

# RELEASE INVESTIGATION REPORT

## SALADO CREEK AREA: AREAS OF CONCERN 42, 52, 58, AND 62



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## EXECUTIVE SUMMARY

This document serves as a Release Investigation Report (RIR) for a combined set of Areas of Concern (AOCs) located in the northeastern portion of the Inner Cantonment section within the vicinity of Salado Creek at Camp Stanley Storage Activity (CSSA) in Boerne, Texas. The AOCs include AOC-42, AOC-52, AOC-58, and AOC-62, with a total area of approximately 3.8 acres. AOC-58 was a suspected trench identified from a 1973 aerial photograph. The anomalies that compose the remaining AOCs were identified during a geophysical investigation conducted in May 1995. For the purposes of this RIR, these four AOCs are collectively referred to as the Salado Creek Area. Work performed at these sites included geophysical surveying, environmental sampling, x-ray fluorescence (XRF) analysis of soil samples, the removal and proper disposal of soil containing contaminants above Tier 1 protective concentration levels (PCLs), and proper documentation of all activities, including preparation of this RIR. This RIR requests No Further Action (NFA) at the Salado Creek Area.

In summary, activities at the Salado Creek Area as described in this RIR showed the following results:

- Excavation, removal, and confirmation sampling was performed at the Salado Creek Area.
- Contaminants of concern (COCs) identified above soil background concentrations at the Salado Creek Area were cadmium, copper, mercury, and zinc. Areas of metal contamination exceeding Tier 1 PCLs have been excavated and removed from the site; confirmation sampling has shown no remaining metal concentrations above residential Tier 1 PCLs.

From the information summarized above and presented in this report, the results of the investigations at the Salado Creek Area meet the three criteria as described in Texas Commission on Environmental Quality (TCEQ) (2003) guidance *Determining Which Releases are Subject to the Texas Risk Reduction Program (TRRP)*. Thus, the following criteria were met:

- Soil found to have a COC concentration above the Tier 1 PCL was excavated and removed from the site.
- There is no evidence of other affected or threatened environmental media (groundwater, surface water, or sediment) at the Salado Creek Area. Inorganic groundwater contamination has not been reported in the closest well to the Salado Creek Area (CS-MW2-LGR, located approximately 50 feet downgradient of the site). Soil that was found to have concentrations of COCs above PCLs was excavated and removed, so there will be no future impact to groundwater from the Salado Creek Area. The Salado Creek Area passes the Tier 1 Ecological Exclusion Criteria Checklist (**Appendix B**).

Because these three criteria are met, the Salado Creek Area is not subject to TRRP. Therefore, this RIR was prepared to document the results and to request an NFA decision from TCEQ.

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## ACRONYMS AND ABBREVIATIONS

AOC	Area of Concern
APPL	Agriculture & Priority Pollutants Laboratory, Inc.
BS	Bexar Shale
BTOC	below top of casing
CC	Cow Creek
COC	contaminant of concern
CSSA	Camp Stanley Storage Activity
CY	cubic yard
DQO	Data Quality Objective
EE	Environmental Encyclopedia
EM	electromagnetic
FSP	Field Sampling Plan
GPR	ground-penetrating radar
<sup>GW</sup> Soil <sub>ing</sub>	soil to groundwater ingestion pathway (PCL)
IM	Interim Measures
LGR	Lower Glen Rose
µg/L	micrograms per liter
MCL	maximum contaminant level
mg/kg	milligrams per kilogram
mm	millimeter
MQL	method quantification limit
NFA	No Further Action
PCE	tetrachloroethene
PCL	protective concentration level
QA	Quality Assurance
QAPP	Quality Assurance Project Plan
QC	Quality Control
RCRA	Resource Conservation and Recovery Act
RFI	RCRA Facility Investigation
RIR	Release Investigation Report
RL	reporting limit
RMU	Range Management Unit
SAP	Sampling and Analysis Plan
SVOC	semivolatile organic compound
SWMU	Solid Waste Management Unit
TAC	Texas Administrative Code
TCEQ	Texas Commission on Environmental Quality

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TCLP	toxicity characteristic leaching procedure
<sup>Tot</sup> Soil <sub>Comb</sub>	total soil combined pathway (PCL)
TPH	total petroleum hydrocarbon
TRRP	Texas Risk Reduction Program
UGR	Upper Glen Rose
USEPA	U.S. Environmental Protection Agency
UXO	unexploded ordnance
VOC	volatile organic compound
WMP	Waste Management Plan
XRF	x-ray fluorescence

## 1.0 INTRODUCTION

Parsons is under contract to provide investigations and environmental services for waste sites located at Camp Stanley Storage Activity (CSSA) in Boerne, Texas (**Figure 1**). This contract includes characterization of selected waste disposal sites and preparation of appropriate documentation, including a Release Investigation Report (RIR) for a combined set of Areas of Concern (AOCs) located in the northeastern portion of the Inner Cantonment area within the vicinity of Salado Creek, approximately one mile west of the eastern CSSA boundary. The AOCs included are AOC-42, AOC-52, AOC-58, and AOC-62, with a total area of approximately 3.8 acres (**Figure 2**). For the purpose of this RIR, these four AOCs are collectively referred to as the Salado Creek Area.

This work has been performed in accordance with requirements of the Resource Conservation and Recovery Act (RCRA) 3008(h) Order in effect for CSSA and in accordance with 30 Texas Administrative Code (TAC) §350, the Texas Risk Reduction Program (TRRP) of the Texas Commission on Environmental Quality (TCEQ). This RIR has been prepared following TCEQ reporting and documentation requirements for releases that do not trigger applicability to the TRRP rule.

This report describes environmental investigation activities at the Salado Creek Area. Work included geophysical surveying, environmental sampling, x-ray fluorescence (XRF) analysis of soil samples, the removal and proper disposal of impacted soil, waste characterization and confirmatory sampling and analysis, and proper documentation of all activities, including preparation of this RIR. All work was performed according to applicable federal, state, and local rules and regulations.

For this report, Section 1 provides the introduction and the documentation to support this RIR. Section 2 provides historical background information for CSSA and for the Salado Creek Area. Section 3 describes the objectives and rationale for preparing an RIR for the Salado Creek Area and the findings from environmental investigations for the site. The groundwater and surface water for CSSA and the area near the Salado Creek Area are also described in Section 3. Section 4 summarizes the findings from completing the Tier 1 Ecological Exclusion Criteria Checklist, which is included as an appendix to this RIR. Section 5 summarizes the overall findings and recommendations for the site. All figures and tables are provided at the end of this RIR (pages 13 through 24). References cited in this report can be found in the CSSA Environmental Encyclopedia (EE) ([Volume 1-1, Bibliography](#)) at [www.stanley.army.mil](http://www.stanley.army.mil).

## 2.0 HISTORICAL BACKGROUND

### 2.1 CAMP STANLEY STORAGE ACTIVITY

Camp Stanley Storage Activity is located in northwestern Bexar County, about 19 miles northwest of downtown San Antonio. The installation consists of approximately 4,004 acres

immediately east of Ralph Fair Road, and approximately 0.5 mile east of Interstate Highway 10 (Figure 1). Camp Bullis borders CSSA on the north, east, and south.

The land where CSSA is located was used for ranching and agriculture until the 1900s. During 1906 and 1907, six tracts of land were purchased by the U.S. Government and designated the Leon Springs Military Reservation. The land included campgrounds and cavalry shelters.

In October 1917, the installation was re-designated Camp Stanley. Extensive construction was started during World War I to provide housing for temporary cantonments and support facilities. In 1931, the installation was selected as an ammunition depot, and construction of standard magazines and igloo magazines began in 1938. Land was also used to test, fire and overhaul ammunition components. As a result of these historic activities, CSSA has several historical waste sites, including Solid Waste Management Units (SWMUs), AOCs, and Range Management Units (RMUs).

The present mission of CSSA is the receipt, storage, issue, and maintenance of ordnance as well as quality assurance testing and maintenance of military weapons and ammunition. Because of its mission, CSSA has been designated a restricted access facility. No changes to the CSSA mission and/or military activities are expected in the future.

## **2.2 SALADO CREEK AREA**

### **2.2.1 Overview**

Prior uses of the Salado Creek Area are unknown; however based on aerial photo review and historical practices at CSSA, it was suspected that the Salado Creek Area was used previously for waste disposal activities. A geophysical survey was conducted in May 1995 at all the "open" areas within a 2,000-foot radius of well CS-16. A portion of the survey was designated "Salado Creek." The area is now now defined as AOC-42, AOC-52, and AOC-62. AOC-58 is located adjacent to this area and was a suspected trench based on a 1973 aerial photograph (**Figure 3**). Photographs showing investigation, excavation, and removal activities at the sites are provided in **Appendix A**.

#### **AOC-42**

Prior uses of AOC-42 and the exact dates of use are unknown. The individual site was 2.5 acres in size and was composed of two anomalous areas identified in the 1995 geophysical survey (**Figure 4**). As shown on Figure 3, a gravel road is visible on the 1957 photo, which is no longer visible on the 1973 photo. Additional background information on AOC-42 can be found in the CSSA EE ([Volume 3-2, AOC-42](#)).

#### **AOC-52**

AOC-52 was originally named SWMU B-4A and was composed of three anomalies identified during the 1995 geophysical survey. The individual site was 0.5 acre. The exact dates



of use at AOC-52 are unknown; however, a review of the aerial photography indicates it was likely between the late 1950s and early 1980s. The majority of ground disturbance in the general area of AOC-52 is shown in the 1966 aerial photo (Figure 3). Additional background information on AOC-52 can be found in the CSSA EE ([Volume 3-2, AOC-52](#)).

### **AOC-58**

AOC-58 was originally identified based on a suspected trench observed on a 1973 aerial photograph (Figure 3). The 1966 and 1986 aerial photographs do not show disturbance in this area. The individual site was 0.4 acre. Additional background information on AOC-58 can be found in the CSSA EE ([Volume 3-2, AOC-58](#)).

### **AOC-62**

AOC-62 was also discovered during the 1995 geophysical survey. The individual site was 0.4 acre. The site was previously associated with a trash pile; however there are no indications of a ground disturbance in the vicinity of AOC-62 on the historical photos shown on Figure 3. The exact dates of use at AOC-62 are unknown. Additional background information on AOC-62 can be found in the CSSA EE ([Volume 3-2, AOC-62](#)).

## **2.2.2 Setting, Size, and Description**

The Salado Creek Area is centrally located in the northeastern portion of the Inner Cantonment (Figure 2). The area is adjacent to SWMU B-4 on its northeast corner and is bordered by Salado Creek to the west. The total area covered encompassed by the boundary for the Salado Creek Area (i.e., the red line shown on Figure 2) is approximately 3.8 acres.

## **2.2.3 Potential Contaminant Sources, Chemicals of Concern, and Previous Investigations**

As discussed in Section 2.2.1, a geophysical survey was conducted in May 1995 of all the "open" areas within a 2,000-foot radius of well CS-16. Four anomalies were observed in the Salado Creek Area and labeled A, B, C, and D (Figure 4). Anomaly A was associated with a trash pile and is now referred to as AOC-62. Anomalies B, C, and D were all associated with trenches. The area surveyed was designated "Salado Creek" and portions of the survey include the area now defined as AOC-42, AOC-52, and AOC-62.

In June and July 1995, 27 soil gas samples were collected at the Salado Creek Area, 13 of which were collected in association with SWMU B-4A (now AOC-52). All the samples were analyzed for chlorinated and aromatic volatile organic compounds (VOCs). Tetrachloroethene (PCE) was the only VOC detected in soil gas in the area. PCE concentrations detected within the boundaries of the Salado Creek Area ranged from 0.03 micrograms per liter ( $\mu\text{g/L}$ ) to 0.15  $\mu\text{g/L}$ . The results of the soil gas survey indicated that the distribution of PCE shows a trend of decreasing concentrations away from the oxidation pond located to the northeast of the Salado Creek Area; therefore, the occurrence of PCE in the Salado Creek Area reflects migration of PCE

contamination from the oxidation pond (**Appendix G**). The following describes previous investigations conducted at the individual AOCs.

### **AOC-42**

A November 1999 geophysical survey extended the original survey conducted in 1995 to fully delineate the geophysical anomalies detected at AOC-42 (**Figure 5**). A total of six anomalies were detected, four of which were consistent with trench-type disposal units. The four suspected trench-type anomalies were excavated during the recent removal effort. The remaining two areas were investigated during the post-excavation geophysical survey performed in July 2011 discussed in Section 3.1.2. Exploratory excavations performed at AOC-42 in 2000 uncovered radios and machine guns in one of the former disposal trenches. In March 2001, nine soil borings were drilled at AOC-42 (SB01-09) and two soil samples were collected from each boring at different depths. Surface soil samples (SS01-09) were also collected at the boring locations and analyzed for metals, VOCs, and explosives. The results were all below the identified Tier 1 protective concentration levels (PCLs).

### **AOC-52**

An electromagnetic conductivity (EM) geophysical survey was conducted on February 2, 1995 at neighboring SWMU B-4, and six anomalies were observed. Three of the observed anomalies were associated with SWMU B-4, and three were associated with AOC-52 (originally named SWMU B-4A). The AOC-52 anomalies were identified as trenches and associated with metal debris. A ground penetrating radar (GPR) geophysical survey conducted on February 15 and 16, 1995 also identified trenches at the site (CSSA EE, [Volume 3-1, SWMU B-4 Surface Geophysical Surveys](#)).

### **AOC-58**

The geophysical survey conducted in 1999 identified four separate anomalies in the central and south-central portion of AOC-58. Based on the results of the geophysical survey, three surface soil samples (AOC58-SS01, AOC58-SS02, and AOC58-SS03) were collected in March 2000 and analyzed for metals, VOCs, and semivolatile organic compounds (SVOCs). Locations of these samples are shown in **Figure 6**. Analytical results indicated that no VOCs or SVOCs were present at AOC-58. However, mercury was detected in sample AOC-58 surface soils above the Tier 1 PCL of 0.77 milligrams per kilogram (mg/kg) in sample AOC58-SS01 (3.20 mg/kg). This sample location was excavated during the 2011 effort. Additional information on AOC-58 is available in the AOC-58 RCRA Facility Investigation Report (RFI) submitted October in 2002 (CSSA EE, [Volume 1-3, AOC-58 RFI](#)).

### **AOC-62**

There are no records available regarding possible waste disposed at the site; however, the types of anomalies located at AOC-62 are associated with buried waste. Exploratory excavations

were performed at AOC-62 in 2000, which uncovered 20 millimeter (mm) guns in the anomaly area.

An XRF survey was conducted at AOC-62 on December 21, 2010. Sixteen sample points were analyzed within the AOC-62 boundary, and immediately adjacent to the east of the AOC. The purpose of the XRF survey was to gather field screening data that may indicate the presence of metals above Tier 1 PCLs in surface soils. Of the XRF-detectable metals, the results for lead and zinc have shown a strong statistical correlation with laboratory-verified samples. As such, these metals were used as indicators of potential areas of metals contamination at the site. XRF analytical results for lead and zinc showed no sample locations with concentrations of these two metals above their respective Tier 1 PCLs.

### 3.0 OBJECTIVES OF RIR FOR THE SALADO CREEK AREA

In accordance with TCEQ (2003) guidance, *Determining Which Releases are Subject to TRRP* ([www.tceq.state.tx.us/assets/public/remediation/trrp/releasesTRRPrev.pdf](http://www.tceq.state.tx.us/assets/public/remediation/trrp/releasesTRRPrev.pdf)), an RIR can be performed for a site when results of an investigation lead to the following conclusions:

- Concentrations of chemicals detected at the site do not exceed Tier 1 residential soil action levels;
- There is no evidence of other affected or threatened environmental media (groundwater, surface water, or sediment) at the site; and
- The site passes the Tier 1 Ecological Exclusion Criteria Checklist (the completed checklist is provided in **Appendix B**).

When these three criteria are met for a site, the release is not subject to TRRP. For such sites, an RIR can be submitted to document the results and a No Further Action (NFA) decision can be requested from the TCEQ.

As referred to in the criteria listed above, the Tier 1 residential soil action levels are provided by TCEQ and were selected following TCEQ guidance (TCEQ, 2007). The most current action levels were used (May 2011). These action levels are referred to as PCLs and are selected for each chemical detected at the site. The PCLs are based on the general size of the site, which is also referred to as the “source area” size. If the source area is greater than 0.5 acre, then the source area is assumed to be 30 acres. Thus, the soil action levels for the Salado Creek Area are based on a 30-acre source area. The PCL is then selected based on the lower of the two PCLs listed for either (1) the total soil combined pathway ( $^{Tot}Soil_{Comb}$ ) (i.e., exposure to a contaminant of concern [COC] from incidental ingestion, dermal contact, inhalation of volatiles and particulates, and vegetable consumption); or (2) the soil to groundwater pathway ( $^{GW}Soil_{Ing}$ ) (i.e., soil-to-groundwater leaching of a COC to groundwater, where the PCL is the highest concentration of COC allowed in soil to be protective of Class 1 or Class 2 groundwater).

Also based on the TCEQ guidance, if the background level or the method quantification limit (MQL) is a higher concentration than the PCL, then the higher of the background or MQL

is used as the action level. Based on the metals that are most common to past activities at CSSA, TCEQ has approved background concentrations for nine metals (arsenic, barium, cadmium, chromium, copper, lead, mercury, nickel, and zinc) (Parsons, 2002). The statistically calculated and TCEQ-approved background metal concentrations are shown in the analytical summary table (**Table 1**) and are also available in the CSSA EE ([Volume 2, Background Metals Levels](#)).

### 3.1 FIELD ACTIVITIES AND INVESTIGATIONS

A summary of the cleanup confirmation results at the sites are shown in Table 1 (detected compounds only) and **Appendix C** (all analytes), and the confirmation soil sampling locations are shown on Figure 6. Waste characterization results for samples collected from stockpiled soil excavated as part of this effort are shown in **Appendix F**. The data verification summary report for the sampling and analytical results is provided in **Appendix D**. Sample locations for soils remaining at the sites are shown on Figure 6. The clearance areas where soils were excavated and removed are also shown on Figure 6. All excavation occurred within the boundaries of the Salado Creek Area. Waste characterization sampling and off-post removal activities are described in Section 3.1.3. Additional information about past activities and investigations at the sites can be found in the CSSA EE ([Volume 3, AOC-42](#)).

#### 3.1.1 Sampling and Analytical Procedures

For all sampling and analytical activities at CSSA, Parsons follows TCEQ-approved Quality Assurance (QA) and Quality Control (QC) procedures as described in the post-wide CSSA Quality Assurance Project Plan (QAPP) which can be found in the CSSA EE ([Volume 1-4, QAPP](#)). The detailed CSSA QAPP presents specific policies, organization, functions, and QA/QC requirements for environmental programs at CSSA, including TCEQ-approved analytical methods, reporting limits (RL), and QA/QC procedures.

The CSSA QAPP (1) was prepared for use by contractors that perform environmental services at CSSA to ensure that the data are scientifically valid and defensible; (2) establishes the analytical protocols and documentation requirements to ensure that the samples are collected and analyzed, and that the data are reviewed and validated in a specified manner; and (3) provides detailed guidance for using the Data Quality Objective (DQO) process for specific investigations. The CSSA QAPP and delivery/task order specific Field Sampling Plans (FSP) constitutes the CSSA Sampling and Analysis Plan (SAP). The SAP defines data quality for a specific project. Information regarding post-wide and site-specific plans and TCEQ correspondence can be found in the CSSA EE ([Volume 1-1, Correspondence](#)).

Following the CSSA-specific plans, the investigative soil analyses for the Salado Creek Area were performed using U.S. Environmental Protection Agency (USEPA) *Test Methods for Evaluating Solid Waste* (SW-846): Method 8260B (VOCs); Method 8270C (SVOCs); Method 8330B (explosives); Method 600/M4-82-020 (asbestos); and Method 6010 (metals). The mercury analyses were performed using USEPA SW846 Method 7471A/7470A. Prior to soil/waste disposal, waste characterization samples were collected from the excavated material and

analyzed for toxicity characteristic leaching procedure (TCLP) metals (Methods SW1311/6010B and SW1311/7470A), total petroleum hydrocarbons (TPH) (Method TX1005) cyanide (Method SW9014), sulfide (Method EPA 376.1), ignitability (Method SW1030), and pH (Method SW9045). All samples were sent to Agriculture & Priority Pollutants Laboratory, Inc. (APPL) for analyses except for samples analyzed for asbestos which were sent to EMC Labs, Inc.

### 3.1.2 Excavation, Removal, and Confirmation Sampling at the Salado Creek Area

Potential sources of contamination were removed from the Salado Creek Area, including metal and assorted debris, and all soils with contamination levels that exceed the identified TRRP PCLs. Excavated soil material was either stockpiled along or adjacent to the excavation to allow for inspection, or moved directly to the respective staging areas within the site boundary. All material that was not native soil/rock was removed, sorted, and managed as appropriate in coordination with CSSA. An unexploded ordnance (UXO) technician was present during excavation to provide UXO support, as necessary. Excavation activities at the Salado Creek Area were initiated on March 14, 2011, starting with AOC-62, with the final excavation completed on July 12, 2011 at AOC-42. **Table 1** shows the soil type excavated per AOC and soil volumes associated with each soil type.

All excavated soil was stockpiled on-site until waste characterization could be completed. All metal debris was disposed of as described in Section 3.1.3. Based on the dimensions of the excavated trenches and the dimensions of stockpiled soil, subtracting the excavated metal content, a total of approximately 5,900 cubic yards (CY) of soil was excavated from the site. Approximately 2,600 CY of clean soil was reused on-site, while approximately 3,300 CY was transported to the East Pasture Berm and Grenade Pit for reuse.

Following completion of the excavation efforts, all trench bottoms and sidewalls were sampled and the results are shown in Table 1. Sidewall samples were analyzed for metals, while bottom samples were analyzed for metals, VOCs, SVOCs, and explosives. All confirmation sample results were below Tier 1 PCLs, with the exception of slight methylene chloride exceedances in three trench bottom samples collected from AOC-52 (AOC52-T1-BOT03, AOC52-T3-BOT02, and AOC52-T3-BOT02-DUP). The presence of low concentrations of methylene chloride in the samples is most likely due to laboratory contamination as there is no known usage of this chemical at CSSA. Additional samples were collected from stockpiles containing excavated top soil from the site and analyzed for methylene chloride and all sample results were below the Tier 1 PCL. Figure 6 shows the locations of all excavation confirmation samples.

A geophysical survey was conducted in July 2011 to confirm the successful removal of all trench materials within the Salado Creek Area. Four anomalous areas were identified as shown on **Figure 7** (Areas 1-4). The anomalous area identified in the northwestern corner of the Salado Creek Area, Area 1, was determined to be interference due to silt fencing. Area 2 was determined to be surficial interference from the excavation and grading of the site. An exploratory excavation confirmed the absence of an additional trench within Area 2. Exploratory excavations

also found no evidence of buried debris within Area 3. Lastly, Area 4 was the operation location of an excavator equipped with a magnetic attachment for sorting of debris. Because the use of magnetic equipment is known to alter the magnetic properties of the soils, exploratory excavations were performed in this area prior to mobilizing the equipment there to ensure that no buried debris was present.

Details regarding the excavation efforts at each of the individual AOCs are described below.

### **AOC-42**

In March 2011, excavation of AOC-42 was initiated. The final extent of excavation included two large parallel trenches aligned in a northwest to southeast direction (Figure 6). Trench 1 was excavated in two specific areas (1 and 1A) to a maximum depth of 7 feet (ft). Trench 1 was approximately 190 ft long by 14 ft wide, and Trench 1A was approximately 80 ft long by 10 ft wide. Trench 2 was also excavated in three specific areas to a maximum depth of 7 ft. The northern excavated area of Trench 2 was approximately 11 ft long and 53 ft wide, the middle excavated area was 13 ft long and 60 ft wide, and the southern excavated area of Trench 2 was 14 ft long and 34 ft wide. Top soil surrounding the trenches was also excavated to a depth of 3 ft to ensure horizontal delineation of the trenches.

Metal and munitions debris were encountered at AOC-42 included M50 and M3 sub-machine guns; .30-caliber and .50-caliber machine guns; assorted magazines; .22-caliber and .30-caliber rifle barrels; 7.62 mm machine guns; bayonets; assorted pistols; 2.36 inch and 3.5 inch rocket launchers; 57 mm recoilless rifles; radios; cameras; munitions debris in the form of signal, ground, illumination, M125-series; and unidentifiable miscellaneous metal debris.

Additionally, approximately 60 CY of fibrous material was discovered during the excavation activities. A sample of the material was sent to the laboratory for analysis, and the results indicated that it was fibrous glass. The material was disposed of with the other solid wastes excavated at the site at Covell Gardens Landfill in San Antonio, Texas. A light blue substance was also found during excavation activities at AOC-42. Two samples were collected from the substance (AOC42-WP01 and AOC42-BG01), and were analyzed for metals. AOC42-WP01 showed metals concentrations above Tier 1 PCLs for aluminum, cadmium, copper, lead, silver, and zinc. Therefore, the area surrounding where this substance was found was over-excavated in July 2011 and two confirmation samples were collected (AOC42-SW14 and AOC42-BOT04).

### **AOC-52**

Excavation of AOC-52 was initiated in April 2011. The final excavation extent included five parallel trenches aligned in a northwest to southeast direction (Figure 6). Trench 1 was excavated to a maximum depth of 6 ft, and was approximately 122 ft long by 9 ft wide. Trench 2 was excavated to a maximum depth of 12 ft, and was approximately 75 ft long by 10 ft wide. Trench 2A was excavated to a maximum depth of 12 ft, and was approximately 125 ft long by 5 ft wide. Trench 3 was excavated to a maximum depth of 5 ft, and was approximately 27 ft long by 3 ft

wide. Trench 4 was excavated to approximately 22 ft long, 3 ft wide, and a maximum depth of 5 ft. Top soil surrounding the trenches was also excavated to a depth of 2 to 4 ft.

A large amount of metal and munitions debris was encountered at AOC-52, including M50 and M3 sub-machine guns; .30-caliber and .50-caliber machine guns; assorted magazines; .22-caliber and .30-caliber rifle barrels; bayonets; assorted pistols; 60 mm and 81 mm mortar tubes; 81 mm mortar shipping containers; spent small arms cartridge cases; metal storage boxes; munitions debris in the form of mines (Antipersonnel, M2A4-series); Signal, Ground, and Illumination (M125-series); grenades (Rifle, Smoke, M22; Hand, Practice, M30; and Illumination, Mk13); 81 mm mortar, tail fin assemblies; 3.5 inch rocket motor; 7.62 mm rifle barrels; 20 mm gun barrels; 4.2 inch mortar tubes; 81 mm and 60 mm mortar tubes; M50 sub-machine guns; .30-caliber machine gun barrels; 57 mm recoilless rifles; miscellaneous gun parts; and unidentifiable miscellaneous metal debris.

Approximately 250 CY of medical debris was found within Trench 2A at AOC-52. The debris was disposed of with the other solid wastes excavated at the site at Covel Gardens Landfill in San Antonio, Texas. Approximately 500 CY of soil was excavated around the area where the debris was found, and one waste characterization sample (AOC52-T2-WC01) was collected from the excavated soil and analyzed for VOCs, SVOCs, metals, and TCLP metals. Results indicated that none of the analytes were above their respective Tier 1 PCLs. Additionally, 2 cubic feet of flat metal plating with asbestos lining was discovered during the excavation activities. A sample of the material was sent to the laboratory for analysis, and the results indicated that the lining was friable asbestos (10% amosite and 5% chrysotile). Following the removal of the asbestos-containing material, two confirmation samples were collected (AOC52-T2A-BOT2 and AOC-52-T2A-SW02). No asbestos was detected in the remaining soil (Appendix C). The asbestos-containing material was disposed of with the other solid wastes excavated at the site at Covel Gardens Landfill in San Antonio, Texas.

### **AOC-58**

Excavation of AOC-58 was initiated in April 2011, and included the excavation of one large trench aligned in a northwest to southeast direction. Trench 1 was excavated to approximately 130 ft long, 9 ft wide, and a maximum depth of 15 ft. Top soil surrounding the trench was also excavated to a depth of 6 ft.

Metal debris and waste encountered at AOC-58 included M50 and M3 sub-machine guns; .22-caliber, .30-caliber and 7.62mm long rifle barrels; assorted gun magazines; bayonets; radios and office equipment; parachutes; assorted pistols; flare guns; office equipment; miscellaneous metal debris; and munitions debris in the form of a M69 81 mm mortar cartridge.

### **AOC-62**

Excavation of AOC-62 was initiated in March 2011, and included the excavation of four parallel trenches aligned in a southwest to northeast direction. Trench 1 was excavated to approximately 62 ft long, 8 ft wide, and a maximum depth of 5 ft. Trench 2 was excavated to

approximately 76 ft long, 6 ft wide, and a maximum depth of 5 ft. Trench 3 was excavated to approximately 81 ft long, 5 ft wide, and a maximum depth of 5 ft. Trench 4 was excavated to approximately 81 ft long, 7 ft wide, and a maximum depth of 5 ft.

Metal debris and waste encountered at AOC-62 included .30 caliber machine guns; gun scopes; 20mm machine guns and 90mm recoilless rifles; 20mm magazines; pusher rods; empty RBC cleaner cans; bayonet “slide clips;” 7.62 and 9mm magazines; pistols; and unidentifiable miscellaneous metal debris.

### 3.1.3 Waste Characterization and Disposal Activities

Waste characterization efforts were performed in accordance with requirements of CSSA’s *RFI and Interim Measures (IM) Waste Management Plan (WMP) – Revised*, dated May 2006 (approved by TCEQ in August 2006) and the RFI/IM Addendum for the Salado Creek Area dated March 2011. Results of waste characterization showed that the impacted media from the Salado Creek Area met State of Texas Class 2 non-hazardous criteria (30 TAC §335 Subchapter R). Approximately 3,300 CY of Class 2 non-hazardous soils were transported to the East Pasture Berm for reuse, as per TCEQ approval December 20, 2010 (**Appendix E**). Approximately 2,600 CY of soil from piles with waste characterization sample results below CSSA background concentrations were reused on site to fill in excavation areas.

Additionally, approximately 2,300 CY of metal debris were collected from the Salado Creek Area. All debris was removed from the site and stored at CSSA in temporary storage containers (Conex) for future management at the discretion of CSSA (e.g., disposal, de-milling, or recycling).

## 3.2 SITE GEOLOGY/HYDROGEOLOGY

A description of the geology and hydrogeology of the area is provided below. Additional information on geology, hydrology and physiography at CSSA are also available in the CSSA EE ([Volume 1-1, Background Information Report](#)).

### 3.2.1 CSSA Geology/Hydrogeology

The Lower Glen Rose (LGR) is the uppermost geologic stratum in the CSSA area. The LGR is a massive, fossiliferous, vuggy limestone that grades upward into thin beds of limestone, marl, and shale. The LGR is approximately 300-330 ft thick in the CSSA area and is underlain by the Bexar Shale (BS) facies of the Hensell Sand, which is estimated to be from 60 to 150 ft thick under the CSSA area. The BS consists of silty dolomite, marl, calcareous shale, and shaley limestone. The geologic strata dip approximately 1 to 2 degrees to the south-southeast at CSSA.

The uppermost hydrogeologic layer at CSSA is the unconfined Upper Trinity aquifer, which consists of the Upper Glen Rose (UGR) Limestone. Locally at CSSA, very low-yielding perched zones of groundwater can exist in the UGR; however, it is very sporadic and seasonal. Transmissivity values are not available for the UGR. Regionally, groundwater flow is thought to



be enhanced along the bedding contacts between marl and limestone; however, the hydraulic conductivity between beds is thought to be poor. This interpretation is based on the observation of discordant static water levels in adjacent wells completed in different beds. Principal development of solution channels is limited to evaporite layers in the UGR Limestone.

The Middle Trinity aquifer functions as the primary source of groundwater at CSSA. It consists of the LGR Limestone, the BS, and the Cow Creek (CC) Limestone. The LGR Limestone outcrops north of CSSA, along Cibolo Creek, and within the central and southwestern portions of CSSA. As such, principal recharge into the Middle Trinity aquifer is via precipitation infiltration at outcrops and along creek beds during flood events. At CSSA, the BS is interpreted as a confining layer, except where it is fractured and faulted, allowing vertical flow from the up-dip CC Limestone into the overlying, down-dip LGR. Fractures and faults within the BS may allow hydraulic communication between the LGR and CC Limestones. Regional groundwater flow within the Middle Trinity aquifer is toward the south and southeast and the average transmissivity coefficient is 1,700 gallons per day per ft (CSSA EE, [Volume 5, Hydrogeologic Report](#)). In general, groundwater at CSSA flows in a northeast to southwest direction. However, local flow gradient may vary depending on rainfall, recharge, and possibly well pumping.

### 3.2 Salado Creek Area Groundwater and Surface Water

No site-specific information regarding groundwater is available. However, between April 1996 and March 2011, measured water levels at Well CS-MW2-LGR, which is located approximately 50 ft downgradient of the site, have ranged from 61.0 ft below top of casing (BTOC) (September 2007) to 283.2 ft BTOC (March 2009). Low concentrations of VOCs and metals detected in CS-MW2-LGR (below their respective maximum contaminant levels [MCL]) are attributed to contaminate groundwater from the SWMU B-3 plume.

No creeks, streams, or ponds are located within the Salado Creek Area; however, Salado Creek is approximately 50 ft to the west of the site boundary (**Figure 8**). Salado Creek is intermittent in the CSSA area due to limited-duration flowing springs during the winter and spring. The distance to the closest perennial surface water body downgradient of the Salado Creek Area is more than 3 miles to the southeast. No significant degradation of high quality receiving waters is anticipated from the Salado Creek Area.

### 4.0 TIER 1 ECOLOGICAL EXCLUSION CRITERIA CHECKLIST

In accordance with TCEQ (2003) guidance, an RIR is submitted when the results of an investigation lead to a conclusion that COCs do not exceed Tier 1 residential soil action levels and there is no evidence of other affected media. The site must also pass the Tier 1 Ecological Exclusion Criteria Checklist. The checklist must be completed as part of the RIR for a site. The completed checklist is provided in Appendix B. Results show that the site passes the checklist and that there are no ecological exposure pathways of concern at the Salado Creek Area. Thus, based on the absence of any complete or significant ecological exposure pathways, the Salado Creek Area may be excluded from further ecological assessment.

## 5.0 SUMMARY AND RECOMMENDATIONS

The Salado Creek Area includes AOC-42, AOC-52, AOC-58, and AOC-62, with a total area of approximately 3.8 acres (Figure 2). The area is approximately one mile west of the nearest facility boundary, and west and southwest of monitoring well CS-MW2-LGR. The Salado Creek Area was identified during a geophysical investigation conducted in May 1995, and based on aerial photograph review. One round of excavation of the Salado Creek Area was initiated on March 14, 2011, starting with AOC-62, and the excavation was completed on July 12, 2011 at AOC-42. Confirmation soil sampling was conducted as excavation of each AOC was completed.

COCs identified above soil background concentrations at the Salado Creek Area were cadmium, copper, mercury, and zinc. Areas of metal contamination exceeding Tier 1 PCLs were excavated and removed from the site; and confirmation sampling has shown no remaining metal concentrations above residential Tier 1 PCLs. From the information summarized above and presented in this report, the results of the investigations at the Salado Creek Area meet the three criteria as described in TCEQ (2003) guidance *Determining Which Releases are Subject to the TRRP*. Thus, the following criteria were met:

- Soil found to have COC concentrations above the Tier 1 PCL was excavated and removed from the site.
- There is no evidence of other affected or threatened environmental media (groundwater, surface water, or sediment) at the Salado Creek Area. Inorganic groundwater contamination has not been reported in the closest well to the Salado Creek Area (CS-MW2-LGR, located approximately 50 ft downgradient of the site). Soil that was found to have concentrations of COCs above their PCL was excavated and removed, so there will be no further impact to groundwater from the Salado Creek Area.
- The Salado Creek Area passes the Tier 1 Ecological Exclusion Criteria Checklist (Appendix B).

Because these three criteria are met, the Salado Creek Area is not subject to TRRP. Therefore, this RIR was prepared to document the results and a NFA decision is requested from the TCEQ.

