01 (15 µg/L and 4.5 µg/L), and CS-WB06-UGR01 (6.4 µg/L VC only).

Additionally, VC was observed at depth in Westbay-equipped wells in zones CS-WB05-LGR03B (15 µg/L), CS-WB05-LGR04A (29 µg/L), CS-WB05-LGR04B (233 µg/L), CS-WB05-BS01 (12 µg/L), and in monitoring well CS-B3-MW01 (36 µg/L). Less significant amounts of VC were identified in zones WB05-CC-02 and CS-WB06-UGR01. Significant amounts of ethene were observed in Westbay-equipped wells in zones CS-WB05-LGR04B (19 µg/L), CS-WB07-LGR01 (4.5 µg/L), and WB08-UGR01 (12 µg/L). CS-WB05 and CS-B3-MW01 are both located north of the bioreactor, indicating reduction byproducts are migrating vertically in this area. 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 *trans*-1,2-DCE suggest abiotic reductive dechlorination may also be occurring.

VOC analytical results from bioreactor trench sump samples indicated a decrease in contaminant mass (total molar concentration) in trench sumps T1-1 and T1-3 during Period 39. Total molar concentrations at sump T1-2, T6-1, and T6-2 appeared to be increasing through Period 39. Despite the increasing trend at these three sumps during Period 39, there is an overall decreasing trend in contaminant mass since injections began at each trench. Over the bioreactor operational period (4.5 years), contaminant mass within the bioreactor trenches appears to be decreasing. In addition, minor amounts of toluene and other fuel related compounds were identified during monitoring of bioreactor sumps from trenches 1, 2, and 6 through Period 39.

Arsenic (As) was detected in concentrations exceeding the MCL (10 µg/L) in three sumps, T1-1 (22 µg/L), T1-2 (19 µg/L), and T6-1 (21 µg/L) and one Westbay well zone, CS-WB05-LGR04B (21 µg/L) during Period 39. Manganese (Mn) was reported in bioreactor trench water samples at concentrations ranging from non-detect to 52 µg/L (MCL is 50 µg/L). All of the shallow UGR wells sampled during the year (6 of 9) had, at some point, elevated levels of Mn. Samples from 5 of 6 UGR wells indicated elevated levels of Mn, with concentrations ranging from 29 to 651 µg/L. Three of the shallow UGR wells did not produce enough water to sample during this Period. An elevated level of Mn was reported in CS-B3-MW01 (259 µg/L), as well as in Westbay well zones CS-WB05-LGR04B (52 µg/L), CS-WB06-UGR01 (575 µg/L), CS-WB07-LGR01 (621 µg/L), and CS-WB08-UGR-01 (818 µg/L). All other multi-port monitoring well 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

Monthly monitoring and semi-annual sampling of the AOC-65 SVE system has been ongoing since April 2008. Initial monitoring results indicate no exceedances of permit-by-rule (PBR) limits occurred for the SVE system. Soil vapor samples were collected from the AOC-65 SVE system during Period 39 and analyzed for VOCs. Results indicated that PCE emissions from the SVE system were 2.5 lb/year during this period, which is well below the permitted level of 0.268 lbs/hr or 2,347.68 lbs/year.

During Period 38, two steam injection wells (SIW) and five vapor extraction wells (VEW) were installed at AOC-65 to enhance and expand the SVE system as part of a steam enhanced

extraction treatability study performed in August 2011. The SIWs were plumbed to the steam line originating from the boiler in Building 89 to facilitate the injection of steam into the bedrock formation which enhances the volatilization of VOCs. The VEWs were plumbed into the existing SVE system and the existing blower was upgraded to handle the new wells.

Based on Period 38 monitoring and drilling in the vicinity of Building 90, a leak in a nearby waterline was discovered and repaired. It was believed that additional waterlines in the area were possibly also be leaking as a significant quantity of water was found at a depth of about 40 feet during drilling of wells approximately 25 feet west of Building 90 during Period 39. A groundwater sample from recently collected from CS-MW36-LGR showed chlorine disinfection by-products (i.e., chloroform), indicating the possible presence of treated (disinfected) water. The concern was that the water leaks may serve as a hydraulic mechanism for the unintended mobilization and dispersion of contaminants known to exist at AOC-65.

Investigation of the waterlines near Building 90 was initiated during Period 39. Waterlines surrounding Building 90 were planned to be pressured tested and repaired as necessary. The resulting inspections and pressure testing indicated all waterlines passed (no leaks) with the exception of the waterline feeding the north end of Building 90 which was visually determined to be in very poor condition and subsequently abandoned in place. The investigations on waterline integrity continued north of Building 90 and included leaks identified in waterlines feeding the historical front gate guard house and a fire hydrant located near Building A101. The waterline supplying the front gate guard house was used occasionally for plant watering and was abandoned in place. The identified leaking fire hydrant and associated valve near Building A101 were replaced. All water supply lines were disinfected and tested before putting back into service in accordance with American Water Works Association requirements. Additionally, water service to Building 79 was connected from the south end, creating a loop around the building, to better serve the needs of the building occupants. Building 90 air conditioning condensate lines were routed to Building 90 storm water conveyance lines.

Soil gas and groundwater samples were collected in August 2011 as part of a pilot study on thermally enhanced SVE using steam. PCE was detected in 18 of the 19 sampled VEWs, ranging from below the RL to 2,500 ppbv. Toluene was detected in 12 of the 18 sampled VEWs, ranging from below the RL to 4.4 ppbv. Injected steam at SIW-01 and SIW-02 during the study period resulted in an overall increase in PCE removal rates estimated from baseline conditions. A report summarizing the findings of this pilot study was prepared during Period 39 and is expected to be submitted to TCEQ during Period 40.

MEETINGS

No status meetings with TCEQ and USEPA occurred during Period 39.

SUMMARY OF CONTACTS

Letters summarizing the results of the June 2011 and September 2011 off-post groundwater monitoring events were mailed to owners of the off-post wells in Period 39. Groundwater sampling notification letters were sent to the USEPA and TCEQ one month prior to the start of the September and December 2011 sampling events. Other correspondence during Period 39 included:

- Letter to TCEQ - Biannual Status Report (Month 43-48, Nov. 2010 - April 2011) of the Pilot Study Class V Aquifer Remediation Injection Wells (May 27, 2011)

- TCEQ Closure Approval Letter for AOC-70 (September 1, 2011);
- TCEQ Closure Approval Letter for SWMU B-15/16 (September 7, 2011);
- TCEQ Approval Letter for Period 38 Progress Report (September 13, 2011);
- TCEQ Closure Approval Letter for AOC-57 (September 13, 2011);
- TCEQ Closure Approval Letter for AOC-64 and SWMU B-71 (October 17, 2011);
- TCEQ Closure Approval Letter for AOC-45 and AOC-59 (October 20, 2011);
- TCEQ Closure Approval Letter for SWMU B-28 (November 17, 2011); and
- Letter to TCEQ – PWS CS-21 Iron and Aluminum Issue (November 3, 2011).

PROJECTED WORK FOR THE NEXT PERIOD

SWMU, AOC, and RMU Investigations

Investigations, interim removal actions, and/or reporting will be continued for SWMUs B-4, B-13, and B-34; AOC-51, AOC-72, and AOC-74; and RMU-5. Reports summarizing investigation results will be submitted upon completion. An interim removal action will be conducted at AOC-65 (see below). Additional characterization sampling is planned for SWMU B-13, AOC-75, RMU-3, and RMU-4. 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 March and June 2012. Quarterly and annual groundwater monitoring reports will be submitted next period. 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 40. The semi-annual carbon exchange will be performed in January 2012.

SWMU B-3 Bioreactor

Monitoring of the bioreactor at SWMU B-3 will continue during Period 40. 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 will be re-designed and constructed during Period 39 including: installation of a new storage tank(s), relocating system controls, and incorporating system instrumentation in SCADA. Additionally, two new extraction wells will be brought online to deliver groundwater to the bioreactor. CSSA discussed these plans with USEPA on June 14, 2011, and these improvements to the bioreactor were agreed on.

AOC-65 SVE System and Interim Removal Action

AOC-65 SVE system O&M will continue in Period 40. 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. Various levels of monitoring will occur twice monthly, monthly, and semi-annually.

An interim removal action will be performed at AOC-65 during Period 40. The purpose of the interim removal action is to remove contaminated soil and rock situated west of Building 90. A trench will be excavated. Backfill of the excavation will include in-situ chemical oxidant (ISCO) to degrade remaining contaminants. This removal action may necessitate the removal of

VEWs and the abandonment of monitoring wells and vapor monitoring points located near the excavation. Four new monitoring wells will be installed to provide monitoring points for a tracer study and to monitor the progress of planned ISCO applications. The tracer study will identify existing data gaps in the monitoring network as well as identify vapor flow paths in the unsaturated zone. Four new VEWs will be installed in areas identified by the tracer study that are likely connected to areas in the subsurface impacted by contaminants. Following the installation of these four new VEWs, the SVE system will be optimized to more efficiently remove contaminated soil vapors.

Finally, the investigation and evaluation of other potential treatment options for AOC-65 and Plume 2 will be continued in Period 40.

MEETINGS

A status meeting will be held with TCEQ, USEPA, and the U.S. Fish and Wildlife Service (USFWS) in January 2012. Quarterly groundwater meetings will be held prior to the quarterly events scheduled in March and June 2012.

**Table 2, Project Task Completion to Date for Open Projects Only
 (Values updated through November 30, 2011)**

| 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 November 30, 2011)**

| 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 | 68% | 68% |
| | Routine Environmental Program Support | RFI | 63% | 63% |
| | Non-Routine Environmental Program Support | RFI | 50% | 50% |
| | AOC-65 Waste Excavation and Removal | RFI | 100% | 100% |
| | Task Order Management | RFI | 86% | 86% |
| TO1 (Parsons) | Program Management | | | |
| | Project Management | RFI | 29.3% | 29.3% |
| | Environmental, Safety, and Occupational Health Support | RFI | 1% | 1% |
| | Data & Information Management Support | RFI | 9.7% | 9.7% |
| TO2 (Parsons) | O&M, Compliance, & Monitoring | | | |
| | Treatability Study Systems Operation | RFI | 18.2% | 18.2% |
| | Compliance and Sampling | RFI | 2.0% | 2.0% |
| | Groundwater Monitoring | RFI | 11.1% | 11.1% |
| TO3 (Parsons) | Site Investigations and Closures | | | |
| | AOC-51 | RFI | 0% | 0% |
| | AOC-74 | RFI | 51.4% | 51.4% |
| | RMU-5 | RFI | 37.3% | 37.3% |
| | SWMU B-27 | RFI | 100% | 100% |
| | AOC-72 | RFI | 72.1% | 72.1% |
| TO4 (Parsons) | Environmental Studies | | | |
| | AOC-65 | RFI | 0.6% | 0.6% |
| | AOC-51 | RFI | 0.9% | 0.9% |
| | AOC-65 Water Line Investigation | RFI | 90% | 0% |