**TABLES AND FIGURES**

**Table 1** Volume of Excavated Soil and Metal Debris at the Salado Creek Area

<b>Site</b>	<b>Soil Type</b>	<b>Depth (ft)</b>	<b>Total Volume (CY)</b>
AOC-42	Top Soil	3	2300
	Trench Soil/Metal Debris	7	1400
	Trench Soil/Fibrous Glass	7	60
AOC-52	Top Soil	2-4	600
	Trench Soil/Metal Debris	5-12	1200
	Trench Soil/Medical Debris	3	500
	Trench Soil/Asbestos-Containing Material	3	0.07
AOC-58	Top Soil	6	1100
	Trench Soil/Metal Debris	15	650
AOC-62	Trench Soil/Metal Debris	5	350

**Table 2. Summary of Chemical Constituents Remaining in Soils at the Salado Creek Area**

	Volatile Organics												Metals																							
	Methylene chloride CAS: 75-09-2 (mg/kg)	Qual	DII	o-Xylene CAS: 95-47-6 (mg/kg)	Qual	DII	Toluene CAS: 108-88-3 (mg/kg)	Qual	DII	bis(2-Ethylhexyl) phthalate CAS: 117-81-7 (mg/kg)	Qual	DII	Barium CAS: 7440-39-3 (mg/kg)	Qual	DII	Cadmium CAS: 7440-43-9 (mg/kg)	Qual	DII	Chromium CAS: 7440-47-3 (mg/kg)	Qual	DII	Copper CAS: 7440-50-8 (mg/kg)	Qual	DII	Lead CAS: 7439-92-1 (mg/kg)	Qual	DII	Mercury CAS: 7439-97-6 (mg/kg)	Qual	DII	Nickel CAS: 7440-02-0 (mg/kg)	Qual	DII	Zinc CAS: 7440-66-6 (mg/kg)	Qual	DII
<b>Tier 1 Soil PCLs - 30 acre<sup>†</sup></b>																																				
Residential Combined Exposure <sup>[1]</sup>	260	c		29000	n		5400	n		43	n		7800	n		52	n		23000	n		550	n		500	n		2.1	n		830	n		9900	n	
Residential Groundwater Exposure <sup>[2]</sup>	0.0065	m		35	m		4.1	m		82	m	>S	220	m	>S	0.75	m	>S	1200	m	>S	520	a	>S	1.5	a	>S	0.0039	m		79	n	>S	1200	n	>S
<b>TCEQ-Approved Background Values</b>																																				
CSSA Metals Background Concentration <sup>[3]</sup>	na			na			na			na			300+++			3++			40.2++			23.2++			84.5++			0.77++			35.5++			73.2++		
<b>Sample Locations (Date Collected)</b>																																				
AOC42-BOT01 (19-Apr-2011)	0.0013	M	1	0.00070	U	1	0.0010	U	1	0.030	M	1	45	M	1	0.030	M	1	9.7	M	1	5.0	M	1	4.5	M	1	0.030	F	1	7.8	M	1	21	M	1
AOC42-BOT01-DUP (19-Apr-2011)	0.0013	U	1	0.00070	U	1	0.0010	U	1	0.030	F	1	52		1	0.030	U	1	11	F	1	6.3	J	1	5.1	F	1	0.040	F	1	8.3		1	24		1
AOC42-BOT02 (19-Apr-2011)	0.0013	M	1	0.00070	M	1	0.0010	M	1	0.030	M	1	10	M	1	0.030	M	1	2.3	M	1	41	M	1	40	M	1	0.010	U	1	3.4	M	1	69	M	1
AOC42-BOT02-DUP (19-Apr-2011)	0.0013	U	1	0.0016	F	1	0.0014	F	1	0.030	F	1	6.8	J	1	0.030	U	1	2.9	F	1	5.4	J	1	0.60	F	1	0.010	U	1	3.1		1	24	J	1
AOC42-BOT04 (04-Aug-2011)	--			--			--			--	F	1	48.5		1	0.030	U	1	11.8	F	1	5.5		1	2.38	F	1	0.050	F	1	7.9		1	19		1
AOC42-BOT04-DUP (04-Aug-2011)	--			--			--			--	F	1	46.6		1	0.030	U	1	11.5	F	1	3.8		1	0.63	F	a	0.020	F	1	8.6		1	15		1
AOC42-SW01 (19-Apr-2011)	--			--			--			--	F	1	64		1	0.030	U	1	11	F	1	5.9	J	1	6.2	F	1	0.010	U	1	8.8		1	14		1
AOC42-SW02 (19-Apr-2011)	--			--			--			--	F	1	74		1	0.030	U	1	14	F	1	5.9	J	1	7.1	F	1	0.010	U	1	9.8		1	18		1
AOC42-SW03 (19-Apr-2011)	--			--			--			--	F	1	81	J	1	0.030	U	1	19	F	1	8.9	J	1	9.4	F	1	0.010	U	1	13		1	24	J	1
AOC42-SW04 (19-Apr-2011)	--			--			--			--	F	1	110	J	1	0.030	U	1	21		1	9.4	J	1	11		1	0.010	U	1	15		1	27	J	1
AOC42-SW05 (19-Apr-2011)	--			--			--			--	F	1	75	J	1	0.030	U	1	15	F	1	6.7	J	1	7.0	F	1	0.010	U	1	10		1	25	J	1
AOC42-SW06 (19-Apr-2011)	--			--			--			--	F	1	64	J	1	0.030	U	1	15	F	1	5.7	J	1	6.6	F	1	0.010	U	1	9.4		1	22	J	1
AOC42-SW07 (19-Apr-2011)	--			--			--			--	F	1	41	J	1	0.10	F	1	8.2	F	1	5.2	J	1	5.0	F	1	0.16		1	6.4		1	20	J	1
AOC42-SW08 (19-Apr-2011)	--			--			--			--	F	1	54	J	1	0.030	U	1	11	F	1	4.4	J	1	4.8	F	1	0.070	F	1	7.4		1	17	J	1
AOC42-SW09 (19-Apr-2011)	--			--			--			--	F	1	16	J	1	0.030	U	1	5.0	F	1	3.4	J	1	1.3	F	1	0.11		1	6.0		1	9.4	J	1
AOC42-SW10 (19-Apr-2011)	--			--			--			--	F	1	18	J	1	0.030	U	1	2.4	F	1	1.2	F	1	0.87	F	1	0.010	U	1	1.9	F	1	11	J	1
AOC42-SW14 (04-Aug-2011)	--			--			--			--	F	1	107		1	0.060	F	1	21.1		1	8.7		1	13.10		1	0.030	F	1	17.2		1	28		1
AOC52-T1-BOT03 (05-May-2011)	0.018		1	0.00070	U	1	0.0010	U	1	0.030	F	1	20	J	1	0.030	U	1	3.5	F	1	10		1	12		1	0.030	F	1	6.0		1	180		1
AOC52-T1-SW05 (05-May-2011)	--			--			--			--	F	1	32	J	1	0.030	U	1	7.9	F	1	3.8		1	3.2	F	1	0.010	U	1	6.9		1	64		1
AOC52-T1-SW06 (05-May-2011)	--			--			--			--	F	1	69	J	1	0.42	F	1	12	F	1	8.9		1	12		1	0.050	F	1	9.3		1	850		1
AOC52-T1-SW07 (05-May-2011)	--			--			--			--	F	1	28	J	1	0.030	U	1	5.7	F	1	2.5		1	3.0	F	1	0.010	U	1	5.6		1	21		1
AOC52-T1-SW08 (05-May-2011)	--			--			--			--	F	1	14	J	1	0.030	U	1	4.1	F	1	1.8	F	1	1.1	F	1	0.010	U	1	3.8		1	6.8		1
AOC52-T2A-BOT01 (24-May-2011)	0.0050		1	0.00070	U	1	0.0010	U	1	0.030	M	1	27	M	1	0.030	M	1	4.6	M	1	3.4	M	1	3.3	M	1	0.020	F	1	4.9	M	1	11	M	1
AOC52-T2A-BOT01-DUP (24-May-2011)	0.0045	F	1	0.00070	U	1	0.0010	U	1	0.030	F	1	29		1	0.030	UJ	1	5.3	F	1	3.4		1	3.0	F	1	0.020	F	1	5.2		1	12		1
AOC52-T2A-BOT02 (24-May-2011)	0.0052		1	0.00070	U	1	0.0010	U	1	0.030	F	1	49		1	0.030	UJ	1	6.4	F	1	5.5		1	4.8	F	1	0.010	U	1	6.4		1	19		1
AOC52-T2A-SW01 (24-May-2011)	--			--			--			--	F	1	64		1	0.030	UJ	1	11	F	1	7.2		1	8.1	F	1	0.010	U	1	8.8		1	19		1
AOC52-T2A-SW01-DUP (24-May-2011)	--			--			--			--	F	1	64		1	0.030	UJ	1	11	F	1	6.8		1	7.6	F	1	0.010	U	1	8.9		1	17		1
AOC52-T2A-SW02 (24-May-2011)	--			--			--			--	F	1	88		1	0.030	UJ	1	15	F	1	9.1		1	12		1	0.010	U	1	11		1	25		1
AOC52-T2A-SW03 (24-May-2011)	--			--			--			--	F	1	70		1	0.030	UJ	1	13	F	1	7.2		1	8.9	F	1	0.010	U	1	8.8		1	21		1
AOC52-T2A-SW04 (24-May-2011)	--			--			--			--	F	1	66		1	0.030	UJ	1	12	F	1	6.8		1	8.3	F	1	0.030	F	1	8.4		1	28		1
AOC52-T2-BOT01 (23-May-2011)	0.0013	U	1	0.00070	U	1	0.0010	U	1	0.030	F	1	14		1	0.030	U	1	2.6	F	1	2.8		1	3.0	F	1	0.030	F	1	3.4		1	47		1
AOC52-T2-BOT02 (23-May-2011)	0.0013	U	1	0.00070	U	1	0.0010	U	1	0.030	F	1	50		1	0.030	U	1	7.9	F	1	7.4		1	7.3	F	1	0.27		1	7.5		1	25		1
AOC52-T2-SW01 (23-May-2011)	--			--			--			--	F	1	32		1	0.030	U	1	6.0	F	1	4.0		1	3.2	F	1	0.020	F	1	5.6		1	13		1
AOC52-T2-SW02 (23-May-2011)	--			--			--			--	F	1	40		1	0.030	U	1	6.6	F	1	3.5		1	4.2	F	1	0.010	U	1	6.6		1	14		1
AOC52-T2-SW03 (23-May-2011)	--			--			--			--	F	1	64		1	0.030	U	1	10	F	1	6.5		1	7.2	F	1	0.020	F	1	8.7		1	17		1
AOC52-T2-SW04 (23-May-2011)	--			--			--			--	F	1	81		1	0.030	U	1	14	F	1	9.0		1	10		1	0.030	F	1	13		1	22		1
AOC52-T3-BOT02 (05-May-2011)	0.018	J	1	0.00070	U	1	0.0010	U	1	0.030	F	1	47	J	1	0.030	U	1	9.6	F	1	9.8		1	5.8	F	1	0.010	U	1	7.6		1	21		1
AOC52-T3-BOT02-DUP (05-May-2011)	0.0091	J	1	0.00070	U	1	0.0017	F	1	0.030	F	1	43	J	1	0.030	U	1	8.7	F	1	4.4		1	5.6	F	1	0.010	U	1	6.9		1	17		1
AOC52-T3-SW03 (05-May-2011)	--			--			--			--	F	1	59	J	1	0.030	U	1	12	F	1	5.3		1	6.2	F	1	0.010	U	1	8.0		1	16		1
AOC52-T3-SW04 (05-May-2011)	--			--			--			--	F	1	61	J	1	0.030	U	1	11	F	1	4.8		1	6.2	F	1	0.010	U	1	7.8		1	15		1

## Table 2. Summary of Chemical Constituents Remaining in Soils at the Salado Creek Area

	Volatile Organics												Metals																							
	Methylene chloride CAS: 75-09-2 (mg/kg)	Qual	Dil	o-Xylene CAS: 95-47-6 (mg/kg)	Qual	Dil	Toluene CAS: 108-88-3 (mg/kg)	Qual	Dil	bis(2-Ethylhexyl) phthalate CAS: 117-81-7 (mg/kg)	Qual	Dil	Barium CAS: 7440-39-3 (mg/kg)	Qual	Dil	Cadmium CAS: 7440-43-9 (mg/kg)	Qual	Dil	Chromium CAS: 7440-47-3 (mg/kg)	Qual	Dil	Copper CAS: 7440-50-8 (mg/kg)	Qual	Dil	Lead CAS: 7439-92-1 (mg/kg)	Qual	Dil	Mercury CAS: 7439-97-6 (mg/kg)	Qual	Dil	Nickel CAS: 7440-02-0 (mg/kg)	Qual	Dil	Zinc CAS: 7440-66-6 (mg/kg)	Qual	Dil
<b>Tier 1 Soil PCLs - 30 acre<sup>†</sup></b>																																				
Residential Combined Exposure <sup>[1]</sup>	260	c		29000	n		5400	n		<b>43</b>	n		7800	n		52	n		23000	n		550	n		500	n		2.1	n		830	n		9900	n	
Residential Groundwater Exposure <sup>[2]</sup>	<b>0.0065</b>	m		<b>35</b>	m		<b>4.1</b>	m		82	m	>S	220	m	>S	0.75	m	>S	<b>1200</b>	m	>S	<b>520</b>	a	>S	1.5	a	>S	0.0039	m		<b>79</b>	n	>S	<b>1200</b>	n	>S
<b>TCEQ-Approved Background Values</b>																																				
CSSA Metals Background Concentration <sup>[3]</sup>	na			na			na			na			<b>300†††</b>			<b>3††</b>			40.2††			23.2††			<b>84.5††</b>			<b>0.77††</b>			35.5††			73.2††		
<b>Sample Locations (Date Collected)</b>																																				
AOC52-T4-BOT01 (05-May-2011)	<b>0.0057</b>		1	0.00070	U	1	0.0010	U	1	0.030	M	1	<b>110</b>	M	1	0.030	M	1	<b>21</b>	M	1	<b>9.2</b>	M	1	<b>11</b>	M	1	0.010	U	1	<b>14</b>	M	1	<b>26</b>	M	1
AOC52-T4-SW01 (05-May-2011)	--			--			--			F	1	<b>74</b>	J	1	0.030	U	1	<b>13</b>	F	1	<b>6.0</b>	F	1	<b>7.2</b>	F	1	0.010	U	1	<b>8.5</b>	F	1	<b>17</b>	J	1	
AOC52-T4-SW02 (05-May-2011)	--			--			--			F	1	<b>60</b>	J	1	0.030	U	1	<b>12</b>	F	1	<b>5.4</b>	F	1	<b>5.7</b>	F	1	0.010	U	1	<b>8.4</b>	F	1	<b>16</b>	J	1	
AOC58-BOT01 (19-Apr-2011)	0.0013	U	1	<b>0.0016</b>	F	1	0.0010	U	1	0.030	M	1	<b>18</b>	M	1	0.030	M	1	<b>3.7</b>	M	1	<b>11</b>	M	1	<b>5.0</b>	M	1	<b>0.20</b>	M	1	<b>5.3</b>	M	1	<b>21</b>	M	1
AOC58-BOT01-DUP (19-Apr-2011)	0.0013	U	1	<b>0.0015</b>	F	1	0.0010	U	1	0.030	F	1	<b>18</b>	F	1	0.030	UJ	1	<b>3.9</b>	F	1	<b>5.4</b>	J	1	<b>2.9</b>	F	1	<b>0.22</b>	F	1	<b>5.1</b>	F	1	<b>15</b>	J	1
AOC58-SW01 (19-Apr-2011)	--			--			--			F	1	<b>17</b>	F	1	0.030	UJ	1	<b>2.4</b>	F	1	<b>1.5</b>	F	1	<b>1.0</b>	F	1	<b>0.020</b>	F	1	<b>4.0</b>	F	1	<b>7.8</b>	J	1	
AOC58-SW02 (19-Apr-2011)	--			--			--			F	1	<b>19</b>	F	1	0.030	UJ	1	<b>3.9</b>	F	1	<b>2.7</b>	J	1	<b>1.5</b>	F	1	<b>0.25</b>	F	1	<b>4.9</b>	F	1	<b>9.2</b>	J	1	
AOC58-SW03 (19-Apr-2011)	--			--			--			F	1	<b>18</b>	F	1	0.030	UJ	1	<b>2.9</b>	F	1	<b>1.8</b>	F	1	<b>1.9</b>	F	1	0.010	U	1	<b>4.3</b>	F	1	<b>10</b>	J	1	
AOC58-SW04 (19-Apr-2011)	--			--			--			F	1	<b>15</b>	F	1	0.030	UJ	1	<b>2.9</b>	F	1	<b>1.2</b>	F	1	<b>0.74</b>	F	1	0.010	U	1	<b>3.5</b>	F	1	<b>8.2</b>	J	1	
AOC62-BOT01 (30-Mar-2011)	--			--			--			F	1	<b>16</b>	F	1	0.030	UJ	1	<b>3.4</b>	F	1	<b>23</b>	F	1	<b>9.2</b>	F	1	<b>0.050</b>	F	1	<b>8.9</b>	F	1	<b>38</b>	J	1	
AOC62-BOT02 (19-Apr-2011)	0.0013	U	1	<b>0.0015</b>	F	1	<b>0.0019</b>	F	1	0.030	F	1	<b>17</b>	F	1	0.030	UJ	1	<b>4.3</b>	F	1	<b>4.2</b>	F	1	<b>6.7</b>	F	1	0.010	U	1	<b>6.1</b>	F	1	<b>26</b>	J	1
AOC62-BOT03 (30-Mar-2011)	--			--			--			F	1	<b>11</b>	F	1	0.030	UJ	1	<b>2.2</b>	F	1	<b>3.3</b>	F	1	<b>2.6</b>	F	1	<b>0.020</b>	F	1	<b>9.3</b>	F	1	<b>32</b>	J	1	
AOC62-BOT04 (30-Mar-2011)	--			--			--			F	1	<b>8.8</b>	F	1	0.030	UJ	1	<b>2.2</b>	F	1	<b>7.3</b>	F	1	<b>2.9</b>	F	1	<b>0.030</b>	F	1	<b>7.2</b>	F	1	<b>38</b>	J	1	
AOC62-SW01 (30-Mar-2011)	--			--			--			F	1	<b>30</b>	F	1	0.030	UJ	1	<b>6.4</b>	F	1	<b>4.6</b>	F	1	<b>3.0</b>	F	1	<b>0.020</b>	F	1	<b>5.6</b>	F	1	<b>12</b>	J	1	
AOC62-SW02 (30-Mar-2011)	--			--			--			F	1	<b>4.5</b>	F	1	0.030	UJ	1	<b>1.1</b>	F	1	<b>0.86</b>	F	1	0.18	U	1	0.010	U	1	<b>2.7</b>	F	1	<b>5.6</b>	J	1	
AOC62-SW03 (30-Mar-2011)	--			--			--			M	1	<b>30</b>	M	1	0.030	M	1	<b>6.5</b>	M	1	<b>2.1</b>	M	1	<b>2.6</b>	M	1	<b>0.020</b>	F	1	<b>5.3</b>	M	1	<b>11</b>	M	1	
AOC62-SW04 (30-Mar-2011)	0.0013	U	1	0.00070	U	1	0.0010	U	1	0.030	F	1	<b>26</b>	F	1	0.030	UJ	1	<b>4.0</b>	F	1	<b>3.0</b>	F	1	<b>2.6</b>	F	1	<b>0.030</b>	F	1	<b>4.7</b>	F	1	<b>8.6</b>	J	1
AOC62-SW05 (30-Mar-2011)	--			--			--			F	1	<b>29</b>	F	1	0.030	UJ	1	<b>5.5</b>	F	1	<b>3.0</b>	F	1	<b>2.5</b>	F	1	<b>0.030</b>	F	1	<b>5.0</b>	F	1	<b>9.4</b>	J	1	
AOC62-SW06 (30-Mar-2011)	--			--			--			F	1	<b>14</b>	F	1	0.030	UJ	1	<b>3.5</b>	F	1	<b>1.8</b>	F	1	<b>0.77</b>	F	1	<b>0.020</b>	F	1	<b>3.7</b>	F	1	<b>8.1</b>	J	1	
AOC62-SW07 (30-Mar-2011)	--			--			--			F	1	<b>36</b>	F	1	0.030	UJ	1	<b>7.0</b>	F	1	<b>2.8</b>	F	1	<b>3.0</b>	F	1	<b>0.020</b>	F	1	<b>6.2</b>	F	1	<b>13</b>	J	1	
AOC62-SW08 (30-Mar-2011)	--			--			--			F	1	<b>5.6</b>	F	1	0.030	UJ	1	<b>1.1</b>	F	1	<b>2.0</b>	F	1	0.18	U	1	<b>0.020</b>	F	1	<b>2.6</b>	F	1	<b>5.2</b>	J	1	
AOC62-SW09 (30-Mar-2011)	--			--			--			F	1	<b>34</b>	F	1	0.030	UJ	1	<b>6.4</b>	F	1	<b>3.9</b>	F	1	<b>3.2</b>	F	1	<b>0.020</b>	F	1	<b>6.0</b>	F	1	<b>9.9</b>	J	1	
AOC62-SW10 (30-Mar-2011)	--			--			--			F	1	<b>16</b>	F	1	0.030	UJ	1	<b>3.6</b>	F	1	<b>1.9</b>	F	1	<b>1.2</b>	F	1	<b>0.020</b>	F	1	<b>3.8</b>	F	1	<b>8.1</b>	J	1	
AOC62-SW11 (30-Mar-2011)	<b>0.0018</b>	F	1	0.00070	U	1	0.0010	U	1	0.030	F	1	<b>41</b>	F	1	0.030	UJ	1	<b>8.2</b>	F	1	<b>3.2</b>	F	1	<b>4.3</b>	F	1	<b>0.020</b>	F	1	<b>6.6</b>	F	1	<b>11</b>	J	1
AOC62-SW12 (30-Mar-2011)	--			--			--			F	1	<b>9.6</b>	F	1	0.030	UJ	1	<b>2.2</b>	F	1	<b>1.8</b>	F	1	<b>0.27</b>	F	1	<b>0.020</b>	F	1	<b>3.8</b>	F	1	<b>8.4</b>	J	1	
AOC62-SW13 (30-Mar-2011)	--			--			--			F	1	<b>44</b>	F	1	0.030	UJ	1	<b>9.6</b>	F	1	<b>3.4</b>	F	1	<b>4.4</b>	F	1	<b>0.020</b>	F	1	<b>8.1</b>	F	1	<b>14</b>	J	1	
AOC62-SW14 (19-Apr-2011)	--			--			--			F	1	<b>20</b>	F	1	0.030	UJ	1	<b>5.0</b>	F	1	<b>2.5</b>	F	1	<b>1.6</b>	F	1	0.010	U	1	<b>4.9</b>	F	1	<b>10</b>	J	1	
AOC62-SW15 (30-Mar-2011)	--			--			--			F	1	<b>43</b>	F	1	0.030	UJ	1	<b>9.1</b>	F	1	<b>3.0</b>	F	1	<b>4.5</b>	F	1	<b>0.020</b>	F	1	<b>7.7</b>	F	1	<b>14</b>	J	1	
AOC62-SW16 (30-Mar-2011)	0.0013	U	1	0.00070	U	1	0.0010	U	1	0.030	F	1	<b>9.8</b>	F	1	0.030	UJ	1	<b>1.9</b>	F	1	<b>1.2</b>	F	1	<b>0.26</b>	F	1	<b>0.030</b>	F	1	<b>3.0</b>	F	1	<b>8.7</b>	J	1
AOC62-T3-SW18 (05-May-2011)	--			--			--			F	1	<b>35</b>	J	1	0.030	U	1	<b>8.4</b>	F	1	<b>4.7</b>	F	1	<b>6.0</b>	F	1	0.010	U	1	<b>7.1</b>	F	1	<b>15</b>	J	1	
AOC62-T3-SW18-DUP (05-May-2011)	--			--			--			F	1	<b>34</b>	J	1	0.030	U	1	<b>7.9</b>	F	1	<b>5.6</b>	F	1	<b>6.1</b>	F	1	0.010	U	1	<b>6.9</b>	F	1	<b>22</b>	J	1	
AOC62-T4-SW17 (05-May-2011)	<b>0.018</b>		1	0.00070	U	1	<b>0.0018</b>	F	1	0.030	F	1	<b>37</b>	J	1	0.030	U	1	<b>8.4</b>	F	1	<b>4.0</b>	F	1	<b>3.8</b>	F	1	<b>0.040</b>	F	1	<b>7.0</b>	F	1	<b>15</b>	J	1
AOC62-T4-SW17-DUP (05-May-2011)	<b>0.015</b>		1	0.00070	U	1	0.0010	U	1	0.030	F	1	<b>40</b>	J	1	0.030	U	1	<b>9.5</b>	F	1	<b>4.3</b>	F	1	<b>3.9</b>	F	1	0.010	U	1	<b>7.4</b>	F	1	<b>14</b>	J	1

**NOTES:**

† TCEQ, TRRP Tier 1 Soil PCLs (Last Revised: March 25, 2009).

†† CSSA Soil Background Concentrations. Second Revision, Evaluation of Background Metals Concentrations in Soils and Bedrock at CSSA. February 2002. Values from Table 3.3.

††† Texas-Specific median background concentration

PCLs and CSSA background values coded in this table as [1, 2, 3].

[1] <sup>10</sup>Soil<sub>Comb</sub> = PCL for COPC in soil for a 30 acre source area and a potential future resident (combined exposure for ingestion, dermal contact, inhalation of volatiles and particulates, and ingestion of above-ground and below-ground vegetables).

[2] <sup>GW</sup>Soil<sub>Ing</sub> = PCL for COPC in soil for a 30 acre source area and a potential future resident (soil-to-groundwater leaching of COPC to Class 1 and 2 groundwater).

[3] CSSA Soil Background Concentrations.

PCLs are shown in **blue** font.  
 mg/kg = milligrams per kilogram.  
 c = carcinogenic.  
 n = noncarcinogenic.  
 m = primary MCL-based.  
 a = EPA Action Level-based.  
 >S = solubility limit exceeded during calculation.  
 na = not applicable.

**QA NOTES AND DATA QUALIFIERS:**

(NO CODE) - Confirmed identification.

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

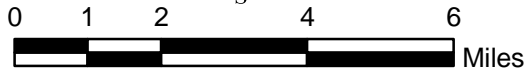
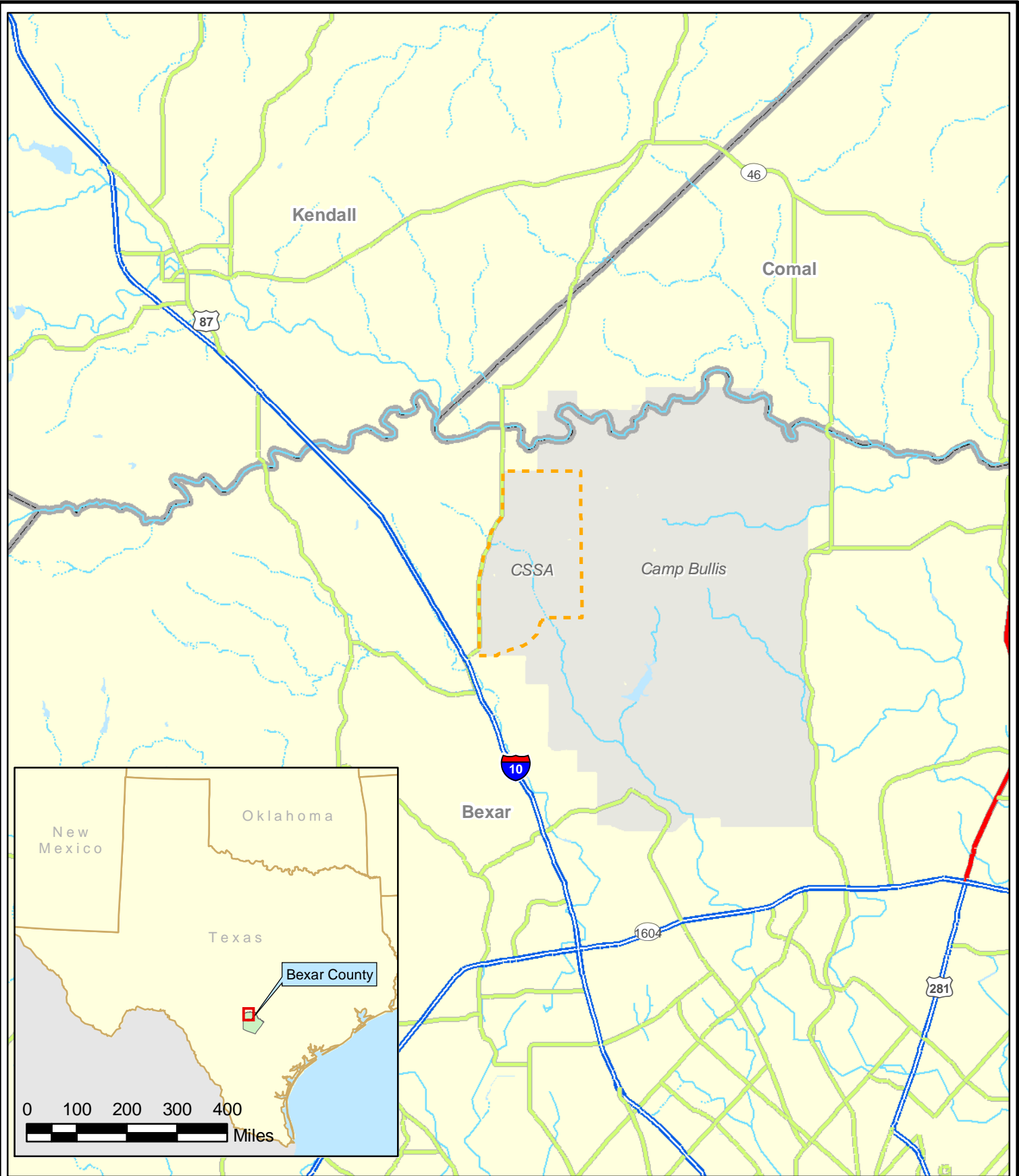
F - Analyte was positively identified, but the quantitation is an estimation above the MDL and below the Reporting Limit (RL).

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

M - Analyte was positively identified but the associated concentration is an estimation due to an associated matrix effect.

Values shown in **BOLD** indicate detections above the MDL.

Values **HIGHLIGHTED** indicate detections above the PCL.









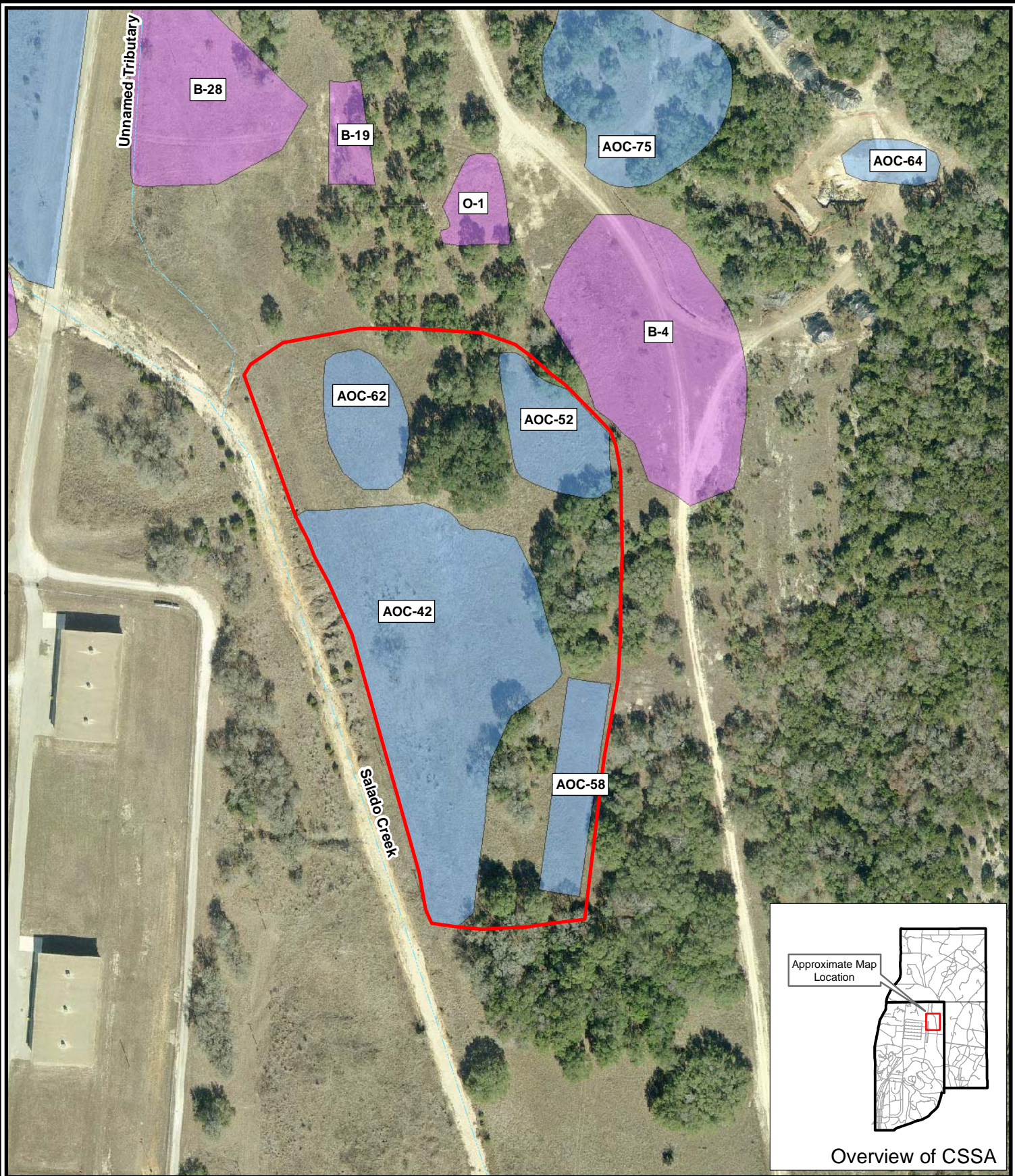
-  CSSA
-  Freeway
-  Highway
-  Major Road
-  County Boundary
-  Military Installation

Figure 1

CSSA Location Map  
Camp Stanley Storage Activity

**PARSONS**



Aerial Photo Date: 2009



175 87.5 0 175 Feet



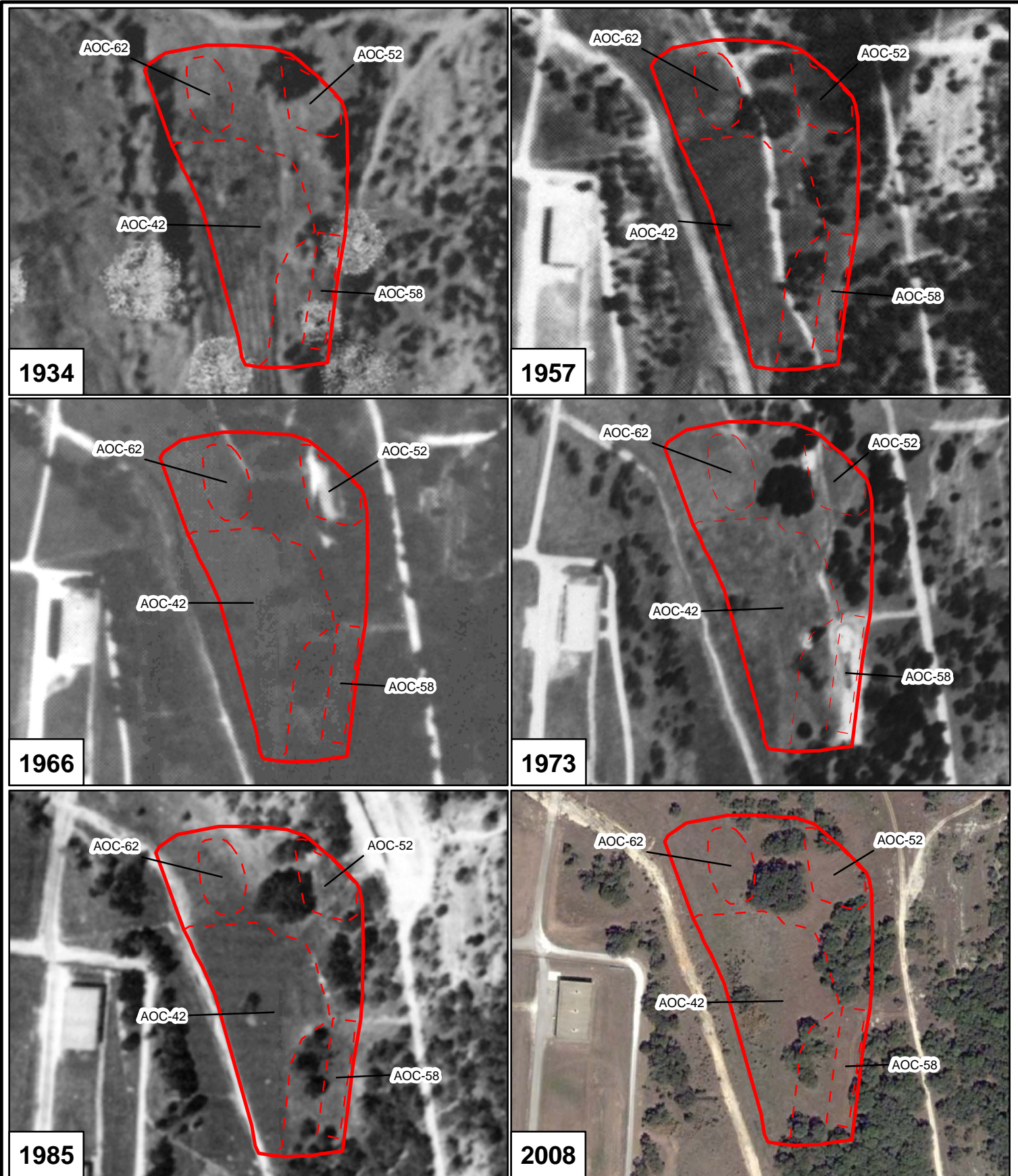
- Salado Creek AOCs
- AOC Boundary
- SWMU Boundary
- Stream
- CSSA Outer Fence Line

Figure 2

Salado Creek AOCs  
Site Location Map  
Camp Stanley Storage Activity

**PARSONS**





1934

1957

1966

1973

1985

2008



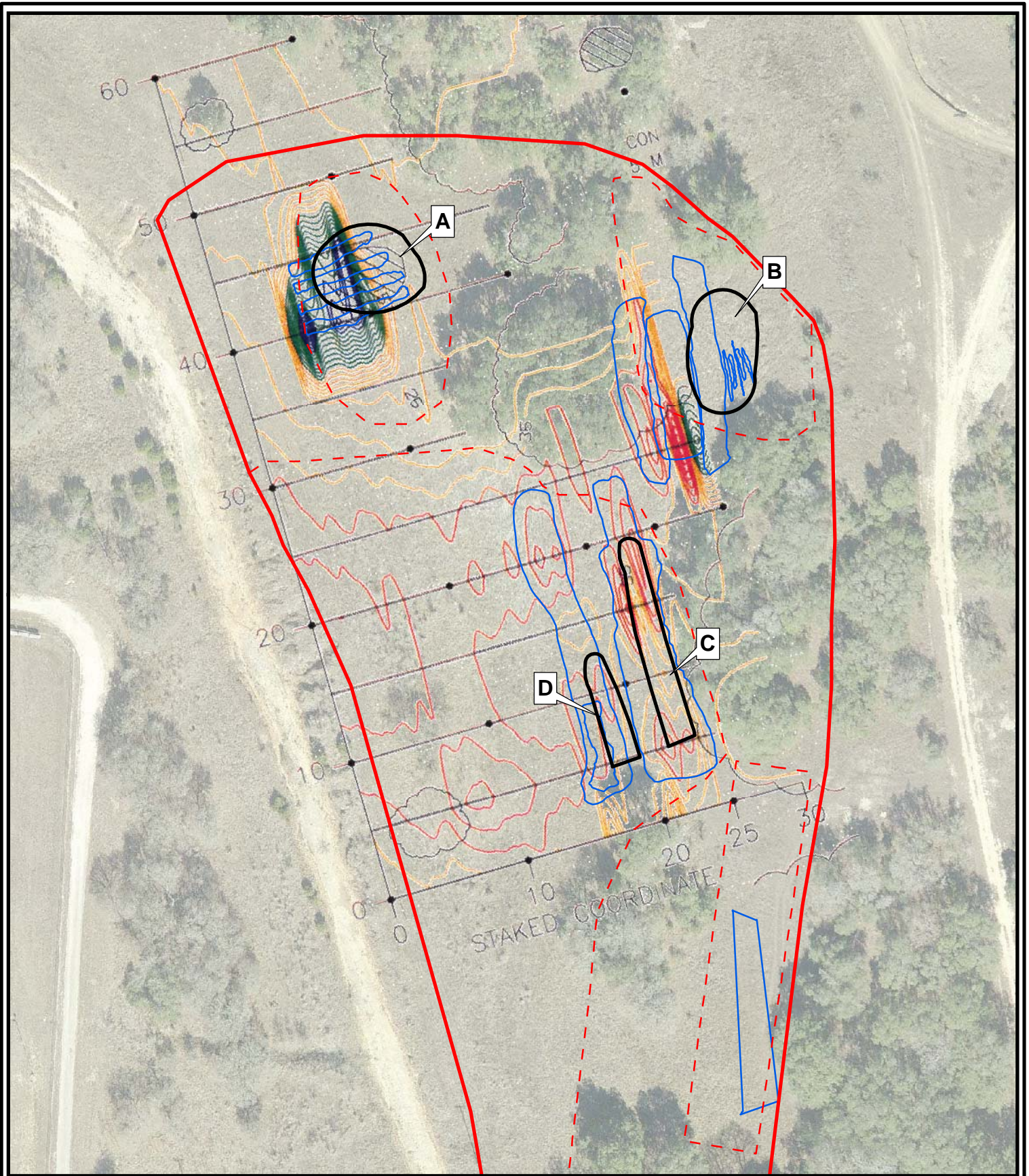
AOC Boundary  
 Salado Creek Area

0 162.5 325 650 Feet

Figure 3

Salado Creek Area  
Aerial Photographs  
Camp Stanley Storage Activity

**PARSONS**



Aerial Photo Date: 2009







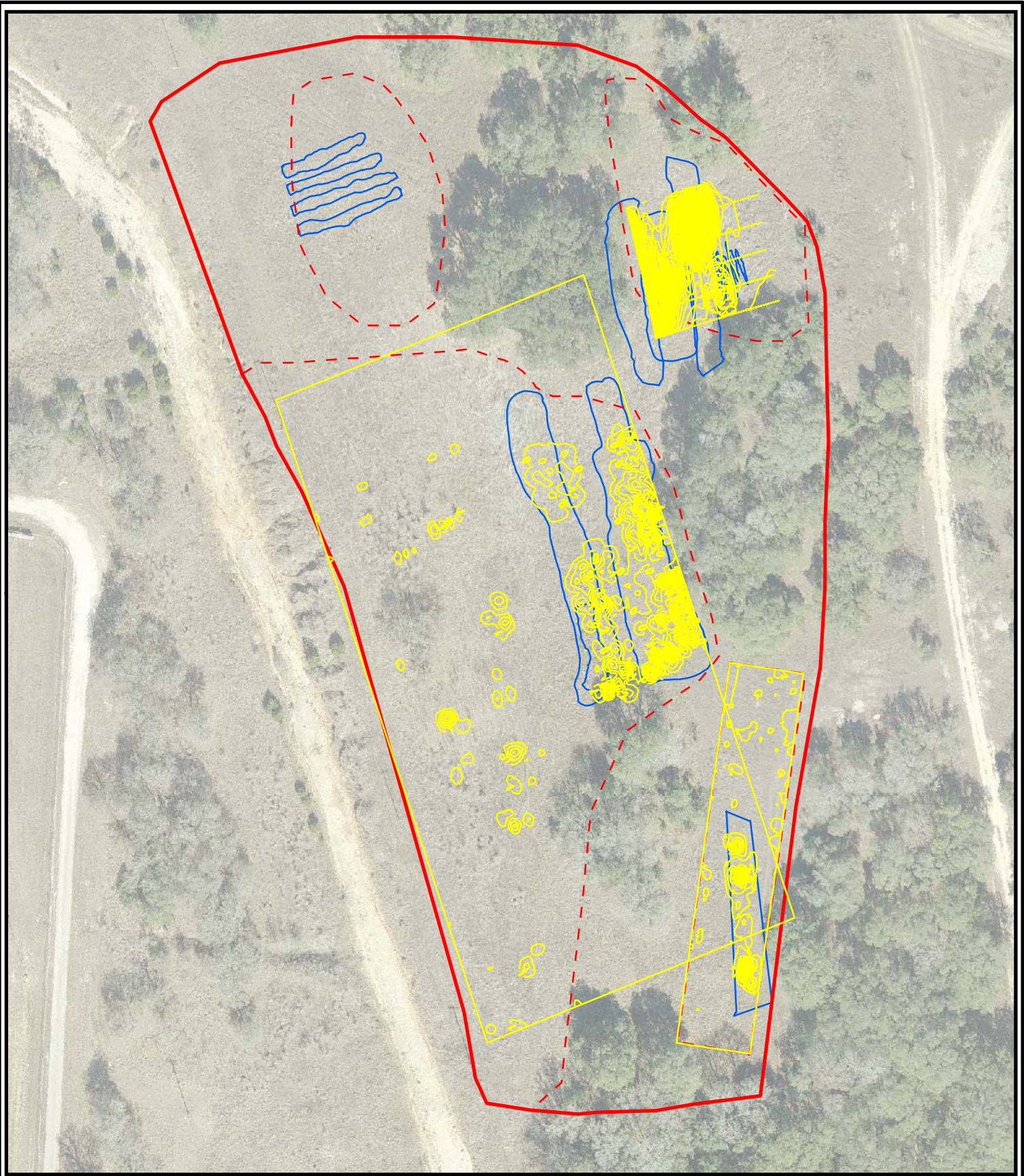
-  Anomaly identified during 1995 geophysical survey
-  AOC Boundary
-  Salado Creek Area
-  Trench Location