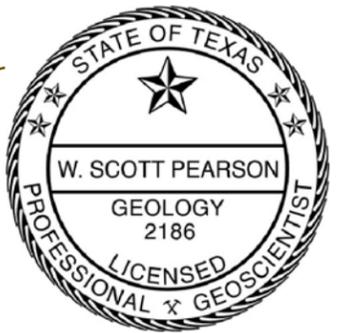
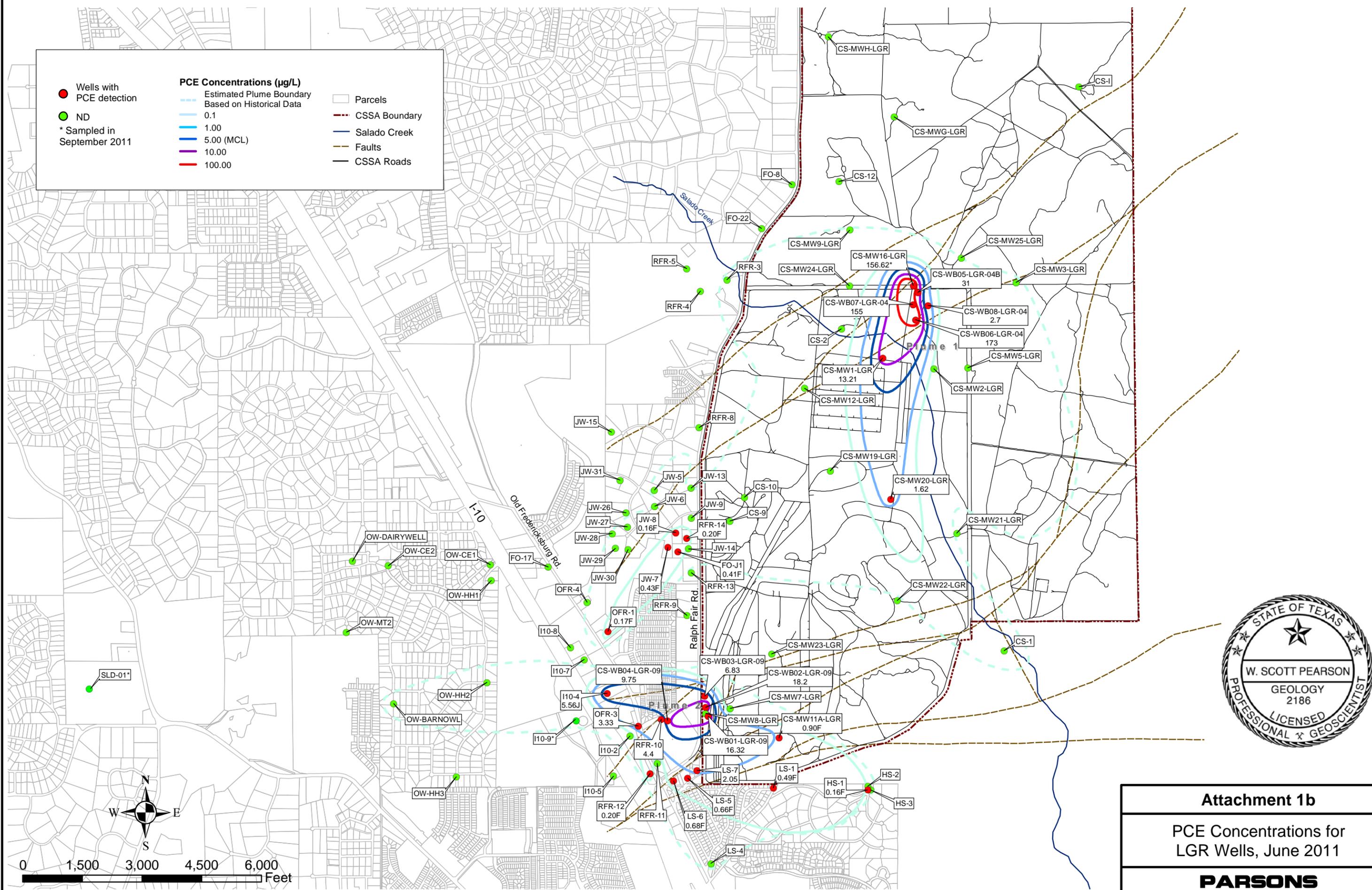
Table 3, Project Team Contact Information

| Name | Organization/Role | Street Address | City, State, Zip | Phone No. | Fax No. | E-mail |
|-------------------------------|------------------------------------|---|---------------------------|----------------|----------------|-----------------------------------|
| Beal, Christopher | Parsons, Geologist | c/o Environmental Office, 25800 Ralph Fair Road | Boerne, TX 78015-4800 | (210) 336-1171 | (210) 295-7386 | chris.beal@parsons.com |
| Burdey, Julie | Parsons, Project Mgr | 8000 Centre Park Dr., Suite 200 | Austin, TX 78754 | (512) 719-6062 | (512) 719-6099 | julie.burdey@parsons.com |
| Caskey, Kyle | Parsons, Site Mgr | c/o Environmental Office, 25800 Ralph Fair Road | Boerne, TX 78015-4800 | (210) 204-8529 | (210) 295-7386 | Kerry.k.caskey@parsons.com |
| Cason, Russ | Weston, Project Mgr | 70 NE Loop 410, Suite 600 | San Antonio, TX 78216 | (210) 308-4338 | (210) 308-4329 | r.cason@westonsolutions.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 |
| Coulter, Kirk | TCEQ, Project Mgr | P.O. Box 13087, MC-127 | Austin, TX 78711-3087 | (512) 239-2572 | | kcoulter@tceq.state.tx.us |
| 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, Samantha | Parsons, Task Mgr | c/o Environmental Office, 25800 Ralph Fair Road | Boerne, TX 78015-4800 | (210) 347-6012 | (210) 295-7386 | Samantha.elliott@parsons.com |
| 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 |
| Marbury, Laura | Parsons, Task Mgr | 8000 Centre Park Dr., Suite 200 | Austin, TX 78754 | (512) 719-6855 | (512) 719-6099 | laura.marbury@parsons.com |
| Moreno, Gabriel | CSSA Environmental Program Manager | 25800 Ralph Fair Road | Boerne, TX 78015-4800 | (210) 698-5208 | (210) 295-7386 | morenog@envirodept.net |
| Pearson, Scott | Parsons, Task Mgr | 8000 Centre Park Dr., Suite 200 | Austin, TX 78754 | (512) 719-6087 | (512) 719-6099 | william.scott.pearson@parsons.com |
| 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 |
| Shirley, Jason (LTC, retired) | CSSA Installation Manager | 25800 Ralph Fair Road | Boerne, TX 78015-4800 | (210) 295-7416 | (210) 295-7386 | |

ATTACHMENT 1

ON-POST AND OFF-POST SAMPLED WELLS

| | | |
|---|---|--|
| <ul style="list-style-type: none"> ● Wells with PCE detection ● ND * Sampled in September 2011 | PCE Concentrations (µg/L) Estimated Plume Boundary Based on Historical Data 0.1 1.00 5.00 (MCL) 10.00 100.00 | <ul style="list-style-type: none"> ▭ Parcels --- CSSA Boundary — Salado Creek — Faults — CSSA Roads |
|---|---|--|



Attachment 1b

PCE Concentrations for
LGR Wells, June 2011

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 | | | | X | | |
| 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 | Closure | | X | | | | |
| 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 | Closure | | X | | | | |
| 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 | -- | Investigation, interim removal action | | | | | | |
| AOC 52 | Area west of B-4 towards Salado Creek near trees, two trenches | RIR August 2011 | Closure | | X | | | | |
| 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 | Closure | | X | | | | |
| 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 | Closure | | X | | | | |
| 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. | -- | Excavate as necessary | | | | | | |
| 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. | -- | XRF Survey, Map site boundaries | | | | | | |
| 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 | Closure | | X | | | | |
| RMU3 | Firing range berm. | -- | Excavate as necessary | | | | | | |
| RMU4 | Former rifle range in East Pasture. | -- | Field mapping. | | | | | | |
| RMU5 | Former rocket range in North Pasture. | -- | Field mapping. | | | | | | |

ATTACHMENT 3
OVERALL H ORDER PERCENT COMPLETE

Attachment 3
Overall (H) Order Percent Complete

| Task Name | % of Project | % of Phase | % Complete | % of Activity Complete | % of Task Complete |
|---|---------------------|-------------------|-------------------|-------------------------------|---------------------------|
| Interim Measures | 30% | | | | 99% |
| Interim Measures Work Plan | | 7% | 100% | 7.0% | |
| Interim Measures Implementation Reports | | 70% | 99% | 69.3% | |
| | | 23% | 99% | 22.8% | |
| RCRA Facility Investigation | 30% | | | | 90% |
| Preliminary Report | | 5% | 100% | 5% | |
| RFI Workplan | | 5% | 100% | 5% | |
| Facility Investigation | | 40% | 93% | 37% | |
| Risk Assessment | | 10% | 91% | 9% | |
| Investigation Analysis | | 10% | 91% | 9% | |
| Groundwater Investigation | | 15% | 90% | 14% | |
| Treatability Studies | | 10% | 74% | 7% | |
| Progress Reports | | 5% | 68% | 3% | |
| 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 | | | | | 56.58% |