Figure 4

Salado Creek Area  
1995 Geophysical Survey  
Camp Stanley Storage Activity

**PARSONS**



Aerial Photo Date: 2009



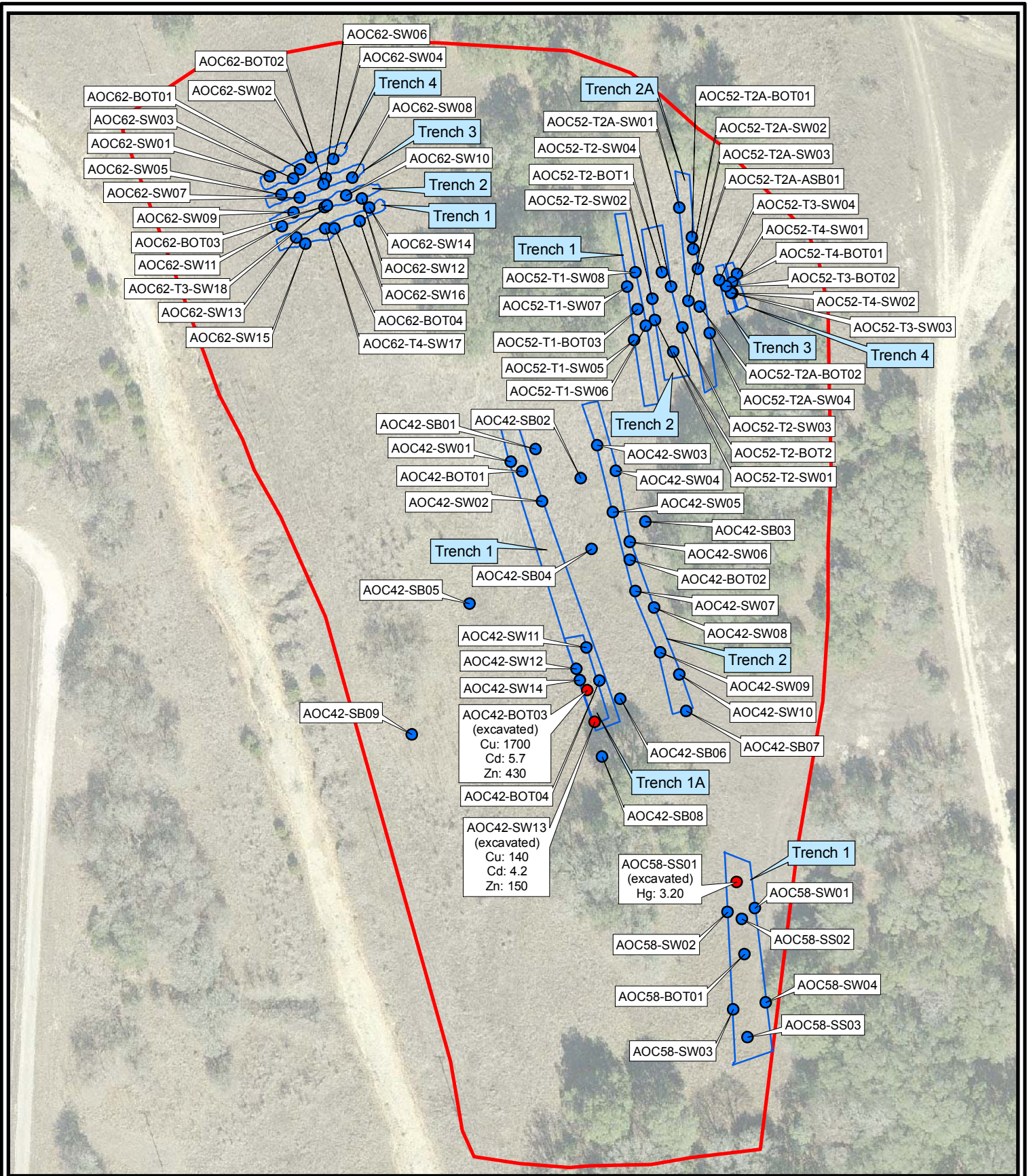
100 50 0 100 Feet

- 1999 Geophysical Survey EM61 Results Contours
- - - AOC Boundary
- ▭ Salado Creek Area
- ▭ Trench Location

Figure 5

Salado Creek Area  
1999 Geophysical Survey  
Camp Stanley Storage Activity

**PARSONS**



Aerial Photo Date: 2009



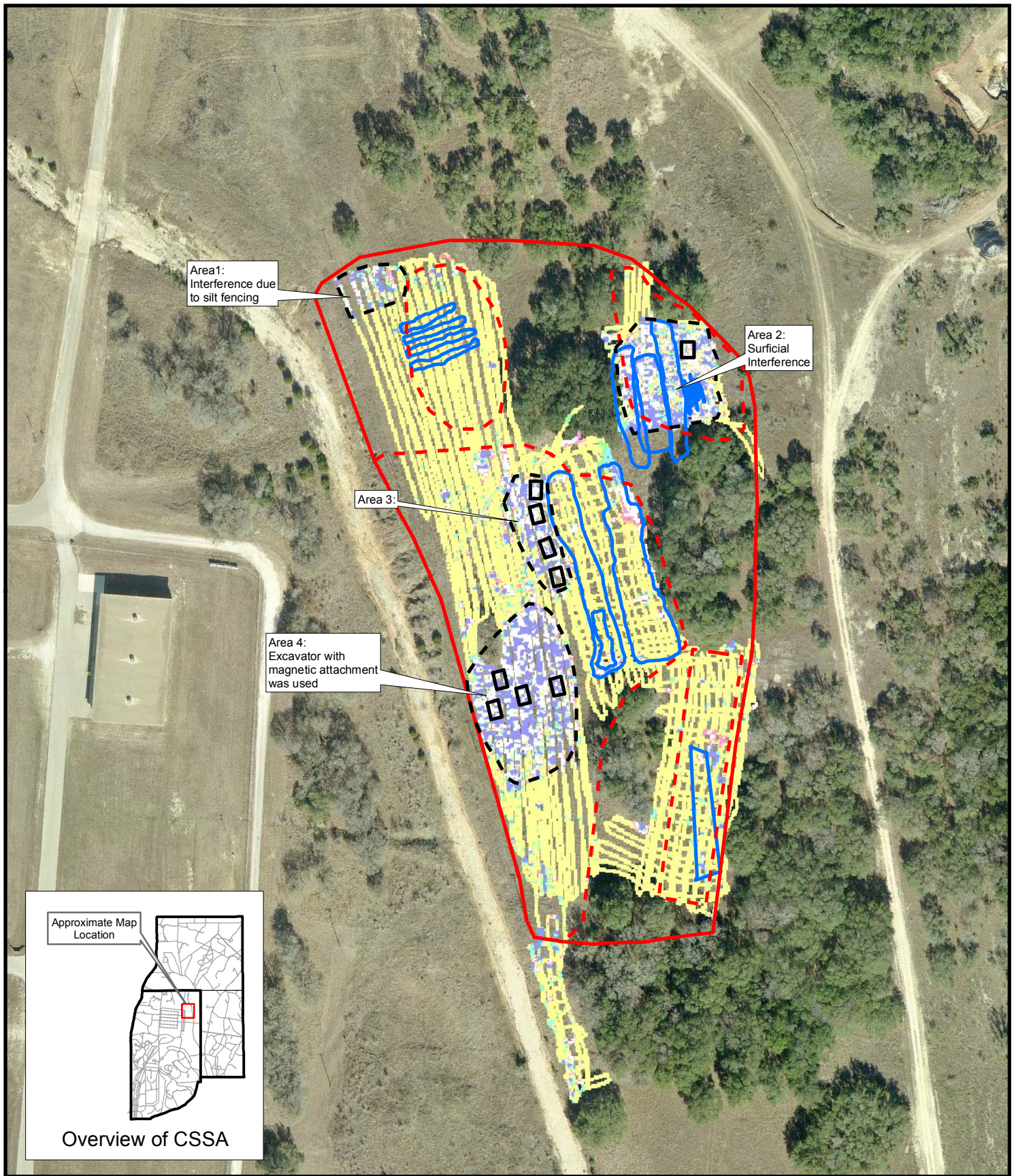
100 50 0 100 Feet

- Soil Sample
- Soil Sample with COC concentration detected above Tier 1 PCL
- Trench Location
- Salado Creek Area

Figure 6

Salado Creek Area  
Sample & Excavation Locations  
Camp Stanley Storage Activity

**PARSONS**



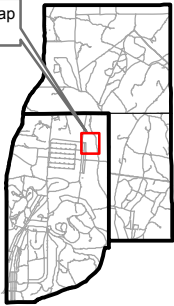
Area 1:  
Interference due  
to silt fencing

Area 2:  
Surficial  
Interference

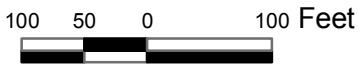
Area 3:

Area 4:  
Excavator with  
magnetic attachment  
was used

Approximate Map  
Location



Overview of CSSA



- - - AOC Boundary
- Salado Creek Area
- Trench Boundary
- Exploratory Excavation
- Area of High Resistivity

Figure 7

Salado Creek Area  
Post Excavation Geophysical Survey  
Camp Stanley Storage Activity

**PARSONS**

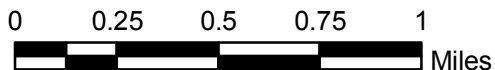
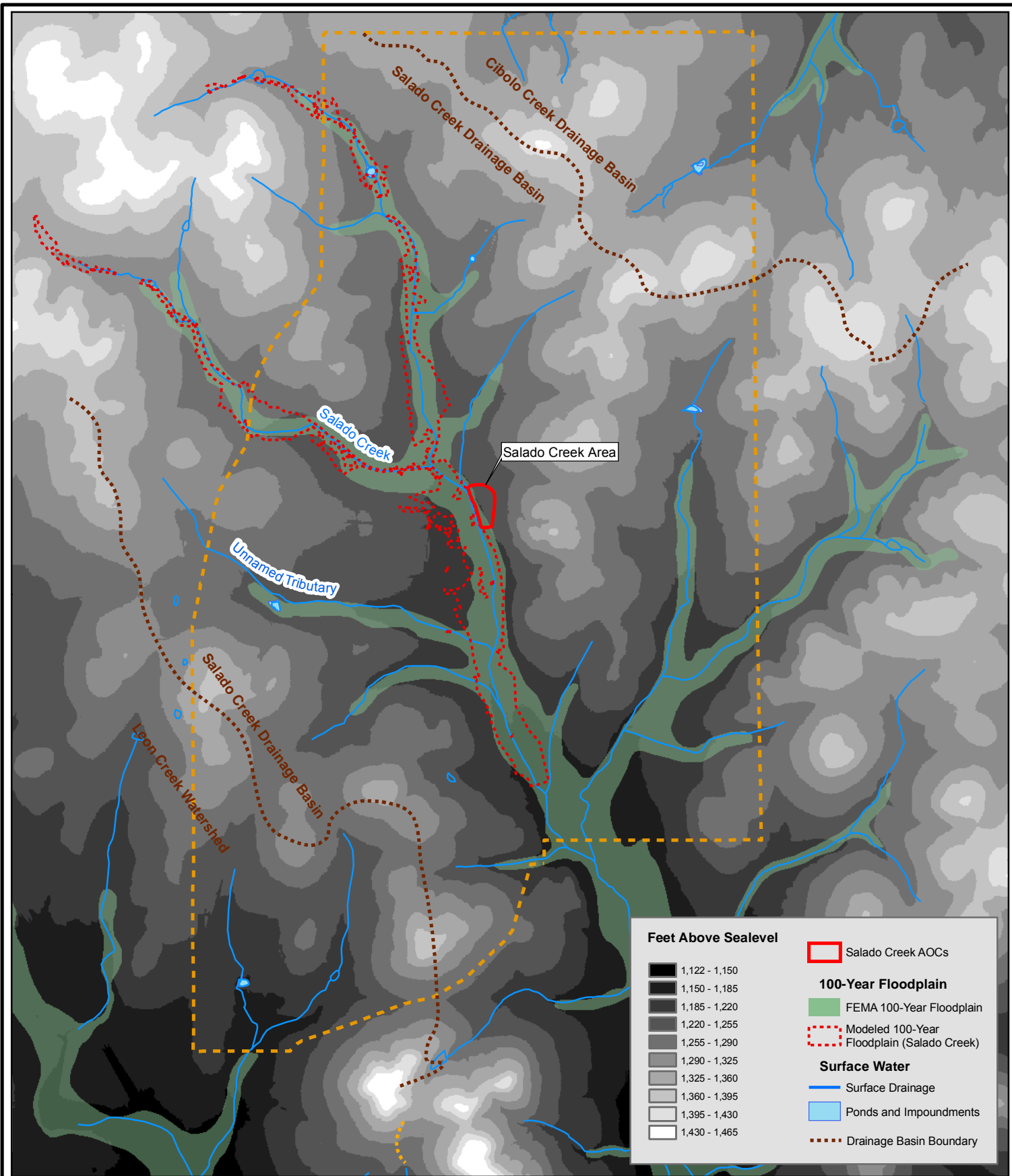


Figure 8

Salado Creek Area Topography, Surface Water, and Floodplains  
Camp Stanley Storage Activity

**PARSONS**

**APPENDIX A**  
**Site Photographs**



**Photo 1. Excavation of Trench 1 at AOC-42, looking south (April 2011).**



**Photo 2. Excavation of Trench 2 at AOC-42, looking south (April 2011).**





**Photo 3. Light blue material found in Trench 2 at AOC-42 (April 2011).**



**Photo 4. Fibrous material found in Trench 2 at AOC-42 (April 2011).**



**Photo 5. Excavator with magnetic attachment sorting debris at AOC-42 (May 2011).**



**Photo 6. Excavation of Trench 2 at AOC-52, looking north (May 2011).**



**Photo 7. Confirmation sampling at AOC-52, looking north (May 2011).**



**Photo 8. Medical debris found at AOC-52 (April 2011).**



**Photo 9. Excavation of AOC-58, looking south (May 2011).**



**Photo 10. Excavation of Trench 4 at AOC-62, looking east (March 2011).**



**Photo 11. Excavation of AOC-62, looking northwest (March 2011).**



**Photo 12. Debris removed from the Salado Creek Area (May 2011).**

**APPENDIX B**

**Tier 1 Ecological Exclusion Criteria Checklist**

Figure: 30 TAC §350.77(b)

**TIER 1: Exclusion Criteria Checklist**

This exclusion criteria checklist is intended to aid the person and the TNRCC in determining whether or not further ecological evaluation is necessary at an affected property where a response action is being pursued under the Texas Risk Reduction Program (TRRP). Exclusion criteria refer to those conditions at an affected property which preclude the need for a formal ecological risk assessment (ERA) because there are **incomplete or insignificant ecological exposure pathways** due to the nature of the affected property setting and/or the condition of the affected property media. This checklist (and/or a Tier 2 or 3 ERA or the equivalent) must be completed by the person for all affected property subject to the TRRP. The person should be familiar with the affected property but need not be a professional scientist in order to respond, although some questions will likely require contacting a wildlife management agency (i.e., Texas Parks and Wildlife Department or U.S. Fish and Wildlife Service). The checklist is designed for general applicability to all affected property; however, there may be unusual circumstances which require professional judgement in order to determine the need for further ecological evaluation (e.g., cave-dwelling receptors). In these cases, the person is strongly encouraged to contact TNRCC before proceeding.

Besides some preliminary information, the checklist consists of three major parts, **each of which must be completed unless otherwise instructed**. PART I requests affected property identification and background information. PART II contains the actual exclusion criteria and supportive information. PART III is a qualitative summary statement and a certification of the information provided by the person. **Answers should reflect existing conditions and should not consider future remedial actions at the affected property**. Completion of the checklist should lead to a logical conclusion as to whether further evaluation is warranted. Definitions of terms used in the checklist have been provided and users are strongly encouraged to familiarize themselves with these definitions before beginning the checklist.

Name of Facility:

**Camp Stanley Storage Activity (CSSA), Boerne, Texas.**

Affected Property Location:

**The Salado Creek Area is a combined set of Areas of Concern (AOC) located in the northeastern portion of the Inner Cantonment area within the vicinity of Salado Creek, approximately one mile west of the eastern CSSA boundary. The AOCs included are AOC-42, AOC-52, AOC-58, and AOC-62, with a total area of approximately 3.8 acres.**

Mailing Address:

**Camp Stanley Storage Activity  
25800 Ralph Fair Road  
Boerne, TX 78015**

TNRCC Case Tracking #s:

**Water Customer No.: CN602728206.  
Air Customer No.: CN600126262.**

Solid Waste Registration #s:

**Texas Solid Waste Registration No.: 69026.**

Voluntary Cleanup Program #: **Not applicable.**

EPA I.D. #s:

**USEPA Identification No.: TX2210020739.**

Figure: 30 TAC §350.77(b)

**Definitions**<sup>1</sup>

**Affected property** - The entire area (i.e., on-site and off-site; including all environmental media) which contains releases of chemicals of concern at concentrations equal to or greater than the assessment level applicable for residential land use and groundwater classification.

**Assessment level** - A critical protective concentration level for a chemical of concern used for affected property assessments where the human health protective concentration level is established under a Tier 1 evaluation as described in §350.75(b) of this title (relating to Tiered Human Health Protective Concentration Level Evaluation), except for the protective concentration level for the soil-to-groundwater exposure pathway which may be established under Tier 1, 2, or 3 as described in §350.75(i)(7) of this title, and ecological protective concentration levels which are developed, when necessary, under Tier 2 and/or 3 in accordance with §350.77(c) and/or (d), respectively, of this title (relating to Ecological Risk Assessment and Development of Ecological Protective Concentration Levels).

**Bedrock** - The solid rock (i.e., consolidated, coherent, and relatively hard naturally formed material that cannot normally be excavated by manual methods alone) that underlies gravel, soil or other surficial material.

**Chemical of concern** - Any chemical that has the potential to adversely affect ecological or human receptors due to its concentration, distribution, and mode of toxicity. Depending on the program area, chemicals of concern may include the following: solid waste, industrial solid waste, municipal solid waste, and hazardous waste as defined in Texas Health and Safety Code, §361.003, as amended; hazardous constituents as listed in 40 Code of Federal Regulations Part 261, Appendix VIII, as amended; constituents on the groundwater monitoring list in 40 Code of Federal Regulations Part 264, Appendix IX, as amended; constituents as listed in 40 CFR Part 258 Appendices I and II, as amended; pollutant as defined in Texas Water Code, §26.001, as amended; hazardous substance as defined in Texas Health and Safety Code, §361.003, as amended, and the Texas Water Code §26.263, as amended; regulated substance as defined in Texas Water Code §26.342, as amended and §334.2 of this title (relating to Definitions), as amended; petroleum product as defined in Texas Water Code §26.342, as amended and §334.122(b)(12) of this title (relating to Definitions for ASTs), as amended; other substances as defined in Texas Water Code §26.039(a), as amended; and daughter products of the aforementioned constituents.

**Community** - An assemblage of plant and animal populations occupying the same habitat in which the various species interact via spatial and trophic relationships (e.g., a desert community or a pond community).

**Complete exposure pathway** - An exposure pathway where a human or ecological receptor is exposed to a chemical of concern via an exposure route (e.g., incidental soil ingestion, inhalation of volatiles and particulates, consumption of prey, etc).

**De minimus** - The description of an area of affected property comprised of one acre or less where the ecological risk is considered to be insignificant because of the small extent of contamination, the absence of protected species, the availability of similar unimpacted habitat nearby, and the lack of adjacent sensitive environmental areas.

**Ecological protective concentration level** - The concentration of a chemical of concern at the point of exposure within an exposure medium (e.g., soil, sediment, groundwater, or surface water) which is determined in accordance with §350.77(c) or (d) of this title (relating to Ecological Risk Assessment and Development of Ecological Protective Concentration Levels) to be protective for ecological receptors. These concentration levels are primarily intended to be protective for more mobile or wide-ranging ecological receptors and, where appropriate, benthic invertebrate communities within the waters in the state. These concentration levels are not intended to be directly protective of receptors with limited mobility or range (e.g., plants, soil invertebrates, and small rodents), particularly those residing within active areas of a facility, unless these receptors are threatened/endangered species or unless impacts to these receptors result in disruption of the ecosystem or other unacceptable consequences for the more

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<sup>1</sup>These definitions were taken from 30 TAC §350.4 and may have both ecological and human health applications. For the purposes of this checklist, it is understood that only the ecological applications are of concern.



mobile or wide-ranging receptors (e.g., impacts to an off-site grassland habitat eliminate rodents which causes a desirable owl population to leave the area).

**Ecological risk assessment** - The process that evaluates the likelihood that adverse ecological effects may occur or are occurring as a result of exposure to one or more stressors; however, as used in this context, only chemical stressors (i.e., COCs) are evaluated.

**Environmental medium** - A material found in the natural environment such as soil (including non-waste fill materials), groundwater, air, surface water, and sediments, or a mixture of such materials with liquids, sludges, gases, or solids, including hazardous waste which is inseparable by simple mechanical removal processes, and is made up primarily of natural environmental material.

**Exclusion criteria** - Those conditions at an affected property which preclude the need to establish a protective concentration level for an ecological exposure pathway because the exposure pathway between the chemical of concern and the ecological receptors is not complete or is insignificant.

**Exposure medium** - The environmental medium or biologic tissue in which or by which exposure to chemicals of concern by ecological or human receptors occurs.

**Facility** - The installation associated with the affected property where the release of chemicals of concern occurred.

**Functioning cap** - A low permeability layer or other approved cover meeting its design specifications to minimize water infiltration and chemical of concern migration, and prevent ecological or human receptor exposure to chemicals of concern, and whose design requirements are routinely maintained.

**Landscaped area** - An area of ornamental, or introduced, or commercially installed, or manicured vegetation which is routinely maintained.

**Off-site property (off-site)** - All environmental media which is outside of the legal boundaries of the on-site property.

**On-site property (on-site)** - All environmental media within the legal boundaries of a property owned or leased by a person who has filed a self-implementation notice or a response action plan for that property or who has become subject to such action through one of the agency's program areas for that property.

**Physical barrier** - Any structure or system, natural or manmade, that prevents exposure or prevents migration of chemicals of concern to the points of exposure.

**Point of exposure** - The location within an environmental medium where a receptor will be assumed to have a reasonable potential to come into contact with chemicals of concern. The point of exposure may be a discrete point, plane, or an area within or beyond some location.

**Protective concentration level** - The concentration of a chemical of concern which can remain within the source medium and not result in levels which exceed the applicable human health risk-based exposure limit or ecological protective concentration level at the point of exposure for that exposure pathway.

**Release** - Any spilling, leaking, pumping, pouring, emitting, emptying, discharging, injecting, escaping, leaching, dumping, or disposing into the environment, with the exception of:

- (A) A release that results in an exposure to a person solely within a workplace, concerning a claim that the person may assert against the person's employer;
- (B) An emission from the engine exhaust of a motor vehicle, rolling stock, aircraft, vessel, or pipeline pumping station engine;
- (C) A release of source, by-product, or special nuclear material from a nuclear incident, as those terms are defined by the Atomic Energy Act of 1954, as amended (42 U.S.C. §2011 et seq.), if the release is subject to requirements concerning financial protection established by the Nuclear Regulatory Commission under §170 of that Act;

(D) For the purposes of the environmental response law §104, as amended, or other response action, a release of source, by-product, or special nuclear material from a processing site designated under §102(a)(1) or §302(a) of the Uranium Mill Tailings Radiation Control Act of 1978 (42 U.S.C. §7912 and §7942), as amended; and

(E) The normal application of fertilizer.

**Sediment** - Non-suspended particulate material lying below surface waters such as bays, the ocean, rivers, streams, lakes, ponds, or other similar surface water body (including intermittent streams). Dredged sediments which have been removed from below surface water bodies and placed on land shall be considered soils.

**Sensitive environmental areas** - Areas that provide unique and often protected habitat for wildlife species. These areas are typically used during critical life stages such as breeding, hatching, rearing of young, and overwintering. Examples include critical habitat for threatened and endangered species, wilderness areas, parks, and wildlife refuges.

**Source medium** - An environmental medium containing chemicals of concern which must be removed, decontaminated and/or controlled in order to protect human health and the environment. The source medium may be the exposure medium for some exposure pathways.

**Stressor** - Any physical, chemical, or biological entity that can induce an adverse response; however, as used in this context, only chemical entities apply.

**Subsurface soil** - For human health exposure pathways, the portion of the soil zone between the base of surface soil and the top of the groundwater-bearing unit(s). For ecological exposure pathways, the portion of the soil zone between 0.5 feet and 5 feet in depth.

**Surface cover** - A layer of artificially placed utility material (e.g., shell, gravel).

**Surface soil** - For human health exposure pathways, the soil zone extending from ground surface to 15 feet in depth for residential land use and from ground surface to 5 feet in depth for commercial/industrial land use; or to the top of the uppermost groundwater-bearing unit or bedrock, whichever is less in depth. For ecological exposure pathways, the soil zone extending from ground surface to 0.5 feet in depth.

**Surface water** - Any water meeting the definition of surface water in the state as defined in §307.3 of this title (relating to Abbreviations and Definitions), as amended.

**PART I. Affected Property Identification and Background Information**

1) Provide a description of the specific area of the response action and the nature of the release. Include estimated acreage of the affected property and the facility property, and a description of the type of facility and/or operation associated with the affected property. Also describe the location of the affected property with respect to the facility property boundaries and public roadways.

**Camp Stanley Storage Activity:** CSSA is located in northwestern Bexar County, about 19 miles northwest of downtown San Antonio. The installation consists of approximately 4,004 acres immediately east of Ralph Fair Road, and approximately 0.5 mile east of Interstate Highway 10 (see Figure 1 of the RIR). CSSA has several historical waste sites, including SWMUs, AOCs, and RMUs. The present mission of CSSA is the receipt, storage, issue, and maintenance of ordnance as well as quality assurance testing and maintenance of military weapons and ammunition. Because of its mission, CSSA has been designated a restricted access facility. No changes to the CSSA mission and/or military activities are expected in the future.

**Salado Creek Area:** The Salado Creek Area is a combined set of Areas of Concern (AOC) located in the northeastern portion of the Inner Cantonment area within the vicinity of Salado Creek, approximately one mile west of the eastern CSSA boundary. The AOCs included are AOC-42, AOC-52, AOC-58, and AOC-62, with a total area of approximately 3.8 acres.

Attach available USGS topographic maps and/or aerial or other affected property photographs to this form to depict the affected property and surrounding area. Indicate attachments:

- Topo map                       Aerial photo                       Other

**Aerial photos of the site and land adjacent to the site are shown on Figure 3 of the RIR. Figure 2 of the RIR shows the general location of the Salado Creek Area.**

2) Identify environmental media known or suspected to contain chemicals of concern (COCs) at the present time. Check all that apply:

<u>Known/Suspected COC Location</u>	<u>Based on sampling data?</u>	
<input type="checkbox"/> <b>NO</b> – Soil ≤ 5 ft below ground surface	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
<input type="checkbox"/> <b>NO</b> – Soil >5 ft below ground surface	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
<input type="checkbox"/> <b>NO</b> – Groundwater	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
<input type="checkbox"/> <b>NO</b> – Surface Water/Sediments	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No

Explain (previously submitted information may be referenced):

**Based on soil samples collected at the Salado Creek Area, there are no VOCs or SVOCs at the sites (see Appendix C of this RIR). Metals with concentrations exceeding Tier 1 PCLs at the site were excavated and removed. There is no evidence of other affected or threatened environmental media (groundwater, surface water, or sediment) at the Salado Creek Area. Over the past 15 years, there have been samples collected from the closest well to the Salado Creek Area (well CS-MW2-LGR located approximately 50 ft downgradient of the site) and analyzed for metals and VOCs. Low concentrations of VOCs and metals detected in CS-MW2-LGR (below their respective MCLs) are attributed to contaminated groundwater from the SWMU B-3 bioreactor plume. Additionally, since soils found to have concentrations of metals above their PCLs were excavated and removed, there will be no impact to groundwater, surface water, or sediment from the Salado Creek Area.**

3) Provide the information below for the nearest surface water body which has become or has the potential to become impacted from migrating COCs via surface water runoff, air deposition, groundwater seepage, etc. Exclude

wastewater treatment facilities and stormwater conveyances/impoundments authorized by permit. Also exclude conveyances, decorative ponds, and those portions of process facilities which are:

- a. Not in contact with surface waters in the State or other surface waters which are ultimately in contact with surface waters in the State; and
- b. Not consistently or routinely utilized as valuable habitat for natural communities including birds, mammals, reptiles, etc.

The nearest surface water body, **Salado Creek**, is **approximately 50 feet** from the affected property (**west of the Salado Creek Area**). The water body is best described as a:

- freshwater stream: \_\_\_\_\_ perennial (has water all year)  
 **intermittent (dries up completely for at least 1 week a year) [only has water during and immediately after rain events]**  
 \_\_\_\_\_ intermittent with perennial pools
- freshwater swamp/marsh/wetland
- saltwater or brackish marsh/swamp/wetland
- reservoir, lake, or pond; approximate surface acres:
- drainage ditch
- tidal stream             bay                             estuary
- other; specify

Is the water body listed as a State classified segment in Appendix C of the current Texas Surface Water Quality Standards; §§307.1 - 307.10?

Yes Segment # \_\_\_\_\_ Use Classification:

**No**

If the water body is not a State classified segment, identify the first downstream classified segment.

Name:

**Salado Creek Drainage Basin**

Segment #:

**The Salado Creek Area is located adjacent to Salado Creek in Segment No. 1910 of the San Antonio River Basin (Salado Creek – from the confluence with the San Antonio River in Bexar County to Rocking Horse Lane west of Camp Bullis in Bexar County).**

Use Classification:

**The unclassified receiving waters of Salado Creek have no significant aquatic life use. The designated uses for Segment No. 1910 are high aquatic life use, contact recreation, public water supply, and aquifer protection – no degradation of high quality receiving waters is anticipated.**

**All creeks at CSSA are intermittent and only have water during and immediately following rain events. Refer to Section 3.2.3 of the RIR.**

As necessary, provide further description of surface waters in the vicinity of the affected property:

The nearest surface water body to the Salado Creek area is Salado Creek and is approximately 50 feet west of the site. Salado Creek is intermittent and only contains water during and immediately following rain events. Salado Creek is intermittent in the area due to limited-duration flowing springs during the winter and spring.

The closest perennial surface water body to the Salado Creek Area is an unnamed pond approximately 4,100 ft upgradient of the site. The distance to the closest perennial surface water body downgradient of the Salado Creek Area is more than 3 miles to the southeast. No significant degradation of high quality receiving waters is anticipated from the Salado Creek Area.

## PART II. Exclusion Criteria and Supportive Information

### Subpart A. Surface Water/Sediment Exposure

1) Regarding the affected property where a response action is being pursued under the TRRP, have COCs migrated and resulted in a release or imminent threat of release to either surface waters or to their associated sediments via surface water runoff, air deposition, groundwater seepage, etc.? Exclude wastewater treatment facilities and stormwater conveyances/impoundments authorized by permit. Also exclude conveyances, decorative ponds, and those portions of process facilities which are:

- a. Not in contact with surface waters in the State or other surface waters which are ultimately in contact with surface waters in the State; and
- b. Not consistently or routinely utilized as valuable habitat for natural communities including birds, mammals, reptiles, etc.

Yes  No

Explain:

There is no evidence of other affected or threatened environmental media (groundwater, surface water, or sediment) at the Salado Creek Area. Since soils that were found to have concentrations of metals above their PCLs were excavated/removed, there will be no impact to groundwater, surface water, or sediment from the Salado Creek area.

The closest surface water body to the Salado Creek Area is Salado Creek, approximately 50 ft west of the site. Salado Creek, and all other streams at CSSA, is intermittent and only contains water during and immediately following rain events.

If the answer is Yes to Subpart A above, the affected property does not meet the exclusion criteria. However, complete the remainder of Part II to determine if there is a complete and/or significant soil exposure pathway, then complete PART III - Qualitative Summary and Certification. If the answer is No, go to Subpart B.

### Subpart B. Affected Property Setting

In answering "Yes" to the following question, it is understood that the affected property is not attractive to wildlife or livestock, including threatened or endangered species (i.e., the affected property does not serve as valuable habitat, foraging area, or refuge for ecological communities). (May require consultation with wildlife management agencies.)

1) Is the affected property wholly contained within contiguous land characterized by: pavement, buildings, landscaped area, functioning cap, roadways, equipment storage area, manufacturing or process area, other surface cover or structure, or otherwise disturbed ground?

Yes  No

Explain:

**Concentrations of chemicals detected in soil samples at the Salado Creek Area do not exceed Tier 1 residential soil action levels. Soils found to have metals concentrations above their PCLs were excavated and removed from the site.**

**There is no evidence of other affected or threatened environmental media (groundwater, surface water, or sediment) at the Salado Creek Area. Since soils found to have concentrations of metals above their PCLs were excavated/removed, there will be no impact to groundwater, surface water, or sediment in the area. Inorganic groundwater contamination has not been reported in the closest well to the Salado Creek Area (well CS-MW2-LGR located approximately 50 feet downgradient).**

**Additionally, several surveys have been conducted at CSSA for T&E species. The only T&E species that have been documented at CSSA are the black-capped vireo (*Vireo atricapillus*) [BCVI] and golden-cheeked warbler (*Dendroica chrysoparia*) [GCWA]. The Salado Creek Area is not located within BCVI or GCWA habitat. The nearest potential habitats for local endangered species are approximately 300 feet northeast (Golden-Cheeked Warbler). Additional information can be found in the following references:**

- **Parsons, 2007. *Final Integrated Natural Resource Management Plan*. Prepared for Camp Stanley Storage Activity, Boerne, Texas. October 2007. Available online: [CSSA EE \(Volume 1.6, Other Plans and Approaches\)](#)**
- **Parsons, 2009. *Final Species and Habitat Distributions of Black-Capped Vireos and Golden-Cheeked Warblers, 2009 Breeding/Nesting Season*. Prepared for Camp Stanley Storage Activity, Boerne, Texas. September 2009. Available online: [CSSA EE \(Volume 1.6, Other Plans and Approaches\)](#)**

If the answer to Subpart B above is Yes, the affected property meets the exclusion criteria, assuming the answer to Subpart A was No. Skip Subparts C and D and complete PART III - Qualitative Summary and Certification. If the answer to Subpart B above is No, go to Subpart C.

### **Subpart C. Soil Exposure**

1) Are COCs which are in the soil of the affected property solely below the first 5 feet beneath ground surface or does the affected property have a physical barrier present to prevent exposure of receptors to COCs in surface soil?

Yes **See explanation**       No

Explain:

**Based on Table 2 of this RIR there are no longer any COCs at the site. What contaminated soil horizon that was present at the site was removed during excavation activities.**

### **Subpart D. De Minimis Land Area Subpart D skipped based on answers to Subpart C.**

In answering "Yes" to the question below, it is understood that all of the following conditions apply:

- The affected property is not known to serve as habitat, foraging area, or refuge to threatened/endangered or otherwise protected species. (Will likely require consultation with wildlife management agencies.)
- Similar but unimpacted habitat exists within a half-mile radius.
- The affected property is not known to be located within one-quarter mile of sensitive environmental areas (e.g., rookeries, wildlife management areas, preserves). (Will likely require consultation with wildlife management agencies.)
- There is no reason to suspect that the COCs associated with the affected property will migrate such that the affected property will become larger than one acre.

1) Using human health protective concentration levels as a basis to determine the extent of the COCs, does the affected property consist of one acre or less and does it meet all of the conditions above?

Yes                       No

Explain how conditions are met/not met:

If the answer to Subpart D above is Yes, then no further ecological evaluation is needed at this affected property, assuming the answer to Subpart A was No. Complete PART III - Qualitative Summary and Certification. If the answer to Subpart D above is No, proceed to Tier 2 or 3 or comparable ERA.

**PART III. Qualitative Summary and Certification (Complete in all cases).**

Attach a brief statement (not to exceed 1 page) summarizing the information you have provided in this form. This summary should include sufficient information to verify that the affected property meets or does not meet the exclusion criteria. The person should make the initial decision regarding the need for further ecological evaluation (i.e., Tier 2 or 3) based upon the results of this checklist. After review, TNRCC will make a final determination on the need for further assessment. **Note that the person has the continuing obligation to re-enter the ERA process if changing circumstances result in the affected property not meeting the Tier 1 exclusion criteria.**

Completed by:  Laura Marbury, P.G.  (Typed/Printed Name)


Principal Geologist  (Title)

September 6, 2011  (Date)

I believe that the information submitted is true, accurate, and complete, to the best of my knowledge.

Julie Burdey, P.G.  (Typed/Printed Name of Person)

Project Manager  (Title of Person)

  
  (Signature of Person)

September 6, 2011  (Date Signed)



**APPENDIX C**

**Confirmation Sample Results for All Analytes at the Salado Creek Area**

# Appendix C. Confirmation Sample Results for All Analytes at the Salado Creek Area

	Volatile Organics																																															
	1,1,1,2-Tetrachloroethane CAS: 630-20-6	Qual	Dil	1,1,1-Trichloroethane CAS: 71-55-6	Qual	Dil	1,1,2,2-Tetrachloroethane CAS: 79-34-5	Qual	Dil	1,1,2-Trichloroethane CAS: 79-00-5	Qual	Dil	1,1-Dichloroethane CAS: 75-34-3	Qual	Dil	1,1-Dichloroethene CAS: 75-35-4	Qual	Dil	1,1-Dichloropropene CAS: 563-58-6	Qual	Dil	1,2,3-Trichlorobenzene CAS: 87-61-6	Qual	Dil	1,2,3-Trichloropropane CAS: 96-18-4	Qual	Dil	1,2,4-Trichlorobenzene CAS: 120-82-1	Qual	Dil	1,2,4-Trimethylbenzene CAS: 95-63-6	Qual	Dil	1,2-Dibromo-3-chloropropane CAS: 96-12-8	Qual	Dil	1,2-Dibromoethane (EDB) CAS: 106-93-4	Qual	Dil	1,2-Dichlorobenzene CAS: 95-50-1	Qual	Dil	1,2-Dichloroethane CAS: 107-06-2	Qual	Dil			
<b>Tier 1 Soil PCLs - 30 acre<sup>1</sup></b>																																																
Residential Combined Exposure <sup>[1]</sup>	39	c		32000	n		4	c		10	c		2600	n		1600	n		26	c		190	n		0.87	c		610	n		73	n		0.08	c		0.43	c		390	n		6.4	c				
Residential Groundwater Exposure <sup>[2]</sup>	0.71	c		0.81	m		0.012	c		0.01	m		9.2	n		0.025	m		0.067	c		13	n		0.0011	c		2.4	m		4.9	n		0.00087	m		0.0001	m		8.9	m		0.0069	m				
<b>TCEQ-Approved Background Values</b>																																																
CSSA Metals Background Concentration <sup>[3]</sup>	na			na			na			na			na			na			na			na			na			na			na			na			na			na			na					
<b>Sample Locations (Date Collected)</b>																																																
AOC42-BOT01 (19-Apr-2011)	0.00080	U	1	0.00090	U	1	0.00090	M	1	0.00090	U	1	0.0010	U	1	0.0011	U	1	0.0012	U	1	0.0010	M	1	0.0010	M	1	0.0010	M	1	0.0011	M	1	0.0020	U	1	0.0013	U	1	0.0010	M	1	0.0010	U	1			
AOC42-BOT01-DUP (19-Apr-2011)	0.00080	U	1	0.00090	U	1	0.00090	U	1	0.00090	U	1	0.0010	U	1	0.0011	U	1	0.0012	U	1	0.0010	U	1	0.0010	U	1	0.0010	U	1	0.0011	U	1	0.0020	U	1	0.0013	U	1	0.0010	U	1	0.0010	U	1	0.0010	U	1
AOC42-BOT02 (19-Apr-2011)	0.00080	M	1	0.00090	M	1	0.00090	M	1	0.00090	M	1	0.0010	M	1	0.0011	M	1	0.0012	M	1	0.0010	M	1	0.0010	M	1	0.0010	M	1	0.0011	M	1	0.0020	M	1	0.0013	M	1	0.0010	M	1	0.0010	M	1	0.0010	M	1
AOC42-BOT02-DUP (19-Apr-2011)	0.00080	U	1	0.00090	U	1	0.00090	U	1	0.00090	U	1	0.0010	U	1	0.0011	U	1	0.0012	U	1	0.0010	U	1	0.0010	U	1	0.0010	U	1	0.0011	U	1	0.0020	U	1	0.0013	U	1	0.0010	U	1	0.0010	U	1	0.0010	U	1
AOC42-BOT04 (04-Aug-2011)	--			--			--			--			--			--			--			--			--			--			--			--			--			--			--					
AOC42-BOT04-DUP (04-Aug-2011)	--			--			--			--			--			--			--			--			--			--			--			--			--			--			--					
AOC42-SW01 (19-Apr-2011)	--			--			--			--			--			--			--			--			--			--			--			--			--			--			--					
AOC42-SW02 (19-Apr-2011)	--			--			--			--			--			--			--			--			--			--			--			--			--			--			--					
AOC42-SW03 (19-Apr-2011)	--			--			--			--			--			--			--			--			--			--			--			--			--			--			--					
AOC42-SW04 (19-Apr-2011)	--			--			--			--			--			--			--			--			--			--			--			--			--			--			--					
AOC42-SW05 (19-Apr-2011)	--			--			--			--			--			--			--			--			--			--			--			--			--			--			--					
AOC42-SW06 (19-Apr-2011)	--			--			--			--			--			--			--			--			--			--			--			--			--			--			--					
AOC42-SW07 (19-Apr-2011)	--			--			--			--			--			--			--			--			--			--			--			--			--			--			--					
AOC42-SW08 (19-Apr-2011)	--			--			--			--			--			--			--			--			--			--			--			--			--			--			--					
AOC42-SW09 (19-Apr-2011)	--			--			--			--			--			--			--			--			--			--			--			--			--			--			--					
AOC42-SW10 (19-Apr-2011)	--			--			--			--			--			--			--			--			--			--			--			--			--			--			--					
AOC42-SW14 (04-Aug-2011)	--			--			--			--			--			--			--			--			--			--			--			--			--			--			--					
AOC52-T1-BOT03 (05-May-2011)	0.00080	U	1	0.00090	U	1	0.00090	U	1	0.00090	U	1	0.0010	U	1	0.0011	U	1	0.0012	U	1	0.0010	U	1	0.0010	U	1	0.0010	U	1	0.0011	U	1	0.0020	U	1	0.0013	U	1	0.0010	U	1	0.0010	U	1	0.0010	U	1
AOC52-T1-SW05 (05-May-2011)	--			--			--			--			--			--			--			--			--			--			--			--			--			--			--					
AOC52-T1-SW06 (05-May-2011)	--			--			--			--			--			--			--			--			--			--			--			--			--			--			--					
AOC52-T1-SW07 (05-May-2011)	--			--			--			--			--			--			--			--			--			--			--			--			--			--			--					
AOC52-T1-SW08 (05-May-2011)	--			--			--			--			--			--			--			--			--			--			--			--			--			--			--					
AOC52-T2A-BOT01 (24-May-2011)	0.00080	U	1	0.00090	U	1	0.00090	U	1	0.00090	U	1	0.0010	U	1	0.0011	U	1	0.0012	U	1	0.0010	M	1	0.0010	U	1	0.0010	M	1	0.0011	U	1	0.0020	U	1	0.0013	U	1	0.0010	U	1	0.0010	U	1	0.0010	U	1
AOC52-T2A-BOT01-DUP (24-May-2011)	0.00080	U	1	0.00090	U	1	0.00090	U	1	0.00090	U	1	0.0010	U	1	0.0011	U	1	0.0012	U	1	0.0010	U	1	0.0010	U	1	0.0010	U	1	0.0011	U	1	0.0020	U	1	0.0013	U	1	0.0010	U	1	0.0010	U	1	0.0010	U	1
AOC52-T2A-BOT02 (24-May-2011)	0.00080	U	1	0.00090	U	1	0.00090	U	1	0.00090	U	1	0.0010	U	1	0.0011	U	1	0.0012	U	1	0.0010	U	1	0.0010	U	1	0.0010	U	1	0.0011	U	1	0.0020	U	1	0.0013	U	1	0.0010	U	1	0.0010	U	1	0.0010	U	1
AOC52-T2A-SW01 (24-May-2011)	--			--			--			--			--			--			--			--			--			--			--			--			--			--			--					
AOC52-T2A-SW01-DUP (24-May-2011)	--			--			--			--			--			--			--			--			--			--			--			--			--			--			--					
AOC52-T2A-SW02 (24-May-2011)	--			--			--			--			--			--			--			--			--			--			--			--			--			--			--					
AOC52-T2A-SW03 (24-May-2011)	--			--			--			--			--			--			--			--			--			--			--			--			--			--			--					
AOC52-T2A-SW04 (24-May-2011)	--			--			--			--			--			--			--			--			--			--			--			--			--			--			--					
AOC52-T2-BOT01 (23-May-2011)	0.00080	U	1	0.00090	U	1	0.00090	U	1	0.00090	U	1	0.0010	U	1	0.0011	U	1	0.0012	U	1	0.0010	U	1	0.0010	U	1	0.0010	U	1	0.0011	U	1	0.0020	U	1	0.0013	U	1	0.0010	U	1	0.0010	U	1	0.0010	U	1
AOC52-T2-BOT02 (23-May-2011)	0.00080	U	1	0.00090	U	1	0.00090	U	1	0.00090	U	1	0.0010	U	1	0.0011	U	1	0.0012	U	1	0.0010	U	1	0.0010	U	1	0.0010	U	1	0.0011	U	1	0.0020	U	1	0.0013	U	1	0.0010	U	1	0.0010	U	1	0.0010	U	1
AOC52-T2-SW01 (23-May-2011)	--			--			--			--			--			--			--			--			--			--			--			--			--			--			--					
AOC52-T2-SW02 (23-May-2011)	--			--			--			--			--			--			--			--			--			--			--			--			--			--			--					
AOC52-T2-SW03 (23-May-2011)	--			--			--			--			--			--			--			--			--			--			--			--			--			--			--					
AOC52-T2-SW04 (23-May-2011)	--			--			--			--			--			--			--			--			--			--			--			--			--			--			--					
AOC52-T3-BOT02 (05-May-2011)	0.00080	U	1	0.00090	U	1	0.00090	U	1	0.00090	U	1	0.0010	U	1	0.0011	U	1	0.0012	U	1	0.0010	U	1	0.0010	U																						