Attachment 3
Overall (H) Order Percent Complete

| Task Name | % of Phase | % of Task | % Complete | % of Activity Complete | % of Activity Remaining | % of Task Complete | Comments/Status |
|---|------------|-----------|------------|------------------------|-------------------------|--------------------|--|
| 1 Interim Measures Work Plan | 7% | | | | | 100.0% | |
| Draft IM Workplan | | 80% | 100% | 80% | 0% | | |
| Draft Final IM Workplan | | 15% | 100% | 15% | 0% | | |
| Final IM Workplan | | 5% | 100% | 5% | 0% | | |
| 2 Interim Measures Implementation | 70% | | | | | 99.0% | |
| Sample 3 Off-Site Wells | | 1% | 100% | 1% | 0% | | |
| Sample 20 Off-Site Wells (6 events) | | 6% | 100% | 6% | 0% | | (remaining off-post sampling 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% | | |
| Locate and map off-site wells | | 1% | 100% | 1% | 0% | | |
| O-1 Soil Borings | | 3% | 100% | 3% | 0% | | |
| O-1 Excavation, Stabilization, Diposal | | 12% | 100% | 12% | 0% | | |
| Establish Treatment Unit | | 1% | 0% | 0% | 100% | | may or may not be necessary. |
| Determine appropriate disposition of soil piles | | 5% | 100% | 5% | 0% | | After treatability studies. |
| Treat/dispose of soil piles | | 20% | 100% | 20% | 0% | | Unfunded CSSA future work. |
| AOC 50 Excavation and Disposal | | 3% | 100% | 3% | 0% | | Not included as IM in the Order. |
| AOC 65 Excavation and Disposal | | 8% | 100% | 8% | 0% | | |
| 3 Reports | 23% | | | | | 99.0% | |
| Quarterly Progress Report 1 (August 1999) | | 0.67% | 100% | 0.67% | 0% | | |
| Quarterly Progress Report 2 (November 1999) | | 0.67% | 100% | 0.67% | 0% | | |
| Quarterly Progress Report 3 (February 2000) | | 0.67% | 100% | 0.67% | 0% | | |
| Quarterly Progress Report 4 (May 2000) | | 0.67% | 100% | 0.67% | 0% | | |
| Quarterly Progress Report 5 (August 2000) | | 0.67% | 100% | 0.67% | 0% | | |
| Quarterly Progress Report 6 (November 2000) | | 0.67% | 100% | 0.67% | 0% | | |
| Quarterly Progress Report 7 (February 2001) | | 0.67% | 100% | 0.67% | 0% | | |
| Quarterly Progress Report 8 (May 2001) | | 0.67% | 100% | 0.67% | 0% | | |
| Quarterly Progress Report 9 (August 2001) | | 0.67% | 100% | 0.67% | 0% | | |
| Quarterly Progress Report 10 (November 2001) | | 0.67% | 100% | 0.67% | 0% | | |
| Quarterly Progress Report 11 (February 2002) | | 0.67% | 100% | 0.67% | 0% | | |
| Quarterly Progress Report 12 (May 2002) | | 0.67% | 100% | 0.67% | 0% | | |
| Quarterly Progress Report 13 (August 2002) | | 0.67% | 100% | 0.67% | 0% | | |
| Quarterly Progress Report 14 (November 2002) | | 0.67% | 100% | 0.67% | 0% | | |
| Quarterly Progress Report 15 (February 2003) | | 0.67% | 100% | 0.67% | 0% | | |
| Quarterly Progress Report 16 (May 2003) | | 0.67% | 100% | 0.67% | 0% | | |
| Quarterly Progress Report 17 (August 2003) | | 0.67% | 100% | 0.67% | 0% | | |
| Quarterly Progress Report 18 (November 2003) | | 0.67% | 100% | 0.67% | 0% | | |
| Quarterly Progress Report 19 (February 2004) | | 0.67% | 100% | 0.67% | 0% | | |
| Quarterly Progress Report 20 (May 2004) | | 0.67% | 100% | 0.67% | 0% | | |
| Quarterly Progress Report 21 (August 2004) | | 0.67% | 100% | 0.67% | 0% | | |
| Quarterly Progress Report 22 (November 2004) | | 0.67% | 100% | 0.67% | 0% | | |
| Quarterly Progress Report 23 (February 2005) | | 0.67% | 100% | 0.67% | 0% | | |
| Quarterly Progress Report 24 (May 2005) | | 0.67% | 100% | 0.67% | 0% | | |
| Quarterly Progress Report 25 (August 2005) | | 0.67% | 100% | 0.67% | 0% | | |
| Quarterly Progress Report 26 (October 2005) | | 0.67% | 100% | 0.67% | 0% | | |
| Quarterly Progress Report 27 (January 2006) | | 0.67% | 100% | 0.67% | 0% | | |
| Quarterly Progress Report 28 (April 2006) | | 0.67% | 100% | 0.67% | 0% | | |
| Semi-annual Progress Rpt 29 (Dec 2006) | | 0.67% | 100% | 0.67% | 0% | | |
| Semi-annual Progress Rpt 30 (July 2007) | | 0.67% | 100% | 0.67% | 0% | | |
| Semi-annual Progress Rpt 31 (Dec 2007) | | 0.67% | 100% | 0.67% | 0% | | |
| Semi-annual Progress Rpt 32 (July 2008) | | 0.67% | 100% | 0.67% | 0% | | |
| Semi-annual Progress Rpt 33 (Dec 2008) | | 0.67% | 100% | 0.67% | 0% | | |
| Semi-annual Progress Rpt 34 (July 2009) | | 0.67% | 100% | 0.67% | 0% | | |
| Semi-annual Progress Rpt 35 (Dec 2009) | | 0.67% | 100% | 0.67% | 0% | | |
| Semi-annual Progress Rpt 36 (July 2010) | | 0.67% | 100% | 0.67% | 0% | | |
| Semi-annual Progress Rpt 37 (Dec 2010) | | 0.67% | 100% | 0.67% | 0% | | |
| Semi-annual Progress Rpt 38 (July 2011) | | 0.67% | 100% | 0.67% | 0% | | |
| Semi-annual Progress Rpt 39 (Dec 2011) | | 0.67% | 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 | | | | | | 99.04% | |

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% | | | | | 92.6% | |
| 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% | 95% | 1.178% | 5% | | Final report submitted. Additional work required. |
| B-5 Investigation/Report | | 1.24% | 100% | 1.240% | 0% | | RRS1 closure approved Oct 02. |
| B-6 Investigation/Report | | 1.24% | 100% | 1.240% | 0% | | RRS1 closure approved Oct 02. |
| B-7 Investigation/Report | | 1.24% | 100% | 1.240% | 0% | | RRS1 closure approved Oct 02. |
| B-8 Investigation/Report | | 1.24% | 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 submitted. Additional work required. |
| 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% | 99% | 1.228% | 1% | | Final report submitted |
| 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% | 99% | 1.228% | 1% | | NFA Closure requested |
| 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% | 99% | 1.228% | 1% | | NFA Closure requested |
| 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% | 99% | 1.228% | 1% | | NFA Closure requested |
| 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% | | |
| AOC 70 Investigation/Report | | 1.24% | 100% | 1.240% | 0% | | NFA closure approved Sept 11 |
| AOC 72 Investigation/Report | | 1.24% | 50% | 0.620% | 50% | | Investigation underway |
| AOC 73 Investigation/Report | | 1.24% | 100% | 1.240% | 0% | | Closure approved July 2009 |
| AOC 74 Investigation/Report | | 1.24% | 90% | 1.116% | 10% | | Investigation underway |
| AOC 75 Investigation/Report | | 1.24% | 25% | 0.310% | 75% | | Investigation 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 |
| B-24 Investigation/Report | | 1.2% | 80% | 0.976% | 20% | | Final report submitted, additional 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% | 99% | 1.207% | 1% | | NFA closure requested |
| 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% | 25% | 0.305% | 75% | | |
| AOC 66 Investigation/Report | | 1.2% | 100% | 1.220% | 0% | | NFA Closure approved Feb 05 |
| RMU-1 Investigation/Report | | 1.2% | 0% | 0.000% | 100% | | |
| RMU-5 Investigation/Report | | 1.2% | 25% | 0.305% | 75% | | Investigation underway |
| AOC 65 Investigation/Report | | 1.2% | 75% | 0.915% | 25% | | Final report submitted, additional 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% | 99% | 1.207% | 1% | | NFA Closure requested |
| RMU-3 Investigation/Report | | 1.2% | 25% | 0.305% | 75% | | Investigation underway |
| RMU-4 Investigation/Report | | 1.2% | 25% | 0.305% | 75% | | Investigation underway |
| Groundwater Investigation | 15% | | | | | 90% | |
| 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% | 80% | 2% | 20% | | |
| 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% | | | | | 68.4% | |
| 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% | | |
| Quarter 24 (May 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 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% | | |
| (Additional Reports - rows hidden) | | | | | | | |
| % of Phase Complete | | | | | | 89.55% | |
| ¹ Breakdown of percent complete for RFI facility investigations: Field work complete (25%), data validation (20%), boring logs (if applicable)(10%), analytical data tables (10%), figures (10%), draft report (20%), final report (5%). Note: if additional investigations are needed, then the percent complete will need to be adjusted on a site by site basis. | | | | | | | |

Attachment 3
Overall (H) Order Percent Complete

| Task Name | % of Phase | % of Task | % Complete | % of Activity Complete | % of Task Complete |
|--|-------------------|------------------|-------------------|-------------------------------|---------------------------|
| Identify and Develop Alternatives | 15% | | | | 0.0% |
| Update DCC Report | | 35% | 0% | 0% | |
| Establish Corrective Action Objectives | | 30% | 0% | 0% | |
| ID, Screen, Develop CM Alternatives | | 35% | 0% | 0% | |
| Evaluate Alternatives | 60% | | | | 0.0% |
| Draft Description of CM Alternative | | 90% | 0% | 0% | |
| Final Description of CM Alternative | | 10% | 0% | 0% | |
| 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% | |
| % of Phase Complete | | | | | 0.0% |

Attachment 3
Overall (H) Order Percent Complete

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

ATTACHMENT 4

GROUNDWATER RESULTS SUMMARY

Attachment 4
June 2011 Quarterly On-post Groundwater Analytical Results

| Well ID | Sample Date | Arsenic | Barium | Cadmium | Chromium | Copper | Lead | Zinc | Mercury |
|-------------------------------------|----------------|---------------|---------------|--------------|---------------|-----------------|----------------|---------------|----------------|
| CS-MW1-LGR | 6/9/2011 | NA | NA | -- | -- | NA | -- | NA | -- |
| CS-MW1-CC | 6/9/2011 | NA | NA | -- | -- | NA | -- | NA | -- |
| CS-MW1-BS | 6/9/2011 | NA | NA | -- | -- | NA | -- | NA | -- |
| CS-MW2-LGR | 6/10/2011 | NA | NA | -- | -- | NA | -- | NA | -- |
| CS-MW3-LGR | 6/14/2011 | NA | NA | -- | 0.007F | NA | -- | NA | -- |
| CS-MW5-LGR | 6/13/2011 | NA | NA | -- | -- | NA | 0.0020F | NA | -- |
| CS-MW6-BS | 6/15/2011 | NA | NA | -- | 0.004F | NA | -- | NA | -- |
| CS-MW7-LGR | 6/16/2011 | NA | NA | -- | 0.002F | NA | -- | NA | -- |
| CS-MW8-LGR | 6/15/2011 | NA | NA | -- | 0.006F | NA | -- | NA | -- |
| CS-MW8-CC | 6/15/2011 | NA | NA | -- | -- | NA | -- | NA | -- |
| CS-MW9-LGR | 6/14/2011 | NA | NA | -- | 0.061 | NA | -- | NA | -- |
| CS-MW9-BS | 6/15/2011 | NA | NA | -- | 0.003F | NA | 0.0751 | NA | -- |
| CS-MW11A-LGR | 6/16/2011 | NA | NA | -- | 0.049 | NA | -- | NA | -- |
| CS-MW12-LGR | 6/10/2011 | NA | NA | -- | 0.002F | NA | 0.0021F | NA | -- |
| CS-MW12-LGR FD | 6/10/2011 | NA | NA | -- | -- | NA | 0.0027F | NA | -- |
| CS-MW12-BS | 6/10/2011 | NA | NA | -- | 0.003F | NA | 0.0020F | NA | -- |
| CS-MW16-LGR | 6/7/2011 | NA | NA | -- | -- | NA | 0.0042F | NA | -- |
| CS-MW16-CC | 6/7/2011 | NA | NA | -- | -- | NA | -- | NA | -- |
| CS-MW19-LGR | 6/16/2011 | NA | NA | -- | -- | NA | -- | NA | -- |
| CS-MW20-LGR | 6/13/2011 | NA | NA | -- | 0.003F | NA | 0.0021F | NA | -- |
| CS-MW21-LGR | 6/13/2011 | NA | NA | -- | -- | NA | 0.0026F | NA | -- |
| CS-MW22-LGR | 6/13/2011 | NA | NA | -- | -- | NA | 0.0020F | NA | -- |
| CS-MW23-LGR | 6/13/2011 | NA | NA | -- | 0.002F | NA | -- | NA | 0.0002F |
| CS-MW24-LGR | 6/9/2011 | NA | NA | -- | -- | NA | -- | NA | -- |
| CS-MW25-LGR | 6/14/2011 | NA | NA | -- | 0.002F | NA | -- | NA | -- |
| CS-MW25-LGR FD | 6/14/2011 | NA | NA | -- | 0.002F | NA | -- | NA | -- |
| CS-MWG-LGR | 6/14/2011 | NA | NA | -- | -- | NA | -- | NA | -- |
| CS-MWH-LGR | 6/8/2011 | NA | NA | -- | -- | NA | 0.0047F | NA | -- |
| CS-1 | 6/8/2011 | NA | NA | -- | -- | NA | -- | NA | -- |
| CS-2 | 6/10/2011 | NA | NA | -- | -- | NA | 0.0024F | NA | -- |
| CSSA Drinking Water Well System | | | | | | | | | |
| CS-1 | 6/7/2011 | -- | 0.0332 | -- | -- | 0.006F | -- | 0.236 | -- |
| CS-9 | 6/7/2011 | -- | 0.0435 | -- | -- | 0.014J | 0.0183F | 1.825 | 0.0028 |
| CS-10 | 6/7/2011 | -- | 0.042 | -- | -- | 0.011J | -- | 0.155 | -- |
| CS-10 FD | 6/7/2011 | -- | 0.0473 | -- | -- | 0.016J | -- | 0.18 | -- |
| CS-12 | 6/7/2011 | -- | 0.0304 | -- | -- | 0.011J | -- | 0.481 | -- |
| Method Detection Limit (MDL) | 0.00022 | 0.0003 | 0.0005 | 0.001 | 0.003 | 0.0019 | 0.008 | 0.0001 | |
| Reporting Limit (RL) | 0.03 | 0.005 | 0.007 | 0.01 | 0.01 | 0.025 | 0.05 | 0.001 | |
| Max. Contaminant Level (MCL) | 0.01 | 2 | 0.005 | 0.1 | AL=1.3 | AL=0.015 | SS=5.0 | 0.002 | |
| BOLD | ≥ MDL | | | | | | | | |
| BOLD | ≥ RL | | | | | | | | |
| BOLD | ≥ MCL | | | | | | | | |

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

Abbreviations/Notes:

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

Data Qualifiers

- 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
June 2011 Quarterly On-post Groundwater Analytical Results

| Well ID | Sample Date | 1,1-DCE | cis-1,2-DCE | trans-1,2-DCE | PCE | TCE | Vinyl Chloride |
|------------------------------|-------------|--------------|----------------|---------------|----------------|----------------|----------------|
| CS-MW1-LGR | 6/9/2011 | -- | 16.53 | 0.21F | 13.21 | 31.37 | -- |
| CS-MW1-CC | 6/9/2011 | -- | -- | -- | -- | -- | -- |
| CS-MW1-BS | 6/9/2011 | -- | 1.01F | -- | -- | -- | -- |
| CS-MW2-LGR | 6/10/2011 | -- | 0.74F | -- | -- | -- | -- |
| CS-MW3-LGR | 6/14/2011 | -- | -- | -- | -- | -- | -- |
| CS-MW5-LGR | 6/13/2011 | -- | -- | -- | -- | -- | -- |
| CS-MW6-BS | 6/15/2011 | -- | -- | -- | -- | -- | -- |
| CS-MW7-LGR | 6/16/2011 | -- | -- | -- | -- | -- | -- |
| CS-MW8-LGR | 6/15/2011 | -- | -- | -- | -- | -- | -- |
| CS-MW8-CC | 6/15/2011 | -- | -- | -- | -- | -- | -- |
| CS-MW9-LGR | 6/14/2011 | -- | -- | -- | -- | -- | -- |
| CS-MW9-BS | 6/15/2011 | -- | -- | -- | -- | -- | -- |
| CS-MW11A-LGR | 6/16/2011 | -- | -- | -- | 0.90F | -- | -- |
| CS-MW12-LGR | 6/10/2011 | -- | -- | -- | -- | -- | -- |
| CS-MW12-LGR FD | 6/10/2011 | -- | -- | -- | -- | -- | -- |
| CS-MW12-BS | 6/10/2011 | -- | -- | -- | -- | -- | -- |
| CS-MW16-LGR | 6/7/2011 | -- | 179.14* | 0.25F | 156.62* | 173.11* | -- |
| CS-MW16-CC | 6/7/2011 | 0.21F | 24.22 | 6.7 | 1.54 | 24.59 | -- |
| CS-MW19-LGR | 6/16/2011 | -- | -- | -- | -- | -- | -- |
| CS-MW20-LGR | 6/13/2011 | -- | -- | -- | 1.62 | -- | -- |
| CS-MW21-LGR | 6/13/2011 | -- | -- | -- | -- | -- | -- |
| CS-MW22-LGR | 6/13/2011 | -- | -- | -- | -- | -- | -- |
| CS-MW23-LGR | 6/13/2011 | -- | -- | -- | -- | -- | -- |
| CS-MW24-LGR | 6/9/2011 | -- | -- | -- | -- | -- | -- |
| CS-MW25-LGR | 6/14/2011 | -- | -- | -- | -- | -- | -- |
| CS-MW25-LGR FD | 6/14/2011 | -- | -- | -- | -- | -- | -- |
| CS-MWG-LGR | 6/14/2011 | -- | -- | -- | -- | -- | -- |
| CS-MWH-LGR | 6/8/2011 | -- | -- | -- | -- | -- | -- |
| CS-I | 6/8/2011 | -- | -- | -- | -- | -- | -- |
| CS-2 | 6/10/2011 | -- | -- | -- | -- | -- | -- |
| Comparison Criteria | | | | | | | |
| 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 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

- 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 2011 Quarterly On-post Groundwater Analytical Results**

| CSSA Drinking Water Well System | | | | | | | |
|-------------------------------------|-------------|-------------|-------------|-------------|-------------|--------------|----|
| CS-1 | 6/7/2011 | -- | -- | -- | -- | 0.34F | -- |
| CS-9 | 6/7/2011 | -- | -- | -- | -- | -- | -- |
| CS-10 | 6/7/2011 | -- | -- | -- | -- | -- | -- |
| CS-10 FD | 6/7/2011 | -- | -- | -- | -- | -- | -- |
| CS-12 | 6/7/2011 | -- | -- | -- | -- | -- | -- |
| Comparison Criteria | | | | | | | |
| 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 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

- 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 2011 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 |
|--|----------|-------------|-------------|-------------|---------------|--------------|--------------|----------------|
| Fair Oaks | FO-8 | 6/2/2011 | -- | -- | -- | -- | -- | -- |
| | FO-17 | 6/1/2011 | -- | -- | -- | -- | -- | -- |
| | FO-17 FD | 6/1/2011 | -- | -- | -- | -- | -- | -- |
| | FO-22 | 6/2/2011 | -- | -- | -- | -- | -- | -- |
| | FO-J1 | 6/2/2011 | -- | -- | -- | 0.41F | -- | -- |
| Hidden Springs | HS-1 | 6/3/2011 | -- | -- | -- | 0.16F | -- | -- |
| | HS-2 | 6/3/2011 | -- | -- | -- | -- | -- | -- |
| | HS-3 | 6/3/2011 | -- | -- | -- | -- | -- | -- |
| IH-10 | I10-2 | 6/13/2011 | -- | -- | -- | -- | -- | -- |
| | I10-4 | 5/31/2011 | -- | -- | -- | 5.56J | 1.97J | -- |
| | I10-5 | 6/2/2011 | -- | -- | -- | -- | -- | -- |
| | I10-5 FD | 6/2/2011 | -- | -- | -- | -- | -- | -- |
| | I10-7 | 6/15/2011 | -- | -- | -- | -- | -- | -- |
| | I10-8 | 6/1/2011 | -- | -- | -- | -- | -- | -- |
| Jackson Woods Subdivision | JW-5 | 6/1/2011 | -- | -- | -- | -- | -- | -- |
| | JW-6 | 6/1/2011 | -- | -- | -- | -- | -- | -- |
| | JW-7 | 6/7/2011 | -- | -- | -- | 0.43F | -- | -- |
| | JW-8 | 6/1/2011 | -- | -- | -- | 0.16F | -- | -- |
| | JW-9 | 6/7/2011 | -- | -- | -- | -- | -- | -- |
| | JW-13 | 6/2/2011 | -- | -- | -- | -- | -- | -- |
| | JW-14 | 6/2/2011 | -- | -- | -- | -- | -- | -- |
| | JW-15 | 6/7/2011 | -- | -- | -- | -- | -- | -- |
| | JW-15 FD | 6/7/2011 | -- | -- | -- | -- | -- | -- |
| | JW-26 | 6/7/2011 | -- | -- | -- | -- | -- | -- |
| | JW-27 | 6/2/2011 | -- | -- | -- | -- | -- | -- |
| | JW-28 | 6/2/2011 | -- | -- | -- | -- | -- | -- |
| | JW-29 | 6/2/2011 | -- | -- | -- | -- | -- | -- |
| | JW-30 | 6/3/2011 | -- | -- | -- | -- | -- | -- |
| JW-30 FD | 6/3/2011 | -- | -- | -- | -- | -- | -- | |
| JW-31 | 6/3/2011 | -- | -- | -- | -- | -- | -- | |
| Leon Springs Villas | LS-1 | 5/31/2011 | -- | -- | -- | 0.49F | -- | -- |
| | LS-4 | 5/31/2011 | -- | -- | -- | -- | -- | -- |
| | LS-5 | 5/31/2011 | -- | -- | -- | 0.66F | 2.36 | -- |
| | LS-6 | 5/31/2011 | -- | -- | -- | 0.68F | 0.90F | -- |
| | LS-7 | 5/31/2011 | -- | -- | -- | 2.05 | -- | -- |
| 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 ug/L.