# Appendix C. Confirmation Sample Results for All Analytes at the Salado Creek Area

	1,1,1,2-Tetrachloroethane CAS: 630-20-6		1,1,1-Trichloroethane CAS: 71-55-6		1,1,2,2-Tetrachloroethane CAS: 79-34-5		1,1,2-Trichloroethane CAS: 79-00-5		1,1-Dichloroethane CAS: 75-34-3		1,1-Dichloroethene CAS: 75-35-4		1,1-Dichloropropene CAS: 563-58-6		1,2,3-Trichlorobenzene CAS: 87-61-6		1,2,3-Trichloropropane CAS: 96-18-4		1,2,4-Trichlorobenzene CAS: 120-82-1		1,2,4-Trimethylbenzene CAS: 95-63-6		1,2-Dibromo-3-chloropropane CAS: 96-12-8		1,2-Dibromoethane (EDB) CAS: 106-93-4		1,2-Dichlorobenzene CAS: 95-50-1		1,2-Dichloroethane CAS: 107-06-2			
	Qual	Dil	Qual	Dil	Qual	Dil	Qual	Dil	Qual	Dil	Qual	Dil	Qual	Dil	Qual	Dil	Qual	Dil	Qual	Dil	Qual	Dil	Qual	Dil	Qual	Dil	Qual	Dil	Qual	Dil		
<b>Tier 1 Soil PCLs - 30 acre<sup>†</sup></b>																																
Residential Combined Exposure <sup>[1]</sup>	39	c	32000	n	4	c	10	c	2600	n	1600	n	26	c	190	n	0.87	c	610	n	73	n	0.08	c	0.43	c	390	n	6.4	c		
Residential Groundwater Exposure <sup>[2]</sup>	0.71	c	0.81	m	0.012	c	0.01	m	9.2	n	0.025	m	0.067	c	13	n	0.0011	c	2.4	m	4.9	n	0.00087	m	0.0001	m	8.9	m	0.0069	m		
<b>TCEQ-Approved Background Values</b>																																
CSSA Metals Background Concentration <sup>[3]</sup>	na		na		na		na		na		na		na		na		na		na		na		na		na		na		na			
<b>Sample Locations (Date Collected)</b>																																
AOC52-T3-BOT02-DUP (05-May-2011)	0.00080	U 1	0.00090	U 1	0.00090	U 1	0.00090	U 1	0.0010	U 1	0.0011	U 1	0.0012	U 1	0.0010	U 1	0.0010	U 1	0.0010	U 1	0.0010	U 1	0.0011	U 1	0.0020	U 1	0.0013	U 1	0.0010	U 1	0.0010	U 1
AOC52-T3-SW03 (05-May-2011)	--		--		--		--		--		--		--		--		--		--		--		--		--		--		--		--	
AOC52-T3-SW04 (05-May-2011)	--		--		--		--		--		--		--		--		--		--		--		--		--		--		--		--	
AOC52-T4-BOT01 (05-May-2011)	0.00080	U 1	0.00090	U 1	0.00090	U 1	0.00090	U 1	0.0010	U 1	0.0011	U 1	0.0012	U 1	0.0010	U 1	0.0010	U 1	0.0010	U 1	0.0010	U 1	0.0011	U 1	0.0020	U 1	0.0013	U 1	0.0010	U 1	0.0010	U 1
AOC52-T4-SW01 (05-May-2011)	--		--		--		--		--		--		--		--		--		--		--		--		--		--		--		--	
AOC52-T4-SW02 (05-May-2011)	--		--		--		--		--		--		--		--		--		--		--		--		--		--		--		--	
AOC58-BOT01 (19-Apr-2011)	0.00080	U 1	0.00090	U 1	0.00090	U 1	0.00090	U 1	0.0010	U 1	0.0011	U 1	0.0012	U 1	0.0010	M 1	0.0010	U 1	0.0010	M 1	0.0011	U 1	0.0020	U 1	0.0013	U 1	0.0010	U 1	0.0010	U 1	0.0010	U 1
AOC58-BOT01-DUP (19-Apr-2011)	0.00080	U 1	0.00090	U 1	0.00090	U 1	0.00090	U 1	0.0010	U 1	0.0011	U 1	0.0012	U 1	0.0010	U 1	0.0010	U 1	0.0010	U 1	0.0011	U 1	0.0020	U 1	0.0013	U 1	0.0010	U 1	0.0010	U 1	0.0010	U 1
AOC58-SW01 (19-Apr-2011)	--		--		--		--		--		--		--		--		--		--		--		--		--		--		--		--	
AOC58-SW02 (19-Apr-2011)	--		--		--		--		--		--		--		--		--		--		--		--		--		--		--		--	
AOC58-SW03 (19-Apr-2011)	--		--		--		--		--		--		--		--		--		--		--		--		--		--		--		--	
AOC58-SW04 (19-Apr-2011)	--		--		--		--		--		--		--		--		--		--		--		--		--		--		--		--	
AOC62-BOT01 (30-Mar-2011)	--		--		--		--		--		--		--		--		--		--		--		--		--		--		--		--	
AOC62-BOT02 (19-Apr-2011)	0.00080	U 1	0.00090	U 1	0.00090	U 1	0.00090	U 1	0.0010	U 1	0.0011	U 1	0.0012	U 1	0.0010	U 1	0.0010	U 1	0.0010	U 1	0.0010	U 1	0.0011	U 1	0.0020	U 1	0.0013	U 1	0.0010	U 1	0.0010	U 1
AOC62-BOT03 (30-Mar-2011)	--		--		--		--		--		--		--		--		--		--		--		--		--		--		--		--	
AOC62-BOT04 (30-Mar-2011)	--		--		--		--		--		--		--		--		--		--		--		--		--		--		--		--	
AOC62-SW01 (30-Mar-2011)	--		--		--		--		--		--		--		--		--		--		--		--		--		--		--		--	
AOC62-SW02 (30-Mar-2011)	--		--		--		--		--		--		--		--		--		--		--		--		--		--		--		--	
AOC62-SW03 (30-Mar-2011)	--		--		--		--		--		--		--		--		--		--		--		--		--		--		--		--	
AOC62-SW04 (30-Mar-2011)	0.00080	U 1	0.00090	U 1	0.00090	U 1	0.00090	U 1	0.0010	U 1	0.0011	U 1	0.0012	U 1	0.0010	U 1	0.0010	U 1	0.0010	U 1	0.0010	U 1	0.0011	U 1	0.0020	U 1	0.0013	U 1	0.0010	U 1	0.0010	U 1
AOC62-SW05 (30-Mar-2011)	--		--		--		--		--		--		--		--		--		--		--		--		--		--		--		--	
AOC62-SW06 (30-Mar-2011)	--		--		--		--		--		--		--		--		--		--		--		--		--		--		--		--	
AOC62-SW07 (30-Mar-2011)	--		--		--		--		--		--		--		--		--		--		--		--		--		--		--		--	
AOC62-SW08 (30-Mar-2011)	--		--		--		--		--		--		--		--		--		--		--		--		--		--		--		--	
AOC62-SW09 (30-Mar-2011)	--		--		--		--		--		--		--		--		--		--		--		--		--		--		--		--	
AOC62-SW10 (30-Mar-2011)	--		--		--		--		--		--		--		--		--		--		--		--		--		--		--		--	
AOC62-SW11 (30-Mar-2011)	0.00080	U 1	0.00090	U 1	0.00090	U 1	0.00090	U 1	0.0010	U 1	0.0011	U 1	0.0012	U 1	0.0010	U 1	0.0010	U 1	0.0010	U 1	0.0010	U 1	0.0011	U 1	0.0020	U 1	0.0013	U 1	0.0010	U 1	0.0010	U 1
AOC62-SW12 (30-Mar-2011)	--		--		--		--		--		--		--		--		--		--		--		--		--		--		--		--	
AOC62-SW13 (30-Mar-2011)	--		--		--		--		--		--		--		--		--		--		--		--		--		--		--		--	
AOC62-SW14 (19-Apr-2011)	--		--		--		--		--		--		--		--		--		--		--		--		--		--		--		--	
AOC62-SW15 (30-Mar-2011)	--		--		--		--		--		--		--		--		--		--		--		--		--		--		--		--	
AOC62-SW16 (30-Mar-2011)	0.00080	U 1	0.00090	U 1	0.00090	U 1	0.00090	U 1	0.0010	U 1	0.0011	U 1	0.0012	U 1	0.0010	U 1	0.0010	U 1	0.0010	U 1	0.0010	U 1	0.0011	U 1	0.0020	U 1	0.0013	U 1	0.0010	U 1	0.0010	U 1
AOC62-T3-SW18 (05-May-2011)	--		--		--		--		--		--		--		--		--		--		--		--		--		--		--		--	
AOC62-T3-SW18-DUP (05-May-2011)	--		--		--		--		--		--		--		--		--		--		--		--		--		--		--		--	
AOC62-T4-SW17 (05-May-2011)	0.00080	U 1	0.00090	U 1	0.00090	U 1	0.00090	U 1	0.0010	U 1	0.0011	U 1	0.0012	U 1	0.0010	U 1	0.0010	U 1	0.0010	U 1	0.0010	U 1	0.0011	U 1	0.0020	U 1	0.0013	U 1	0.0010	U 1	0.0010	U 1
AOC62-T4-SW17-DUP (05-May-2011)	0.00080	U 1	0.00090	U 1	0.00090	U 1	0.00090	U 1	0.0010	U 1	0.0011	U 1	0.0012	U 1	0.0010	U 1	0.0010	U 1	0.0010	U 1	0.0010	U 1	0.0011	U 1	0.0020	U 1	0.0013	U 1	0.0010	U 1	0.0010	U 1

# Appendix C. Confirmation Sample Results for All Analytes at the Salado Creek Area

		Volatile Organics																																												
		1,2-Dichloropropane CAS: 78-87-5		1,3,5-Trimethylbenzene CAS: 108-67-8		1,3-Dichlorobenzene CAS: 541-73-1		1,3-Dichloropropane CAS: 142-28-9		1,4-Dichlorobenzene CAS: 106-46-7		1-Chlorohexane CAS: 544-10-5		2,2-Dichloropropane CAS: 594-20-7		2-Chlorotoluene CAS: 95-49-8		4-Chlorotoluene CAS: 106-43-4		Benzene CAS: 71-43-2		Bromobenzene CAS: 108-86-1		Bromochloromethane CAS: 74-97-5		Bromodichloromethane (mg/kg)		Bromoform CAS: 75-25-2		Bromomethane CAS: 74-83-9																
		Qual	Dil	Qual	Dil	Qual	Dil	Qual	Dil	Qual	Dil	Qual	Dil	Qual	Dil	Qual	Dil	Qual	Dil	Qual	Dil	Qual	Dil	Qual	Dil	Qual	Dil	Qual	Dil	Qual	Dil	Qual	Dil													
<b>Tier 1 Soil PCLs - 30 acre<sup>1</sup></b>																																														
Residential Combined Exposure <sup>[1]</sup>		31	n	59	n	62	n	26	c	250	c	2300	n	31	n	830	n	2.5	n	48	c	79	n	350	n	98	c	280	c	29	n															
Residential Groundwater Exposure <sup>[2]</sup>		0.011	m	27	n	3.4	n	0.032	c	1.1	m	20	n	0.06	c	4.5	n	19	n	0.013	m	2.9	n	1.5	n	0.033	c	0.32	c	0.065	n															
<b>TCEQ-Approved Background Values</b>																																														
CSSA Metals Background Concentration <sup>[3]</sup>		na																																												
<b>Sample Locations (Date Collected)</b>																																														
AOC42-BOT01 (19-Apr-2011)		0.00070	U	1	0.0011	M	1	0.0011	M	1	0.00070	U	1	0.00080	M	1	0.00090	M	1	0.0010	U	1	0.0013	M	1	0.0011	M	1	0.00090	U	1	0.00090	M	1	0.00080	U	1	0.00090	U	1	0.0011	U	1	0.00070	U	1
AOC42-BOT01-DUP (19-Apr-2011)		0.00070	U	1	0.0011	U	1	0.0011	U	1	0.00070	U	1	0.00080	U	1	0.00090	U	1	0.0010	U	1	0.0013	U	1	0.0011	U	1	0.00090	U	1	0.00090	U	1	0.00080	U	1	0.00090	U	1	0.0011	U	1	0.00070	U	1
AOC42-BOT02 (19-Apr-2011)		0.00070	M	1	0.0011	M	1	0.0011	M	1	0.00070	M	1	0.00080	M	1	0.00090	M	1	0.0010	M	1	0.0013	M	1	0.0011	M	1	0.00090	M	1	0.00090	M	1	0.00080	M	1	0.00090	M	1	0.0011	M	1	0.00070	U	1
AOC42-BOT02-DUP (19-Apr-2011)		0.00070	U	1	0.0011	U	1	0.0011	U	1	0.00070	U	1	0.00080	U	1	0.00090	U	1	0.0010	U	1	0.0013	U	1	0.0011	U	1	0.00090	U	1	0.00090	U	1	0.00080	U	1	0.00090	U	1	0.0011	U	1	0.00070	U	1
AOC42-BOT04 (04-Aug-2011)		--			--			--			--			--			--			--			--			--			--			--			--			--			--			--		
AOC42-BOT04-DUP (04-Aug-2011)		--			--			--			--			--			--			--			--			--			--			--			--			--			--			--		
AOC42-SW01 (19-Apr-2011)		--			--			--			--			--			--			--			--			--			--			--			--			--			--			--		
AOC42-SW02 (19-Apr-2011)		--			--			--			--			--			--			--			--			--			--			--			--			--			--			--		
AOC42-SW03 (19-Apr-2011)		--			--			--			--			--			--			--			--			--			--			--			--			--			--			--		
AOC42-SW04 (19-Apr-2011)		--			--			--			--			--			--			--			--			--			--			--			--			--			--			--		
AOC42-SW05 (19-Apr-2011)		--			--			--			--			--			--			--			--			--			--			--			--			--			--			--		
AOC42-SW06 (19-Apr-2011)		--			--			--			--			--			--			--			--			--			--			--			--			--			--			--		
AOC42-SW07 (19-Apr-2011)		--			--			--			--			--			--			--			--			--			--			--			--			--			--			--		
AOC42-SW08 (19-Apr-2011)		--			--			--			--			--			--			--			--			--			--			--			--			--			--			--		
AOC42-SW09 (19-Apr-2011)		--			--			--			--			--			--			--			--			--			--			--			--			--			--			--		
AOC42-SW10 (19-Apr-2011)		--			--			--			--			--			--			--			--			--			--			--			--			--			--			--		
AOC42-SW14 (04-Aug-2011)		--			--			--			--			--			--			--			--			--			--			--			--			--			--			--		
AOC52-T1-BOT03 (05-May-2011)		0.00070	U	1	0.0011	U	1	0.0011	U	1	0.00070	U	1	0.00080	U	1	0.00090	U	1	0.0010	U	1	0.0013	U	1	0.0011	U	1	0.00090	U	1	0.00090	U	1	0.00080	U	1	0.00090	U	1	0.0011	U	1	0.00070	U	1
AOC52-T1-SW05 (05-May-2011)		--			--			--			--			--			--			--			--			--			--			--			--			--			--			--		
AOC52-T1-SW06 (05-May-2011)		--			--			--			--			--			--			--			--			--			--			--			--			--			--			--		
AOC52-T1-SW07 (05-May-2011)		--			--			--			--			--			--			--			--			--			--			--			--			--			--			--		
AOC52-T1-SW08 (05-May-2011)		--			--			--			--			--			--			--			--			--			--			--			--			--			--			--		
AOC52-T2A-BOT01 (24-May-2011)		0.00070	U	1	0.0011	U	1	0.0011	U	1	0.00070	U	1	0.00080	U	1	0.00090	U	1	0.0010	U	1	0.0013	U	1	0.0011	U	1	0.00090	U	1	0.00090	U	1	0.00080	U	1	0.00090	U	1	0.0011	U	1	0.00070	U	1
AOC52-T2A-BOT01-DUP (24-May-2011)		0.00070	U	1	0.0011	U	1	0.0011	U	1	0.00070	U	1	0.00080	U	1	0.00090	U	1	0.0010	U	1	0.0013	U	1	0.0011	U	1	0.00090	U	1	0.00090	U	1	0.00080	U	1	0.00090	U	1	0.0011	U	1	0.00070	U	1
AOC52-T2A-BOT02 (24-May-2011)		0.00070	U	1	0.0011	U	1	0.0011	U	1	0.00070	U	1	0.00080	U	1	0.00090	U	1	0.0010	U	1	0.0013	U	1	0.0011	U	1	0.00090	U	1	0.00090	U	1	0.00080	U	1	0.00090	U	1	0.0011	U	1	0.00070	U	1
AOC52-T2A-SW01 (24-May-2011)		--			--			--			--			--			--			--			--			--			--			--			--			--			--			--		
AOC52-T2A-SW01-DUP (24-May-2011)		--			--			--			--			--			--			--			--			--			--			--			--			--			--			--		
AOC52-T2A-SW02 (24-May-2011)		--			--			--			--			--			--			--			--			--			--			--			--			--			--			--		
AOC52-T2A-SW03 (24-May-2011)		--			--			--			--			--			--			--			--			--			--			--			--			--			--			--		
AOC52-T2A-SW04 (24-May-2011)		--			--			--			--			--			--			--			--			--			--			--			--			--			--			--		
AOC52-T2-BOT01 (23-May-2011)		0.00070	U	1	0.0011	U	1	0.0011	U	1	0.00070	U	1	0.00080	U	1	0.00090	U	1	0.0010	U	1	0.0013	U	1	0.0011	U	1	0.00090	U	1	0.00090	U	1	0.00080	U	1	0.00090	U	1	0.0011	U	1	0.00070	U	1
AOC52-T2-BOT02 (23-May-2011)		0.00070	U	1	0.0011	U	1	0.0011	U	1	0.00070	U	1	0.00080	U	1	0.00090	U	1	0.0010	U	1	0.0013	U	1	0.0011	U	1	0.00090	U	1	0.00090	U	1	0.00080	U	1	0.00090	U	1	0.0011	U	1	0.00070	U	1
AOC52-T2-SW01 (23-May-2011)		--			--			--			--			--			--			--			--			--			--			--			--			--			--			--		
AOC52-T2-SW02 (23-May-2011)		--			--			--			--			--			--			--			--			--			--			--			--			--			--			--		
AOC52-T2-SW03 (23-May-2011)		--			--			--			--			--			--			--			--			--			--			--			--			--			--			--		
AOC52-T2-SW04 (23-May-2011)		--			--			--			--			--			--			--			--			--			--			--			--			--			--			--		
AOC52-T3-BOT02 (05-May-2011)		0.00070	U	1	0.0011	U	1	0.0011	U	1	0.00070	U	1	0.00080	U	1	0.00090	U	1	0.0010	U	1	0.0013	U	1	0.0011	U	1	0.00090	U	1	0.00090	U	1	0.00080	U	1	0.00090	U	1	0.0011	U	1	0.00070	U	1

### Appendix C. Confirmation Sample Results for All Analytes at the Salado Creek Area

	Volatile Organics																																												
	1,2-Dichloropropane CAS: 78-87-5	Qual	Dil	1,3,5-Trimethylbenzene CAS: 108-67-8	Qual	Dil	1,3-Dichlorobenzene CAS: 541-73-1	Qual	Dil	1,3-Dichloropropane CAS: 142-28-9	Qual	Dil	1,4-Dichlorobenzene CAS: 106-46-7	Qual	Dil	1-Chlorohexane CAS: 544-10-5	Qual	Dil	2,2-Dichloropropane CAS: 594-20-7	Qual	Dil	2-Chlorotoluene CAS: 95-49-8	Qual	Dil	4-Chlorotoluene CAS: 106-43-4	Qual	Dil	Benzene CAS: 71-43-2	Qual	Dil	Bromobenzene CAS: 108-86-1	Qual	Dil	Bromochloromethane CAS: 74-97-5	Qual	Dil	Bromodichloromethane (mg/kg)	Qual	Dil	Bromoform CAS: 75-25-2	Qual	Dil	Bromomethane CAS: 74-83-9	Qual	Dil
<b>Tier 1 Soil PCLs - 30 acre<sup>†</sup></b>																																													
Residential Combined Exposure <sup>[1]</sup>	31	n		59	n		62	n		26	c		250	c		2300	n		31	n		830	n		2.5	n		48	c		79	n		350	n		98	c		280	c		29	n	
Residential Groundwater Exposure <sup>[2]</sup>	0.011	m		27	n		3.4	n		0.032	c		1.1	m		20	n		0.06	c		4.5	n		19	n		0.013	m		2.9	n		1.5	n		0.033	c		0.32	c		0.065	n	
<b>TCEQ-Approved Background Values</b>																																													
CSSA Metals Background Concentration <sup>[3]</sup>	na			na			na			na			na			na			na			na			na			na			na			na			na			na			na		
<b>Sample Locations (Date Collected)</b>																																													
AOC52-T3-BOT02-DUP (05-May-2011)	0.00070	U	1	0.0011	U	1	0.0011	U	1	0.00070	U	1	0.00080	U	1	0.00090	U	1	0.0010	U	1	0.0013	U	1	0.0011	U	1	0.00090	U	1	0.00090	U	1	0.00080	U	1	0.00090	U	1	0.0011	U	1	0.00070	U	1
AOC52-T3-SW03 (05-May-2011)	--			--			--			--			--			--			--			--			--			--			--			--			--			--			--		
AOC52-T3-SW04 (05-May-2011)	--			--			--			--			--			--			--			--			--			--			--			--			--			--			--		
AOC52-T4-BOT01 (05-May-2011)	0.00070	U	1	0.0011	U	1	0.0011	U	1	0.00070	U	1	0.00080	U	1	0.00090	U	1	0.0010	U	1	0.0013	U	1	0.0011	U	1	0.00090	U	1	0.00090	U	1	0.00080	U	1	0.00090	U	1	0.0011	U	1	0.00070	U	1
AOC52-T4-SW01 (05-May-2011)	--			--			--			--			--			--			--			--			--			--			--			--			--			--			--		
AOC52-T4-SW02 (05-May-2011)	--			--			--			--			--			--			--			--			--			--			--			--			--			--			--		
AOC58-BOT01 (19-Apr-2011)	0.00070	U	1	0.0011	U	1	0.0011	U	1	0.00070	U	1	0.00080	U	1	0.00090	U	1	0.0010	U	1	0.0013	U	1	0.0011	U	1	0.00090	U	1	0.00090	U	1	0.00080	U	1	0.00090	U	1	0.0011	U	1	0.00070	U	1
AOC58-BOT01-DUP (19-Apr-2011)	0.00070	U	1	0.0011	U	1	0.0011	U	1	0.00070	U	1	0.00080	U	1	0.00090	U	1	0.0010	U	1	0.0013	U	1	0.0011	U	1	0.00090	U	1	0.00090	U	1	0.00080	U	1	0.00090	U	1	0.0011	U	1	0.00070	U	1
AOC58-SW01 (19-Apr-2011)	--			--			--			--			--			--			--			--			--			--			--			--			--			--			--		
AOC58-SW02 (19-Apr-2011)	--			--			--			--			--			--			--			--			--			--			--			--			--			--			--		
AOC58-SW03 (19-Apr-2011)	--			--			--			--			--			--			--			--			--			--			--			--			--			--			--		
AOC58-SW04 (19-Apr-2011)	--			--			--			--			--			--			--			--			--			--			--			--			--			--			--		
AOC62-BOT01 (30-Mar-2011)	--			--			--			--			--			--			--			--			--			--			--			--			--			--			--		
AOC62-BOT02 (19-Apr-2011)	0.00070	U	1	0.0011	U	1	0.0011	U	1	0.00070	U	1	0.00080	U	1	0.00090	U	1	0.0010	U	1	0.0013	U	1	0.0011	U	1	0.00090	U	1	0.00090	U	1	0.00080	U	1	0.00090	U	1	0.0011	U	1	0.00070	U	1
AOC62-BOT03 (30-Mar-2011)	--			--			--			--			--			--			--			--			--			--			--			--			--			--			--		
AOC62-BOT04 (30-Mar-2011)	--			--			--			--			--			--			--			--			--			--			--			--			--			--			--		
AOC62-SW01 (30-Mar-2011)	--			--			--			--			--			--			--			--			--			--			--			--			--			--			--		
AOC62-SW02 (30-Mar-2011)	--			--			--			--			--			--			--			--			--			--			--			--			--			--			--		
AOC62-SW03 (30-Mar-2011)	--			--			--			--			--			--			--			--			--			--			--			--			--			--			--		
AOC62-SW04 (30-Mar-2011)	0.00070	U	1	0.0011	U	1	0.0011	U	1	0.00070	U	1	0.00080	U	1	0.00090	U	1	0.0010	U	1	0.0013	U	1	0.0011	U	1	0.00090	U	1	0.00090	U	1	0.00080	U	1	0.00090	U	1	0.0011	U	1	0.00070	U	1
AOC62-SW05 (30-Mar-2011)	--			--			--			--			--			--			--			--			--			--			--			--			--			--			--		
AOC62-SW06 (30-Mar-2011)	--			--			--			--			--			--			--			--			--			--			--			--			--			--			--		
AOC62-SW07 (30-Mar-2011)	--			--			--			--			--			--			--			--			--			--			--			--			--			--			--		
AOC62-SW08 (30-Mar-2011)	--			--			--			--			--			--			--			--			--			--			--			--			--			--			--		
AOC62-SW09 (30-Mar-2011)	--			--			--			--			--			--			--			--			--			--			--			--			--			--			--		
AOC62-SW10 (30-Mar-2011)	--			--			--			--			--			--			--			--			--			--			--			--			--			--			--		
AOC62-SW11 (30-Mar-2011)	0.00070	U	1	0.0011	U	1	0.0011	U	1	0.00070	U	1	0.00080	U	1	0.00090	U	1	0.0010	U	1	0.0013	U	1	0.0011	U	1	0.00090	U	1	0.00090	U	1	0.00080	U	1	0.00090	U	1	0.0011	U	1	0.00070	U	1
AOC62-SW12 (30-Mar-2011)	--			--			--			--			--			--			--			--			--			--			--			--			--			--			--		
AOC62-SW13 (30-Mar-2011)	--			--			--			--			--			--			--			--			--			--			--			--			--			--			--		
AOC62-SW14 (19-Apr-2011)	--			--			--			--			--			--			--			--			--			--			--			--			--			--			--		
AOC62-SW15 (30-Mar-2011)	--			--			--			--			--			--			--			--			--			--			--			--			--			--			--		
AOC62-SW16 (30-Mar-2011)	0.00070	U	1	0.0011	U	1	0.0011	U	1	0.00070	U	1	0.00080	U	1	0.00090	U	1	0.0010	U	1	0.0013	U	1	0.0011	U	1	0.00090	U	1	0.00090	U	1	0.00080	U	1	0.00090	U	1	0.0011	U	1	0.00070	U	1
AOC62-T3-SW18 (05-May-2011)	--			--			--			--			--			--			--			--			--			--			--			--			--			--			--		
AOC62-T3-SW18-DUP (05-May-2011)	--			--			--			--			--			--			--			--			--			--			--			--			--			--			--		
AOC62-T4-SW17 (05-May-2011)	0.00070	U	1	0.0011	U	1	0.0011	U	1	0.00070	U	1	0.00080	U	1	0.00090	U	1	0.0010	U	1	0.0013	U	1	0.0011	U	1	0.00090	U	1	0.00090	U	1	0.00080	U	1	0.00090	U	1	0.0011	U	1	0.00070	U	1
AOC62-T4-SW17-DUP (05-May-2011)	0.00070	U	1	0.0011	U	1	0.0011	U	1	0.00070	U	1	0.00080	U	1	0.00090	U	1	0.0010	U	1	0.0013	U	1	0.0011	U	1	0.00090	U	1	0.00090	U	1	0.00080	U	1	0.00090	U	1	0.0011	U	1	0.00070	U	1

# Appendix C. Confirmation Sample Results for All Analytes at the Salado Creek Area

	Volatile Organics																																												
	Carbon tetrachloride CAS: 56-23-5	Chlorobenzene CAS: 108-90-7	Chloroethane CAS: 75-00-3	Chloroform CAS: 67-66-3	Chloromethane CAS: 74-87-3	cis-1,2-Dichloroethene CAS: 156-59-2	cis-1,3-Dichloropropene CAS: 10061-01-5	Dibromochloromethane CAS: 124-48-1	Dibromomethane CAS: 74-95-3	Dichlorodifluoromethane CAS: 75-71-8	Ethylbenzene CAS: 100-41-4	Hexachlorobutadiene CAS: 87-68-3	Isopropylbenzene CAS: 98-82-8	m,p-Xylene CAS: 179601-23-1	Methylene chloride CAS: 75-09-2																														
<b>Tier 1 Soil PCLs - 30 acre<sup>†</sup></b>																																													
Residential Combined Exposure <sup>[1]</sup>	9.7	c	320	n	23000	n	8	c	84	c	720	n	7.1	n	72	c	140	n	12000	n	4000	n	12	c	3000	n	4700		260	c															
Residential Groundwater Exposure <sup>[2]</sup>	0.031	m	0.55	m	15	n	0.51	n	0.2	c	0.12	m	0.0033	c	0.025	c	0.56	c	120	n	3.8	m	1.6	c	170	n	53		0.0065	m															
<b>TCEQ-Approved Background Values</b>																																													
CSSA Metals Background Concentration <sup>[3]</sup>	na		na		na		na		na		na		na		na		na		na		na		na		na		na		na																
<b>Sample Locations (Date Collected)</b>																																													
AOC42-BOT01 (19-Apr-2011)	0.0010	U	1	0.00070	U	1	0.0015	U	1	0.00070	U	1	0.0015	U	1	0.00080	U	1	0.00090	U	1	0.0010	U	1	0.0018	U	1	0.0010	U	1	0.0011	M	1	0.0010	M	1	0.0018	U	1	0.0013	M	1			
AOC42-BOT01-DUP (19-Apr-2011)	0.0010	U	1	0.00070	U	1	0.0015	U	1	0.00070	U	1	0.0015	U	1	0.00080	U	1	0.00090	U	1	0.0010	U	1	0.0018	U	1	0.0010	U	1	0.0011	U	1	0.0010	U	1	0.0018	U	1	0.0013	U	1			
AOC42-BOT02 (19-Apr-2011)	0.0010	M	1	0.00070	M	1	0.0015	U	1	0.00070	M	1	0.0015	U	1	0.00080	M	1	0.00090	M	1	0.0010	M	1	0.0018	U	1	0.0010	M	1	0.0011	M	1	0.0010	M	1	0.0018	M	1	0.0013	M	1			
AOC42-BOT02-DUP (19-Apr-2011)	0.0010	U	1	0.00070	U	1	0.0015	U	1	0.00070	U	1	0.0015	U	1	0.00080	U	1	0.00090	U	1	0.0010	U	1	0.0018	U	1	0.0010	U	1	0.0011	U	1	0.0010	U	1	0.0018	U	1	0.0013	U	1			
AOC42-BOT04 (04-Aug-2011)	--			--			--			--			--			--			--			--			--			--			--			--			--								
AOC42-BOT04-DUP (04-Aug-2011)	--			--			--			--			--			--			--			--			--			--			--			--			--								
AOC42-SW01 (19-Apr-2011)	--			--			--			--			--			--			--			--			--			--			--			--			--								
AOC42-SW02 (19-Apr-2011)	--			--			--			--			--			--			--			--			--			--			--			--			--								
AOC42-SW03 (19-Apr-2011)	--			--			--			--			--			--			--			--			--			--			--			--			--								
AOC42-SW04 (19-Apr-2011)	--			--			--			--			--			--			--			--			--			--			--			--			--								
AOC42-SW05 (19-Apr-2011)	--			--			--			--			--			--			--			--			--			--			--			--			--								
AOC42-SW06 (19-Apr-2011)	--			--			--			--			--			--			--			--			--			--			--			--			--								
AOC42-SW07 (19-Apr-2011)	--			--			--			--			--			--			--			--			--			--			--			--			--								
AOC42-SW08 (19-Apr-2011)	--			--			--			--			--			--			--			--			--			--			--			--			--								
AOC42-SW09 (19-Apr-2011)	--			--			--			--			--			--			--			--			--			--			--			--			--								
AOC42-SW10 (19-Apr-2011)	--			--			--			--			--			--			--			--			--			--			--			--			--								
AOC42-SW14 (04-Aug-2011)	--			--			--			--			--			--			--			--			--			--			--			--			--								
AOC52-T1-BOT03 (05-May-2011)	0.0010	U	1	0.00070	U	1	0.0015	U	1	0.00070	U	1	0.0015	U	1	0.00080	U	1	0.00090	U	1	0.00090	U	1	0.0010	U	1	0.0018	U	1	0.0010	U	1	0.0011	U	1	0.0010	U	1	0.0018	U	1	0.018	J	1
AOC52-T1-SW05 (05-May-2011)	--			--			--			--			--			--			--			--			--			--			--			--			--			--					
AOC52-T1-SW06 (05-May-2011)	--			--			--			--			--			--			--			--			--			--			--			--			--			--					
AOC52-T1-SW07 (05-May-2011)	--			--			--			--			--			--			--			--			--			--			--			--			--			--					
AOC52-T1-SW08 (05-May-2011)	--			--			--			--			--			--			--			--			--			--			--			--			--			--					
AOC52-T2A-BOT01 (24-May-2011)	0.0010	U	1	0.00070	U	1	0.0015	U	1	0.00070	U	1	0.0015	U	1	0.00080	U	1	0.00090	U	1	0.00090	U	1	0.0010	U	1	0.0018	U	1	0.0010	U	1	0.0011	M	1	0.0010	U	1	0.0018	U	1	0.0050	J	1
AOC52-T2A-BOT01-DUP (24-May-2011)	0.0010	U	1	0.00070	U	1	0.0015	U	1	0.00070	U	1	0.0015	U	1	0.00080	U	1	0.00090	U	1	0.00090	U	1	0.0010	U	1	0.0018	U	1	0.0010	U	1	0.0011	U	1	0.0010	U	1	0.0018	U	1	0.0045	F	1
AOC52-T2A-BOT02 (24-May-2011)	0.0010	U	1	0.00070	U	1	0.0015	U	1	0.00070	U	1	0.0015	U	1	0.00080	U	1	0.00090	U	1	0.00090	U	1	0.0010	U	1	0.0018	U	1	0.0010	U	1	0.0011	U	1	0.0010	U	1	0.0018	U	1	0.0052	J	1
AOC52-T2A-SW01 (24-May-2011)	--			--			--			--			--			--			--			--			--			--			--			--			--			--					
AOC52-T2A-SW01-DUP (24-May-2011)	--			--			--			--			--			--			--			--			--			--			--			--			--			--					
AOC52-T2A-SW02 (24-May-2011)	--			--			--			--			--			--			--			--			--			--			--			--			--			--					
AOC52-T2A-SW03 (24-May-2011)	--			--			--			--			--			--			--			--			--			--			--			--			--			--					
AOC52-T2A-SW04 (24-May-2011)	--			--			--			--			--			--			--			--			--			--			--			--			--			--					
AOC52-T2-BOT01 (23-May-2011)	0.0010	U	1	0.00070	U	1	0.0015	U	1	0.00070	U	1	0.0015	U	1	0.00080	U	1	0.00090	U	1	0.00090	U	1	0.0010	U	1	0.0018	U	1	0.0010	U	1	0.0011	U	1	0.0010	U	1	0.0018	U	1	0.0013	U	1
AOC52-T2-BOT02 (23-May-2011)	0.0010	U	1	0.00070	U	1	0.0015	U	1	0.00070	U	1	0.0015	U	1	0.00080	U	1	0.00090	U	1	0.00090	U	1	0.0010	U	1	0.0018	U	1	0.0010	U	1	0.0011	U	1	0.0010	U	1	0.0018	U	1	0.0013	U	1
AOC52-T2-SW01 (23-May-2011)	--			--			--			--			--			--			--			--			--			--			--			--			--			--					
AOC52-T2-SW02 (23-May-2011)	--			--			--			--			--			--			--			--			--			--			--			--			--			--					
AOC52-T2-SW03 (23-May-2011)	--			--			--			--			--			--			--			--			--			--			--			--			--			--					
AOC52-T2-SW04 (23-May-2011)	--			--			--			--			--			--			--			--			--			--			--			--			--			--					
AOC52-T3-BOT02 (05-May-2011)	0.0010	U	1	0.00070	U	1	0.0015	U	1	0.00070	U	1	0.0015	U	1	0.00080	U	1	0.00090	U	1	0.00090	U	1	0.0010	U	1	0.0018	U	1	0.0010	U	1	0.0011	U	1	0.0010	U	1	0.0018	U	1	0.018	J	1