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

Data Qualifiers:
--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 2011 Quarterly Off-Post Groundwater Analytical Results**

| | | | | | | | | |
|--|--------------|-------------|-------------|-------------|--------------|--------------|--------------|----|
| Old Fredericksburg Road | OFR-1 | 6/1/2011 | -- | -- | -- | 0.17F | -- | -- |
| | OFR-3 | 5/31/2011 | -- | -- | -- | 3.33 | 1.91 | -- |
| | OFR-4 | 6/7/2011 | -- | -- | -- | -- | -- | -- |
| Ralph Fair Road | RFR-3 | 6/2/2011 | -- | -- | -- | -- | -- | -- |
| | RFR-4 | 6/2/2011 | -- | -- | -- | -- | -- | -- |
| | RFR-5 | 6/2/2011 | -- | -- | -- | -- | -- | -- |
| | RFR-8 | 6/3/2011 | -- | -- | -- | -- | -- | -- |
| | RFR-9 | 6/13/2011 | -- | -- | -- | -- | -- | -- |
| | RFR-10 | 5/31/2011 | -- | -- | -- | 4.4 | -- | -- |
| | RFR-11 | 5/31/2011 | -- | -- | -- | -- | 1.92 | -- |
| | RFR-12 | 6/15/2011 | -- | -- | -- | 0.20F | 0.63F | -- |
| | RFR-13 | 6/3/2011 | -- | -- | -- | -- | -- | -- |
| RFR-14 | 6/3/2011 | -- | -- | -- | 0.20F | -- | -- | |
| The Oaks Water Supply | OW-BARNOWL | 6/1/2011 | -- | -- | -- | -- | -- | -- |
| | OW-CE1 | 6/1/2011 | -- | -- | -- | -- | -- | -- |
| | OW-CE2 | 6/1/2011 | -- | -- | -- | -- | -- | -- |
| | OW-DAIRYWELL | 6/1/2011 | -- | -- | -- | -- | -- | -- |
| | OW-HH1 | 6/1/2011 | -- | -- | -- | -- | -- | -- |
| | OW-HH1 FD | 6/1/2011 | -- | -- | -- | -- | -- | -- |
| | OW-HH2 | 6/1/2011 | -- | -- | -- | -- | -- | -- |
| | OW-HH3 | 6/1/2011 | -- | -- | -- | -- | -- | -- |
| OW-MT2 | 6/1/2011 | -- | -- | -- | -- | -- | -- | |
| 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 ug/L.

Abbreviations/Notes:

FD - Field Duplicate

TCE - Trichloroethene

PCE - Tetrachloroethene

DCE - Dichloroethene

Data Qualifiers:

--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 2011 Westbay Analytical Results**

| Well ID | Date Sampled | 1,1-DCE (1,1-dichloroethene) | cis-1,2-DCE (cis-1,2-dichloroethene) | TCE (trichloroethene) | PCE (tetrachloroethene) | trans-1,2-DCE (trans-1,2-dichloroethene) | Vinyl Chloride |
|------------------------|--------------|---------------------------------|---|--------------------------|----------------------------|---|----------------|
| CS-WB01-LGR-09 | 6/6/2011 | -- | 0.34 | 19.56 | 16.32 | -- | -- |
| CS-WB02-LGR-09 | 6/6/2011 | -- | 0.32 | 13.22 | 18.2 | -- | -- |
| CS-WB03-LGR-09 | 6/6/2011 | -- | 35.36 | 3.84 | 6.83 | -- | -- |
| CS-WB04-LGR-06 | 6/6/2011 | -- | 3.02 | 13.68 | 28.74 | 0.32 | -- |
| CS-WB04-LGR-07 | 6/6/2011 | -- | 2.24 | 11.15 | 17.91 | 0.23 | -- |
| CS-WB04-LGR-09* | 6/6/2011 | -- | -- | 7.29 | 9.75 | -- | -- |
| CS-WB04-LGR-10* | 6/6/2011 | -- | -- | 0.5 | 1.01 | -- | -- |
| CS-WB04-LGR-11* | 6/6/2011 | -- | -- | -- | 0.24 | -- | -- |
| Comparison Criteria | | | | | | | |
| Method Detection Limit | MDL | 0.3 | 0.16 | 0.16 | 0.15 | 0.19 | 0.23 |
| Reporting Limit | RL | 1.2 | 1.2 | 1 | 1.4 | 0.6 | 1.1 |
| Max. Contaminant Level | MCL | 7 | 70 | 5 | 5 | 100 | 2 |

Data Qualifiers

'--' indicates the result was non-detect.

All samples were analyzed by APPL as screening data.

* Additional analytes were run for WB04-LGR-09, -10, and -11, no detections were reported.

All values are reported in µg/L.

| | |
|-------------|-------|
| BOLD | ≥ MDL |
| BOLD | ≥ RL |
| BOLD | ≥ MCL |

Attachment 4

Analytical Results for CSSA Westbay and Off-Base Wells Quarterly Groundwater Samples Analyzed for Complete VOC List - Collected in May and June 2011

| SAMPLE ID: | CS-WB04-LGR-09 | CS-WB04-LGR-10 | CS-WB04-LGR-11 | I10-2 | I10-4 | IS-7 | RFR-10 | RFR-11 |
|-------------------------------------|----------------|----------------|----------------|-----------|-----------|---------------|------------|---------------|
| DATE SAMPLED: | 6/6/2011 | 6/6/2011 | 6/6/2011 | 6/13/2011 | 5/31/2011 | 5/31/2011 | 5/31/2011 | 5/31/2011 |
| LAB SAMPLE ID: | AY39212 | AY39211 | AY39210 | AY39732 | AY39128 | AY39122 | AY39126 | AY39127 |
| SAMPLE INTERVAL (ft bgs): | 207 to 320 | 325 to 345 | 350 to 377 | 0 to 0 | 0 to 0 | 0 to 0 | 134 to 198 | 0 to 0 |
| Units | | | | | | | | |
| Volatile Organics - SW8260B | | | | | | | | |
| 1,1,1,2-Tetrachloroethane | µg/L | 0.090 U | 0.090 U | 0.090 U | 0.090 U | 0.090 U | 0.090 U | 0.090 U |
| 1,1,1-Trichloroethane | µg/L | 0.030 U | 0.030 U | 0.030 U | 0.030 U | 0.030 U | 0.030 U | 0.030 U |
| 1,1,2,2-Tetrachloroethane | µg/L | 0.070 U | 0.070 U | 0.070 U | 0.070 U | 0.070 U | 0.070 U | 0.070 U |
| 1,1,2-Trichloroethane | µg/L | 0.060 U | 0.060 U | 0.060 U | 0.060 U | 0.060 U | 0.060 U | 0.060 U |
| 1,1-Dichloroethane | µg/L | 0.070 U | 0.070 U | 0.070 U | 0.070 U | 0.070 U | 0.070 U | 0.070 U |
| 1,1-Dichloroethene | µg/L | 0.12 U | 0.12 U | 0.12 U | 0.12 U | 0.12 U | 0.12 U | 0.12 U |
| 1,1-Dichloropropene | µg/L | 0.10 U | 0.10 U | 0.10 U | 0.10 U | 0.10 U | 0.10 U | 0.10 U |
| 1,2,3-Trichlorobenzene | µg/L | 0.24 U | 0.24 U | 0.24 U | 0.24 U | 0.24 U | 0.24 U | 0.24 U |
| 1,2,3-Trichloropropane | µg/L | 0.17 U | 0.17 U | 0.17 U | 0.17 U | 0.17 U | 0.17 U | 0.17 U |
| 1,2,4-Trichlorobenzene | µg/L | 0.16 U | 0.16 U | 0.16 U | 0.16 U | 0.16 U | 0.16 U | 0.16 U |
| 1,2,4-Trimethylbenzene | µg/L | 0.040 U | 0.040 U | 0.040 U | 0.040 U | 0.040 U | 0.040 U | 0.040 U |
| 1,2-Dibromo-3-chloropropane | µg/L | 0.76 U | 0.76 U | 0.76 U | 0.76 U | 0.76 U | 0.76 U | 0.76 U |
| 1,2-Dibromoethane (EDB) | µg/L | 0.060 U | 0.060 U | 0.060 U | 0.060 U | 0.060 U | 0.060 U | 0.060 U |
| 1,2-Dichlorobenzene | µg/L | 0.020 U | 0.020 U | 0.020 U | 0.020 U | 0.020 U | 0.020 U | 0.020 U |
| 1,2-Dichloroethane | µg/L | 0.050 U | 0.050 U | 0.050 U | 0.050 U | 0.050 U | 0.050 U | 0.050 U |
| 1,2-Dichloropropane | µg/L | 0.060 U | 0.060 U | 0.060 U | 0.060 U | 0.060 U | 0.060 U | 0.060 U |
| 1,3,5-Trimethylbenzene (Mesitylene) | µg/L | 0.040 U | 0.040 U | 0.040 U | 0.040 U | 0.040 U | 0.040 U | 0.040 U |
| 1,3-Dichlorobenzene | µg/L | 0.030 U | 0.030 U | 0.030 U | 0.030 U | 0.030 U | 0.030 U | 0.030 U |
| 1,3-Dichloropropane | µg/L | 0.050 U | 0.050 U | 0.050 U | 0.050 U | 0.050 U | 0.050 U | 0.050 U |
| 1,4-Dichlorobenzene | µg/L | 0.070 U | 0.070 U | 0.070 U | 0.070 U | 0.070 U | 0.070 U | 0.070 U |
| 1-Chlorohexane | µg/L | 0.040 U | 0.040 U | 0.040 U | 0.040 U | 0.040 U | 0.040 U | 0.040 U |
| 2,2-Dichloropropane | µg/L | 0.10 U | 0.10 U | 0.10 U | 0.10 U | 0.10 U | 0.10 U | 0.10 U |
| 2-Chlorotoluene | µg/L | 0.040 U | 0.040 U | 0.040 U | 0.040 U | 0.040 U | 0.040 U | 0.040 U |
| 4-Chlorotoluene | µg/L | 0.040 U | 0.040 U | 0.040 U | 0.040 U | 0.040 U | 0.040 U | 0.040 U |
| Benzene | µg/L | 0.070 U | 0.070 U | 0.070 U | 0.070 U | 0.070 U | 0.070 U | 0.070 U |
| Bromobenzene | µg/L | 0.060 U | 0.060 U | 0.060 U | 0.060 U | 0.060 U | 0.060 U | 0.060 U |
| Bromochloromethane | µg/L | 0.11 U | 0.11 U | 0.11 U | 0.11 U | 0.11 U | 0.11 U | 0.11 U |
| Bromodichloromethane | µg/L | 0.060 U | 0.060 U | 0.060 U | 0.060 U | 0.060 U | 0.060 U | 0.060 U |
| Bromoform | µg/L | 0.13 U | 0.13 U | 0.13 U | 0.13 U | 0.13 U | 0.13 U | 0.13 U |
| Bromomethane | µg/L | 0.080 U | 0.080 U | 0.080 U | 0.080 U | 0.080 U | 0.080 U | 0.080 U |
| Carbon tetrachloride | µg/L | 0.060 U | 0.060 U | 0.060 U | 0.060 U | 0.060 U | 0.060 U | 0.060 U |
| Chlorobenzene | µg/L | 0.040 U | 0.040 U | 0.040 U | 0.040 U | 0.040 U | 0.040 U | 0.040 U |
| Chloroethane | µg/L | 0.070 U | 0.070 U | 0.070 U | 0.070 U | 0.070 U | 0.070 U | 0.070 U |
| Chloroform | µg/L | 0.060 U | 0.060 U | 0.060 U | 0.060 U | 0.060 U | 0.060 U | 0.060 U |
| Chloromethane | µg/L | 0.16 U | 0.16 U | 0.16 U | 0.16 U | 0.33 F | 0.16 U | 0.46 F |
| cis-1,2-Dichloroethene | µg/L | 0.070 U | 0.070 U | 0.070 U | 0.070 U | 0.070 U | 0.070 U | 0.070 U |
| cis-1,3-Dichloropropene | µg/L | 0.030 U | 0.030 U | 0.030 U | 0.030 U | 0.030 U | 0.030 U | 0.030 U |
| Dibromochloromethane | µg/L | 0.060 U | 0.060 U | 0.060 U | 0.060 U | 0.060 U | 0.060 U | 0.060 U |
| Dibromomethane | µg/L | 0.060 U | 0.060 U | 0.060 U | 0.060 U | 0.060 U | 0.060 U | 0.060 U |
| Dichlorodifluoromethane | µg/L | 0.11 U | 0.11 U | 0.11 U | 0.11 U | 0.11 U | 0.11 U | 0.11 U |
| Ethylbenzene | µg/L | 0.050 U | 0.050 U | 0.050 U | 0.050 U | 0.050 U | 0.050 U | 0.050 U |
| Hexachlorobutadiene | µg/L | 0.17 U | 0.17 U | 0.17 U | 0.17 U | 0.17 U | 0.17 U | 0.17 U |
| Isopropylbenzene | µg/L | 0.040 U | 0.040 U | 0.040 U | 0.040 U | 0.040 U | 0.040 U | 0.040 U |
| m,p-Xylene | µg/L | 0.070 U | 0.070 U | 0.070 U | 0.070 U | 0.070 U | 0.070 U | 0.070 U |
| Methylene chloride | µg/L | 0.35 U | 0.35 U | 0.35 U | 0.35 U | 0.35 U | 0.35 U | 0.35 U |
| Naphthalene | µg/L | 0.070 U | 0.070 U | 0.070 U | 0.070 U | 0.070 U | 0.070 U | 0.070 U |
| n-Butylbenzene | µg/L | 0.17 U | 0.17 U | 0.17 U | 0.17 U | 0.17 U | 0.17 U | 0.17 U |
| n-Propylbenzene | µg/L | 0.030 U | 0.030 U | 0.030 U | 0.030 U | 0.030 U | 0.030 U | 0.030 U |
| o-Xylene | µg/L | 0.060 U | 0.060 U | 0.060 U | 0.060 U | 0.060 U | 0.060 U | 0.060 U |