# Appendix C. Confirmation Sample Results for All Analytes at the Salado Creek Area

	Volatile Organics																																												
	Carbon tetrachloride CAS: 56-23-5	Chlorobenzene CAS: 108-90-7	Chloroethane CAS: 75-00-3	Chloroform CAS: 67-66-3	Chloromethane CAS: 74-87-3	cis-1,2-Dichloroethene CAS: 156-59-2	cis-1,3-Dichloropropene CAS: 10061-01-5	Dibromochloromethane CAS: 124-48-1	Dibromomethane CAS: 74-95-3	Dichlorodifluoromethane CAS: 75-71-8	Ethylbenzene CAS: 100-41-4	Hexachlorobutadiene CAS: 87-68-3	Isopropylbenzene CAS: 98-82-8	m,p-Xylene CAS: 179601-23-1	Methylene chloride CAS: 75-09-2	Qual	Dil	Qual	Dil	Qual	Dil	Qual	Dil	Qual	Dil	Qual	Dil	Qual	Dil	Qual	Dil														
<b>Tier 1 Soil PCLs - 30 acre<sup>†</sup></b>																																													
Residential Combined Exposure <sup>[1]</sup>	9.7	c	320	n	23000	n	8	c	84	c	720	n	7.1	n	72	c	140	n	12000	n	4000	n	12	c	3000	n	4700		260	c															
Residential Groundwater Exposure <sup>[2]</sup>	0.031	m	0.55	m	15	n	0.51	n	0.2	c	0.12	m	0.0033	c	0.025	c	0.56	c	120	n	3.8	m	1.6	c	170	n	53		0.0065	m															
<b>TCEQ-Approved Background Values</b>																																													
CSSA Metals Background Concentration <sup>[3]</sup>	na		na		na		na		na		na		na		na		na		na		na		na		na		na		na																
<b>Sample Locations (Date Collected)</b>																																													
AOC52-T3-BOT02-DUP (05-May-2011)	0.0010	U	1	0.00070	U	1	0.0015	U	1	0.00070	U	1	0.0015	U	1	0.00080	U	1	0.00090	U	1	0.00090	U	1	0.0010	U	1	0.0018	U	1	0.0010	U	1	0.0011	U	1	0.0010	U	1	0.0018	U	1	0.0091	J	1
AOC52-T3-SW03 (05-May-2011)	--			--			--			--			--			--			--			--			--			--			--			--			--			--			--		
AOC52-T3-SW04 (05-May-2011)	--			--			--			--			--			--			--			--			--			--			--			--			--			--			--		
AOC52-T4-BOT01 (05-May-2011)	0.0010	U	1	0.00070	U	1	0.0015	U	1	0.00070	U	1	0.0015	U	1	0.00080	U	1	0.00090	U	1	0.00090	U	1	0.0010	U	1	0.0018	U	1	0.0010	U	1	0.0011	U	1	0.0010	U	1	0.0018	U	1	0.0057		1
AOC52-T4-SW01 (05-May-2011)	--			--			--			--			--			--			--			--			--			--			--			--			--			--			--		
AOC52-T4-SW02 (05-May-2011)	--			--			--			--			--			--			--			--			--			--			--			--			--			--			--		
AOC58-BOT01 (19-Apr-2011)	0.0010	U	1	0.00070	U	1	0.0015	U	1	0.00070	U	1	0.0015	U	1	0.00080	U	1	0.00090	U	1	0.00090	U	1	0.0010	U	1	0.0018	U	1	0.0010	U	1	0.0011	M	1	0.0010	U	1	0.0018	U	1	0.0013	U	1
AOC58-BOT01-DUP (19-Apr-2011)	0.0010	U	1	0.00070	U	1	0.0015	U	1	0.00070	U	1	0.0015	U	1	0.00080	U	1	0.00090	U	1	0.00090	U	1	0.0010	U	1	0.0018	U	1	0.0010	U	1	0.0011	U	1	0.0010	U	1	0.0018	U	1	0.0013	U	1
AOC58-SW01 (19-Apr-2011)	--			--			--			--			--			--			--			--			--			--			--			--			--			--			--		
AOC58-SW02 (19-Apr-2011)	--			--			--			--			--			--			--			--			--			--			--			--			--			--			--		
AOC58-SW03 (19-Apr-2011)	--			--			--			--			--			--			--			--			--			--			--			--			--			--			--		
AOC58-SW04 (19-Apr-2011)	--			--			--			--			--			--			--			--			--			--			--			--			--			--			--		
AOC62-BOT01 (30-Mar-2011)	--			--			--			--			--			--			--			--			--			--			--			--			--			--			--		
AOC62-BOT02 (19-Apr-2011)	0.0010	U	1	0.00070	U	1	0.0015	U	1	0.00070	U	1	0.0015	U	1	0.00080	U	1	0.00090	U	1	0.00090	U	1	0.0010	U	1	0.0018	U	1	0.0010	U	1	0.0011	U	1	0.0010	U	1	0.0018	U	1	0.0013	U	1
AOC62-BOT03 (30-Mar-2011)	--			--			--			--			--			--			--			--			--			--			--			--			--			--			--		
AOC62-BOT04 (30-Mar-2011)	--			--			--			--			--			--			--			--			--			--			--			--			--			--			--		
AOC62-SW01 (30-Mar-2011)	--			--			--			--			--			--			--			--			--			--			--			--			--			--			--		
AOC62-SW02 (30-Mar-2011)	--			--			--			--			--			--			--			--			--			--			--			--			--			--			--		
AOC62-SW03 (30-Mar-2011)	--			--			--			--			--			--			--			--			--			--			--			--			--			--			--		
AOC62-SW04 (30-Mar-2011)	0.0010	U	1	0.00070	U	1	0.0015	U	1	0.00070	U	1	0.0015	U	1	0.00080	U	1	0.00090	U	1	0.00090	U	1	0.0010	U	1	0.0018	U	1	0.0010	U	1	0.0011	U	1	0.0010	U	1	0.0018	U	1	0.0013	U	1
AOC62-SW05 (30-Mar-2011)	--			--			--			--			--			--			--			--			--			--			--			--			--			--			--		
AOC62-SW06 (30-Mar-2011)	--			--			--			--			--			--			--			--			--			--			--			--			--			--			--		
AOC62-SW07 (30-Mar-2011)	--			--			--			--			--			--			--			--			--			--			--			--			--			--			--		
AOC62-SW08 (30-Mar-2011)	--			--			--			--			--			--			--			--			--			--			--			--			--			--			--		
AOC62-SW09 (30-Mar-2011)	--			--			--			--			--			--			--			--			--			--			--			--			--			--			--		
AOC62-SW10 (30-Mar-2011)	--			--			--			--			--			--			--			--			--			--			--			--			--			--			--		
AOC62-SW11 (30-Mar-2011)	0.0010	U	1	0.00070	U	1	0.0015	U	1	0.00070	U	1	0.0015	U	1	0.00080	U	1	0.00090	U	1	0.00090	U	1	0.0010	U	1	0.0018	U	1	0.0010	U	1	0.0011	U	1	0.0010	U	1	0.0018	U	1	0.0018	F	1
AOC62-SW12 (30-Mar-2011)	--			--			--			--			--			--			--			--			--			--			--			--			--			--			--		
AOC62-SW13 (30-Mar-2011)	--			--			--			--			--			--			--			--			--			--			--			--			--			--			--		
AOC62-SW14 (19-Apr-2011)	--			--			--			--			--			--			--			--			--			--			--			--			--			--			--		
AOC62-SW15 (30-Mar-2011)	--			--			--			--			--			--			--			--			--			--			--			--			--			--			--		
AOC62-SW16 (30-Mar-2011)	0.0010	U	1	0.00070	U	1	0.0015	U	1	0.00070	U	1	0.0015	U	1	0.00080	U	1	0.00090	U	1	0.00090	U	1	0.0010	U	1	0.0018	U	1	0.0010	U	1	0.0011	U	1	0.0010	U	1	0.0018	U	1	0.0013	U	1
AOC62-T3-SW18 (05-May-2011)	--			--			--			--			--			--			--			--			--			--			--			--			--			--			--		
AOC62-T3-SW18-DUP (05-May-2011)	--			--			--			--			--			--			--			--			--			--			--			--			--			--			--		
AOC62-T4-SW17 (05-May-2011)	0.0010	U	1	0.00070	U	1	0.0015	U	1	0.00070	U	1	0.0015	U	1	0.00080	U	1	0.00090	U	1	0.00090	U	1	0.0010	U	1	0.0018	U	1	0.0010	U	1	0.0011	U	1	0.0010	U	1	0.0018	U	1	0.018		1
AOC62-T4-SW17-DUP (05-May-2011)	0.0010	U	1	0.00070	U	1	0.0015	U	1	0.00070	U	1	0.0015	U	1	0.00080	U	1	0.00090	U	1	0.00090	U	1	0.0010	U	1	0.0018	U	1	0.0010	U	1	0.0011	U	1	0.0010	U	1	0.0018	U	1	0.015		1

# Appendix C. Confirmation Sample Results for All Analytes at the Salado Creek Area

	Volatile Organics																																												
	Naphthalene CAS: 91-20-3 Qual Dil	n-Butylbenzene CAS: 104-51-8 Qual Dil	n-Propylbenzene CAS: 103-65-1 Qual Dil	o-Xylene CAS: 95-47-6 Qual Dil	p-Cymene (p-Isopropyltoluene) CAS: 99-87-6 Qual Dil	sec-Butylbenzene CAS: 135-98-8 Qual Dil	Styrene CAS: 100-42-5 Qual Dil	tert-Butylbenzene CAS: 98-06-6 Qual Dil	Tetrachloroethene (PCE) CAS: 127-18-4 Qual Dil	Toluene CAS: 108-88-3 Qual Dil	trans-1,2-Dichloroethene CAS: 156-60-5 Qual Dil	trans-1,3-Dichloropropene CAS: 10061-02-6 Qual Dil	Trichloroethene (TCE) CAS: 79-01-6 Qual Dil	Trichlorofluoromethane CAS: 75-69-4 Qual Dil	Vinyl chloride CAS: 75-01-4 Qual Dil																														
<b>Tier 1 Soil PCLs - 30 acre<sup>1</sup></b>																																													
Residential Combined Exposure <sup>[1]</sup>	120	n	1500	n	1600	n	29000	n	2500	n	1600	n	4300	n	1400	n	94	c	5400	n	370	n	26	c	68	n	12000	n	3.4	c															
Residential Groundwater Exposure <sup>[2]</sup>	16	n	61	n	22	n	35	m	120	n	42	n	1.6	m	50	n	0.025	m	4.1	m	0.25	m	0.018	c	0.017	m	64	n	0.011	m															
<b>TCEQ-Approved Background Values</b>																																													
CSSA Metals Background Concentration <sup>[3]</sup>	na		na		na		na		na		na		na		na		na		na		na		na		na		na		na																
<b>Sample Locations (Date Collected)</b>																																													
AOC42-BOT01 (19-Apr-2011)	0.0010	M	1	0.0010	M	1	0.0012	M	1	0.00070	U	1	0.0012	M	1	0.0011	M	1	0.00090	U	1	0.0012	M	1	0.00080	M	1	0.0010	U	1	0.00080	U	1	0.00090	U	1	0.0012	U	1	0.0013	U	1	0.0013	U	1
AOC42-BOT01-DUP (19-Apr-2011)	0.0010	U	1	0.0010	U	1	0.0012	U	1	0.00070	U	1	0.0012	U	1	0.0011	U	1	0.00090	U	1	0.0012	U	1	0.00080	U	1	0.0010	U	1	0.00080	U	1	0.00090	U	1	0.0012	U	1	0.0013	U	1	0.0013	U	1
AOC42-BOT02 (19-Apr-2011)	0.0010	M	1	0.0010	M	1	0.0012	M	1	0.00070	M	1	0.0012	M	1	0.0011	M	1	0.00090	M	1	0.0012	M	1	0.00080	M	1	0.0010	M	1	0.00080	M	1	0.00090	M	1	0.0012	M	1	0.0013	U	1	0.0013	U	1
AOC42-BOT02-DUP (19-Apr-2011)	0.0010	U	1	0.0010	U	1	0.0012	U	1	0.0016	F	1	0.0012	U	1	0.0011	U	1	0.00090	U	1	0.0012	U	1	0.00080	U	1	0.0014	F	1	0.00080	U	1	0.00090	U	1	0.0012	U	1	0.0013	U	1	0.0013	U	1
AOC42-BOT04 (04-Aug-2011)	--			--			--			--			--			--			--			--			--			--			--			--			--			--			--		
AOC42-BOT04-DUP (04-Aug-2011)	--			--			--			--			--			--			--			--			--			--			--			--			--			--			--		
AOC42-SW01 (19-Apr-2011)	--			--			--			--			--			--			--			--			--			--			--			--			--			--			--		
AOC42-SW02 (19-Apr-2011)	--			--			--			--			--			--			--			--			--			--			--			--			--			--			--		
AOC42-SW03 (19-Apr-2011)	--			--			--			--			--			--			--			--			--			--			--			--			--			--			--		
AOC42-SW04 (19-Apr-2011)	--			--			--			--			--			--			--			--			--			--			--			--			--			--			--		
AOC42-SW05 (19-Apr-2011)	--			--			--			--			--			--			--			--			--			--			--			--			--			--			--		
AOC42-SW06 (19-Apr-2011)	--			--			--			--			--			--			--			--			--			--			--			--			--			--			--		
AOC42-SW07 (19-Apr-2011)	--			--			--			--			--			--			--			--			--			--			--			--			--			--			--		
AOC42-SW08 (19-Apr-2011)	--			--			--			--			--			--			--			--			--			--			--			--			--			--			--		
AOC42-SW09 (19-Apr-2011)	--			--			--			--			--			--			--			--			--			--			--			--			--			--			--		
AOC42-SW10 (19-Apr-2011)	--			--			--			--			--			--			--			--			--			--			--			--			--			--			--		
AOC42-SW14 (04-Aug-2011)	--			--			--			--			--			--			--			--			--			--			--			--			--			--			--		
AOC52-T1-BOT03 (05-May-2011)	0.0010	U	1	0.0010	U	1	0.0012	U	1	0.00070	U	1	0.0012	U	1	0.0011	U	1	0.00090	U	1	0.0012	U	1	0.00080	U	1	0.0010	U	1	0.00080	U	1	0.00090	U	1	0.0012	U	1	0.0013	U	1	0.0013	U	1
AOC52-T1-SW05 (05-May-2011)	--			--			--			--			--			--			--			--			--			--			--			--			--			--			--		
AOC52-T1-SW06 (05-May-2011)	--			--			--			--			--			--			--			--			--			--			--			--			--			--			--		
AOC52-T1-SW07 (05-May-2011)	--			--			--			--			--			--			--			--			--			--			--			--			--			--			--		
AOC52-T1-SW08 (05-May-2011)	--			--			--			--			--			--			--			--			--			--			--			--			--			--			--		
AOC52-T2A-BOT01 (24-May-2011)	0.0010	M	1	0.0010	U	1	0.0012	U	1	0.00070	U	1	0.0012	U	1	0.0011	U	1	0.00090	U	1	0.0012	U	1	0.00080	U	1	0.0010	U	1	0.00080	U	1	0.00090	U	1	0.0012	U	1	0.0013	U	1	0.0013	U	1
AOC52-T2A-BOT01-DUP (24-May-2011)	0.0010	U	1	0.0010	U	1	0.0012	U	1	0.00070	U	1	0.0012	U	1	0.0011	U	1	0.00090	U	1	0.0012	U	1	0.00080	U	1	0.0010	U	1	0.00080	U	1	0.00090	U	1	0.0012	U	1	0.0013	U	1	0.0013	U	1
AOC52-T2A-BOT02 (24-May-2011)	0.0010	U	1	0.0010	U	1	0.0012	U	1	0.00070	U	1	0.0012	U	1	0.0011	U	1	0.00090	U	1	0.0012	U	1	0.00080	U	1	0.0010	U	1	0.00080	U	1	0.00090	U	1	0.0012	U	1	0.0013	U	1	0.0013	U	1
AOC52-T2A-SW01 (24-May-2011)	--			--			--			--			--			--			--			--			--			--			--			--			--			--			--		
AOC52-T2A-SW01-DUP (24-May-2011)	--			--			--			--			--			--			--			--			--			--			--			--			--			--			--		
AOC52-T2A-SW02 (24-May-2011)	--			--			--			--			--			--			--			--			--			--			--			--			--			--			--		
AOC52-T2A-SW03 (24-May-2011)	--			--			--			--			--			--			--			--			--			--			--			--			--			--			--		
AOC52-T2A-SW04 (24-May-2011)	--			--			--			--			--			--			--			--			--			--			--			--			--			--			--		
AOC52-T2-BOT01 (23-May-2011)	0.0010	U	1	0.0010	U	1	0.0012	U	1	0.00070	U	1	0.0012	U	1	0.0011	U	1	0.00090	U	1	0.0012	U	1	0.00080	U	1	0.0010	U	1	0.00080	U	1	0.00090	U	1	0.0012	U	1	0.0013	U	1	0.0013	U	1
AOC52-T2-BOT02 (23-May-2011)	0.0010	U	1	0.0010	U	1	0.0012	U	1	0.00070	U	1	0.0012	U	1	0.0011	U	1	0.00090	U	1	0.0012	U	1	0.00080	U	1	0.0010	U	1	0.00080	U	1	0.00090	U	1	0.0012	U	1	0.0013	U	1	0.0013	U	1
AOC52-T2-SW01 (23-May-2011)	--			--			--			--			--			--			--			--			--			--			--			--			--			--			--		
AOC52-T2-SW02 (23-May-2011)	--			--			--			--			--			--			--			--			--			--			--			--			--			--			--		
AOC52-T2-SW03 (23-May-2011)	--			--			--			--			--			--			--			--			--			--			--			--			--			--			--		
AOC52-T2-SW04 (23-May-2011)	--			--			--			--			--			--			--			--			--			--			--			--			--			--			--		
AOC52-T3-BOT02 (05-May-2011)	0.0010	U	1	0.0010	U	1	0.0012	U	1	0.00070	U	1	0.0012	U	1	0.0011	U	1	0.00090	U	1	0.0012	U	1	0.00080	U	1	0.0010	U	1	0.00080	U	1	0.00090	U	1	0.0012	U	1	0.0013	U	1	0.0013	U	1



# Appendix C. Confirmation Sample Results for All Analytes at the Salado Creek Area

	Volatile Organics																																												
	Naphthalene CAS: 91-20-3 Qual Dil	n-Butylbenzene CAS: 104-51-8 Qual Dil	n-Propylbenzene CAS: 103-65-1 Qual Dil	o-Xylene CAS: 95-47-6 Qual Dil	p-Cymene (p-Isopropyltoluene) CAS: 99-87-6 Qual Dil	sec-Butylbenzene CAS: 135-98-8 Qual Dil	Styrene CAS: 100-42-5 Qual Dil	tert-Butylbenzene CAS: 98-06-6 Qual Dil	Tetrachloroethene (PCE) CAS: 127-18-4 Qual Dil	Toluene CAS: 108-88-3 Qual Dil	trans-1,2-Dichloroethene CAS: 156-60-5 Qual Dil	trans-1,3-Dichloropropene CAS: 10061-02-6 Qual Dil	Trichloroethene (TCE) CAS: 79-01-6 Qual Dil	Trichlorofluoromethane CAS: 75-69-4 Qual Dil	Vinyl chloride CAS: 75-01-4 Qual Dil																														
<b>Tier 1 Soil PCLs - 30 acre<sup>1</sup></b>																																													
Residential Combined Exposure <sup>[1]</sup>	120	n	1500	n	1600	n	29000	n	2500	n	1600	n	4300	n	1400	n	94	c	5400	n	370	n	26	c	68	n	12000	n	3.4	c															
Residential Groundwater Exposure <sup>[2]</sup>	16	n	61	n	22	n	35	m	120	n	42	n	1.6	m	50	n	0.025	m	4.1	m	0.25	m	0.018	c	0.017	m	64	n	0.011	m															
<b>TCEQ-Approved Background Values</b>																																													
CSSA Metals Background Concentration <sup>[3]</sup>	na		na		na		na		na		na		na		na		na		na		na		na		na		na		na																
<b>Sample Locations (Date Collected)</b>																																													
AOC52-T3-BOT02-DUP (05-May-2011)	0.0010	U	1	0.0010	U	1	0.0012	U	1	0.00070	U	1	0.0012	U	1	0.0011	U	1	0.00090	U	1	0.0012	U	1	0.00080	U	1	0.0017	F	1	0.00080	U	1	0.00090	U	1	0.0012	U	1	0.0013	U	1	0.0013	U	1
AOC52-T3-SW03 (05-May-2011)	--			--			--			--			--			--			--			--			--			--			--			--			--			--			--		
AOC52-T3-SW04 (05-May-2011)	--			--			--			--			--			--			--			--			--			--			--			--			--			--			--		
AOC52-T4-BOT01 (05-May-2011)	0.0010	U	1	0.0010	U	1	0.0012	U	1	0.00070	U	1	0.0012	U	1	0.0011	U	1	0.00090	U	1	0.0012	U	1	0.00080	U	1	0.0010	U	1	0.00080	U	1	0.00090	U	1	0.0012	U	1	0.0013	U	1	0.0013	U	1
AOC52-T4-SW01 (05-May-2011)	--			--			--			--			--			--			--			--			--			--			--			--			--			--			--		
AOC52-T4-SW02 (05-May-2011)	--			--			--			--			--			--			--			--			--			--			--			--			--			--			--		
AOC58-BOT01 (19-Apr-2011)	0.0010	M	1	0.0010	U	1	0.0012	U	1	0.0016	F	1	0.0012	U	1	0.0011	U	1	0.00090	U	1	0.0012	U	1	0.00080	U	1	0.0010	U	1	0.00080	U	1	0.00090	U	1	0.0012	U	1	0.0013	U	1	0.0013	U	1
AOC58-BOT01-DUP (19-Apr-2011)	0.0010	U	1	0.0010	U	1	0.0012	U	1	0.0015	F	1	0.0012	U	1	0.0011	U	1	0.00090	U	1	0.0012	U	1	0.00080	U	1	0.0010	U	1	0.00080	U	1	0.00090	U	1	0.0012	U	1	0.0013	U	1	0.0013	U	1
AOC58-SW01 (19-Apr-2011)	--			--			--			--			--			--			--			--			--			--			--			--			--			--			--		
AOC58-SW02 (19-Apr-2011)	--			--			--			--			--			--			--			--			--			--			--			--			--			--			--		
AOC58-SW03 (19-Apr-2011)	--			--			--			--			--			--			--			--			--			--			--			--			--			--			--		
AOC58-SW04 (19-Apr-2011)	--			--			--			--			--			--			--			--			--			--			--			--			--			--			--		
AOC62-BOT01 (30-Mar-2011)	--			--			--			--			--			--			--			--			--			--			--			--			--			--			--		
AOC62-BOT02 (19-Apr-2011)	0.0010	U	1	0.0010	U	1	0.0012	U	1	0.0015	F	1	0.0012	U	1	0.0011	U	1	0.00090	U	1	0.0012	U	1	0.00080	U	1	0.0010	U	1	0.00080	U	1	0.00090	U	1	0.0012	U	1	0.0013	U	1	0.0013	U	1
AOC62-BOT03 (30-Mar-2011)	--			--			--			--			--			--			--			--			--			--			--			--			--			--			--		
AOC62-BOT04 (30-Mar-2011)	--			--			--			--			--			--			--			--			--			--			--			--			--			--			--		
AOC62-SW01 (30-Mar-2011)	--			--			--			--			--			--			--			--			--			--			--			--			--			--			--		
AOC62-SW02 (30-Mar-2011)	--			--			--			--			--			--			--			--			--			--			--			--			--			--			--		
AOC62-SW03 (30-Mar-2011)	--			--			--			--			--			--			--			--			--			--			--			--			--			--			--		
AOC62-SW04 (30-Mar-2011)	0.0010	U	1	0.0010	U	1	0.0012	U	1	0.00070	U	1	0.0012	U	1	0.0011	U	1	0.00090	U	1	0.0012	U	1	0.00080	U	1	0.0010	U	1	0.00080	U	1	0.00090	U	1	0.0012	U	1	0.0013	U	1	0.0013	U	1
AOC62-SW05 (30-Mar-2011)	--			--			--			--			--			--			--			--			--			--			--			--			--			--			--		
AOC62-SW06 (30-Mar-2011)	--			--			--			--			--			--			--			--			--			--			--			--			--			--			--		
AOC62-SW07 (30-Mar-2011)	--			--			--			--			--			--			--			--			--			--			--			--			--			--			--		
AOC62-SW08 (30-Mar-2011)	--			--			--			--			--			--			--			--			--			--			--			--			--			--			--		
AOC62-SW09 (30-Mar-2011)	--			--			--			--			--			--			--			--			--			--			--			--			--			--			--		
AOC62-SW10 (30-Mar-2011)	--			--			--			--			--			--			--			--			--			--			--			--			--			--			--		
AOC62-SW11 (30-Mar-2011)	0.0010	U	1	0.0010	U	1	0.0012	U	1	0.00070	U	1	0.0012	U	1	0.0011	U	1	0.00090	U	1	0.0012	U	1	0.00080	U	1	0.0010	U	1	0.00080	U	1	0.00090	U	1	0.0012	U	1	0.0013	U	1	0.0013	U	1
AOC62-SW12 (30-Mar-2011)	--			--			--			--			--			--			--			--			--			--			--			--			--			--			--		
AOC62-SW13 (30-Mar-2011)	--			--			--			--			--			--			--			--			--			--			--			--			--			--			--		
AOC62-SW14 (19-Apr-2011)	--			--			--			--			--			--			--			--			--			--			--			--			--			--			--		
AOC62-SW15 (30-Mar-2011)	--			--			--			--			--			--			--			--			--			--			--			--			--			--			--		
AOC62-SW16 (30-Mar-2011)	0.0010	U	1	0.0010	U	1	0.0012	U	1	0.00070	U	1	0.0012	U	1	0.0011	U	1	0.00090	U	1	0.0012	U	1	0.00080	U	1	0.0010	U	1	0.00080	U	1	0.00090	U	1	0.0012	U	1	0.0013	U	1	0.0013	U	1
AOC62-T3-SW18 (05-May-2011)	--			--			--			--			--			--			--			--			--			--			--			--			--			--			--		
AOC62-T3-SW18-DUP (05-May-2011)	--			--			--			--			--			--			--			--			--			--			--			--			--			--			--		
AOC62-T4-SW17 (05-May-2011)	0.0010	U	1	0.0010	U	1	0.0012	U	1	0.00070	U	1	0.0012	U	1	0.0011	U	1	0.00090	U	1	0.0012	U	1	0.00080	U	1	0.0010	U	1	0.00080	U	1	0.00090	U	1	0.0012	U	1	0.0013	U	1	0.0013	U	1
AOC62-T4-SW17-DUP (05-May-2011)	0.0010	U	1	0.0010	U	1	0.0012	U	1	0.00070	U	1	0.0012	U	1	0.0011	U	1	0.00090	U	1	0.0012	U	1	0.00080	U	1	0.0010	U	1	0.00080	U	1	0.00090	U	1	0.0012	U	1	0.0013	U	1	0.0013	U	1

# Appendix C. Confirmation Sample Results for All Analytes at the Salado Creek Area

	Semi-Volatile Organics																																												
	1,2,4-Trichlorobenzene CAS: 120-82-1 Qual Dil	1,2-Dichlorobenzene CAS: 95-50-1 Qual Dil	1,3-Dichlorobenzene CAS: 541-73-1 Qual Dil	1,4-Dichlorobenzene CAS: 106-46-7 Qual Dil	2,4,5-Trichlorophenol CAS: 95-95-4 Qual Dil	2,4,6-Trichlorophenol CAS: 88-06-2 Qual Dil	2,4-Dichlorophenol CAS: 120-83-2 Qual Dil	2,4-Dimethylphenol CAS: 105-67-9 Qual Dil	2,4-Dinitrophenol CAS: 51-28-5 Qual Dil	2,4-Dinitrotoluene CAS: 121-14-2 Qual Dil	2,6-Dinitrotoluene CAS: 606-20-2 Qual Dil	2-Chloronaphthalene CAS: 91-58-7 Qual Dil	2-Chlorophenol CAS: 95-57-8 Qual Dil	2-Methy-4,6-dinitrophenol CAS: 534-52-1 Qual Dil	2-Methylnaphthalene CAS: 91-57-6 Qual Dil																														
<b>Tier 1 Soil PCLs - 30 acre<sup>1</sup></b>																																													
Residential Combined Exposure <sup>[1]</sup>	610	n	390	n	62	n	250	c	4100	n	67	n	190	n	880	n	130	n	6.9	c	6.9	c	5000	n	360	n	5.2	n	250	n															
Residential Groundwater Exposure <sup>[2]</sup>	2.4	m	8.9	m	3.4	n	1.1	m	17	n	0.087	n	0.18	n	1.6	n	0.047	n	0.0027	c	0.0024	c	330	n	0.82	n	0.0023	n	8.5	n															
<b>TCEQ-Approved Background Values</b>																																													
CSSA Metals Background Concentration <sup>[3]</sup>	na		na		na		na		na		na		na		na		na		na		na		na		na		na		na																
<b>Sample Locations (Date Collected)</b>																																													
AOC42-BOT01 (19-Apr-2011)	0.040	U	1	0.030	M	1	0.040	M	1	0.030	M	1	0.040	U	1	0.040	U	1	0.040	U	1	0.040	U	1	0.030	M	1	0.030	U	1	0.050	U	1												
AOC42-BOT01-DUP (19-Apr-2011)	0.040	U	1	0.030	U	1	0.040	U	1	0.030	U	1	0.040	U	1	0.040	U	1	0.040	U	1	0.080	U	1	0.030	U	1	0.040	U	1	0.040	U	1	0.030	U	1	0.030	U	1	0.050	U	1			
AOC42-BOT02 (19-Apr-2011)	0.040	U	1	0.030	U	1	0.040	U	1	0.030	U	1	0.040	U	1	0.040	U	1	0.040	U	1	0.080	U	1	0.030	U	1	0.040	U	1	0.040	U	1	0.030	U	1	0.030	U	1	0.050	U	1			
AOC42-BOT02-DUP (19-Apr-2011)	0.040	U	1	0.030	U	1	0.040	U	1	0.030	U	1	0.040	U	1	0.040	U	1	0.040	U	1	0.080	U	1	0.030	U	1	0.040	U	1	0.040	U	1	0.030	U	1	0.030	U	1	0.050	U	1			
AOC42-BOT04 (04-Aug-2011)	--			--			--			--			--			--			--			--			--			--			--			--			--			--					
AOC42-BOT04-DUP (04-Aug-2011)	--			--			--			--			--			--			--			--			--			--			--			--			--			--					
AOC42-SW01 (19-Apr-2011)	--			--			--			--			--			--			--			--			--			--			--			--			--			--					
AOC42-SW02 (19-Apr-2011)	--			--			--			--			--			--			--			--			--			--			--			--			--			--					
AOC42-SW03 (19-Apr-2011)	--			--			--			--			--			--			--			--			--			--			--			--			--			--					
AOC42-SW04 (19-Apr-2011)	--			--			--			--			--			--			--			--			--			--			--			--			--			--					
AOC42-SW05 (19-Apr-2011)	--			--			--			--			--			--			--			--			--			--			--			--			--			--					
AOC42-SW06 (19-Apr-2011)	--			--			--			--			--			--			--			--			--			--			--			--			--			--					
AOC42-SW07 (19-Apr-2011)	--			--			--			--			--			--			--			--			--			--			--			--			--			--					
AOC42-SW08 (19-Apr-2011)	--			--			--			--			--			--			--			--			--			--			--			--			--			--					
AOC42-SW09 (19-Apr-2011)	--			--			--			--			--			--			--			--			--			--			--			--			--			--					
AOC42-SW10 (19-Apr-2011)	--			--			--			--			--			--			--			--			--			--			--			--			--			--					
AOC42-SW14 (04-Aug-2011)	--			--			--			--			--			--			--			--			--			--			--			--			--			--					
AOC52-T1-BOT03 (05-May-2011)	0.040	U	1	0.030	U	1	0.040	U	1	0.030	U	1	0.040	U	1	0.040	U	1	0.040	U	1	0.080	U	1	0.030	U	1	0.040	U	1	0.040	U	1	0.030	U	1	0.030	U	1	0.030	U	1	0.050	U	1
AOC52-T1-SW05 (05-May-2011)	--			--			--			--			--			--			--			--			--			--			--			--			--			--			--		
AOC52-T1-SW06 (05-May-2011)	--			--			--			--			--			--			--			--			--			--			--			--			--			--			--		
AOC52-T1-SW07 (05-May-2011)	--			--			--			--			--			--			--			--			--			--			--			--			--			--			--		
AOC52-T1-SW08 (05-May-2011)	--			--			--			--			--			--			--			--			--			--			--			--			--			--			--		
AOC52-T2A-BOT01 (24-May-2011)	0.040	U	1	0.030	U	1	0.040	U	1	0.030	U	1	0.040	U	1	0.040	U	1	0.040	U	1	0.080	U	1	0.030	U	1	0.040	U	1	0.040	U	1	0.030	U	1	0.030	U	1	0.030	U	1	0.050	U	1
AOC52-T2A-BOT01-DUP (24-May-2011)	0.040	U	1	0.030	U	1	0.040	U	1	0.030	U	1	0.040	U	1	0.040	U	1	0.040	U	1	0.080	U	1	0.030	U	1	0.040	U	1	0.040	U	1	0.030	U	1	0.030	U	1	0.030	U	1	0.050	U	1
AOC52-T2A-BOT02 (24-May-2011)	0.040	U	1	0.030	U	1	0.040	U	1	0.030	U	1	0.040	U	1	0.040	U	1	0.040	U	1	0.080	U	1	0.030	U	1	0.040	U	1	0.040	U	1	0.030	U	1	0.030	U	1	0.030	U	1	0.050	U	1
AOC52-T2A-SW01 (24-May-2011)	--			--			--			--			--			--			--			--			--			--			--			--			--			--			--		
AOC52-T2A-SW01-DUP (24-May-2011)	--			--			--			--			--			--			--			--			--			--			--			--			--			--			--		
AOC52-T2A-SW02 (24-May-2011)	--			--			--			--			--			--			--			--			--			--			--			--			--			--			--		
AOC52-T2A-SW03 (24-May-2011)	--			--			--			--			--			--			--			--			--			--			--			--			--			--			--		
AOC52-T2A-SW04 (24-May-2011)	--			--			--			--			--			--			--			--			--			--			--			--			--			--			--		
AOC52-T2-BOT01 (23-May-2011)	0.040	U	1	0.030	U	1	0.040	U	1	0.030	U	1	0.040	U	1	0.040	U	1	0.040	U	1	0.080	U	1	0.030	U	1	0.040	U	1	0.040	U	1	0.030	U	1	0.030	U	1	0.030	U	1	0.050	U	1
AOC52-T2-BOT02 (23-May-2011)	0.040	U	1	0.030	U	1	0.040	U	1	0.030	U	1	0.040	U	1	0.040	U	1	0.040	U	1	0.080	U	1	0.030	U	1	0.040	U	1	0.040	U	1	0.030	U	1	0.030	U	1	0.030	U	1	0.050	U	1
AOC52-T2-SW01 (23-May-2011)	--			--			--			--			--			--			--			--			--			--			--			--			--			--			--		
AOC52-T2-SW02 (23-May-2011)	--			--			--			--			--			--			--			--			--			--			--			--			--			--			--		
AOC52-T2-SW03 (23-May-2011)	--			--			--			--			--			--			--			--			--			--			--			--			--			--			--		
AOC52-T2-SW04 (23-May-2011)	--			--			--			--			--			--			--			--			--			--			--			--			--			--			--		
AOC52-T3-BOT02 (05-May-2011)	0.040	U	1	0.030	U	1	0.040	U	1	0.030	U	1	0.040	U	1	0.040	U	1	0.040	U	1	0.080	U	1	0.030	U	1	0.040	U	1	0.040	U	1	0.030	U	1	0.030	U	1	0.030	U	1	0.050	U	1

# Appendix C. Confirmation Sample Results for All Analytes at the Salado Creek Area

	Semi-Volatile Organics																																												
	1,2,4-Trichlorobenzene CAS: 120-82-1 Qual Dil	1,2-Dichlorobenzene CAS: 95-50-1 Qual Dil	1,3-Dichlorobenzene CAS: 541-73-1 Qual Dil	1,4-Dichlorobenzene CAS: 106-46-7 Qual Dil	2,4,5-Trichlorophenol CAS: 95-95-4 Qual Dil	2,4,6-Trichlorophenol CAS: 88-06-2 Qual Dil	2,4-Dichlorophenol CAS: 120-83-2 Qual Dil	2,4-Dimethylphenol CAS: 105-67-9 Qual Dil	2,4-Dinitrophenol CAS: 51-28-5 Qual Dil	2,4-Dinitrotoluene CAS: 121-14-2 Qual Dil	2,6-Dinitrotoluene CAS: 606-20-2 Qual Dil	2-Chloronaphthalene CAS: 91-58-7 Qual Dil	2-Chlorophenol CAS: 95-57-8 Qual Dil	2-Methyl-4,6-dinitrophenol CAS: 534-52-1 Qual Dil	2-Methylnaphthalene CAS: 91-57-6 Qual Dil																														
<b>Tier 1 Soil PCLs - 30 acre<sup>†</sup></b>																																													
Residential Combined Exposure <sup>[1]</sup>	610	n	390	n	62	n	250	c	4100	n	67	n	190	n	880	n	130	n	6.9	c	6.9	c	5000	n	360	n	5.2	n	250	n															
Residential Groundwater Exposure <sup>[2]</sup>	2.4	m	8.9	m	3.4	n	1.1	m	17	n	0.087	n	0.18	n	1.6	n	0.047	n	0.0027	c	0.0024	c	330	n	0.82	n	0.0023	n	8.5	n															
<b>TCEQ-Approved Background Values</b>																																													
CSSA Metals Background Concentration <sup>[3]</sup>	na		na		na		na		na		na		na		na		na		na		na		na		na		na		na																
<b>Sample Locations (Date Collected)</b>																																													
AOC52-T3-BOT02-DUP (05-May-2011)	0.040	U	1	0.030	U	1	0.040	U	1	0.030	U	1	0.040	U	1	0.040	U	1	0.080	U	1	0.030	U	1	0.050	U	1	0.040	U	1	0.040	U	1	0.030	U	1	0.030	U	1	0.050	U	1			
AOC52-T3-SW03 (05-May-2011)	--			--			--			--			--			--			--			--			--			--			--			--			--								
AOC52-T3-SW04 (05-May-2011)	--			--			--			--			--			--			--			--			--			--			--			--			--								
AOC52-T4-BOT01 (05-May-2011)	0.040	U	1	0.030	U	1	0.040	U	1	0.030	U	1	0.040	U	1	0.040	U	1	0.080	M	1	0.030	U	1	0.050	U	1	0.040	U	1	0.040	U	1	0.030	U	1	0.030	U	1	0.050	U	1			
AOC52-T4-SW01 (05-May-2011)	--			--			--			--			--			--			--			--			--			--			--			--			--								
AOC52-T4-SW02 (05-May-2011)	--			--			--			--			--			--			--			--			--			--			--			--			--								
AOC58-BOT01 (19-Apr-2011)	0.040	M	1	0.030	M	1	0.040	M	1	0.030	M	1	0.040	U	1	0.040	U	1	0.040	M	1	0.080	M	1	0.030	U	1	0.050	U	1	0.040	U	1	0.040	U	1	0.030	M	1	0.030	U	1	0.050	M	1
AOC58-BOT01-DUP (19-Apr-2011)	0.040	U	1	0.030	U	1	0.040	U	1	0.030	U	1	0.040	U	1	0.040	U	1	0.040	U	1	0.080	U	1	0.030	U	1	0.050	U	1	0.040	U	1	0.040	U	1	0.030	U	1	0.030	U	1	0.050	U	1
AOC58-SW01 (19-Apr-2011)	--			--			--			--			--			--			--			--			--			--			--			--			--			--					
AOC58-SW02 (19-Apr-2011)	--			--			--			--			--			--			--			--			--			--			--			--			--			--					
AOC58-SW03 (19-Apr-2011)	--			--			--			--			--			--			--			--			--			--			--			--			--			--					
AOC58-SW04 (19-Apr-2011)	--			--			--			--			--			--			--			--			--			--			--			--			--			--					
AOC62-BOT01 (30-Mar-2011)	--			--			--			--			--			--			--			--			--			--			--			--			--			--					
AOC62-BOT02 (19-Apr-2011)	0.040	U	1	0.030	U	1	0.040	U	1	0.030	U	1	0.040	U	1	0.040	U	1	0.040	U	1	0.080	U	1	0.030	U	1	0.050	U	1	0.040	U	1	0.040	U	1	0.030	U	1	0.030	U	1	0.050	U	1
AOC62-BOT03 (30-Mar-2011)	--			--			--			--			--			--			--			--			--			--			--			--			--			--					
AOC62-BOT04 (30-Mar-2011)	--			--			--			--			--			--			--			--			--			--			--			--			--			--					
AOC62-SW01 (30-Mar-2011)	--			--			--			--			--			--			--			--			--			--			--			--			--			--					
AOC62-SW02 (30-Mar-2011)	--			--			--			--			--			--			--			--			--			--			--			--			--			--					
AOC62-SW03 (30-Mar-2011)	--			--			--			--			--			--			--			--			--			--			--			--			--			--					
AOC62-SW04 (30-Mar-2011)	0.040	U	1	0.030	U	1	0.040	U	1	0.030	U	1	0.040	U	1	0.040	U	1	0.040	U	1	0.080	U	1	0.030	U	1	0.050	U	1	0.040	U	1	0.040	U	1	0.030	U	1	0.030	U	1	0.050	U	1
AOC62-SW05 (30-Mar-2011)	--			--			--			--			--			--			--			--			--			--			--			--			--			--					
AOC62-SW06 (30-Mar-2011)	--			--			--			--			--			--			--			--			--			--			--			--			--			--					
AOC62-SW07 (30-Mar-2011)	--			--			--			--			--			--			--			--			--			--			--			--			--			--					
AOC62-SW08 (30-Mar-2011)	--			--			--			--			--			--			--			--			--			--			--			--			--			--					
AOC62-SW09 (30-Mar-2011)	--			--			--			--			--			--			--			--			--			--			--			--			--			--					
AOC62-SW10 (30-Mar-2011)	--			--			--			--			--			--			--			--			--			--			--			--			--			--					
AOC62-SW11 (30-Mar-2011)	0.040	U	1	0.030	U	1	0.040	U	1	0.030	U	1	0.040	U	1	0.040	U	1	0.040	U	1	0.080	U	1	0.030	U	1	0.050	U	1	0.040	U	1	0.040	U	1	0.030	U	1	0.030	U	1	0.050	U	1
AOC62-SW12 (30-Mar-2011)	--			--			--			--			--			--			--			--			--			--			--			--			--			--					
AOC62-SW13 (30-Mar-2011)	--			--			--			--			--			--			--			--			--			--			--			--			--			--					
AOC62-SW14 (19-Apr-2011)	--			--			--			--			--			--			--			--			--			--			--			--			--			--					
AOC62-SW15 (30-Mar-2011)	--			--			--			--			--			--			--			--			--			--			--			--			--			--					
AOC62-SW16 (30-Mar-2011)	0.040	U	1	0.030	U	1	0.040	U	1	0.030	U	1	0.040	U	1	0.040	U	1	0.040	U	1	0.080	U	1	0.030	U	1	0.050	U	1	0.040	U	1	0.040	U	1	0.030	U	1	0.030	U	1	0.050	U	1
AOC62-T3-SW18 (05-May-2011)	--			--			--			--			--			--			--			--			--			--			--			--			--			--					
AOC62-T3-SW18-DUP (05-May-2011)	--			--			--			--			--			--			--			--			--			--			--			--			--			--					
AOC62-T4-SW17 (05-May-2011)	0.040	U	1	0.030	U	1	0.040	U	1	0.030	U	1	0.040	U	1	0.040	U	1	0.040	U	1	0.080	U	1	0.030	U	1	0.050	U	1	0.040	U	1	0.040	U	1	0.030	U	1	0.030	U	1	0.050	U	1
AOC62-T4-SW17-DUP (05-May-2011)	0.040	U	1	0.030	U	1	0.040	U	1	0.030	U	1	0.040	U	1	0.040	U	1	0.040	U	1	0.080	U	1	0.030	U	1	0.050	U	1	0.040	U	1	0.040	U	1	0.030	U	1	0.030	U	1	0.050	U	1

# Appendix C. Confirmation Sample Results for All Analytes at the Salado Creek Area

	Semi-Volatile Organics																																															
	2-Methylphenol CAS: 95-48-7 Qual Dil	2-Nitroaniline CAS: 88-74-4 Qual Dil	2-Nitrophenol CAS: 88-75-5 Qual Dil	3,3'-Dichlorobenzidine CAS: 91-94-1 Qual Dil	3-Nitroaniline CAS: 99-09-2 Qual Dil	4-Bromophenyl phenyl ether CAS: 101-55-3 Qual Dil	4-Chloro-3-methyl phenol CAS: 59-50-7 Qual Dil	4-Chloroaniline CAS: 106-47-8 Qual Dil	4-Chlorophenyl phenyl ether CAS: 7005-72-3 Qual Dil	4-Methylphenol (p-cresol) CAS: 106-44-5 Qual Dil	4-Nitroaniline CAS: 100-01-6 Qual Dil	4-Nitrophenol CAS: 100-02-7 Qual Dil	Acenaphthene CAS: 83-32-9 Qual Dil	Acenaphthylene CAS: 208-96-8 Qual Dil	Anthracene CAS: 120-12-7 Qual Dil																																	
<b>Tier 1 Soil PCLs - 30 acre<sup>†</sup></b>																																																
Residential Combined Exposure <sup>[1]</sup>	1000	n		11	n		100	n		10	c		19	n		0.27	c		330	n		23	c		0.15	c		270	n		190	n		51	n		3000	n		3800	n		18000	n				
Residential Groundwater Exposure <sup>[2]</sup>	3.6	n		0.011	n		0.067	n		0.031	c		0.013	n		0.18	c		2.3	n		0.01	c		0.016	c		0.32	n		0.054	c		0.05	n		120	n		200	n		3400	n	>S			
<b>TCEQ-Approved Background Values</b>																																																
CSSA Metals Background Concentration <sup>[3]</sup>	na			na			na			na			na			na			na			na			na			na			na			na			na			na			na					
<b>Sample Locations (Date Collected)</b>																																																
AOC42-BOT01 (19-Apr-2011)	0.020	U	1	0.040	U	1	0.040	U	1	0.020	U	1	0.010	U	1	0.050	U	1	0.040	U	1	0.040	U	1	0.040	U	1	0.040	U	1	0.030	U	1	0.040	U	1	0.040	U	1	0.030	U	1	0.040	U	1			
AOC42-BOT01-DUP (19-Apr-2011)	0.020	U	1	0.040	U	1	0.040	U	1	0.020	U	1	0.010	U	1	0.050	U	1	0.040	U	1	0.040	U	1	0.040	U	1	0.040	U	1	0.040	U	1	0.030	U	1	0.040	U	1	0.040	U	1	0.030	U	1	0.040	U	1
AOC42-BOT02 (19-Apr-2011)	0.020	U	1	0.040	U	1	0.040	U	1	0.020	U	1	0.010	U	1	0.050	U	1	0.040	U	1	0.040	U	1	0.040	U	1	0.040	U	1	0.040	U	1	0.030	U	1	0.040	U	1	0.040	U	1	0.030	U	1	0.040	U	1
AOC42-BOT02-DUP (19-Apr-2011)	0.020	U	1	0.040	U	1	0.040	U	1	0.020	U	1	0.010	U	1	0.050	U	1	0.040	U	1	0.040	U	1	0.040	U	1	0.040	U	1	0.040	U	1	0.030	U	1	0.040	U	1	0.040	U	1	0.030	U	1	0.040	U	1
AOC42-BOT04 (04-Aug-2011)	--			--			--			--			--			--			--			--			--			--			--			--			--			--			--					
AOC42-BOT04-DUP (04-Aug-2011)	--			--			--			--			--			--			--			--			--			--			--			--			--			--			--					
AOC42-SW01 (19-Apr-2011)	--			--			--			--			--			--			--			--			--			--			--			--			--			--			--					
AOC42-SW02 (19-Apr-2011)	--			--			--			--			--			--			--			--			--			--			--			--			--			--			--					
AOC42-SW03 (19-Apr-2011)	--			--			--			--			--			--			--			--			--			--			--			--			--			--			--					
AOC42-SW04 (19-Apr-2011)	--			--			--			--			--			--			--			--			--			--			--			--			--			--			--					
AOC42-SW05 (19-Apr-2011)	--			--			--			--			--			--			--			--			--			--			--			--			--			--			--					
AOC42-SW06 (19-Apr-2011)	--			--			--			--			--			--			--			--			--			--			--			--			--			--			--					
AOC42-SW07 (19-Apr-2011)	--			--			--			--			--			--			--			--			--			--			--			--			--			--			--					
AOC42-SW08 (19-Apr-2011)	--			--			--			--			--			--			--			--			--			--			--			--			--			--			--					
AOC42-SW09 (19-Apr-2011)	--			--			--			--			--			--			--			--			--			--			--			--			--			--			--					
AOC42-SW10 (19-Apr-2011)	--			--			--			--			--			--			--			--			--			--			--			--			--			--			--					
AOC42-SW14 (04-Aug-2011)	--			--			--			--			--			--			--			--			--			--			--			--			--			--			--					
AOC52-T1-BOT03 (05-May-2011)	0.020	U	1	0.040	U	1	0.040	U	1	0.020	U	1	0.010	U	1	0.050	U	1	0.040	U	1	0.040	U	1	0.040	U	1	0.040	U	1	0.030	U	1	0.040	U	1	0.040	U	1	0.040	U	1	0.030	U	1	0.040	U	1
AOC52-T1-SW05 (05-May-2011)	--			--			--			--			--			--			--			--			--			--			--			--			--			--			--					
AOC52-T1-SW06 (05-May-2011)	--			--			--			--			--			--			--			--			--			--			--			--			--			--			--					
AOC52-T1-SW07 (05-May-2011)	--			--			--			--			--			--			--			--			--			--			--			--			--			--			--					
AOC52-T1-SW08 (05-May-2011)	--			--			--			--			--			--			--			--			--			--			--			--			--			--			--					
AOC52-T2A-BOT01 (24-May-2011)	0.020	U	1	0.040	U	1	0.040	U	1	0.020	U	1	0.010	U	1	0.050	U	1	0.040	U	1	0.040	U	1	0.040	U	1	0.040	U	1	0.030	U	1	0.040	U	1	0.040	U	1	0.040	U	1	0.030	U	1	0.040	U	1
AOC52-T2A-BOT01-DUP (24-May-2011)	0.020	U	1	0.040	U	1	0.040	U	1	0.020	U	1	0.010	U	1	0.050	U	1	0.040	U	1	0.040	U	1	0.040	U	1	0.040	U	1	0.030	U	1	0.040	U	1	0.040	U	1	0.040	U	1	0.030	U	1	0.040	U	1
AOC52-T2A-BOT02 (24-May-2011)	0.020	U	1	0.040	U	1	0.040	U	1	0.020	U	1	0.010	U	1	0.050	U	1	0.040	U	1	0.040	U	1	0.040	U	1	0.040	U	1	0.030	U	1	0.040	U	1	0.040	U	1	0.040	U	1	0.030	U	1	0.040	U	1
AOC52-T2A-SW01 (24-May-2011)	--			--			--			--			--			--			--			--			--			--			--			--			--			--			--					
AOC52-T2A-SW01-DUP (24-May-2011)	--			--			--			--			--			--			--			--			--			--			--			--			--			--			--					
AOC52-T2A-SW02 (24-May-2011)	--			--			--			--			--			--			--			--			--			--			--			--			--			--			--					
AOC52-T2A-SW03 (24-May-2011)	--			--			--			--			--			--			--			--			--			--			--			--			--			--			--					
AOC52-T2A-SW04 (24-May-2011)	--			--			--			--			--			--			--			--			--			--			--			--			--			--			--					
AOC52-T2-BOT01 (23-May-2011)	0.020	U	1	0.040	U	1	0.040	U	1	0.020	U	1	0.010	U	1	0.050	U	1	0.040	U	1	0.040	U	1	0.040	U	1	0.040	U	1	0.030	U	1	0.040	U	1	0.040	U	1	0.040	U	1	0.030	U	1	0.040	U	1
AOC52-T2-BOT02 (23-May-2011)	0.020	U	1	0.040	U	1	0.040	U	1	0.020	U	1	0.010	U	1	0.050	U	1	0.040	U	1	0.040	U	1	0.040	U	1	0.040	U	1	0.030	U	1	0.040	U	1	0.040	U	1	0.040	U	1	0.030	U	1	0.040	U	1
AOC52-T2-SW01 (23-May-2011)	--			--			--			--			--			--			--			--			--			--			--			--			--			--			--					
AOC52-T2-SW02 (23-May-2011)	--			--			--			--			--			--			--			--			--			--			--			--			--			--			--					
AOC52-T2-SW03 (23-May-2011)	--			--			--			--			--			--			--			--			--			--			--			--			--			--			--					
AOC52-T2-SW04 (23-May-2011)	--			--			--			--			--			--			--			--			--			--			--			--			--			--			--					
AOC52-T3-BOT02 (05-May-2011)	0.020	U	1	0.040	U	1	0.040	U	1	0.020	U	1	0.010	U	1	0.050	U	1	0.040	U	1	0.040	U	1	0.040	U	1	0.040	U	1	0.030	U	1	0.040	U	1	0.040	U	1	0.040	U	1	0.030	U	1	0.040	U	1

# Appendix C. Confirmation Sample Results for All Analytes at the Salado Creek Area

	Semi-Volatile Organics																																															
	2-Methylphenol CAS: 95-48-7 Qual Dil	2-Nitroaniline CAS: 88-74-4 Qual Dil	2-Nitrophenol CAS: 88-75-5 Qual Dil	3,3'-Dichlorobenzidine CAS: 91-94-1 Qual Dil	3-Nitroaniline CAS: 99-09-2 Qual Dil	4-Bromophenyl phenyl ether CAS: 101-55-3 Qual Dil	4-Chloro-3-methyl phenol CAS: 59-50-7 Qual Dil	4-Chloroaniline CAS: 106-47-8 Qual Dil	4-Chlorophenyl phenyl ether CAS: 7005-72-3 Qual Dil	4-Methylphenol (p-cresol) CAS: 106-44-5 Qual Dil	4-Nitroaniline CAS: 100-01-6 Qual Dil	4-Nitrophenol CAS: 100-02-7 Qual Dil	Acenaphthene CAS: 83-32-9 Qual Dil	Acenaphthylene CAS: 208-96-8 Qual Dil	Anthracene CAS: 120-12-7 Qual Dil																																	
<b>Tier 1 Soil PCLs - 30 acre<sup>1</sup></b>																																																
Residential Combined Exposure <sup>[1]</sup>	1000	n		11	n		100	n		10	c		19	n		0.27	c		330	n		23	c		0.15	c		270	n		190	n		51	n		3000	n		3800	n		18000	n				
Residential Groundwater Exposure <sup>[2]</sup>	3.6	n		0.011	n		0.067	n		0.031	c		0.013	n		0.18	c		2.3	n		0.01	c		0.016	c		0.32	n		0.054	c		0.05	n		120	n		200	n		3400	n	>S			
<b>TCEQ-Approved Background Values</b>																																																
CSSA Metals Background Concentration <sup>[3]</sup>	na			na			na			na			na			na			na			na			na			na			na			na			na			na			na					
<b>Sample Locations (Date Collected)</b>																																																
AOC52-T3-BOT02-DUP (05-May-2011)	0.020	U	1	0.040	U	1	0.040	U	1	0.020	U	1	0.010	U	1	0.050	U	1	0.040	U	1	0.040	U	1	0.040	U	1	0.040	U	1	0.030	U	1	0.040	U	1	0.040	U	1	0.030	U	1	0.040	U	1			
AOC52-T3-SW03 (05-May-2011)	--			--			--			--			--			--			--			--			--			--			--			--			--			--			--					
AOC52-T3-SW04 (05-May-2011)	--			--			--			--			--			--			--			--			--			--			--			--			--			--			--					
AOC52-T4-BOT01 (05-May-2011)	0.020	U	1	0.040	U	1	0.040	U	1	0.020	U	1	0.010	U	1	0.050	U	1	0.040	U	1	0.040	U	1	0.040	U	1	0.040	U	1	0.030	U	1	0.040	U	1	0.040	U	1	0.040	U	1	0.030	U	1	0.040	U	1
AOC52-T4-SW01 (05-May-2011)	--			--			--			--			--			--			--			--			--			--			--			--			--			--			--					
AOC52-T4-SW02 (05-May-2011)	--			--			--			--			--			--			--			--			--			--			--			--			--			--			--					
AOC58-BOT01 (19-Apr-2011)	0.020	M	1	0.040	U	1	0.040	U	1	0.020	U	1	0.010	U	1	0.050	U	1	0.040	M	1	0.040	U	1	0.040	M	1	0.040	U	1	0.030	U	1	0.040	U	1	0.040	U	1	0.040	U	1	0.030	U	1	0.040	U	1
AOC58-BOT01-DUP (19-Apr-2011)	0.020	U	1	0.040	U	1	0.040	U	1	0.020	U	1	0.010	U	1	0.050	U	1	0.040	U	1	0.040	U	1	0.040	U	1	0.040	U	1	0.030	U	1	0.040	U	1	0.040	U	1	0.040	U	1	0.030	U	1	0.040	U	1
AOC58-SW01 (19-Apr-2011)	--			--			--			--			--			--			--			--			--			--			--			--			--			--			--					
AOC58-SW02 (19-Apr-2011)	--			--			--			--			--			--			--			--			--			--			--			--			--			--			--					
AOC58-SW03 (19-Apr-2011)	--			--			--			--			--			--			--			--			--			--			--			--			--			--			--					
AOC58-SW04 (19-Apr-2011)	--			--			--			--			--			--			--			--			--			--			--			--			--			--			--					
AOC62-BOT01 (30-Mar-2011)	--			--			--			--			--			--			--			--			--			--			--			--			--			--			--					
AOC62-BOT02 (19-Apr-2011)	0.020	U	1	0.040	U	1	0.040	U	1	0.020	U	1	0.010	U	1	0.050	U	1	0.040	U	1	0.040	U	1	0.040	U	1	0.040	U	1	0.030	U	1	0.040	U	1	0.040	U	1	0.040	U	1	0.030	U	1	0.040	U	1
AOC62-BOT03 (30-Mar-2011)	--			--			--			--			--			--			--			--			--			--			--			--			--			--			--					
AOC62-BOT04 (30-Mar-2011)	--			--			--			--			--			--			--			--			--			--			--			--			--			--			--					
AOC62-SW01 (30-Mar-2011)	--			--			--			--			--			--			--			--			--			--			--			--			--			--			--					
AOC62-SW02 (30-Mar-2011)	--			--			--			--			--			--			--			--			--			--			--			--			--			--			--					
AOC62-SW03 (30-Mar-2011)	--			--			--			--			--			--			--			--			--			--			--			--			--			--			--					
AOC62-SW04 (30-Mar-2011)	0.020	U	1	0.040	U	1	0.040	U	1	0.020	U	1	0.010	U	1	0.050	U	1	0.040	U	1	0.040	U	1	0.040	U	1	0.040	U	1	0.030	U	1	0.040	U	1	0.040	U	1	0.040	U	1	0.030	U	1	0.040	U	1
AOC62-SW05 (30-Mar-2011)	--			--			--			--			--			--			--			--			--			--			--			--			--			--			--					
AOC62-SW06 (30-Mar-2011)	--			--			--			--			--			--			--			--			--			--			--			--			--			--			--					
AOC62-SW07 (30-Mar-2011)	--			--			--			--			--			--			--			--			--			--			--			--			--			--			--					
AOC62-SW08 (30-Mar-2011)	--			--			--			--			--			--			--			--			--			--			--			--			--			--			--					
AOC62-SW09 (30-Mar-2011)	--			--			--			--			--			--			--			--			--			--			--			--			--			--			--					
AOC62-SW10 (30-Mar-2011)	--			--			--			--			--			--			--			--			--			--			--			--			--			--			--					
AOC62-SW11 (30-Mar-2011)	0.020	U	1	0.040	U	1	0.040	U	1	0.020	U	1	0.010	U	1	0.050	U	1	0.040	U	1	0.040	U	1	0.040	U	1	0.040	U	1	0.030	U	1	0.040	U	1	0.040	U	1	0.040	U	1	0.030	U	1	0.040	U	1
AOC62-SW12 (30-Mar-2011)	--			--			--			--			--			--			--			--			--			--			--			--			--			--			--					
AOC62-SW13 (30-Mar-2011)	--			--			--			--			--			--			--			--			--			--			--			--			--			--			--					
AOC62-SW14 (19-Apr-2011)	--			--			--			--			--			--			--			--			--			--			--			--			--			--			--					
AOC62-SW15 (30-Mar-2011)	--			--			--			--			--			--			--			--			--			--			--			--			--			--			--					
AOC62-SW16 (30-Mar-2011)	0.020	U	1	0.040	U	1	0.040	U	1	0.020	U	1	0.010	U	1	0.050	U	1	0.040	U	1	0.040	U	1	0.040	U	1	0.040	U	1	0.030	U	1	0.040	U	1	0.040	U	1	0.040	U	1	0.030	U	1	0.040	U	1
AOC62-T3-SW18 (05-May-2011)	--			--			--			--			--			--			--			--			--			--			--			--			--			--			--					
AOC62-T3-SW18-DUP (05-May-2011)	--			--			--			--			--			--			--			--			--			--			--			--			--			--			--					
AOC62-T4-SW17 (05-May-2011)	0.020	U	1	0.040	U	1	0.040	U	1	0.020	U	1	0.010	U	1	0.050	U	1	0.040	U	1	0.040	U	1	0.040	U	1	0.040	U	1	0.030	U	1	0.040	U	1	0.040	U	1	0.040	U	1	0.030	U	1	0.040	U	1
AOC62-T4-SW17-DUP (05-May-2011)	0.020	U	1	0.040	U	1	0.040	U	1	0.020	U	1	0.010	U	1	0.050	U	1	0.040	U	1	0.040	U	1	0.040	U	1	0.040	U	1	0.030	U	1	0.040	U	1	0.040	U	1	0.040	U	1	0.030	U	1	0.040	U	1

# Appendix C. Confirmation Sample Results for All Analytes at the Salado Creek Area

	Semi-Volatile Organics																																												
	Benzo(a)anthracene CAS: 56-55-3 Qual Dil	Benzo(a)pyrene CAS: 50-32-8 Qual Dil	Benzo(b)fluoranthene CAS: 205-99-2 Qual Dil	Benzo(g,h,i)perylene CAS: 191-24-2 Qual Dil	Benzoic acid CAS: 65-85-0 Qual Dil	Benzyl alcohol CAS: 100-51-6 Qual Dil	Benzyl butyl phthalate CAS: 85-68-7 Qual Dil	bis(2-Chloroethoxy)methane CAS: 111-91-1 Qual Dil	bis(2-Chloroethyl)ether CAS: 111-44-4 Qual Dil	bis(2-Chloropropyl)ether CAS: 108-60-1 Qual Dil	bis(2-Ethylhexyl) phthalate CAS: 117-81-7 Qual Dil	Chrysene CAS: 218-01-9 Qual Dil	Dibenz(a,h)anthracene CAS: 53-70-3 Qual Dil	Dibenzofuran CAS: 132-64-9 Qual Dil	Diethyl phthalate CAS: 84-66-2 Qual Dil																														
<b>Tier 1 Soil PCLs - 30 acre<sup>†</sup></b>																																													
Residential Combined Exposure <sup>[1]</sup>	5.6	c	0.56	c	5.7	c	1800	n	350	n	4000	n	1600	c	2.5	c	1.4	c	41	c	43	c	560	c	0.55	c	270	n	1400	n															
Residential Groundwater Exposure <sup>[2]</sup>	8.9	c	3.8	m	30	c	23000	n	>S	95	n	15	n	130	c	0.0059	c	0.0011	c	0.095	c	82	m	770	c	>S	7.6	c	17	n	78	n													
<b>TCEQ-Approved Background Values</b>																																													
CSSA Metals Background Concentration <sup>[3]</sup>	na		na		na		na		na		na		na		na		na		na		na		na		na		na		na																
<b>Sample Locations (Date Collected)</b>																																													
AOC42-BOT01 (19-Apr-2011)	0.040	U	1	0.050	U	1	0.060	U	1	0.040	U	1	0.020	M	1	0.12	U	1	0.040	U	1	0.060	U	1	0.040	U	1	0.050	U	1	0.030	U	1	0.040	U	1	0.040	U	1	0.040	U	1	0.040	U	1
AOC42-BOT01-DUP (19-Apr-2011)	0.040	U	1	0.050	U	1	0.060	U	1	0.040	U	1	0.020	U	1	0.12	U	1	0.040	U	1	0.060	U	1	0.040	U	1	0.050	U	1	0.030	U	1	0.040	U	1	0.040	U	1	0.040	U	1	0.040	U	1
AOC42-BOT02 (19-Apr-2011)	0.040	U	1	0.050	U	1	0.060	U	1	0.040	U	1	0.020	M	1	0.12	U	1	0.040	U	1	0.060	U	1	0.040	U	1	0.050	U	1	0.030	U	1	0.040	U	1	0.040	U	1	0.040	U	1	0.040	U	1
AOC42-BOT02-DUP (19-Apr-2011)	0.040	U	1	0.050	U	1	0.060	U	1	0.040	U	1	0.020	U	1	0.12	U	1	0.040	U	1	0.060	U	1	0.040	U	1	0.050	U	1	0.030	U	1	0.040	U	1	0.040	U	1	0.040	U	1	0.040	U	1
AOC42-BOT04 (04-Aug-2011)	--			--			--			--			--			--			--			--			--			--			--			--			--			--			--		
AOC42-BOT04-DUP (04-Aug-2011)	--			--			--			--			--			--			--			--			--			--			--			--			--			--			--		
AOC42-SW01 (19-Apr-2011)	--			--			--			--			--			--			--			--			--			--			--			--			--			--			--		
AOC42-SW02 (19-Apr-2011)	--			--			--			--			--			--			--			--			--			--			--			--			--			--			--		
AOC42-SW03 (19-Apr-2011)	--			--			--			--			--			--			--			--			--			--			--			--			--			--			--		
AOC42-SW04 (19-Apr-2011)	--			--			--			--			--			--			--			--			--			--			--			--			--			--			--		
AOC42-SW05 (19-Apr-2011)	--			--			--			--			--			--			--			--			--			--			--			--			--			--			--		
AOC42-SW06 (19-Apr-2011)	--			--			--			--			--			--			--			--			--			--			--			--			--			--			--		
AOC42-SW07 (19-Apr-2011)	--			--			--			--			--			--			--			--			--			--			--			--			--			--			--		
AOC42-SW08 (19-Apr-2011)	--			--			--			--			--			--			--			--			--			--			--			--			--			--			--		
AOC42-SW09 (19-Apr-2011)	--			--			--			--			--			--			--			--			--			--			--			--			--			--			--		
AOC42-SW10 (19-Apr-2011)	--			--			--			--			--			--			--			--			--			--			--			--			--			--			--		
AOC42-SW14 (04-Aug-2011)	--			--			--			--			--			--			--			--			--			--			--			--			--			--			--		
AOC52-T1-BOT03 (05-May-2011)	0.040	U	1	0.050	U	1	0.060	U	1	0.040	U	1	0.020	U	1	0.12	U	1	0.040	U	1	0.060	U	1	0.040	U	1	0.050	U	1	0.030	U	1	0.040	U	1	0.040	U	1	0.040	U	1	0.040	U	1
AOC52-T1-SW05 (05-May-2011)	--			--			--			--			--			--			--			--			--			--			--			--			--			--			--		
AOC52-T1-SW06 (05-May-2011)	--			--			--			--			--			--			--			--			--			--			--			--			--			--			--		
AOC52-T1-SW07 (05-May-2011)	--			--			--			--			--			--			--			--			--			--			--			--			--			--			--		
AOC52-T1-SW08 (05-May-2011)	--			--			--			--			--			--			--			--			--			--			--			--			--			--			--		
AOC52-T2A-BOT01 (24-May-2011)	0.040	U	1	0.050	U	1	0.060	U	1	0.040	U	1	0.020	M	1	0.12	U	1	0.040	U	1	0.060	U	1	0.040	U	1	0.050	U	1	0.030	U	1	0.040	U	1	0.040	U	1	0.040	U	1	0.040	U	1
AOC52-T2A-BOT01-DUP (24-May-2011)	0.040	U	1	0.050	U	1	0.060	U	1	0.040	U	1	0.020	U	1	0.12	U	1	0.040	U	1	0.060	U	1	0.040	U	1	0.050	U	1	0.030	U	1	0.040	U	1	0.040	U	1	0.040	U	1	0.040	U	1
AOC52-T2A-BOT02 (24-May-2011)	0.040	U	1	0.050	U	1	0.060	U	1	0.040	U	1	0.020	U	1	0.12	U	1	0.040	U	1	0.060	U	1	0.040	U	1	0.050	U	1	0.030	U	1	0.040	U	1	0.040	U	1	0.040	U	1	0.040	U	1
AOC52-T2A-SW01 (24-May-2011)	--			--			--			--			--			--			--			--			--			--			--			--			--			--			--		
AOC52-T2A-SW01-DUP (24-May-2011)	--			--			--			--			--			--			--			--			--			--			--			--			--			--			--		
AOC52-T2A-SW02 (24-May-2011)	--			--			--			--			--			--			--			--			--			--			--			--			--			--			--		
AOC52-T2A-SW03 (24-May-2011)	--			--			--			--			--			--			--			--			--			--			--			--			--			--			--		
AOC52-T2A-SW04 (24-May-2011)	--			--			--			--			--			--			--			--			--			--			--			--			--			--			--		
AOC52-T2-BOT01 (23-May-2011)	0.040	U	1	0.050	U	1	0.060	U	1	0.040	U	1	0.020	U	1	0.12	U	1	0.040	U	1	0.060	U	1	0.040	U	1	0.050	U	1	0.030	U	1	0.040	U	1	0.040	U	1	0.040	U	1	0.040	U	1
AOC52-T2-BOT02 (23-May-2011)	0.040	U	1	0.050	U	1	0.060	U	1	0.040	U	1	0.020	U	1	0.12	U	1	0.040	U	1	0.060	U	1	0.040	U	1	0.050	U	1	0.030	U	1	0.040	U	1	0.040	U	1	0.040	U	1	0.040	U	1
AOC52-T2-SW01 (23-May-2011)	--			--			--			--			--			--			--			--			--			--			--			--			--			--			--		
AOC52-T2-SW02 (23-May-2011)	--			--			--			--			--			--			--			--			--			--			--			--			--			--			--		
AOC52-T2-SW03 (23-May-2011)	--			--			--			--			--			--			--			--			--			--			--			--			--			--			--		
AOC52-T2-SW04 (23-May-2011)	--			--			--			--			--			--			--			--			--			--			--			--			--			--			--		
AOC52-T3-BOT02 (05-May-2011)	0.040	U	1	0.050	U	1	0.060	U	1	0.040	U	1	0.020	U	1	0.12	U	1	0.040	U	1	0.060	U	1	0.040	U	1	0.050	U	1	0.030	U	1	0.040	U	1	0.040	U	1	0.040	U	1	0.040	U	1

# Appendix C. Confirmation Sample Results for All Analytes at the Salado Creek Area

	Semi-Volatile Organics																																												
	Benzo(a)anthracene CAS: 56-55-3 Qual Dil	Benzo(a)pyrene CAS: 50-32-8 Qual Dil	Benzo(b)fluoranthene CAS: 205-99-2 Qual Dil	Benzo(g,h,i)perylene CAS: 191-24-2 Qual Dil	Benzoic acid CAS: 65-85-0 Qual Dil	Benzyalcohol CAS: 100-51-6 Qual Dil	Benzybutyl phthalate CAS: 85-68-7 Qual Dil	bis(2-Chloroethoxy)methane CAS: 111-91-1 Qual Dil	bis(2-Chloroethyl)ether CAS: 111-44-4 Qual Dil	bis(2-Chloropropyl)ether CAS: 108-60-1 Qual Dil	bis(2-Ethylhexyl) phthalate CAS: 117-81-7 Qual Dil	Chrysene CAS: 218-01-9 Qual Dil	Dibenz(a,h)anthracene CAS: 53-70-3 Qual Dil	Dibenzofuran CAS: 132-64-9 Qual Dil	Diethyl phthalate CAS: 84-66-2 Qual Dil																														
<b>Tier 1 Soil PCLs - 30 acre<sup>†</sup></b>																																													
Residential Combined Exposure <sup>[1]</sup>	5.6	c	0.56	c	5.7	c	1800	n	350	n	4000	n	1600	c	2.5	c	1.4	c	41	c	43	c	560	c	0.55	c	270	n	1400	n															
Residential Groundwater Exposure <sup>[2]</sup>	8.9	c	3.8	m	30	c	23000	n	>S	95	n	15	n	130	c	0.0059	c	0.0011	c	0.095	c	82	m	770	c	>S	7.6	c	17	n	78	n													
<b>TCEQ-Approved Background Values</b>																																													
CSSA Metals Background Concentration <sup>[3]</sup>	na		na		na		na		na		na		na		na		na		na		na		na		na		na		na																
<b>Sample Locations (Date Collected)</b>																																													
AOC52-T3-BOT02-DUP (05-May-2011)	0.040	U	1	0.050	U	1	0.060	U	1	0.040	U	1	0.020	U	1	0.12	U	1	0.040	U	1	0.060	U	1	0.040	U	1	0.050	U	1	0.030	U	1	0.040	U	1	0.040	U	1	0.040	U	1	0.040	U	1
AOC52-T3-SW03 (05-May-2011)	--			--			--			--			--			--			--			--			--			--			--			--			--			--			--		
AOC52-T3-SW04 (05-May-2011)	--			--			--			--			--			--			--			--			--			--			--			--			--			--			--		
AOC52-T4-BOT01 (05-May-2011)	0.040	U	1	0.050	U	1	0.060	U	1	0.040	U	1	0.020	M	1	0.12	U	1	0.040	U	1	0.060	U	1	0.040	U	1	0.050	U	1	0.030	U	1	0.040	U	1	0.040	U	1	0.040	U	1	0.040	U	1
AOC52-T4-SW01 (05-May-2011)	--			--			--			--			--			--			--			--			--			--			--			--			--			--			--		
AOC52-T4-SW02 (05-May-2011)	--			--			--			--			--			--			--			--			--			--			--			--			--			--			--		
AOC58-BOT01 (19-Apr-2011)	0.040	U	1	0.050	U	1	0.060	U	1	0.040	U	1	0.020	M	1	0.12	M	1	0.040	U	1	0.060	M	1	0.040	M	1	0.050	M	1	0.030	U	1	0.040	U	1	0.040	U	1	0.040	U	1	0.040	U	1
AOC58-BOT01-DUP (19-Apr-2011)	0.040	U	1	0.050	U	1	0.060	U	1	0.040	U	1	0.020	U	1	0.12	U	1	0.040	U	1	0.060	U	1	0.040	U	1	0.050	U	1	0.030	U	1	0.040	U	1	0.040	U	1	0.040	U	1	0.040	U	1
AOC58-SW01 (19-Apr-2011)	--			--			--			--			--			--			--			--			--			--			--			--			--			--			--		
AOC58-SW02 (19-Apr-2011)	--			--			--			--			--			--			--			--			--			--			--			--			--			--			--		
AOC58-SW03 (19-Apr-2011)	--			--			--			--			--			--			--			--			--			--			--			--			--			--			--		
AOC58-SW04 (19-Apr-2011)	--			--			--			--			--			--			--			--			--			--			--			--			--			--			--		
AOC62-BOT01 (30-Mar-2011)	--			--			--			--			--			--			--			--			--			--			--			--			--			--			--		
AOC62-BOT02 (19-Apr-2011)	0.040	U	1	0.050	U	1	0.060	U	1	0.040	U	1	0.020	U	1	0.12	U	1	0.040	U	1	0.060	U	1	0.040	U	1	0.050	U	1	0.030	U	1	0.040	U	1	0.040	U	1	0.040	U	1	0.040	U	1
AOC62-BOT03 (30-Mar-2011)	--			--			--			--			--			--			--			--			--			--			--			--			--			--			--		
AOC62-BOT04 (30-Mar-2011)	--			--			--			--			--			--			--			--			--			--			--			--			--			--			--		
AOC62-SW01 (30-Mar-2011)	--			--			--			--			--			--			--			--			--			--			--			--			--			--			--		
AOC62-SW02 (30-Mar-2011)	--			--			--			--			--			--			--			--			--			--			--			--			--			--			--		
AOC62-SW03 (30-Mar-2011)	--			--			--			--			--			--			--			--			--			--			--			--			--			--			--		
AOC62-SW04 (30-Mar-2011)	0.040	U	1	0.050	U	1	0.060	U	1	0.040	U	1	0.020	U	1	0.12	U	1	0.040	U	1	0.060	U	1	0.040	U	1	0.050	U	1	0.030	U	1	0.040	U	1	0.040	U	1	0.040	U	1	0.040	U	1
AOC62-SW05 (30-Mar-2011)	--			--			--			--			--			--			--			--			--			--			--			--			--			--			--		
AOC62-SW06 (30-Mar-2011)	--			--			--			--			--			--			--			--			--			--			--			--			--			--			--		
AOC62-SW07 (30-Mar-2011)	--			--			--			--			--			--			--			--			--			--			--			--			--			--			--		
AOC62-SW08 (30-Mar-2011)	--			--			--			--			--			--			--			--			--			--			--			--			--			--			--		
AOC62-SW09 (30-Mar-2011)	--			--			--			--			--			--			--			--			--			--			--			--			--			--			--		
AOC62-SW10 (30-Mar-2011)	--			--			--			--			--			--			--			--			--			--			--			--			--			--			--		
AOC62-SW11 (30-Mar-2011)	0.040	U	1	0.050	U	1	0.060	U	1	0.040	U	1	0.020	U	1	0.12	U	1	0.040	U	1	0.060	U	1	0.040	U	1	0.050	U	1	0.030	U	1	0.040	U	1	0.040	U	1	0.040	U	1	0.040	U	1
AOC62-SW12 (30-Mar-2011)	--			--			--			--			--			--			--			--			--			--			--			--			--			--			--		
AOC62-SW13 (30-Mar-2011)	--			--			--			--			--			--			--			--			--			--			--			--			--			--			--		
AOC62-SW14 (19-Apr-2011)	--			--			--			--			--			--			--			--			--			--			--			--			--			--			--		
AOC62-SW15 (30-Mar-2011)	--			--			--			--			--			--			--			--			--			--			--			--			--			--			--		
AOC62-SW16 (30-Mar-2011)	0.040	U	1	0.050	U	1	0.060	U	1	0.040	U	1	0.020	U	1	0.12	U	1	0.040	U	1	0.060	U	1	0.040	U	1	0.050	U	1	0.030	U	1	0.040	U	1	0.040	U	1	0.040	U	1	0.040	U	1
AOC62-T3-SW18 (05-May-2011)	--			--			--			--			--			--			--			--			--			--			--			--			--			--			--		
AOC62-T3-SW18-DUP (05-May-2011)	--			--			--			--			--			--			--			--			--			--			--			--			--			--			--		
AOC62-T4-SW17 (05-May-2011)	0.040	U	1	0.050	U	1	0.060	U	1	0.040	U	1	0.020	U	1	0.12	U	1	0.040	U	1	0.060	U	1	0.040	U	1	0.050	U	1	0.030	U	1	0.040	U	1	0.040	U	1	0.040	U	1	0.040	U	1
AOC62-T4-SW17-DUP (05-May-2011)	0.040	U	1	0.050	U	1	0.060	U	1	0.040	U	1	0.020	U	1	0.12	U	1	0.040	U	1	0.060	U	1	0.040	U	1	0.050	U	1	0.030	U	1	0.040	U	1	0.040	U	1	0.040	U	1	0.040	U	1





# Appendix C. Confirmation Sample Results for All Analytes at the Salado Creek Area

	Semi-Volatile Organics																																
	Dimethyl phthalate CAS: 131-11-3 Qual Dil	Di-n-butyl phthalate CAS: 84-74-2 Qual Dil	Di-n-octyl phthalate CAS: 117-84-0 Qual Dil	Fluoranthene CAS: 206-44-0 Qual Dil	Fluorene CAS: 86-73-7 Qual Dil	Hexachlorobenzene CAS: 118-74-1 Qual Dil	Hexachlorobutadiene CAS: 87-68-3 Qual Dil	Hexachlorocyclopentadiene CAS: 77-47-4 Qual Dil	Hexachloroethane CAS: 67-72-1 Qual Dil	Indeno[1,2,3-cd]pyrene CAS: 193-39-5 Qual Dil	Isophorone CAS: 78-59-1 Qual Dil	Naphthalene CAS: 91-20-3 Qual Dil	Nitrobenzene CAS: 98-95-3 Qual Dil	n-Nitrosodipropylamine CAS: 621-64-7 Qual Dil	n-Nitrosodiphenylamine CAS: 86-30-6 Qual Dil																		
<b>Tier 1 Soil PCLs - 30 acre<sup>†</sup></b>																																	
Residential Combined Exposure <sup>[1]</sup>	660	n	4400	n	1300	n	2300	n	2300	n	1.0	c	12	c	7.2	n	67	n	5.7	c	1200	n	120	n	34	c	0.4	c	570	c			
Residential Groundwater Exposure <sup>[2]</sup>	31	n	1700	n	810000	n	>S	960	n	>S	150	n	0.56	m	1.6	c	9.6	m	0.92	n	87	c	1.5	c	16	n	0.18	n	0.00018	c	1.4	c	
<b>TCEQ-Approved Background Values</b>																																	
CSSA Metals Background Concentration <sup>[3]</sup>	na		na		na		na		na		na		na		na		na		na		na		na		na		na		na				
<b>Sample Locations (Date Collected)</b>																																	
AOC52-T3-BOT02-DUP (05-May-2011)	0.040	U	1	0.040	U	1	0.030	U	1	0.040	U	1	0.040	U	1	0.050	U	1	0.060	U	1	0.030	U	1	0.040	U	1	0.040	U	1	0.050	U	1
AOC52-T3-SW03 (05-May-2011)	--			--			--			--			--			--			--			--			--			--			--		
AOC52-T3-SW04 (05-May-2011)	--			--			--			--			--			--			--			--			--			--			--		
AOC52-T4-BOT01 (05-May-2011)	0.040	U	1	0.040	U	1	0.030	U	1	0.040	U	1	0.040	U	1	0.050	U	1	0.060	U	1	0.030	U	1	0.040	U	1	0.040	U	1	0.050	U	1
AOC52-T4-SW01 (05-May-2011)	--			--			--			--			--			--			--			--			--			--			--		
AOC52-T4-SW02 (05-May-2011)	--			--			--			--			--			--			--			--			--			--			--		
AOC58-BOT01 (19-Apr-2011)	0.040	U	1	0.040	U	1	0.030	U	1	0.040	U	1	0.040	U	1	0.050	U	1	0.060	M	1	0.030	M	1	0.040	M	1	0.040	U	1	0.040	M	1
AOC58-BOT01-DUP (19-Apr-2011)	0.040	U	1	0.040	U	1	0.030	U	1	0.040	U	1	0.040	U	1	0.050	U	1	0.060	U	1	0.030	U	1	0.040	U	1	0.040	U	1	0.040	U	1
AOC58-SW01 (19-Apr-2011)	--			--			--			--			--			--			--			--			--			--			--		
AOC58-SW02 (19-Apr-2011)	--			--			--			--			--			--			--			--			--			--			--		
AOC58-SW03 (19-Apr-2011)	--			--			--			--			--			--			--			--			--			--			--		
AOC58-SW04 (19-Apr-2011)	--			--			--			--			--			--			--			--			--			--			--		
AOC62-BOT01 (30-Mar-2011)	--			--			--			--			--			--			--			--			--			--			--		
AOC62-BOT02 (19-Apr-2011)	0.040	U	1	0.040	U	1	0.030	U	1	0.040	U	1	0.040	U	1	0.050	U	1	0.060	U	1	0.030	U	1	0.040	U	1	0.040	U	1	0.040	U	1
AOC62-BOT03 (30-Mar-2011)	--			--			--			--			--			--			--			--			--			--			--		
AOC62-BOT04 (30-Mar-2011)	--			--			--			--			--			--			--			--			--			--			--		
AOC62-SW01 (30-Mar-2011)	--			--			--			--			--			--			--			--			--			--			--		
AOC62-SW02 (30-Mar-2011)	--			--			--			--			--			--			--			--			--			--			--		
AOC62-SW03 (30-Mar-2011)	--			--			--			--			--			--			--			--			--			--			--		
AOC62-SW04 (30-Mar-2011)	0.040	U	1	0.040	U	1	0.030	U	1	0.040	U	1	0.040	U	1	0.050	U	1	0.060	U	1	0.030	U	1	0.040	U	1	0.040	U	1	0.040	U	1
AOC62-SW05 (30-Mar-2011)	--			--			--			--			--			--			--			--			--			--			--		
AOC62-SW06 (30-Mar-2011)	--			--			--			--			--			--			--			--			--			--			--		
AOC62-SW07 (30-Mar-2011)	--			--			--			--			--			--			--			--			--			--			--		
AOC62-SW08 (30-Mar-2011)	--			--			--			--			--			--			--			--			--			--			--		
AOC62-SW09 (30-Mar-2011)	--			--			--			--			--			--			--			--			--			--			--		
AOC62-SW10 (30-Mar-2011)	--			--			--			--			--			--			--			--			--			--			--		
AOC62-SW11 (30-Mar-2011)	0.040	U	1	0.040	U	1	0.030	U	1	0.040	U	1	0.040	U	1	0.050	U	1	0.060	U	1	0.030	U	1	0.040	U	1	0.040	U	1	0.040	U	1
AOC62-SW12 (30-Mar-2011)	--			--			--			--			--			--			--			--			--			--			--		
AOC62-SW13 (30-Mar-2011)	--			--			--			--			--			--			--			--			--			--			--		
AOC62-SW14 (19-Apr-2011)	--			--			--			--			--			--			--			--			--			--			--		
AOC62-SW15 (30-Mar-2011)	--			--			--			--			--			--			--			--			--			--			--		
AOC62-SW16 (30-Mar-2011)	0.040	U	1	0.040	U	1	0.030	U	1	0.040	U	1	0.040	U	1	0.050	U	1	0.060	U	1	0.030	U	1	0.040	U	1	0.040	U	1	0.040	U	1
AOC62-T3-SW18 (05-May-2011)	--			--			--			--			--			--			--			--			--			--			--		
AOC62-T3-SW18-DUP (05-May-2011)	--			--			--			--			--			--			--			--			--			--			--		
AOC62-T4-SW17 (05-May-2011)	0.040	U	1	0.040	U	1	0.030	U	1	0.040	U	1	0.040	U	1	0.050	U	1	0.060	U	1	0.030	U	1	0.040	U	1	0.040	U	1	0.040	U	1
AOC62-T4-SW17-DUP (05-May-2011)	0.040	U	1	0.040	U	1	0.030	U	1	0.040	U	1	0.040	U	1	0.050	U	1	0.060	U	1	0.030	U	1	0.040	U	1	0.040	U	1	0.040	U	1