Attachment 4

Analytical Results for CSSA Westbay and Off-Base Wells Quarterly Groundwater Samples Analyzed for Complete VOC List - Collected in May and June 2011

| SAMPLE ID: | CS-WB04-LGR-09 | CS-WB04-LGR-10 | CS-WB04-LGR-11 | I10-2 | I10-4 | IS-7 | RFR-10 | RFR-11 |
|------------------------------------|------------------|----------------|----------------|---------------|-----------|--------------|------------|------------|
| DATE SAMPLED: | 6/6/2011 | 6/6/2011 | 6/6/2011 | 6/13/2011 | 5/31/2011 | 5/31/2011 | 5/31/2011 | 5/31/2011 |
| LAB SAMPLE ID: | AY39212 | AY39211 | AY39210 | AY39732 | AY39128 | AY39122 | AY39126 | AY39127 |
| SAMPLE INTERVAL (ft bgs): | Units 207 to 320 | 325 to 345 | 350 to 377 | 0 to 0 | 0 to 0 | 0 to 0 | 134 to 198 | 0 to 0 |
| Volatile Organics - SW8260B | | | | | | | | |
| p-Cymene (p-Isopropyltoluene) | µg/L | 0.050 U | 0.050 U | 0.050 U | 0.050 U | 0.050 UJ | 0.050 U | 0.050 U |
| sec-Butylbenzene | µg/L | 0.050 U | 0.050 U | 0.050 U | 0.050 U | 0.050 UJ | 0.050 U | 0.050 U |
| Styrene | µg/L | 0.080 U | 0.080 U | 0.080 U | 0.080 U | 0.080 UJ | 0.080 U | 0.080 U |
| tert-Butylbenzene | µg/L | 0.040 U | 0.040 U | 0.040 U | 0.040 U | 0.040 UJ | 0.040 U | 0.040 U |
| Tetrachloroethene (PCE) | µg/L | 9.8 | 1.0 F | 0.24 F | 0.060 U | 5.6 J | 2.0 | 4.4 |
| Toluene | µg/L | 0.060 U | 0.060 U | 0.060 U | 0.060 U | 0.060 UJ | 0.060 U | 0.060 U |
| trans-1,2-Dichloroethene | µg/L | 0.080 U | 0.080 U | 0.080 U | 0.080 U | 0.080 UJ | 0.080 U | 0.080 U |
| trans-1,3-Dichloropropene | µg/L | 0.040 U | 0.040 U | 0.040 U | 0.040 U | 0.040 UJ | 0.040 U | 0.040 U |
| Trichloroethene (TCE) | µg/L | 7.3 | 0.50 F | 0.050 U | 0.050 U | 2.0 J | 0.050 U | 1.9 |
| Trichlorofluoromethane | µg/L | 0.070 U | 0.070 U | 0.070 U | 0.070 U | 0.070 UJ | 0.070 U | 0.070 U |
| Vinyl chloride | µg/L | 0.080 U | 0.080 U | 0.080 U | 0.080 U | 0.080 UJ | 0.080 U | 0.080 U |

QA NOTES AND DATA QUALIFIERS:

(NO CODE) - Confirmed identification.

U - Analyte was not detected above the indicated Method Detection Limit (MDL).

F - Analyte was positively identified, but the quantitation is an estimation above the MDL and below the Reporting Limit (RL).

J - Analyte was positively identified, but the quantitation is an estimation due to discrepancies in meeting certain analyte-specific quality control criteria.

UJ - Analyte was not detected above the indicated RL; however, the result is estimated due to discrepancies in meeting certain analyte-specific quality control criteria.

Detections are bolded.

Attachment 4
September 2011 Quarterly On-post Groundwater Analytical Results

| Well ID | Sample Date | Arsenic | Aluminum | Barium | Cadmium | Chromium | Copper | Iron | Lead | Zinc | Mercury |
|---------------------------------|-------------|---------|-------------|--------|---------|----------|--------|--------|----------|--------|---------|
| CS-MW35-LGR | 9/15/2011 | 0.0009F | NA | 0.0407 | -- | 0.004F | -- | NA | -- | 0.1 | -- |
| CS-MW36-LGR | 9/15/2011 | 0.0014F | NA | 0.0354 | -- | 0.007F | -- | NA | -- | 0.029F | -- |
| CS-9 | 9/14/2011 | 0.0013F | NA | 0.0423 | -- | -- | 0.005F | NA | 0.0190F | 1.722 | 0.0051 |
| CSSA Drinking Water Well System | | | | | | | | | | | |
| CS-1 | 9/14/2011 | 0.0012F | NA | 0.0316 | -- | -- | 0.013J | NA | 0.0294 | 0.543 | -- |
| CS-10 | 9/14/2011 | 0.0014F | NA | 0.0413 | -- | 0.002F | 0.025J | NA | 0.0022F | 0.106 | -- |
| CS-10 FD | 9/14/2011 | 0.0025F | NA | 0.0403 | -- | -- | 0.015J | NA | -- | 0.095 | -- |
| CS-12 | 9/14/2011 | 0.0021F | -- | 0.0331 | -- | -- | 0.015J | 0.08F | 0.0053F | 0.201 | -- |
| Comparison Criteria | | | | | | | | | | | |
| Method Detection Limit (MDL) | | 0.00022 | 0.02 | 0.0003 | 0.0005 | 0.001 | 0.003 | 0.03 | 0.0019 | 0.008 | 0.0001 |
| Reporting Limit (RL) | | 0.03 | 0.2 | 0.005 | 0.007 | 0.01 | 0.01 | 0.2 | 0.025 | 0.05 | 0.001 |
| Max. Contaminant Level (MCL) | | 0.01 | SS=0.05-0.2 | 2 | 0.005 | 0.1 | SS=1.3 | SS=0.3 | AL=0.015 | SS=5.0 | 0.002 |

| Well ID | Sample Date | 1,1-DCE | cis-1,2-DCE | trans-1,2-DCE | PCE | TCE | Vinyl Chloride |
|---------------------------------|-------------|---------|-------------|---------------|------|-------|----------------|
| CS-MW35-LGR | 9/15/2011 | -- | -- | -- | 2.01 | -- | -- |
| CS-MW36-LGR | 9/15/2011 | -- | -- | -- | 9.91 | 9.33 | -- |
| CS-9 | 9/14/2011 | -- | -- | -- | -- | -- | -- |
| CSSA Drinking Water Well System | | | | | | | |
| CS-1 | 9/14/2011 | -- | -- | -- | -- | 0.25F | -- |
| CS-10 | 9/14/2011 | -- | -- | -- | -- | -- | -- |
| CS-10 FD | 9/14/2011 | -- | -- | -- | -- | -- | -- |
| CS-12 | 9/14/2011 | -- | -- | -- | -- | -- | -- |
| Comparison Criteria | | | | | | | |
| 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 ug/L & metals data reported in mg/L.

Abbreviations/Notes:

FD Field Duplicate
TCE Trichloroethene
PCE Tetrachloroethene
DCE Dichloroethene
AL Action Level
NA Not Analyzed for that analyte
SS Secondary Standard
WWTP Waste Water Treatment Plant

Data Qualifiers

--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
Validated Analytical Results for CS-MW35-LGR and CS-MW36-LGR

| | | |
|-----------------------|--------------------|--------------------|
| SAMPLE ID: | CS-MW35-LGR | CS-MW36-LGR |
| DATE SAMPLED: | 9/15/2011 | 9/15/2011 |
| LAB SAMPLE ID: | Units | AY46413 |
| | | AY46412 |