# Appendix C. Confirmation Sample Results for All Analytes at the Salado Creek Area

	Semi-Volatile Organics												Explosives																				
	Pentachlorophenol CAS: 87-86-5 Qual Dil	Phenanthrene CAS: 85-01-8 Qual Dil	Phenol CAS: 108-95-2 Qual Dil	Pyrene CAS: 129-00-0 Qual Dil	1,3,5-Trinitrobenzene CAS: 99-35-4 Qual Dil	1,3-Dinitrobenzene CAS: 99-65-0 Qual Dil	2,4,6-Trinitrotoluene (TNT) CAS: 118-96-7 Qual Dil	2,4-Dinitrotoluene CAS: 121-14-2 Qual Dil	2,6-Dinitrotoluene CAS: 606-20-2 Qual Dil	2-Nitrotoluene CAS: 88-72-2 Qual Dil	3-Nitrotoluene CAS: 99-08-1 Qual Dil	4-Nitrotoluene CAS: 99-99-0 Qual Dil	RDY CAS: 121-82-4 Qual Dil	Nitrobenzene CAS: 98-95-3 Qual Dil	HMX CAS: 2691-41-0 Qual Dil																		
<b>Tier 1 Soil PCLs - 30 acre<sup>†</sup></b>																																	
Residential Combined Exposure <sup>[1]</sup>	2.4	c	1700	n	1600	n	1700	n	2000	n	6.3	n	17	n	6.9	c	6.9	c	21	c	270	n	170	n	25	n	34	c	200	n			
Residential Groundwater Exposure <sup>[2]</sup>	0.0092	m	210	n	9.6	n	560	n	>S	0.91	n	0.0038	n	0.086	n	0.0027	c	0.0024	c	0.016	c	0.92	n	0.22	c	0.018	c	0.18	n	1.2	n		
<b>TCEQ-Approved Background Values</b>																																	
CSSA Metals Background Concentration <sup>[3]</sup>	na		na		na		na		na		na		na		na		na		na		na		na		na		na		na				
<b>Sample Locations (Date Collected)</b>																																	
AOC42-BOT01 (19-Apr-2011)	0.030	U	1	0.040	U	1	0.040	U	1	0.050	U	1	0.075	U	1	0.075	U	1	0.075	U	1	0.080	U	1	0.075	U	1	0.075	U	1	0.080	U	1
AOC42-BOT01-DUP (19-Apr-2011)	0.030	U	1	0.040	U	1	0.040	U	1	0.050	U	1	0.075	U	1	0.075	U	1	0.075	U	1	0.080	U	1	0.075	U	1	0.080	U	1	0.080	U	1
AOC42-BOT02 (19-Apr-2011)	0.030	U	1	0.040	U	1	0.040	U	1	0.050	U	1	0.075	U	1	0.075	U	1	0.075	U	1	0.080	U	1	0.075	U	1	0.080	U	1	0.080	U	1
AOC42-BOT02-DUP (19-Apr-2011)	0.030	U	1	0.040	U	1	0.040	U	1	0.050	U	1	0.075	U	1	0.075	U	1	0.075	U	1	0.080	U	1	0.075	U	1	0.080	U	1	0.080	U	1
AOC42-BOT04 (04-Aug-2011)	--			--			--			--			--			--			--			--			--			--			--		
AOC42-BOT04-DUP (04-Aug-2011)	--			--			--			--			--			--			--			--			--			--			--		
AOC42-SW01 (19-Apr-2011)	--			--			--			--			--			--			--			--			--			--			--		
AOC42-SW02 (19-Apr-2011)	--			--			--			--			--			--			--			--			--			--			--		
AOC42-SW03 (19-Apr-2011)	--			--			--			--			--			--			--			--			--			--			--		
AOC42-SW04 (19-Apr-2011)	--			--			--			--			--			--			--			--			--			--			--		
AOC42-SW05 (19-Apr-2011)	--			--			--			--			--			--			--			--			--			--			--		
AOC42-SW06 (19-Apr-2011)	--			--			--			--			--			--			--			--			--			--			--		
AOC42-SW07 (19-Apr-2011)	--			--			--			--			--			--			--			--			--			--			--		
AOC42-SW08 (19-Apr-2011)	--			--			--			--			--			--			--			--			--			--			--		
AOC42-SW09 (19-Apr-2011)	--			--			--			--			--			--			--			--			--			--			--		
AOC42-SW10 (19-Apr-2011)	--			--			--			--			--			--			--			--			--			--			--		
AOC42-SW14 (04-Aug-2011)	--			--			--			--			--			--			--			--			--			--			--		
AOC52-T1-BOT03 (05-May-2011)	0.030	U	1	0.040	U	1	0.040	U	1	0.050	U	1	0.075	U	1	0.075	U	1	0.075	U	1	0.080	U	1	0.075	U	1	0.075	U	1	0.080	U	1
AOC52-T1-SW05 (05-May-2011)	--			--			--			--			--			--			--			--			--			--			--		
AOC52-T1-SW06 (05-May-2011)	--			--			--			--			--			--			--			--			--			--			--		
AOC52-T1-SW07 (05-May-2011)	--			--			--			--			--			--			--			--			--			--			--		
AOC52-T1-SW08 (05-May-2011)	--			--			--			--			--			--			--			--			--			--			--		
AOC52-T2A-BOT01 (24-May-2011)	0.030	U	1	0.040	U	1	0.040	U	1	0.050	U	1	0.075	U	1	0.075	U	1	0.075	U	1	0.080	U	1	0.075	U	1	0.075	U	1	0.080	U	1
AOC52-T2A-BOT01-DUP (24-May-2011)	0.030	U	1	0.040	U	1	0.040	U	1	0.050	U	1	0.075	U	1	0.075	U	1	0.075	U	1	0.080	U	1	0.075	U	1	0.080	U	1	0.080	U	1
AOC52-T2A-BOT02 (24-May-2011)	0.030	U	1	0.040	U	1	0.040	U	1	0.050	U	1	0.075	U	1	0.075	U	1	0.075	U	1	0.080	U	1	0.075	U	1	0.080	U	1	0.080	U	1
AOC52-T2A-SW01 (24-May-2011)	--			--			--			--			--			--			--			--			--			--			--		
AOC52-T2A-SW01-DUP (24-May-2011)	--			--			--			--			--			--			--			--			--			--			--		
AOC52-T2A-SW02 (24-May-2011)	--			--			--			--			--			--			--			--			--			--			--		
AOC52-T2A-SW03 (24-May-2011)	--			--			--			--			--			--			--			--			--			--			--		
AOC52-T2A-SW04 (24-May-2011)	--			--			--			--			--			--			--			--			--			--			--		
AOC52-T2-BOT01 (23-May-2011)	0.030	U	1	0.040	U	1	0.040	U	1	0.050	U	1	0.075	U	1	0.075	U	1	0.075	U	1	0.080	U	1	0.075	U	1	0.075	U	1	0.080	U	1
AOC52-T2-BOT02 (23-May-2011)	0.030	U	1	0.040	U	1	0.040	U	1	0.050	U	1	0.075	U	1	0.075	U	1	0.075	U	1	0.080	U	1	0.075	U	1	0.080	U	1	0.080	U	1
AOC52-T2-SW01 (23-May-2011)	--			--			--			--			--			--			--			--			--			--			--		
AOC52-T2-SW02 (23-May-2011)	--			--			--			--			--			--			--			--			--			--			--		
AOC52-T2-SW03 (23-May-2011)	--			--			--			--			--			--			--			--			--			--			--		
AOC52-T2-SW04 (23-May-2011)	--			--			--			--			--			--			--			--			--			--			--		
AOC52-T3-BOT02 (05-May-2011)	0.030	U	1	0.040	U	1	0.040	U	1	0.050	U	1	0.075	U	1	0.075	U	1	0.075	U	1	0.080	U	1	0.075	U	1	0.075	U	1	0.080	U	1

# Appendix C. Confirmation Sample Results for All Analytes at the Salado Creek Area

	Semi-Volatile Organics												Explosives																				
	Pentachlorophenol CAS: 87-86-5 Qual Dil	Phenanthrene CAS: 85-01-8 Qual Dil	Phenol CAS: 108-95-2 Qual Dil	Pyrene CAS: 129-00-0 Qual Dil	1,3,5-Trinitrobenzene CAS: 99-35-4 Qual Dil	1,3-Dinitrobenzene CAS: 99-65-0 Qual Dil	2,4,6-Trinitrotoluene (TNT) CAS: 118-96-7 Qual Dil	2,4-Dinitrotoluene CAS: 121-14-2 Qual Dil	2,6-Dinitrotoluene CAS: 606-20-2 Qual Dil	2-Nitrotoluene CAS: 88-72-2 Qual Dil	3-Nitrotoluene CAS: 99-08-1 Qual Dil	4-Nitrotoluene CAS: 99-99-0 Qual Dil	RDY CAS: 121-82-4 Qual Dil	Nitrobenzene CAS: 98-95-3 Qual Dil	HMX CAS: 2691-41-0 Qual Dil																		
<b>Tier 1 Soil PCLs - 30 acre<sup>1</sup></b>																																	
Residential Combined Exposure <sup>[1]</sup>	2.4	c	1700	n	1600	n	1700	n	2000	n	6.3	n	17	n	6.9	c	6.9	c	21	c	270	n	170	n	25	n	34	c	200	n			
Residential Groundwater Exposure <sup>[2]</sup>	0.0092	m	210	n	9.6	n	560	n	>S	0.91	n	0.0038	n	0.086	n	0.0027	c	0.0024	c	0.016	c	0.92	n	0.22	c	0.018	c	0.18	n	1.2	n		
<b>TCEQ-Approved Background Values</b>																																	
CSSA Metals Background Concentration <sup>[3]</sup>	na		na		na		na		na		na		na		na		na		na		na		na		na		na		na				
<b>Sample Locations (Date Collected)</b>																																	
AOC52-T3-BOT02-DUP (05-May-2011)	0.030	U	1	0.040	U	1	0.040	U	1	0.050	U	1	0.075	U	1	0.075	U	1	0.075	U	1	0.080	U	1	0.075	U	1	0.080	U	1	0.080	U	1
AOC52-T3-SW03 (05-May-2011)	--			--			--			--			--			--			--			--			--			--			--		
AOC52-T3-SW04 (05-May-2011)	--			--			--			--			--			--			--			--			--			--			--		
AOC52-T4-BOT01 (05-May-2011)	0.030	U	1	0.040	U	1	0.040	U	1	0.050	U	1	0.075	U	1	0.075	U	1	0.075	U	1	0.080	U	1	0.080	U	1	0.080	U	1	0.080	U	1
AOC52-T4-SW01 (05-May-2011)	--			--			--			--			--			--			--			--			--			--			--		
AOC52-T4-SW02 (05-May-2011)	--			--			--			--			--			--			--			--			--			--			--		
AOC58-BOT01 (19-Apr-2011)	0.030	U	1	0.040	U	1	0.040	M	1	0.050	U	1	0.075	U	1	0.075	U	1	0.075	U	1	0.080	U	1	0.075	U	1	0.080	U	1	0.080	U	1
AOC58-BOT01-DUP (19-Apr-2011)	0.030	U	1	0.040	U	1	0.040	U	1	0.050	U	1	0.075	U	1	0.075	U	1	0.075	U	1	0.080	U	1	0.075	U	1	0.080	U	1	0.080	U	1
AOC58-SW01 (19-Apr-2011)	--			--			--			--			--			--			--			--			--			--			--		
AOC58-SW02 (19-Apr-2011)	--			--			--			--			--			--			--			--			--			--			--		
AOC58-SW03 (19-Apr-2011)	--			--			--			--			--			--			--			--			--			--			--		
AOC58-SW04 (19-Apr-2011)	--			--			--			--			--			--			--			--			--			--			--		
AOC62-BOT01 (30-Mar-2011)	--			--			--			--			--			--			--			--			--			--			--		
AOC62-BOT02 (19-Apr-2011)	0.030	U	1	0.040	U	1	0.040	U	1	0.050	U	1	0.075	U	1	0.075	U	1	0.075	U	1	0.080	U	1	0.075	U	1	0.080	U	1	0.080	U	1
AOC62-BOT03 (30-Mar-2011)	--			--			--			--			--			--			--			--			--			--			--		
AOC62-BOT04 (30-Mar-2011)	--			--			--			--			--			--			--			--			--			--			--		
AOC62-SW01 (30-Mar-2011)	--			--			--			--			--			--			--			--			--			--			--		
AOC62-SW02 (30-Mar-2011)	--			--			--			--			--			--			--			--			--			--			--		
AOC62-SW03 (30-Mar-2011)	--			--			--			--			--			--			--			--			--			--			--		
AOC62-SW04 (30-Mar-2011)	0.030	U	1	0.040	U	1	0.040	U	1	0.050	U	1	0.075	U	1	0.075	U	1	0.075	U	1	0.080	U	1	0.075	U	1	0.080	U	1	0.080	U	1
AOC62-SW05 (30-Mar-2011)	--			--			--			--			--			--			--			--			--			--			--		
AOC62-SW06 (30-Mar-2011)	--			--			--			--			--			--			--			--			--			--			--		
AOC62-SW07 (30-Mar-2011)	--			--			--			--			--			--			--			--			--			--			--		
AOC62-SW08 (30-Mar-2011)	--			--			--			--			--			--			--			--			--			--			--		
AOC62-SW09 (30-Mar-2011)	--			--			--			--			--			--			--			--			--			--			--		
AOC62-SW10 (30-Mar-2011)	--			--			--			--			--			--			--			--			--			--			--		
AOC62-SW11 (30-Mar-2011)	0.030	U	1	0.040	U	1	0.040	U	1	0.050	U	1	0.075	U	1	0.075	U	1	0.075	U	1	0.080	U	1	0.075	U	1	0.080	U	1	0.080	U	1
AOC62-SW12 (30-Mar-2011)	--			--			--			--			--			--			--			--			--			--			--		
AOC62-SW13 (30-Mar-2011)	--			--			--			--			--			--			--			--			--			--			--		
AOC62-SW14 (19-Apr-2011)	--			--			--			--			--			--			--			--			--			--			--		
AOC62-SW15 (30-Mar-2011)	--			--			--			--			--			--			--			--			--			--			--		
AOC62-SW16 (30-Mar-2011)	0.030	U	1	0.040	U	1	0.040	U	1	0.050	U	1	0.075	U	1	0.075	U	1	0.075	U	1	0.080	U	1	0.075	U	1	0.080	U	1	0.080	U	1
AOC62-T3-SW18 (05-May-2011)	--			--			--			--			--			--			--			--			--			--			--		
AOC62-T3-SW18-DUP (05-May-2011)	--			--			--			--			--			--			--			--			--			--			--		
AOC62-T4-SW17 (05-May-2011)	0.030	U	1	0.040	U	1	0.040	U	1	0.050	U	1	0.075	U	1	0.075	U	1	0.075	U	1	0.080	U	1	0.075	U	1	0.080	U	1	0.080	U	1
AOC62-T4-SW17-DUP (05-May-2011)	0.030	U	1	0.040	U	1	0.040	U	1	0.050	U	1	0.075	U	1	0.075	U	1	0.075	U	1	0.080	U	1	0.075	U	1	0.080	U	1	0.080	U	1

## Appendix C. Confirmation Sample Results for All Analytes at the Salado Creek Area

	Explosives						Metals																							
	Tetryl CAS: 479-45-8	Qual	Dil	Arsenic CAS: 7440-38-2	Qual	Dil	Barium CAS: 7440-39-3	Qual	Dil	Cadmium CAS: 7440-43-9	Qual	Dil	Chromium CAS: 7440-47-3	Qual	Dil	Copper CAS: 7440-50-8	Qual	Dil	Lead CAS: 7439-92-1	Qual	Dil	Mercury CAS: 7439-97-6	Qual	Dil	Nickel CAS: 7440-02-0	Qual	Dil	Zinc CAS: 7440-66-6	Qual	Dil
<b>Tier 1 Soil PCLs - 30 acre<sup>1</sup></b>																														
Residential Combined Exposure <sup>[1]</sup>	34	n		24	n		7800	n		52	n		23000	n		550	n		500	n		2.1	n		830	n		9900	n	
Residential Groundwater Exposure <sup>[2]</sup>	0.55	n		2.5	m	>S	220	m	>S	0.75	m	>S	1200	m	>S	520	a	>S	1.5	a	>S	0.0039	m		79	n	>S	1200	n	>S
<b>TCEQ-Approved Background Values</b>																														
CSSA Metals Background Concentration <sup>[3]</sup>	na			19.6††			300††			3.0††			40.2††			23.2††			84.5††			0.77††			35.5††			73.2††		
<b>Sample Locations (Date Collected)</b>																														
AOC42-BOT01 (19-Apr-2011)	0.075	U	1	3.6	M	1	45	M	1	0.030	M	1	9.7	M	1	5.0	M	1	4.5	M	1	0.030	F	1	7.8	M	1	21	M	1
AOC42-BOT01-DUP (19-Apr-2011)	0.075	U	1	4.2	F	1	52			0.030	U	1	11	F	1	6.3	J	1	5.1	F	1	0.040	F	1	8.3			24		
AOC42-BOT02 (19-Apr-2011)	0.075	U	1	2.0	M	1	10	M	1	0.030	M	1	2.3	M	1	41	M	1	40	M	1	0.010	U	1	3.4	M	1	69	M	1
AOC42-BOT02-DUP (19-Apr-2011)	0.075	U	1	2.1	F	1	6.8	J	1	0.030	U	1	2.9	F	1	5.4	J	1	0.60	F	1	0.010	U	1	3.1		1	24	J	1
AOC42-BOT04 (04-Aug-2011)	--			2.4	F	1	48.5		1	0.030	U	1	11.8	F	1	5.5		1	2.38	F	1	0.050	F	1	7.9		1	19		1
AOC42-BOT04-DUP (04-Aug-2011)	--			2.1	F	1	46.6		1	0.030	U	1	11.5	F	1	3.8		1	0.63	F	a	0.020	F	1	8.6		1	15		1
AOC42-SW01 (19-Apr-2011)	--			4.3	F	1	64		1	0.030	U	1	11	F	1	5.9	J	1	6.2	F	1	0.010	U	1	8.8		1	14		1
AOC42-SW02 (19-Apr-2011)	--			4.7	F	1	74		1	0.030	U	1	14	F	1	5.9	J	1	7.1	F	1	0.010	U	1	9.8		1	18		1
AOC42-SW03 (19-Apr-2011)	--			4.7	F	1	81	J	1	0.030	U	1	19	F	1	8.9	J	1	9.4	F	1	0.010	U	1	13		1	24	J	1
AOC42-SW04 (19-Apr-2011)	--			4.2	F	1	110	J	1	0.030	U	1	21		1	9.4	J	1	11		1	0.010	U	1	15		1	27	J	1
AOC42-SW05 (19-Apr-2011)	--			4.3	F	1	75	J	1	0.030	U	1	15	F	1	6.7	J	1	7.0	F	1	0.010	U	1	10		1	25	J	1
AOC42-SW06 (19-Apr-2011)	--			3.9	F	1	64	J	1	0.030	U	1	15	F	1	5.7	J	1	6.6	F	1	0.010	U	1	9.4		1	22	J	1
AOC42-SW07 (19-Apr-2011)	--			3.4	F	1	41	J	1	0.10	F	1	8.2	F	1	5.2	J	1	5.0	F	1	0.16		1	6.4		1	20	J	1
AOC42-SW08 (19-Apr-2011)	--			3.7	F	1	54	J	1	0.030	U	1	11	F	1	4.4	J	1	4.8	F	1	0.070	F	1	7.4		1	17	J	1
AOC42-SW09 (19-Apr-2011)	--			3.8	F	1	16	J	1	0.030	U	1	5.0	F	1	3.4	J	1	1.3	F	1	0.11		1	6.0		1	9.4	J	1
AOC42-SW10 (19-Apr-2011)	--			1.5	F	1	18	J	1	0.030	U	1	2.4	F	1	1.2	F	1	0.87	F	1	0.010	U	1	1.9	F	1	11	J	1
AOC42-SW14 (04-Aug-2011)	--			4.7	F	1	107		1	0.060	F	1	21.1		1	8.7		1	13.10		1	0.030	F	1	17.2		1	28		1
AOC52-T1-BOT03 (05-May-2011)	0.075	U	1	3.2	F	1	20	J	1	0.030	U	1	3.5	F	1	10		1	12		1	0.030	F	1	6.0		1	180		1
AOC52-T1-SW05 (05-May-2011)	--			4.1	F	1	32	J	1	0.030	U	1	7.9	F	1	3.8		1	3.2	F	1	0.010	U	1	6.9		1	64		1
AOC52-T1-SW06 (05-May-2011)	--			5.1	F	1	69	J	1	0.42	F	1	12	F	1	8.9		1	12		1	0.050	F	1	9.3		1	850		1
AOC52-T1-SW07 (05-May-2011)	--			5.4	F	1	28	J	1	0.030	U	1	5.7	F	1	2.5		1	3.0	F	1	0.010	U	1	5.6		1	21		1
AOC52-T1-SW08 (05-May-2011)	--			3.2	F	1	14	J	1	0.030	U	1	4.1	F	1	1.8	F	1	1.1	F	1	0.010	U	1	3.8		1	6.8		1
AOC52-T2A-BOT01 (24-May-2011)	0.075	U	1	2.8	M	1	27	M	1	0.030	M	1	4.6	M	1	3.4	M	1	3.3	M	1	0.020	F	1	4.9	M	1	11	M	1
AOC52-T2A-BOT01-DUP (24-May-2011)	0.075	U	1	3.0	F	1	29		1	0.030	U	1	5.3	F	1	3.4		1	3.0	F	1	0.020	F	1	5.2		1	12		1
AOC52-T2A-BOT02 (24-May-2011)	0.075	U	1	3.1	F	1	49		1	0.030	U	1	6.4	F	1	5.5		1	4.8	F	1	0.010	U	1	6.4		1	19		1
AOC52-T2A-SW01 (24-May-2011)	--			4.6	F	1	64		1	0.030	U	1	11	F	1	7.2		1	8.1	F	1	0.010	U	1	8.8		1	19		1
AOC52-T2A-SW01-DUP (24-May-2011)	--			4.5	F	1	64		1	0.030	U	1	11	F	1	6.8		1	7.6	F	1	0.010	U	1	8.9		1	17		1
AOC52-T2A-SW02 (24-May-2011)	--			5.0	F	1	88		1	0.030	U	1	15	F	1	9.1		1	12		1	0.010	U	1	11		1	25		1
AOC52-T2A-SW03 (24-May-2011)	--			4.2	F	1	70		1	0.030	U	1	13	F	1	7.2		1	8.9	F	1	0.010	U	1	8.8		1	21		1
AOC52-T2A-SW04 (24-May-2011)	--			3.7	F	1	66		1	0.030	U	1	12	F	1	6.8		1	8.3	F	1	0.030	F	1	8.4		1	28		1
AOC52-T2-BOT01 (23-May-2011)	0.075	U	1	1.7	F	1	14		1	0.030	U	1	2.6	F	1	2.8		1	3.0	F	1	0.030	F	1	3.4		1	47		1
AOC52-T2-BOT02 (23-May-2011)	0.075	U	1	4.1	F	1	50		1	0.030	U	1	7.9	F	1	7.4		1	7.3	F	1	0.27		1	7.5		1	25		1
AOC52-T2-SW01 (23-May-2011)	--			3.4	F	1	32		1	0.030	U	1	6.0	F	1	4.0		1	3.2	F	1	0.020	F	1	5.6		1	13		1
AOC52-T2-SW02 (23-May-2011)	--			3.2	F	1	40		1	0.030	U	1	6.6	F	1	3.5		1	4.2	F	1	0.010	U	1	6.6		1	14		1
AOC52-T2-SW03 (23-May-2011)	--			4.3	F	1	64		1	0.030	U	1	10	F	1	6.5		1	7.2	F	1	0.020	F	1	8.7		1	17		1
AOC52-T2-SW04 (23-May-2011)	--			5.1	F	1	81		1	0.030	U	1	14	F	1	9.0		1	10		1	0.030	F	1	13		1	22		1
AOC52-T3-BOT02 (05-May-2011)	0.075	U	1	4.3	F	1	47	J	1	0.030	U	1	9.6	F	1	9.8		1	5.8	F	1	0.010	U	1	7.6		1	21		1

# Appendix C. Confirmation Sample Results for All Analytes at the Salado Creek Area

	Explosives						Metals																								
	Tetryl CAS: 479-45-8	Qual	Dil	Arsenic CAS: 7440-38-2	Qual	Dil	Barium CAS: 7440-39-3	Qual	Dil	Cadmium CAS: 7440-43-9	Qual	Dil	Chromium CAS: 7440-47-3	Qual	Dil	Copper CAS: 7440-50-8	Qual	Dil	Lead CAS: 7439-92-1	Qual	Dil	Mercury CAS: 7439-97-6	Qual	Dil	Nickel CAS: 7440-02-0	Qual	Dil	Zinc CAS: 7440-66-6	Qual	Dil	
<b>Tier 1 Soil PCLs - 30 acre<sup>†</sup></b>																															
Residential Combined Exposure <sup>[1]</sup>	34	n		24	n		7800	n		52	n		23000	n		550	n		500	n		2.1	n		830	n		9900	n		
Residential Groundwater Exposure <sup>[2]</sup>	<b>0.55</b>	n		2.5	m	>S	220	m	>S	0.75	m	>S	<b>1200</b>	m	>S	<b>520</b>	a	>S	1.5	a	>S	0.0039	m		<b>79</b>	n	>S	<b>1200</b>	n	>S	
<b>TCEQ-Approved Background Values</b>																															
CSSA Metals Background Concentration <sup>[3]</sup>	na			<b>19.6††</b>			<b>300†††</b>			<b>3.0††</b>			40.2††			23.2††			<b>84.5††</b>			<b>0.77††</b>			35.5††			73.2††			
<b>Sample Locations (Date Collected)</b>																															
AOC52-T3-BOT02-DUP (05-May-2011)	0.075	U	1	<b>4.4</b>	F	1	<b>43</b>	J	1	0.030	U	1	<b>8.7</b>	F	1	<b>4.4</b>		1	<b>5.6</b>	F	1	0.010	U	1	<b>6.9</b>		1	<b>17</b>		1	
AOC52-T3-SW03 (05-May-2011)	--			<b>4.8</b>	F	1	<b>59</b>	J	1	0.030	U	1	<b>12</b>	F	1	<b>5.3</b>		1	<b>6.2</b>	F	1	0.010	U	1	<b>8.0</b>		1	<b>16</b>		1	
AOC52-T3-SW04 (05-May-2011)	--			<b>4.6</b>	F	1	<b>61</b>	J	1	0.030	U	1	<b>11</b>	F	1	<b>4.8</b>		1	<b>6.2</b>	F	1	0.010	U	1	<b>7.8</b>		1	<b>15</b>		1	
AOC52-T4-BOT01 (05-May-2011)	0.075	U	1	<b>5.6</b>	M	1	<b>110</b>	M	1	0.030	M	1	<b>21</b>	M	1	<b>9.2</b>	M	1	<b>11</b>	M	1	0.010	U	1	<b>14</b>	M	1	<b>26</b>	M	1	
AOC52-T4-SW01 (05-May-2011)	--			<b>5.0</b>	F	1	<b>74</b>	J	1	0.030	U	1	<b>13</b>	F	1	<b>6.0</b>		1	<b>7.2</b>	F	1	0.010	U	1	<b>8.5</b>		1	<b>17</b>		1	
AOC52-T4-SW02 (05-May-2011)	--			<b>4.7</b>	F	1	<b>60</b>	J	1	0.030	U	1	<b>12</b>	F	1	<b>5.4</b>		1	<b>5.7</b>	F	1	0.010	U	1	<b>8.4</b>		1	<b>16</b>		1	
AOC58-BOT01 (19-Apr-2011)	0.075	U	1	<b>2.9</b>	M	1	<b>18</b>	M	1	0.030	M	1	<b>3.7</b>	M	1	<b>11</b>	M	1	<b>5.0</b>	M	1	<b>0.20</b>	M	1	<b>5.3</b>	M	1	<b>21</b>	M	1	
AOC58-BOT01-DUP (19-Apr-2011)	0.075	U	1	<b>2.8</b>	F	1	<b>18</b>		1	0.030	UJ	1	<b>3.9</b>	F	1	<b>5.4</b>	J	1	<b>2.9</b>	F	1	<b>0.22</b>		1	<b>5.1</b>		1	<b>15</b>	J	1	
AOC58-SW01 (19-Apr-2011)	--			<b>2.7</b>	F	1	<b>17</b>		1	0.030	UJ	1	<b>2.4</b>	F	1	<b>1.5</b>	F	1	<b>1.0</b>	F	1	<b>0.020</b>	F	1	<b>4.0</b>		1	<b>7.8</b>	J	1	
AOC58-SW02 (19-Apr-2011)	--			<b>2.6</b>	F	1	<b>19</b>		1	0.030	UJ	1	<b>3.9</b>	F	1	<b>2.7</b>	J	1	<b>1.5</b>	F	1	<b>0.25</b>		1	<b>4.9</b>		1	<b>9.2</b>	J	1	
AOC58-SW03 (19-Apr-2011)	--			<b>2.6</b>	F	1	<b>18</b>		1	0.030	UJ	1	<b>2.9</b>	F	1	<b>1.8</b>	F	1	<b>1.9</b>	F	1	0.010	U	1	<b>4.3</b>		1	<b>10</b>	J	1	
AOC58-SW04 (19-Apr-2011)	--			<b>2.5</b>	F	1	<b>15</b>		1	0.030	UJ	1	<b>2.9</b>	F	1	<b>1.2</b>	F	1	<b>0.74</b>	F	1	0.010	U	1	<b>3.5</b>		1	<b>8.2</b>	J	1	
AOC62-BOT01 (30-Mar-2011)	--			<b>2.2</b>	F	1	<b>16</b>		1	0.030	UJ	1	<b>3.4</b>	F	1	<b>2.3</b>		1	<b>9.2</b>	F	1	<b>0.050</b>	F	1	<b>8.9</b>		1	<b>38</b>		1	
AOC62-BOT02 (19-Apr-2011)	0.075	U	1	<b>2.4</b>	F	1	<b>17</b>		1	0.030	UJ	1	<b>4.3</b>	F	1	<b>4.2</b>		1	<b>6.7</b>	F	1	0.010	U	1	<b>6.1</b>		1	<b>26</b>		1	
AOC62-BOT03 (30-Mar-2011)	--			<b>3.4</b>	F	1	<b>11</b>		1	0.030	UJ	1	<b>2.2</b>	F	1	<b>3.3</b>		1	<b>2.6</b>	F	1	<b>0.020</b>	F	1	<b>9.3</b>		1	<b>32</b>		1	
AOC62-BOT04 (30-Mar-2011)	--			<b>2.8</b>	F	1	<b>8.8</b>		1	0.030	UJ	1	<b>2.2</b>	F	1	<b>7.3</b>		1	<b>2.9</b>	F	1	<b>0.030</b>	F	1	<b>7.2</b>		1	<b>38</b>		1	
AOC62-SW01 (30-Mar-2011)	--			<b>2.9</b>	F	1	<b>30</b>		1	0.030	UJ	1	<b>6.4</b>	F	1	<b>4.6</b>		1	<b>3.0</b>	F	1	<b>0.020</b>	F	1	<b>5.6</b>		1	<b>12</b>		1	
AOC62-SW02 (30-Mar-2011)	--			<b>2.2</b>	F	1	<b>4.5</b>		1	0.030	UJ	1	<b>1.1</b>	F	1	<b>0.86</b>	F	1	0.18	U	1	0.010	U	1	<b>2.7</b>		1	<b>5.6</b>		1	
AOC62-SW03 (30-Mar-2011)	--			<b>3.3</b>	M	1	<b>30</b>	M	1	0.030	M	1	<b>6.5</b>	M	1	<b>2.1</b>	M	1	<b>2.6</b>	M	1	<b>0.020</b>	F	1	<b>5.3</b>	M	1	<b>11</b>	M	1	
AOC62-SW04 (30-Mar-2011)	0.075	U	1	<b>3.0</b>	F	1	<b>26</b>		1	0.030	UJ	1	<b>4.0</b>	F	1	<b>3.0</b>		1	<b>2.6</b>	F	1	<b>0.030</b>	F	1	<b>4.7</b>		1	<b>8.6</b>		1	
AOC62-SW05 (30-Mar-2011)	--			<b>2.8</b>	F	1	<b>29</b>		1	0.030	UJ	1	<b>5.5</b>	F	1	<b>3.0</b>		1	<b>2.5</b>	F	1	<b>0.030</b>	F	1	<b>5.0</b>		1	<b>9.4</b>		1	
AOC62-SW06 (30-Mar-2011)	--			<b>2.8</b>	F	1	<b>14</b>		1	0.030	UJ	1	<b>3.5</b>	F	1	<b>1.8</b>	F	1	<b>0.77</b>	F	1	<b>0.020</b>	F	1	<b>3.7</b>		1	<b>8.1</b>		1	
AOC62-SW07 (30-Mar-2011)	--			<b>3.6</b>	F	1	<b>36</b>		1	0.030	UJ	1	<b>7.0</b>	F	1	<b>2.8</b>		1	<b>3.0</b>	F	1	<b>0.020</b>	F	1	<b>6.2</b>		1	<b>13</b>		1	
AOC62-SW08 (30-Mar-2011)	--			<b>2.2</b>	F	1	<b>5.6</b>		1	0.030	UJ	1	<b>1.1</b>	F	1	<b>2.0</b>		1	0.18	U	1	<b>0.020</b>	F	1	<b>2.6</b>		1	<b>5.2</b>		1	
AOC62-SW09 (30-Mar-2011)	--			<b>3.2</b>	F	1	<b>34</b>		1	0.030	UJ	1	<b>6.4</b>	F	1	<b>3.9</b>		1	<b>3.2</b>	F	1	<b>0.020</b>	F	1	<b>6.0</b>		1	<b>9.9</b>		1	
AOC62-SW10 (30-Mar-2011)	--			<b>2.5</b>	F	1	<b>16</b>		1	0.030	UJ	1	<b>3.6</b>	F	1	<b>1.9</b>	F	1	<b>1.2</b>	F	1	<b>0.020</b>	F	1	<b>3.8</b>		1	<b>8.1</b>		1	
AOC62-SW11 (30-Mar-2011)	0.075	U	1	<b>3.5</b>	F	1	<b>41</b>		1	0.030	UJ	1	<b>8.2</b>	F	1	<b>3.2</b>		1	<b>4.3</b>	F	1	<b>0.020</b>	F	1	<b>6.6</b>		1	<b>11</b>		1	
AOC62-SW12 (30-Mar-2011)	--			<b>2.6</b>	F	1	<b>9.6</b>		1	0.030	UJ	1	<b>2.2</b>	F	1	<b>1.8</b>	F	1	<b>0.27</b>	F	1	<b>0.020</b>	F	1	<b>3.8</b>		1	<b>8.4</b>		1	
AOC62-SW13 (30-Mar-2011)	--			<b>3.9</b>	F	1	<b>44</b>		1	0.030	UJ	1	<b>9.6</b>	F	1	<b>3.4</b>		1	<b>4.4</b>	F	1	<b>0.020</b>	F	1	<b>8.1</b>		1	<b>14</b>		1	
AOC62-SW14 (19-Apr-2011)	--			<b>2.6</b>	F	1	<b>20</b>		1	0.030	UJ	1	<b>5.0</b>	F	1	<b>2.5</b>		1	<b>1.6</b>	F	1	0.010	U	1	<b>4.9</b>		1	<b>10</b>		1	
AOC62-SW15 (30-Mar-2011)	--			<b>3.8</b>	F	1	<b>43</b>		1	0.030	UJ	1	<b>9.1</b>	F	1	<b>3.0</b>		1	<b>4.5</b>	F	1	<b>0.020</b>	F	1	<b>7.7</b>		1	<b>14</b>		1	
AOC62-SW16 (30-Mar-2011)	0.075	U	1	<b>2.2</b>	F	1	<b>9.8</b>		1	0.030	UJ	1	<b>1.9</b>	F	1	<b>1.2</b>	F	1	<b>0.26</b>	F	1	<b>0.030</b>	F	1	<b>3.0</b>		1	<b>8.7</b>		1	
AOC62-T3-SW18 (05-May-2011)	--			<b>3.9</b>	F	1	<b>35</b>	J	1	0.030	U	1	<b>8.4</b>	F	1	<b>4.7</b>		1	<b>6.0</b>	F	1	0.010	U	1	<b>7.1</b>		1	<b>15</b>		1	
AOC62-T3-SW18-DUP (05-May-2011)	--			<b>3.7</b>	F	1	<b>34</b>	J	1	0.030	U	1	<b>7.9</b>	F	1	<b>5.6</b>		1	<b>6.1</b>	F	1	0.010	U	1	<b>6.9</b>		1	<b>22</b>		1	
AOC62-T4-SW17 (05-May-2011)	0.075	U	1	<b>3.7</b>	F	1	<b>37</b>	J	1	0.030	U	1	<b>8.4</b>	F	1	<b>4.0</b>		1	<b>3.8</b>	F	1	<b>0.040</b>	F	1	<b>7.0</b>		1	<b>15</b>		1	
AOC62-T4-SW17-DUP (05-May-2011)	0.075	U	1	<b>4.1</b>	F	1	<b>40</b>	J	1	0.030	U	1	<b>9.5</b>	F	1	<b>4.3</b>		1	<b>3.9</b>	F	1	0.010	U	1	<b>7.4</b>		1	<b>14</b>		1	

**NOTES:**

- † TCEQ, TRRP Tier 1 Soil PCLs (Last Revised: March 25, 2009).
- †† CSSA Soil Background Concentrations. Second Revision, Evaluation of Background Metals Concentrations in Soils and Bedrock at CSSA. February 2002. Values from Table 3.3.
- ††† Texas-Specific median background concentration
- PCLs and CSSA background values coded in this table as [1, 2, 3].
- [1] <sup>Tot</sup>Soil<sub>comb</sub> = PCL for COPC in soil for a 30 acre source area and a potential future resident (combined exposure for ingestion, dermal contact, inhalation of volatiles and particulates, and ingestion of above-ground and below-ground vegetables).
- [2] <sup>GW</sup>Soil<sub>ing</sub> = PCL for COPC in soil for a 30 acre source area and a potential future resident (soil-to-groundwater leaching of COPC to Class 1 and 2 groundwater).
- [3] CSSA Soil Background Concentrations. PCLs are shown in **blue** font. All results given in milligrams per kilogram (mg/kg).  
c = carcinogenic.  
n = noncarcinogenic.  
m = primary MCL-based.  
a = EPA Action Level-based.  
>S = solubility limit exceeded during calculation.  
na = not applicable.

**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 associated concentration is an estimation due to discrepancies in meeting certain analyte-specific quality control criteria.
- M - Analyte was positively identified but the associated concentration is an estimation due to an associated matrix effect.
- Values shown in **BOLD** indicate detections above the MDL.
- Values **HIGHLIGHTED** indicate detections above the PCL.

**APPENDIX D**

**Data Verification Summary Report**

**DATA VERIFICATION SUMMARY REPORT**  
**for samples collected from AOC62**  
**CAMP STANLEY STORAGE ACTIVITY**  
**BOERNE, TEXAS**

Data Verification by: Tammy Chang  
Parsons - Austin

**INTRODUCTION**

The following data verification summary report covers soil samples and the associated field quality control (QC) samples collected from Camp Stanley Storage Activity (CSSA) under Environmental Protection Support, Investigations, and Treatability Studies on March 30, 2011. The samples in the following Sample Delivery Group (SDG) included samples collected from AOC62:

64297

. Samples were analyzed for volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), explosives, and metals which include total metals and TCLP-Texas 11 metals. Not all samples were analyzed for all parameters.

Field QC samples collected in association with this SDG included (1) one trip blank (TB) for VOCs; (2) one equipment blank (EB) for all above listed parameters; (3) one set of matrix spike/matrix spike duplicate (MS/MSD) for metals.

All samples were collected by Parsons and analyzed by Agriculture & Priority Pollutants Laboratories, Inc. (APPL) in Clovis, California, following the procedures outlined in the Statement of Work and CSSA QAPP, Version 1.0.

The samples in this SDG were shipped to the laboratory in one cooler. The cooler was received by the laboratory at a temperature of 4.0°C which was within the recommended range is 2-6° C. The analyses for two of the samples listed on the Chain of custody (COC) were cancelled by Parsons.

**EVALUATION CRITERIA**

The data submitted by the laboratory has been reviewed and verified following the guidelines outlined in the CSSA QAPP, Version 1.0. Information reviewed in the data packages included sample results; field and laboratory quality control results; calibrations; case narratives; raw data; COC forms and the cooler receipt checklist. The analyses and findings presented in this report are based on the reviewed information, and whether guidelines in the CSSA QAPP, Version 1.0, were met.

## ICP METALS

### General

The ICP metals portion of this SDG consisted of nineteen (19) soil samples, one (1) EB, one (1) pair of matrix spike/matrix spike duplicate (MS/MSD), and one (1) TCLP-Texas 11 metals. One of soil samples were analyzed for total metals and TCLP-metals. The samples (other than the TCLP sample) were collected on March 30, 2011 and were analyzed for arsenic, barium, cadmium, chromium, copper, lead, nickel and zinc.

The ICP metals analyses were performed using USEPA SW846 Method 6010B. The TCLP extraction was performed according to Method 1311. All samples in this SDG were analyzed following the procedures outlined in the CSSA QAPP. All samples were prepared and analyzed within the holding time required by the method.