| Volatile Organics - SW8260B | | | | | |
|-------------------------------------|------|-------|---|-------|---|
| 1,1,1,2-Tetrachloroethane | µg/L | 0.090 | U | 0.090 | U |
| 1,1,1-Trichloroethane | µg/L | 0.030 | U | 0.030 | U |
| 1,1,2,2-Tetrachloroethane | µg/L | 0.070 | U | 0.070 | U |
| 1,1,2-Trichloroethane | µg/L | 0.060 | U | 0.060 | U |
| 1,1-Dichloroethane | µg/L | 0.070 | U | 0.070 | U |
| 1,1-Dichloroethene | µg/L | 0.12 | U | 0.12 | U |
| 1,1-Dichloropropene | µg/L | 0.10 | U | 0.10 | U |
| 1,2,3-Trichlorobenzene | µg/L | 0.24 | U | 0.24 | U |
| 1,2,3-Trichloropropane | µg/L | 0.17 | U | 0.17 | U |
| 1,2,4-Trichlorobenzene | µg/L | 0.16 | U | 0.16 | U |
| 1,2,4-Trimethylbenzene | µg/L | 0.040 | U | 0.040 | U |
| 1,2-Dibromo-3-chloropropane | µg/L | 0.76 | U | 0.76 | U |
| 1,2-Dibromoethane (EDB) | µg/L | 0.060 | U | 0.060 | U |
| 1,2-Dichlorobenzene | µg/L | 0.020 | U | 0.020 | U |
| 1,2-Dichloroethane | µg/L | 0.050 | U | 0.050 | U |
| 1,2-Dichloropropane | µg/L | 0.060 | U | 0.060 | U |
| 1,3,5-Trimethylbenzene (Mesitylene) | µg/L | 0.040 | U | 0.040 | U |
| 1,3-Dichlorobenzene | µg/L | 0.030 | U | 0.030 | U |
| 1,3-Dichloropropane | µg/L | 0.050 | U | 0.050 | U |
| 1,4-Dichlorobenzene | µg/L | 0.070 | U | 0.070 | U |
| 1-Chlorohexane | µg/L | 0.040 | U | 0.040 | U |
| 2,2-Dichloropropane | µg/L | 0.10 | M | 0.10 | U |
| 2-Chlorotoluene | µg/L | 0.040 | U | 0.040 | U |
| 4-Chlorotoluene | µg/L | 0.040 | U | 0.040 | U |
| Benzene | µg/L | 0.070 | U | 0.070 | U |
| Bromobenzene | µg/L | 0.060 | U | 0.060 | U |
| Bromochloromethane | µg/L | 0.11 | U | 0.11 | U |
| Bromodichloromethane | µg/L | 0.060 | U | 0.060 | U |
| Bromoform | µg/L | 0.13 | U | 0.13 | U |
| Bromomethane | µg/L | 0.080 | U | 0.080 | U |
| Carbon tetrachloride | µg/L | 0.060 | U | 0.060 | U |
| Chlorobenzene | µg/L | 0.040 | U | 0.040 | U |
| Chloroethane | µg/L | 0.070 | U | 0.070 | U |
| Chloroform | µg/L | 0.060 | U | 0.060 | U |
| Chloromethane | µg/L | 0.16 | U | 0.16 | U |
| cis-1,2-Dichloroethene | µg/L | 0.070 | U | 0.070 | U |
| cis-1,3-Dichloropropene | µg/L | 0.030 | U | 0.030 | U |
| Dibromochloromethane | µg/L | 0.060 | U | 0.060 | U |
| Dibromomethane | µg/L | 0.060 | U | 0.060 | U |
| Dichlorodifluoromethane | µg/L | 0.11 | U | 0.11 | U |
| Ethylbenzene | µg/L | 0.050 | U | 0.050 | U |
| Hexachlorobutadiene | µg/L | 0.17 | U | 0.17 | U |
| Isopropylbenzene | µg/L | 0.040 | U | 0.040 | U |
| m,p-Xylene | µg/L | 0.070 | U | 0.070 | U |
| Methylene chloride | µg/L | 0.35 | U | 0.35 | U |
| Naphthalene | µg/L | 0.070 | U | 0.070 | U |
| n-Butylbenzene | µg/L | 0.17 | U | 0.17 | U |

Attachment 4
Validated Analytical Results for CS-MW35-LGR and CS-MW35-LGR

SAMPLE ID: CS-MW35-LGR CS-MW36-LGR
DATE SAMPLED: 9/15/2011 9/15/2011
LAB SAMPLE ID: Units AY46413 AY46412

| Volatile Organics - SW8260B | | | | | |
|-------------------------------------|------|----------------|---|---------------|---|
| n-Propylbenzene | µg/L | 0.030 | U | 0.030 | U |
| o-Xylene | µg/L | 0.060 | U | 0.060 | U |
| p-Cymene (p-Isopropyltoluene) | µg/L | 0.050 | U | 0.050 | U |
| sec-Butylbenzene | µg/L | 0.050 | U | 0.050 | U |
| Styrene | µg/L | 0.080 | U | 0.080 | U |
| tert-Butylbenzene | µg/L | 0.040 | U | 0.040 | U |
| Tetrachloroethene (PCE) | µg/L | 2.0 | | 9.9 | |
| Toluene | µg/L | 0.060 | U | 0.060 | U |
| trans-1,2-Dichloroethene | µg/L | 0.080 | U | 0.080 | U |
| trans-1,3-Dichloropropene | µg/L | 0.040 | U | 0.040 | U |
| Trichloroethene (TCE) | µg/L | 0.050 | U | 9.3 | |
| Trichlorofluoromethane | µg/L | 0.070 | U | 0.070 | U |
| Vinyl chloride | µg/L | 0.080 | U | 0.080 | U |
| Metals - SW6010B/SW7470A | | | | | |
| Arsenic | mg/L | 0.00090 | F | 0.0014 | F |
| Barium | mg/L | 0.041 | | 0.035 | |
| Cadmium | mg/L | 0.00050 | U | 0.00050 | U |
| Chromium | mg/L | 0.0040 | F | 0.0070 | F |
| Copper | mg/L | 0.0030 | U | 0.0030 | U |
| Lead | mg/L | 0.0019 | U | 0.0019 | U |
| Mercury | mg/L | 0.00010 | U | 0.00010 | U |
| Nickel | mg/L | 0.015 | | 0.0040 | F |
| Zinc | mg/L | 0.10 | | 0.029 | F |
| Inorganics - E310.1, SW9056, E160.1 | | | | | |
| Alkalinity, Bicarbonate | mg/L | 310 | | 220 | |
| Alkalinity, Total | mg/L | 310 | | 220 | |
| Bromide | mg/L | 0.60 | | 0.59 | |
| Chloride | mg/L | 18 | | 15 | |
| Fluoride | mg/L | 0.31 | F | 0.37 | F |
| Nitrate | mg/L | 10 | | 17 | |
| Nitrite | mg/L | 0.040 | U | 0.040 | U |
| Phosphorus | mg/L | 0.13 | U | 0.13 | U |
| Sulfate | mg/L | 66 | | 64 | |
| Total Dissolved Solids | mg/L | 470 | | 360 | |

QA NOTES AND DATA QUALIFIERS:

(NO CODE) - Confirmed identification.
U - Analyte was not detected above the indicated Method Detection Limit (MDL).
F - Analyte was positively identified, but the quantitation is an estimation above the MDL and below the Reporting Limit (RL).
M = Concentration is estimated due to a matrix effect.
Detections are bolded.

Attachment 4
September 2011 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 | 9/7/2011 | -- | -- | -- | 4.12 | 1.84 | -- |
| | I10-9 | 9/6/2011 | -- | -- | -- | -- | 0.57F | -- |
| | I10-9 FD | 9/6/2011 | -- | -- | -- | -- | 0.32F | -- |
| Leon Springs Villas | LS-5 | 9/6/2011 | -- | -- | -- | 1.38F | 4.8 | -- |
| | | 9/28/2011 | -- | -- | -- | 1.11F | 2.54 | -- |
| | | 10/12/2011 | -- | -- | -- | 0.74F | 1.82 | -- |
| | LS-6 | 9/6/2011 | -- | -- | -- | 1.43 | 1.87 | -- |
| | LS-6-A2 | 9/6/2011 | -- | -- | -- | -- | -- | -- |
| | LS-7 | 9/6/2011 | -- | -- | -- | 4.35 | 1.02 | -- |
| | | 10/12/2011 | -- | -- | -- | 2.26 | 0.38F | -- |
| LS-7-A2 | 9/6/2011 | -- | -- | -- | -- | -- | -- | |
| Old Fredricksburg | OFR-3 | 9/6/2011 | -- | -- | -- | 7.72 | 5.14 | -- |
| | OFR-3-A2 | 9/6/2011 | -- | -- | -- | -- | -- | -- |
| Ralph Fair Road | RFR-10 | 9/6/2011 | -- | -- | -- | 6.75 | 1.79 | -- |
| | RFR-10-A2 | 9/6/2011 | -- | -- | -- | -- | -- | -- |
| | RFR-10-B2 | 9/6/2011 | -- | -- | -- | -- | -- | -- |
| | RFR-11 | 9/6/2011 | -- | -- | -- | 0.64F | 4.81 | -- |
| | | 10/12/2011 | -- | -- | -- | 0.48F | 1.9 | -- |
| | RFR-11-A2 | 9/6/2011 | -- | -- | -- | -- | -- | -- |
| | RFR-12 | 9/7/2011 | -- | -- | -- | -- | -- | -- |
| The Oaks Water Supply | OW-BARNOWL | 9/8/2011 | -- | -- | -- | -- | -- | -- |
| | OW-CE1 | 9/8/2011 | -- | -- | -- | -- | -- | -- |
| | OW-CE2 | 9/8/2011 | -- | -- | -- | -- | -- | -- |
| | OW-DAIRYWELL | 9/8/2011 | -- | -- | -- | -- | -- | -- |
| | OW-HH1 | 9/8/2011 | -- | -- | -- | -- | -- | -- |
| | OW-HH1 FD | 9/8/2011 | -- | -- | -- | -- | -- | -- |
| | OW-HH2 | 9/8/2011 | -- | -- | -- | -- | -- | -- |
| | OW-HH3 | 9/8/2011 | -- | -- | -- | -- | -- | -- |
| OW-MT2 | 9/8/2011 | -- | -- | -- | -- | -- | -- | |
| Scenic Loop Drive | SLD-01 | 9/8/2011 | -- | -- | -- | -- | -- | -- |
| 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:

-- 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

ATTACHMENT 5

**SUMMARY OF CURRENT AND UPCOMING REMEDIAL
ACTIVITIES AT SWMUS, AOCS, AND RMUS**

**Attachment 5
Site Status Matrix**

| Site | Area | Work Needed | Current Status | Progress | Estimated Excavation Time | Original Description | Type of Closure Report | Potential COCs | Notes |
|---------------------------------|------------------|---|---|--|---------------------------|---|------------------------|------------------------|--|
| Field Effort in Progress | | | | | | | | | |
| RMU-5 | North Pasture | | NP Investigation currently underway. | XRF survey conducted 12/8-9 (45 points collected). 10/3 NP UXO Investigation began. | | Former rocket range. Unclear if accurately located, near B-20, several MD items found during cedar clearing | pending | explosives, metals | nothing in XRF above background. No evidence found during XRF survey of rocket range. Only MD suspected to be from B-20 |
| AOC-51 | East Pasture | -UXO Investigation | UXO Investigation underway. | XRF survey completed 12/28 (69 locations). Soil samples (SS10, 11, and 12) collected 11/15. Results expected 11/21. | pending | No specific records of waste management in area, yet ordnance have been found. | pending | metals | |
| AOC-72 | Inner Cantonment | -place BMPs for erosion control -excavate -RIR | Awaiting waste characterization sample results verification from landfill. | 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. | 1 week | Construction debris landfill. Not investigated yet. | RIR | VOCs, metals, asbestos | XRF survey showed no Zn or Pb above background in surface soils. |
| AOC-74 | Inner Cantonment | -tree clearing -soil excavation -RIR | awaiting last confirmation sample result. Hauling proposed to begin 12/12. | 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. | 3 weeks | Surficial evidence of construction debris. | RIR | Cr, Cd, Pb, Ni, Zn, As | |
| Remaining Sites | | | | | | | | | |
| SWMU B-13 | Inner Cantonment | -complete SWPPP and WP/SAP -Excavate disposal area. | | 6/21/11 XRF Survey performed across site. | 5 weeks | Construction waste disposal site mixed w/ ammo boxes, etc. Geophysical survey, soil borings. buried materials - approximately 5,900 CYS | RIR | metals, VOCs | 500 CY/day piling debris - so 12 days (3 weeks); 1000 CY/day to haul to landfill using 10 20CY endumps - so 6 days of hauling = approx. 2 weeks |
| AOC-65 | Inner Cantonment | -repair water line -complete engineering plan for IRA -excavate drainage ditch | | | pending | Remove soils and bedrock west of Bldg 90 w/in the ditch area. Proposed trench area = 300 feet long, 2.5 to 3ft wide, and 15 to 30 ft deep. Most conservative estimate = 27,000ft ³ = 1,000cy | NA | PCE | |
| AOC-75 | Inner Cantonment | additional soil sampling -draft SWPPP and WP/SAP -excavate soils | | | 1 week | Elevated mercury and lead levels to the north of B-4. | pending | mercury, lead | |
| SWMU B-4 | Inner Cantonment | - Sort and haul dirt, debris, etc. - Draft Summary Report | -Work on hold. | 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. | 5 weeks | | NA | metals | |
| RMU-3 | Inner Cantonment | adjust site boundary based on soil sample results. - complete drafting of field Plans | | 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 | 15 days | 0.5 acres is old boundary, but more like 1.5 acres based on XRF results former rifle range, field survey done. Estimated volume = 61100 SF down 1 feet = 2300 cy | RIR | explosives, metals | |
| RMU-4 | East Pasture | - complete SWPPP and WP/SAP -Possibly geophysical survey -excavate | | 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). | 11 days | 1.6 acres former rifle range, field survey done, MD found (3" stokes) during road investigation in 2006. estimated volume = 400ft*150ft*2 ft. deep = 120000ft ³ = 4444CY | RIR | explosives, metals | Possible USGS scattered debris site. Zig zag trenches in area. |
| SWMU B-34 | Inner Cantonment | locations -Collect confirmation surface soil samples | awaiting collection of ss samples to confirm XRF findings. | XRF sampled 12/1/2010 (40 locations). XRF results contoured 12/27. Tentative Tier 2 PCL for lead developed. Collected additional XRF survey locations 6/13 and 6/14/2011. | | Originally buried pipe, but soil contamination is problem. Surface and subsurface soil samples collected. No MEC concerns. | APAR | metals, TPH | commercial, no eco, tier 2 |
| SWMU B-8 | North Pasture | - collect additional samples to delineate contamination extent - complete SWPPP and WP/SAP - excavate soils above RAL. RIR or APAR | - Soil Sampling Plan ready now - can happen before plans finalized. Soil sampling effort to delineate excavation extent | 8/15 - developed sampling plan which is ready to go. | pending | former burn area | APAR or RIR | Ba, Cu, Pb, Zn | |
| SWMU B-20/21 | North Pasture | - evaluate XRF survey results and assess need for additional ss samples. - draft SWPPP -draft WP/SAP -Excavate contaminate soils | Need to figure out historic samples to include in UCL calculations. Need to develop sampling plan based on those findings. | ESS finalized 3/14. XRF survey conducted 6/16/2011 to characterize Zn levels across the site. | pending | OB/OD area, MEC and MC issues. MEC will need to be addressed separately. Estimated 1,510 for 0.5' depth w/ 3000 cy for pims. PIMS area doesn't need to be sifted. | APAR | metals | reacquire and dig: 2 miniexcavators, 2 teams of 3 UXO techs; each team can do approx 50 anomalies/day; with an estimated anomaly estimate of 80 anomalies per 10,000 ft ² . excavation rate = 500cy/day. Sift rate = 300 cy/day. Based on these assumptions, will take approx 8 weeks to reacquire and dig. |

**Attachment 5
Site Status Matrix**

| Site | Area | Work Needed | Current Status | Progress | Estimated Excavation Time | Original Description | Type of Closure Report | Potential COCs | Notes |
|------------------------------|-------------------------------|---|--|--|---------------------------|--|------------------------|--------------------------------|---|
| SWMU B-24 | North Pasture | -delineate horizontal extent -estimate excavation time -draft SWPPP -draft WP/SAP - SWPPP BMPs - remove soil piles -Excavate soils, if necessary. | Need to collect samples to delineate extent. Sampling Plan ready. | 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 . | pending | 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 | Need USGS to ALLTEM area to acquire points. Part of June effort? Then we can re-acquire and dig in prep for excavation. reacquire and dig: 2 miniexcavators, 2 teams of 3 UXO techs; each team can do approx 50 anomalies/day; with an estimated anomaly estimate of 80 anomalies per 10,000 ft2. |
| SWMU B-4 | Inner Cantonment | trench delineated | | UXO team worked at site from 10/31 to 11/4. 11/9 to 11/10. | 4 weeks | Newly discovered trench from Weston. Also includes cleaning up the remaining work from B-4. 2 weeks for trench and 2 weeks to clean up site - maybe? | pending | metals, explosives | |
| Field Effort Complete | | | | | | | | | |
| SWMU B-2 | North Pasture | APAR | In APAR queue | 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. | | former burn area TRRP: residential, eco, Tier 2 | APAR | Lead, Zinc, DNT (1 bot sample) | Lead all below tier 2, 95%UCL of zn levels below teir 2. DNT resample now clean. |
| AOC-42 | Inner Cantonment Salado Creek | None | Complete. Awaiting TCEQ Approval. | 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. 4/19 2 samples collected from soil piles. 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 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. Geophysical survey conducted July 5th and July 18th. RIR submitted to CSSA 9/6/2011. | | One of the Salado Creek Anomalies south of B-28, based on geophysical survey. 6 anomalies found at this site in second geophysical survey. Radios, grease guns © found during previous exploratory trenching. Soil gas, surface and subsurface soil samples. Two trenches outlined. Previously estimated at 6,000 CY of material based on areal extent of anomalies on geophysical map going to a depth of 6 feet. But now looking to go down 14 feet. | RIR | metals | -Excavated volume: Top soil = 2,300, Trench soil/metal debris = 1,400, Fiber Glass Area = 60. |
| AOC-52 | Inner Cantonment Salado Creek | None | Complete. Awaiting TCEQ Approval. | Final WP/SAP completed 3/14. Began excavation 4/18. Pocket of medical debris found - est. >500 cy of it. Suspected Asbestos sampled collected 5/24. Confirmation samples collected 5/24 . All confirmation samples came back clean. Medical debris excavated 6/28/2011. see Salado Creek describtion under AOC-42. | | one of the Salado Creek anomalies. At least 2 trenches w/ metal debris. Exploritory trenching performed only. - spring filled clips found during previous exploratory trenching. At least 2 trenches present in approximatley 0.1 acres. Estimate depth to 10ft = 43,560 ft3 = 1,615 CY TRRP: residential, eco, Tier 1 | RIR | metals | -excavated volume: top soil = 600, trench soil/metal debris = 1,200, medical debris = 500. |
| AOC-58 | Inner Cantonment Salado Creek | None | Complete. Awaiting TCEQ Approval. | 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. 4/19 sample taken of soil pile and trench. see Salado Creek describtion under AOC-42. | | suspected disposal trench - 4 separate anomalies. Geophysical survey done, 3 surface soil samples collected on top of anomalies (mercury exceeded background at SS01). anomalous area found to be approx. bayonnetts w/ corrosive material found during previous exploratory trenching. Estimating trench depth of 15 feet. KC and BM familiar w/ site. TRRP: residential, eco, Tier 1 | RIR | metals | - excavated volume: top soil = 1,100, trench soil/metal debris = 650. |
| AOC-62 | Inner Cantonment Salado Creek | None | Complete. Awaiting TCEQ Approval. | 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. see Salado Creek describtion under AOC-42. | | One of the Salado Creek Anomalies south of B-28, based on geophysical survey. - 20 mm gun lots found during previous exploratory trenching.. .10 acres = 4356 ft2 *5 feet = 21780 ft3 = 806 CY TRRP: residential, eco, Tier 1 | RIR | metals | |

**Attachment 5
Site Status Matrix**

| Site | Area | Work Needed | Current Status | Progress | Estimated Excavation Time | Original Description | Type of Closure Report | Potential COCs | Notes |
|---------------------|--------------------------------|-------------|-----------------------------------|---|---------------------------|--|------------------------|---|----------------------------------|
| RMU-2 | Inner Cantonment | -RIR | Complete. Awaiting TCEQ Approval. | 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 - SS55, 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. Final RIR submitted to CSSA on 11/17/2011. | 9 weeks | Small pistol range. | RIR | explosives, metals | |
| SWMU B-27 | Inner Cantonment Salado Creek | - RIR (JM) | Complete. Awaiting TCEQ Approval. | 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. | | reportedly former sanitary landfill - however contents unknown. Geophysical indicated 5 anomalie area, 3 appear to be trenches, 10-13 ft bgs based on soil borings. But USGS data shows more like 8ft deep. 8 ft deep (13000 cy = 25 weeks) and 12 ft deep (19000 cy = 37 weeks). 8 trenches | RIR | metals | - MEC site - USGS trench site |
| Closed Sites | | | | | | | | | |
| SWMU B-15/16 | East Pasture | None | Complete. | 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. 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 | | Range landfill trenches, one trench already excavated. Mounds at the end of trenches investigated (pushed over) but not sampled. TRRP: residential, eco, Tier 1. | RIR | Zn. 9 metals plus BOTs w/ VOCs, and SVOCs | |
| SWMU B-28 | Inner Cantonment, Salado Creek | None | Complete. | 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. | | Former trenches, already excavated. TRRP: residential, eco, Tier 1 | RIR | Barium, Zinc, Copper | |

**Attachment 5
Site Status Matrix**

| Site | Area | Work Needed | Current Status | Progress | Estimated Excavation Time | Original Description | Type of Closure Report | Potential COCs | Notes |
|--------|------------------|-------------|----------------|---|---------------------------|--|------------------------|----------------|---|
| AOC-45 | Inner Cantonment | None | Complete. | 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. | | area of disturbed soil. Nothing done to date. Estimate excavation to remove above Pb contamination (XRF results) above 84.5 (27000ft2), down to 1ft = 1000CY | RIR | metals | XRF showed site is actually situated to the west of the original location, High Pb levels, minimal Zn above background. |
| AOC-57 | Inner Cantonment | 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 received - 9/13,2011. | | used for cleaning and maintenance activities at temporary structures. Soil gas survey done but nothing detected other than 1 low level of PCE east of Bldg 90. | RIR | metals, VOCs | One original XRF hit above tier 1 for lead. Above tier 1 regardless if commercial/residential/ or if eco is considered. But when re-sampled, it was lower. Include samples of this, and the PCE location. |
| AOC-59 | East Pasture | 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. | | Trench-type anomaly observed on areal photo. Started RIR, but only 4 samples collected. 120*45*5ft deep = 27000ft3 = 1000 CY | RIR | | |
| AOC-70 | Inner Cantonment | 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. | | former pesticide storage building | RIR | pesticides | |

ATTACHMENT 6
METAL CONCENTRATIONS IN SUPPLY WELL CS-1

Attachment 6. Metal Concentrations in Supply Well CS-1