The ICP metals samples were digested in four batches, two for soil, one for TCLP extract, and one for EB.

### Accuracy

Accuracy was evaluated using the percent recovery obtained from the four laboratory control samples (LCS), one for each analytical batch and one set of MS/MSD. AOC62-SW03 was designated for the MS/MSD analyses on the COC.

All LCS recoveries were within acceptance criteria.

All %Rs of metal failed to meet the 80 – 120% criteria in MS and/or MSD analyses. “M” flags were applied to all metal results of parent sample.

### Precision

Precision was evaluated with the relative percent difference (%RPD) of the MS/MSD results.

All %RPD of MS/MSD exceeded the 20% criteria. “M” flags have already been applied to the parent sample results due to accuracy issues. No additional flags were needed.

### Representativeness

Representativeness expresses the degree to which sample data accurately and precisely represents actual site conditions. Representativeness has been evaluated by:

- Comparing the COC procedures to those described in the CSSA QAPP;
- Comparing actual analytical procedures to those described in the CSSA QAPP;
- Evaluating holding times; and
- Examining laboratory blanks and EBs for cross contamination of samples during collection and analysis.



The samples in this SDG were analyzed following the COC and the analytical procedures described in the CSSA QAPP. All samples were prepared and analyzed within the holding times required by the method.

- All instrument tune criteria were met.
- All initial calibration criteria were met.
- All calibration verification criteria were met.
- All second source verification criteria were met. The ICV was prepared using a secondary source.
- All interference check criteria were met.
- All internal standard criteria were met.
- Dilution test (DT) was analyzed on sample AOC62-SW03. The DT was applicable for all metals detected in the parent sample at a concentration of 50 times the MDL or greater. All applicable metals failed to meet criteria in the DT, as follows:

**AOC62-SW03**

Metal	%D	Criteria
Barium	83	%D ≤ 10
Chromium	73	

- A post digestion spike (PDS) was analyzed on the same samples as the DT. All metals met criteria in the PDS:

**AOC62-SW03**

Metal	%R	Criteria
Arsenic	85	75-125%
Barium	102	
Cadmium	69	
Chromium	85	
Copper	91	
Nickel	84	
Lead	81	
Zinc	80	

“J” flags were applied to all cadmium results of all non-TCLP soil samples.

- Another DT was analyzed on sample AOC62-WC01. The DT was applicable for all metals detected in the parent sample at a concentration of 50 times the MDL or greater. All applicable metals failed to meet criteria in the DT, as follows:

**AOC62-WC01**

<b>Metal</b>	<b>%D</b>	<b>Criteria</b>
Barium	<b>100</b>	%D ≤ 10
Chromium	<b>56</b>	
Nickel	<b>54</b>	
Lead	<b>60</b>	
Zinc	<b>62</b>	

- A post digestion spike (PDS) was analyzed on the same samples as the DT. All metals met criteria in the PDS:

**AOC62-WC01**

<b>Metal</b>	<b>%R</b>	<b>Criteria</b>
Arsenic	86	75-125%
Barium	98	
Cadmium	<b>73</b>	
Chromium	86	
Copper	95	
Nickel	84	
Lead	84	
Zinc	91	

“J” flags were applied to all cadmium results of all non-TCLP soil samples.

There were four method blanks (MBs), one EB, and several calibration blanks associated with the ICP analyses in this SDG. All blanks were free of any target metals at or above the RL. Barium and copper were detected near the method detection limits (MDLs) in the EB. This minor detection had no impact to the soil sample results.

**Completeness**

Completeness has been evaluated by comparing the total number of samples collected with the total number of samples with valid analytical data.

All ICP results for the samples in this SDG were considered usable. The completeness for the ICP portion of this SDG is 100%, which meets the minimum acceptance criteria of 90%.

**MERCURY****General**

The mercury portion of this SDG consisted of nineteen (19) soil samples, one (1) EB, one (1) pair of matrix spike/matrix spike duplicate (MS/MSD), and one (1) TCLP-Texas 11 metals. The samples (other than the TCLP sample) were collected on March 30, 2011 and were analyzed for mercury.

The mercury analyses were performed using USEPA SW846 Method 7471A/7470A. TCLP was performed with SW1311 method. All samples in this SDG were analyzed following the procedures outlined in the CSSA QAPP. All samples were prepared and analyzed within the holding time required by the method.

The mercury samples were prepared in four analytical batches, two for soil, one for TCLP extract, and one for EB.

### **Accuracy**

Accuracy was evaluated using the percent recovery obtained from the four LCSs and MS/MSD results. MS/MSD were performed with sample AOC62-SW03.

All LCS recoveries and MS/MSD recoveries were within acceptance criteria.

### **Precision**

Precision was evaluated with the %RPD of MS/MSD results.

The %RPDs of the MS/MSD was compliant.

### **Representativeness**

Representativeness expresses the degree to which sample data accurately and precisely represents actual site conditions. Representativeness has been evaluated by:

- Comparing the COC procedures to those described in the CSSA QAPP;
- Comparing actual analytical procedures to those described in the CSSA QAPP;
- Evaluating holding times; and
- Examining laboratory blanks and EBs for cross contamination of samples during sample collection and analysis.

The samples in this SDG were analyzed following the COC and the analytical procedures described in the CSSA QAPP. All samples were prepared and analyzed within the holding times required by the method.

- All initial calibration criteria were met.
- All calibration verification criteria were met.
- All second source verification criteria were met. The ICV was prepared using a secondary source.

There were four MBs, one EB, and several calibration blanks associated with the mercury analyses in this SDG. All blanks were free of mercury at or above the RL.

### **Completeness**

Completeness has been evaluated by comparing the total number of samples collected with the total number of samples with valid analytical data.

All mercury results for the samples in this SDG were considered usable. The completeness for the mercury portion of this SDG is 100%, which meets the minimum acceptance criteria of 90%.

## **VOLATILES**

### **General**

This data package consisted of four (4) soil samples, one (1) EB, and one (1) TB. The samples were collected on March 30, 2011 and were analyzed for a full list of VOCs.

The VOC analyses were performed using United States Environmental Protection Agency (USEPA) SW846 Method 8260B. The samples were analyzed in three analytical batches under three separate initial calibration (ICAL) curves, one for soil, one for TB and one for EB. All samples were analyzed following the procedures outlined in the CSSA QAPP. All samples were prepared and analyzed within the holding time required by the method. All samples were analyzed undiluted.

### **Accuracy**

Accuracy was evaluated using the percent recovery (%R) obtained from the three LCSs, and the surrogate spikes.

All LCSs and surrogate spike recoveries were within acceptance criteria for all three batches.

### **Precision**

Precision is normally evaluated with the %RPD of the MS/MSD and parent and field duplicate sample results. Since there were no duplicate analyses involved in this SDG, precision of the VOC analysis could not be measured.

### **Representativeness**

Representativeness expresses the degree to which sample data accurately and precisely represents actual site conditions. Representativeness has been evaluated by:

- Comparing the COC procedures to those described in the CSSA QAPP;
- Comparing actual analytical procedures to those described in the CSSA QAPP;
- Evaluating holding times; and
- Examining TB, EB, and laboratory blanks for cross contamination of samples during collection, transit or analysis.

All samples in this data package were analyzed following the COC and the analytical procedures described in the CSSA QAPP, Version 1.0. All samples were prepared and analyzed within the holding time required by the method.

- All instrument performance check criteria were met.
- All initial calibration criteria were met.

- All three LCS samples were prepared with a secondary source. All second source verification criteria were met.
- All initial calibration verification (ICV) criteria were met.
- All continuing calibration verification (CCV) criteria were met.
- All internal standard criteria were met.

There were three MBs, one EB, one TB, and few calibration blanks associated with the VOC analyses in this SDG. All blanks were non-detect for all target VOCs at RLs. Toluene and m,p-xylene were detected between method detection limit (MDL) and RL in the EB, since these two compounds were not detected in any of the four associated samples, there is no corrective action or data qualifiers needed.

### **Completeness**

Completeness has been evaluated in accordance with the CSSA QAPP. The number of usable results has been divided by the number of possible individual analyte results and expressed as a percentage to determine the completeness of the data set.

All VOC results for the samples in this SDG were considered usable. The completeness for this SDG is 100%, which meets the minimum acceptance criteria of 95%.

### **SEMI-VOLATILES**

#### **General**

This data package consisted of four (7) soil samples and one (1) EB. The samples were collected on March 30, 2011 and were analyzed for a full list of SVOCs.

The SVOC analyses were performed using United States Environmental Protection Agency (USEPA) SW846 Method 8270C. The samples were analyzed in two analytical batches under two separate initial calibration (ICAL) curves, one for each matrix. All samples were analyzed following the procedures outlined in the CSSA QAPP. All samples were prepared and analyzed within the holding time required by the method. All samples were analyzed undiluted.

#### **Accuracy**

Accuracy was evaluated using the percent recovery (%R) obtained from the two LCSs and the surrogate spikes.

All LCSs and surrogate spike recoveries were within acceptance criteria for both batches.

#### **Precision**

Since there were no duplicate analyses involved in the SVOC analyses, the precision could not be measured.

#### **Representativeness**

Representativeness expresses the degree to which sample data accurately and precisely represents actual site conditions. Representativeness has been evaluated by:

- Comparing the COC procedures to those described in the CSSA QAPP;
- Comparing actual analytical procedures to those described in the CSSA QAPP;
- Evaluating holding times; and
- Examining EB and laboratory blanks for cross contamination of samples during collection or analysis.

All samples in this data package were analyzed following the COC and the analytical procedures described in the CSSA QAPP, Version 1.0. All samples were prepared and analyzed within the holding time required by the method.

- All instrument performance check criteria were met.
- All initial calibration criteria were met.
- Both LCS samples were prepared with a secondary source. All second source verification criteria were met.
- All initial calibration verification (ICV) criteria were met.
- All continuing calibration verification (CCV) criteria were met.
- All internal standard criteria were met.

There were two MBs, one EB, and few calibration blanks associated with the SVOC analyses in this SDG. All blanks were non-detect for all target SVOCs.

### **Completeness**

Completeness has been evaluated in accordance with the CSSA QAPP. The number of usable results has been divided by the number of possible individual analyte results and expressed as a percentage to determine the completeness of the data set.

All SVOC results for the samples in this SDG were considered usable. The completeness for this SDG is 100%, which meets the minimum acceptance criteria of 95%.

## **EXPLOSIVES**

### **General**

This data package consisted of four (4) soil samples and one (1) EB. The samples were collected on March 30, 2011 and were analyzed for a full list of explosives by SW8330B.

The explosive analyses were performed using United States Environmental Protection Agency (USEPA) SW846 Method 8330B. The samples were analyzed in two analytical batches under two separate sets of initial calibration (ICAL) curves, one for each matrix. All samples were analyzed following the procedures outlined in the CSSA QAPP. All samples were prepared and analyzed within the holding time required by the method. All samples were analyzed undiluted.

## Accuracy

Accuracy was evaluated using the percent recovery (%R) obtained from the two LCSs and the surrogate spikes.

All LCSs and surrogate spike recoveries were within acceptance criteria for both batches.

## Precision

Since there were no duplicate analyses involved in the explosive analyses, the precision could not be measured.

## Representativeness

Representativeness expresses the degree to which sample data accurately and precisely represents actual site conditions. Representativeness has been evaluated by:

- Comparing the COC procedures to those described in the CSSA QAPP;
- Comparing actual analytical procedures to those described in the CSSA QAPP;
- Evaluating holding times; and
- Examining EB and laboratory blanks for cross contamination of samples during collection or analysis.

All samples in this data package were analyzed following the COC and the analytical procedures described in the CSSA QAPP, Version 1.0. All samples were prepared and analyzed within the holding time required by the method.

- All instrument performance check criteria were met.
- All initial calibration criteria were met.
- Both LCS samples were prepared with a secondary source. All second source verification criteria were met.
- All initial calibration verification (ICV) criteria were met.
- All continuing calibration verification (CCV) criteria were met.

There were two MBs, one EB, and few calibration blanks associated with the explosive analyses in this SDG. All blanks were non-detect for all target explosives.

## Completeness

Completeness has been evaluated in accordance with the CSSA QAPP. The number of usable results has been divided by the number of possible individual analyte results and expressed as a percentage to determine the completeness of the data set.

All explosive results for the samples in this SDG were considered usable. The completeness for this SDG is 100%, which meets the minimum acceptance criteria of 95%.

**DATA VERIFICATION SUMMARY REPORT**  
**for samples collected from AOCs 45, 42 and 58**  
**CAMP STANLEY STORAGE ACTIVITY**  
**BOERNE, TEXAS**

Data Verification by: Tammy Chang  
Parsons - Austin

**INTRODUCTION**

The following data verification summary report covers soil samples and the associated field quality control (QC) samples collected from Camp Stanley Storage Activity (CSSA) under Environmental Protection Support, Investigations, and Treatability Studies on April 7, 2011. The samples in the following Sample Delivery Group (SDG) included samples collected from AOCs 45, 42, and 58:

64351

. Samples were analyzed for volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), explosives, and metals. Not all samples were analyzed for all parameters.

Field QC samples collected in association with this SDG included (1) one trip blank (TB) for VOCs; (2) one equipment blank (EB) for all above listed parameters; (3) one set of matrix spike/matrix spike duplicate (MS/MSD) for metals; and (4) one set of parent and field duplicate (FD).

All samples were collected by Parsons and analyzed by Agriculture & Priority Pollutants Laboratories, Inc. (APPL) in Clovis, California, following the procedures outlined in the Statement of Work and CSSA QAPP, Version 1.0.

The samples in this SDG were shipped to the laboratory in two coolers. The coolers were received by the laboratory both at a temperature of 3.0°C which was within the recommended range is 2-6° C.

**EVALUATION CRITERIA**

The data submitted by the laboratory has been reviewed and verified following the guidelines outlined in the CSSA QAPP, Version 1.0. Information reviewed in the data packages included sample results; field and laboratory quality control results; calibrations; case narratives; raw data; COC forms and the cooler receipt checklist. The analyses and findings presented in this report are based on the reviewed information, and whether guidelines in the CSSA QAPP, Version 1.0, were met.



## ICP METALS

### General

The ICP metals portion of this SDG consisted of sixteen (16) soil samples, one (1) EB, one (1) pair of matrix spike/matrix spike duplicate (MS/MSD), and one (1) FD. All samples were collected on April 7, 2011 and were analyzed for arsenic, barium, cadmium, chromium, copper, lead, nickel and zinc.

The ICP metals analyses were performed using USEPA SW846 Method 6010B. All samples in this SDG were analyzed following the procedures outlined in the CSSA QAPP. All samples were prepared and analyzed within the holding time required by the method.

The ICP metals samples were digested in two batches, one for soil and one for EB.

### Accuracy

Accuracy was evaluated using the percent recovery obtained from the two laboratory control samples (LCS), one for each analytical batch and one set of MS/MSD. AOC45-SS04 was designated for the MS/MSD analyses on the COC.

All LCS recoveries were within acceptance criteria.

All %Rs of metal failed to meet the 80 – 120% criteria in MS and/or MSD analyses. “M” flags were applied to all metal results of parent sample.

### Precision

Precision was evaluated with the relative percent difference (%RPD) of the MS/MSD results and parent/FD results. Sample AOC45-SS10 was collected in duplicate.

All %RPD of MS/MSD met the 20% criteria.

**AOC45-SS10**

Metals	Parent, mg/kg	FD, mg/kg	%RPD	Criteria, %RPD
Barium	31.4	27.0	15	≤20
Copper	6.14	5.23	16	
<b>Lead</b>	28.72	61.15	<b>72</b>	
Nickel	5.99	5.40	10	
Zinc	17.8	17.5	1.7	

“J” flags were applied to all lead results for samples collected from AOC45 in this SDG.

### Representativeness

Representativeness expresses the degree to which sample data accurately and precisely represents actual site conditions. Representativeness has been evaluated by:

- Comparing the COC procedures to those described in the CSSA QAPP;

- Comparing actual analytical procedures to those described in the CSSA QAPP;
- Evaluating holding times; and
- Examining laboratory blanks and EBs for cross contamination of samples during collection and analysis.

The samples in this SDG were analyzed following the COC and the analytical procedures described in the CSSA QAPP. All samples were prepared and analyzed within the holding times required by the method.

- All instrument tune criteria were met.
- All initial calibration criteria were met.
- All calibration verification criteria were met.
- All second source verification criteria were met. The ICV was prepared using a secondary source.
- All interference check criteria were met.
- All internal standard criteria were met.
- Dilution test (DT) was analyzed on sample AOC45-SS04. The DT was applicable for all metals detected in the parent sample at a concentration of 50 times the MDL or greater. All applicable metals failed to meet criteria in the DT, as follows:

**AOC45-SS04**

Metal	%D	Criteria
Barium	29	%D ≤ 10
Chromium	32	
Copper	29	
Nickel	34	
Lead	29	

- A post digestion spike (PDS) was analyzed on the same samples as the DT. All metals met criteria in the PDS:

**AOC45-SS04**

Metal	%R	Criteria
Arsenic	87	75-125%
Barium	101	
Cadmium	87	
Chromium	89	
Copper	96	
Nickel	90	
Lead	90	
Zinc	88	

There were two method blanks (MBs), one EB, and several calibration blanks associated with the ICP analyses in this SDG. All blanks were free of any target metals at or above the RL. Arsenic and lead were detected near the method detection limits (MDLs) in the EB. This minor detection had no impact to the soil sample results.

### **Completeness**

Completeness has been evaluated by comparing the total number of samples collected with the total number of samples with valid analytical data.

All ICP results for the samples in this SDG were considered usable. The completeness for the ICP portion of this SDG is 100%, which meets the minimum acceptance criteria of 90%.

## **MERCURY**

### **General**

The mercury portion of this SDG consisted of sixteen (16) soil samples, one (1) EB, one (1) pair of matrix spike/matrix spike duplicate (MS/MSD), and one (1) FD. The samples were collected on April 7, 2011 and were analyzed for mercury.

The mercury analyses were performed using USEPA SW846 Method 7471A/7470A. All samples in this SDG were analyzed following the procedures outlined in the CSSA QAPP. All samples were prepared and analyzed within the holding time required by the method.

The mercury samples were prepared in two analytical batches, one for soil, one for EB.

### **Accuracy**

Accuracy was evaluated using the percent recovery obtained from the two LCSs and MS/MSD results. There was a LCS duplicate analyzed in the water batch. MS/MSD were performed with sample AOC45-SS04.

All LCS and LCSD recoveries and MS/MSD recoveries were within acceptance criteria.

### **Precision**

Precision was evaluated with the %RPD of MS/MSD results and parent/FD sample results. Sample AOC45-SS10 was collected in duplicate

The %RPD of the MS/MSD was compliant.

Both parent and FD samples had no mercury detected at MDL.

### **Representativeness**

Representativeness expresses the degree to which sample data accurately and precisely represents actual site conditions. Representativeness has been evaluated by:

- Comparing the COC procedures to those described in the CSSA QAPP;
- Comparing actual analytical procedures to those described in the CSSA QAPP;
- Evaluating holding times; and

- Examining laboratory blanks and EBs for cross contamination of samples during sample collection and analysis.

The samples in this SDG were analyzed following the COC and the analytical procedures described in the CSSA QAPP. All samples were prepared and analyzed within the holding times required by the method.

- All initial calibration criteria were met.
- All calibration verification criteria were met.
- All second source verification criteria were met. The ICV was prepared using a secondary source.

There were two MBs, one EB, and several calibration blanks associated with the mercury analyses in this SDG. All blanks were free of mercury at or above the RL.

### **Completeness**

Completeness has been evaluated by comparing the total number of samples collected with the total number of samples with valid analytical data.

All mercury results for the samples in this SDG were considered usable. The completeness for the mercury portion of this SDG is 100%, which meets the minimum acceptance criteria of 90%.

### **VOLATILES**

#### **General**

This data package consisted of four (4) soil samples, one (1) EB, and one (1) TB. The samples were collected on April 7, 2011 and were analyzed for a full list of VOCs.

The VOC analyses were performed using United States Environmental Protection Agency (USEPA) SW846 Method 8260B. The samples were analyzed in two analytical batches under three separate initial calibration (ICAL) curves, one for soil, one for TB and EB. All samples were analyzed following the procedures outlined in the CSSA QAPP. All samples were prepared and analyzed within the holding time required by the method. All samples were analyzed undiluted.

#### **Accuracy**

Accuracy was evaluated using the percent recovery (%R) obtained from the two LCSs, and the surrogate spikes.

All LCSs and surrogate spike recoveries were within acceptance criteria for all three batches.

## Precision

Precision is normally evaluated with the %RPD of the MS/MSD and parent and field duplicate sample results. Since there were no duplicate analyses involved in this SDG, precision of the VOC analysis could not be measured.

## Representativeness

Representativeness expresses the degree to which sample data accurately and precisely represents actual site conditions. Representativeness has been evaluated by:

- Comparing the COC procedures to those described in the CSSA QAPP;
- Comparing actual analytical procedures to those described in the CSSA QAPP;
- Evaluating holding times; and
- Examining TB, EB, and laboratory blanks for cross contamination of samples during collection, transit or analysis.

All samples in this data package were analyzed following the COC and the analytical procedures described in the CSSA QAPP, Version 1.0. All samples were prepared and analyzed within the holding time required by the method.

- All instrument performance check criteria were met.
- All initial calibration criteria were met.
- All two LCS samples were prepared with a secondary source. All second source verification criteria were met.
- All initial calibration verification (ICV) criteria were met.
- All continuing calibration verification (CCV) criteria were met.
- All internal standard criteria were met except sample AOC45-SS14 had two internal standards failed low. Lab re-injected the same extract and similar results were shown. Low internal standard cause high biased results; however, since all of the associated target VOCs were all non-detected under the possible high biased condition, no qualifiers were needed.

There were two MBs, one EB, one TB, and few calibration blanks associated with the VOC analyses in this SDG. All blanks were non-detect for all target VOCs at RLs except m,p-xylene, o-xylene and naphthalene were detected above the RLs. Since none of the associated soil samples had these compounds detected, there is no need for data qualifiers.

## Completeness

Completeness has been evaluated in accordance with the CSSA QAPP. The number of usable results has been divided by the number of possible individual analyte results and expressed as a percentage to determine the completeness of the data set.

All VOC results for the samples in this SDG were considered usable. The completeness for this SDG is 100%, which meets the minimum acceptance criteria of 95%.

## **SEMI-VOLATILES**

### **General**

This data package consisted of four (4) soil samples and one (1) EB. The samples were collected on April 7, 2011 and were analyzed for a full list of SVOCs.

The SVOC analyses were performed using United States Environmental Protection Agency (USEPA) SW846 Method 8270C. The samples were analyzed in two analytical batches under two separate initial calibration (ICAL) curves, one for each matrix. All samples were analyzed following the procedures outlined in the CSSA QAPP. All samples were prepared and analyzed within the holding time required by the method. All samples were analyzed undiluted.

### **Accuracy**

Accuracy was evaluated using the percent recovery (%R) obtained from the two LCSs and the surrogate spikes.

All LCSs and surrogate spike recoveries were within acceptance criteria for both batches.

### **Precision**

Since there were no duplicate analyses involved in the SVOC analyses, the precision could not be measured.

### **Representativeness**

Representativeness expresses the degree to which sample data accurately and precisely represents actual site conditions. Representativeness has been evaluated by:

- Comparing the COC procedures to those described in the CSSA QAPP;
- Comparing actual analytical procedures to those described in the CSSA QAPP;
- Evaluating holding times; and
- Examining EB and laboratory blanks for cross contamination of samples during collection or analysis.

All samples in this data package were analyzed following the COC and the analytical procedures described in the CSSA QAPP, Version 1.0. All samples were prepared and analyzed within the holding time required by the method.

- All instrument performance check criteria were met.
- All initial calibration criteria were met.
- Both LCS samples were prepared with a secondary source. All second source verification criteria were met.
- All initial calibration verification (ICV) criteria were met.

- All continuing calibration verification (CCV) criteria were met.
- All internal standard criteria were met.

There were two MBs, one EB, and few calibration blanks associated with the SVOC analyses in this SDG. All blanks were non-detect for all target SVOCs.

### **Completeness**

Completeness has been evaluated in accordance with the CSSA QAPP. The number of usable results has been divided by the number of possible individual analyte results and expressed as a percentage to determine the completeness of the data set.

All SVOC results for the samples in this SDG were considered usable. The completeness for this SDG is 100%, which meets the minimum acceptance criteria of 95%.

## **EXPLOSIVES**

### **General**

This data package consisted of four (4) soil samples and one (1) EB. The samples were collected on April 7, 2011 and were analyzed for a full list of explosives by SW8330B.

The explosive analyses were performed using United States Environmental Protection Agency (USEPA) SW846 Method 8330B. The samples were analyzed in two analytical batches under two separate sets of initial calibration (ICAL) curves, one for each matrix. All samples were analyzed following the procedures outlined in the CSSA QAPP. All samples were prepared and analyzed within the holding time required by the method. All samples were analyzed undiluted.

### **Accuracy**

Accuracy was evaluated using the percent recovery (%R) obtained from the two LCSs and the surrogate spikes.

All LCSs and surrogate spike recoveries were within acceptance criteria for both batches.

### **Precision**

Since there were no duplicate analyses involved in the explosive analyses, the precision could not be measured.

### **Representativeness**

Representativeness expresses the degree to which sample data accurately and precisely represents actual site conditions. Representativeness has been evaluated by:

- Comparing the COC procedures to those described in the CSSA QAPP;
- Comparing actual analytical procedures to those described in the CSSA QAPP;
- Evaluating holding times; and

- Examining EB and laboratory blanks for cross contamination of samples during collection or analysis.

All samples in this data package were analyzed following the COC and the analytical procedures described in the CSSA QAPP, Version 1.0. All samples were prepared and analyzed within the holding time required by the method.

- All instrument performance check criteria were met.
- All initial calibration criteria were met.
- Both LCS samples were prepared with a secondary source. All second source verification criteria were met.
- All initial calibration verification (ICV) criteria were met.
- All continuing calibration verification (CCV) criteria were met.

There were two MBs, one EB, and few calibration blanks associated with the explosive analyses in this SDG. All blanks were non-detect for all target explosives.

### **Completeness**

Completeness has been evaluated in accordance with the CSSA QAPP. The number of usable results has been divided by the number of possible individual analyte results and expressed as a percentage to determine the completeness of the data set.

All explosive results for the samples in this SDG were considered usable. The completeness for this SDG is 100%, which meets the minimum acceptance criteria of 95%.



**DATA VERIFICATION SUMMARY REPORT**  
**for samples collected from AOC 42**  
**CAMP STANLEY STORAGE ACTIVITY**  
**BOERNE, TEXAS**

Data Verification by: Tammy Chang  
Parsons - Austin

**INTRODUCTION**

The following data verification summary report covers soil samples and the associated field quality control (QC) samples collected from Camp Stanley Storage Activity (CSSA) under Environmental Protection Support, Investigations, and Treatability Studies on April 19, 2011. The samples in the following Sample Delivery Group (SDG) included samples collected from AOC 42:

64462

Samples were analyzed for volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), explosives, and metals. Not all samples were analyzed for all parameters.

Field QC samples collected in association with this SDG included (1) one trip blank (TB) for VOCs; (2) one set of matrix spike/matrix spike duplicate (MS/MSD) for VOCs and metals; and (3) one set of parent and field duplicate (FD).

All samples were collected by Parsons and analyzed by Agriculture & Priority Pollutants Laboratories, Inc. (APPL) in Clovis, California, following the procedures outlined in the Statement of Work and CSSA QAPP, Version 1.0.

The samples in this SDG were shipped to the laboratory in two coolers. The coolers were received by the laboratory both at a temperature of 4.5°C which was within the recommended range is 2-6°C.

**EVALUATION CRITERIA**

The data submitted by the laboratory has been reviewed and verified following the guidelines outlined in the CSSA QAPP, Version 1.0. Information reviewed in the data packages included sample results; field and laboratory quality control results; calibrations; case narratives; raw data; COC forms and the cooler receipt checklist. The analyses and findings presented in this report are based on the reviewed information, and whether guidelines in the CSSA QAPP, Version 1.0, were met.

## ICP METALS

### General

The ICP metals portion of this SDG consisted of ten (10) soil samples, one (1) pair of matrix spike/matrix spike duplicate (MS/MSD), and one (1) FD. All samples were collected on April 19, 2011 and were analyzed for arsenic, barium, cadmium, chromium, copper, lead, nickel and zinc.

The ICP metals analyses were performed using USEPA SW846 Method 6010B. All samples in this SDG were analyzed following the procedures outlined in the CSSA QAPP. All samples were prepared and analyzed within the holding time required by the method.

The ICP metals samples were digested in one batch.

### Accuracy

Accuracy was evaluated using the percent recovery obtained from the two laboratory control samples (LCS), one for each analytical batch and one set of MS/MSD. AOC42-BOT02 was designated for the MS/MSD analyses on the COC.

All LCS recoveries were within acceptance criteria.

All %Rs of metal failed to meet the 75 – 125% criteria in MS and/or MSD analyses. “M” flags were applied to all metal results of parent sample.

### Precision

Precision was evaluated with the relative percent difference (%RPD) of the MS/MSD results and parent/FD results. Sample AOC42-BOT02 was collected in duplicate.

All %RPD of MS/MSD met the 20% criteria except copper. Since “M” flag has already applied to the parent sample result of copper, no further action is needed.

**AOC42-BOT02**

Metals	Parent, mg/kg	FD, mg/kg	%RPD	Criteria, %RPD
<b>Barium</b>	10.4	6.8	<b>42</b>	≤20
<b>Copper</b>	41.20	5.36	<b>154</b>	
<b>Lead</b>	<b>39.75</b>	<b>0.60 (F)</b>	NA	
Nickel	3.40	3.08	9.9	
<b>Zinc</b>	69.3	23.9	<b>97</b>	

%RPD calculation is only applicable when both reported concentration are greater than the reporting limit. “J” flags were applied to all barium, copper, and zinc results for samples collected from AOC42 in this SDG. Although the %RPD is not applicable when one of the two results is less than the reporting limit, the great difference in the lead concentrations between the parent and FD indicates the uneven distribution of lead in the soil, therefore, “J” flags were also

applied to both the parent and FD sample lead results. This is not called in the CSSA QAPP, but it was applied based on data validator's professional opinion.

### Representativeness

Representativeness expresses the degree to which sample data accurately and precisely represents actual site conditions. Representativeness has been evaluated by:

- Comparing the COC procedures to those described in the CSSA QAPP;
- Comparing actual analytical procedures to those described in the CSSA QAPP;
- Evaluating holding times; and
- Examining laboratory blanks and EBs for cross contamination of samples during collection and analysis.

The samples in this SDG were analyzed following the COC and the analytical procedures described in the CSSA QAPP. All samples were prepared and analyzed within the holding times required by the method.

- All instrument tune criteria were met.
- All initial calibration criteria were met.
- All calibration verification criteria were met.
- All second source verification criteria were met. The ICV was prepared using a secondary source.
- All interference check criteria were met.
- All internal standard criteria were met.
- Dilution test (DT) was analyzed on sample AOC42-BOT02. The DT was applicable for all metals detected in the parent sample at a concentration of 50 times the MDL or greater. All applicable metals failed to meet criteria in the DT, as follows:

#### AOC42-BOT02

Metal	%D	Criteria
Barium	31	%D ≤ 10
Copper	27	
Lead	37	
Zinc	43	

- A post digestion spike (PDS) was analyzed on the same samples as the DT. All metals met criteria in the PDS:

**AOC42-BOT02**

<b>Metal</b>	<b>%R</b>	<b>Criteria</b>
Arsenic	88	75-125%
Barium	90	
Cadmium	<b>73</b>	
Chromium	84	
Copper	104	
Nickel	84	
Lead	92	
Zinc	89	

%R of cadmium was 2% lower than the lower control limit, therefore, no flag was applied due to this minor exceedance.

There were one method blank (MB) and several calibration blanks associated with the ICP analyses in this SDG. All blanks were free of any target metals at or above the RL.

**Completeness**

Completeness has been evaluated by comparing the total number of samples collected with the total number of samples with valid analytical data.

All ICP results for the samples in this SDG were considered usable. The completeness for the ICP portion of this SDG is 100%, which meets the minimum acceptance criteria of 90%.

**MERCURY****General**

The mercury portion of this SDG consisted of ten (10) soil samples, one (1) pair of matrix spike/matrix spike duplicate (MS/MSD), and one (1) FD. All samples were collected on April 19, 2011 and were analyzed for mercury.

The mercury analyses were performed using USEPA SW846 Method 7471A. All samples in this SDG were analyzed following the procedures outlined in the CSSA QAPP. All samples were prepared and analyzed within the holding time required by the method.

The mercury samples were prepared in one analytical batch.

**Accuracy**

Accuracy was evaluated using the percent recovery obtained from the one LCS and MS/MSD results. MS/MSD analyses were performed with sample AOC42-BOT02.

All LCS and MS/MSD recoveries were within acceptance criteria.

**Precision**

Precision was evaluated with the %RPD of MS/MSD results and parent/FD sample results. Sample AOC42-BOT02 was collected in duplicate

The %RPD of the MS/MSD was compliant.

Both parent and FD samples had no mercury detected at MDL.

### **Representativeness**

Representativeness expresses the degree to which sample data accurately and precisely represents actual site conditions. Representativeness has been evaluated by:

- Comparing the COC procedures to those described in the CSSA QAPP;
- Comparing actual analytical procedures to those described in the CSSA QAPP;
- Evaluating holding times; and
- Examining laboratory blanks and EBs for cross contamination of samples during sample collection and analysis.

The samples in this SDG were analyzed following the COC and the analytical procedures described in the CSSA QAPP. All samples were prepared and analyzed within the holding times required by the method.

- All initial calibration criteria were met.
- All calibration verification criteria were met.
- All second source verification criteria were met. The ICV was prepared using a secondary source.

There were one MB and several calibration blanks associated with the mercury analyses in this SDG. All blanks were free of mercury at or above the RL.

### **Completeness**

Completeness has been evaluated by comparing the total number of samples collected with the total number of samples with valid analytical data.

All mercury results for the samples in this SDG were considered usable. The completeness for the mercury portion of this SDG is 100%, which meets the minimum acceptance criteria of 90%.

### **VOLATILES**

#### **General**

This data package consisted of three (3) soil samples and one (1) TB. The samples were collected on April 19, 2011 and were analyzed for a full list of VOCs.

The VOC analyses were performed using United States Environmental Protection Agency (USEPA) SW846 Method 8260B. The samples were analyzed in two analytical batches under three separate initial calibration (ICAL) curves, one for soil, one for TB. All samples were analyzed following the procedures outlined in the CSSA QAPP. All samples were prepared and analyzed within the holding time required by the method. All samples were analyzed undiluted.

## Accuracy

Accuracy was evaluated using the percent recovery (%R) obtained from the two LCSs, MS/MSD, and the surrogate spikes. Sample AOC42-BOT02 was the parent sample for the MS and MSD analyses.

All LCSs and surrogate spike recoveries were within acceptance criteria for both batches.

“M” flags were applied to all parent results associated with non-compliant MS/MSD %R.

## Precision

Precision is evaluated with the %RPD of the MS/MSD and parent and field duplicate sample results. Sample AOC42-BOT02 was collected in duplicate.

“M” flags were applied to all parent results associated with non-compliant MS/MSD %RPD.

None of the target compounds were detected above reporting limits in both parent and FD samples.

## Representativeness

Representativeness expresses the degree to which sample data accurately and precisely represents actual site conditions. Representativeness has been evaluated by:

- Comparing the COC procedures to those described in the CSSA QAPP;
- Comparing actual analytical procedures to those described in the CSSA QAPP;
- Evaluating holding times; and
- Examining TB, EB, and laboratory blanks for cross contamination of samples during collection, transit or analysis.

All samples in this data package were analyzed following the COC and the analytical procedures described in the CSSA QAPP, Version 1.0. All samples were prepared and analyzed within the holding time required by the method.

- All instrument performance check criteria were met.
- All initial calibration criteria were met.
- Both LCS samples were prepared with a secondary source. All second source verification criteria were met.
- All initial calibration verification (ICV) criteria were met.
- All continuing calibration verification (CCV) criteria were met.

There were two MBs, one TB, and few calibration blanks associated with the VOC analyses in this SDG. All blanks were non-detect for all target VOCs at RLs.

## Completeness

Completeness has been evaluated in accordance with the CSSA QAPP. The number of usable results has been divided by the number of possible individual analyte results and expressed as a percentage to determine the completeness of the data set.

All VOC results for the samples in this SDG were considered usable. The completeness for this SDG is 100%, which meets the minimum acceptance criteria of 95%.

## SEMI-VOLATILES

### General

This data package consisted of three (3) soil samples. The samples were collected on April 19, 2011 and were analyzed for a full list of SVOCs.

The SVOC analyses were performed using United States Environmental Protection Agency (USEPA) SW846 Method 8270C. The samples were analyzed in one analytical batch under one set of initial calibration (ICAL) curve. All samples were analyzed following the procedures outlined in the CSSA QAPP. All samples were prepared and analyzed within the holding time required by the method. All samples were analyzed undiluted.

### Accuracy

Accuracy was evaluated using the percent recovery (%R) obtained from the LCS, MS, MSD, and surrogates. Sample AOC42-BOT02 was the parent sample for the MS and MSD analyses.

All LCS and surrogate spike recoveries were within acceptance criteria for both batches.

The only non-compliant %R of MS and MSD is benzoic acid. "M" flag was applied to the parent sample result.

### Precision

Precision was evaluated based on the RPD of MS/MSD and parent/FD sample results.

All %RPDs of MS/MSD were compliant.

None of the target compounds were detected above the reporting limits in the parent and FD samples.

### Representativeness

Representativeness expresses the degree to which sample data accurately and precisely represents actual site conditions. Representativeness has been evaluated by:

- Comparing the COC procedures to those described in the CSSA QAPP;
- Comparing actual analytical procedures to those described in the CSSA QAPP;
- Evaluating holding times; and

- Examining laboratory blank for cross contamination of samples during collection or analysis.

All samples in this data package were analyzed following the COC and the analytical procedures described in the CSSA QAPP, Version 1.0. All samples were prepared and analyzed within the holding time required by the method.

- All instrument performance check criteria were met.
- All initial calibration criteria were met.
- The LCS was prepared with a secondary source. All second source verification criteria were met.
- All initial calibration verification (ICV) criteria were met.
- All continuing calibration verification (CCV) criteria were met.
- All internal standard criteria were met.

There were one MB and few calibration blanks associated with the SVOC analyses in this SDG. All blanks were non-detect for all target SVOCs.

### **Completeness**

Completeness has been evaluated in accordance with the CSSA QAPP. The number of usable results has been divided by the number of possible individual analyte results and expressed as a percentage to determine the completeness of the data set.

All SVOC results for the samples in this SDG were considered usable. The completeness for this SDG is 100%, which meets the minimum acceptance criteria of 95%.

## **EXPLOSIVES**

### **General**

This data package consisted of three (3) soil samples. The samples were collected on April 19, 2011 and were analyzed for a full list of explosives by SW8330B.

The explosive analyses were performed using United States Environmental Protection Agency (USEPA) SW846 Method 8330B. The samples were analyzed in one analytical batch under one set of initial calibration (ICAL) curve. All samples were analyzed following the procedures outlined in the CSSA QAPP. All samples were prepared and analyzed within the holding time required by the method. All samples were analyzed undiluted.

### **Accuracy**

Accuracy was evaluated using the percent recovery (%R) obtained from the LCS, MS, MSD, and the surrogate spikes.

All LCS, MS, MSD, and surrogate spike recoveries were within acceptance criteria for both batches.



### **Precision**

Precision was evaluated based on the RPD of MS/MSD and parent/FD sample results.

All %RPDs of MS/MSD were compliant.

None of the target compounds were detected in the parent and FD samples.

### **Representativeness**

Representativeness expresses the degree to which sample data accurately and precisely represents actual site conditions. Representativeness has been evaluated by:

- Comparing the COC procedures to those described in the CSSA QAPP;
- Comparing actual analytical procedures to those described in the CSSA QAPP;
- Evaluating holding times; and
- Examining laboratory blank for cross contamination of samples during collection or analysis.

All samples in this data package were analyzed following the COC and the analytical procedures described in the CSSA QAPP, Version 1.0. All samples were prepared and analyzed within the holding time required by the method.

- All instrument performance check criteria were met.
- All initial calibration criteria were met.
- Both LCS samples were prepared with a secondary source. All second source verification criteria were met.
- All initial calibration verification (ICV) criteria were met.
- All continuing calibration verification (CCV) criteria were met.

There were one MB and few calibration blanks associated with the explosive analyses in this SDG. All blanks were non-detect for all target explosives.

### **Completeness**

Completeness has been evaluated in accordance with the CSSA QAPP. The number of usable results has been divided by the number of possible individual analyte results and expressed as a percentage to determine the completeness of the data set.

All explosive results for the samples in this SDG were considered usable. The completeness for this SDG is 100%, which meets the minimum acceptance criteria of 95%.

**DATA VERIFICATION SUMMARY REPORT**  
**for samples collected from AOC 42**  
**CAMP STANLEY STORAGE ACTIVITY**  
**BOERNE, TEXAS**

Data Verification by: Tammy Chang  
Parsons - Austin

**INTRODUCTION**

The following data verification summary report covers soil samples and the associated field quality control (QC) samples collected from Camp Stanley Storage Activity (CSSA) under Environmental Protection Support, Investigations, and Treatability Studies on April 19, 2011. The samples in the following Sample Delivery Group (SDG) included samples collected from AOC 42:

64464

. Samples were analyzed for volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), explosives, and metals. Not all samples were analyzed for all parameters.

Field QC samples collected in association with this SDG included (1) one trip blank (TB) for VOCs; (2) one equipment blank (EB) for all above listed parameters; (3) one set of matrix spike/matrix spike duplicate (MS/MSD); and (4) one set of parent and field duplicate (FD).

All samples were collected by Parsons and analyzed by Agriculture & Priority Pollutants Laboratories, Inc. (APPL) in Clovis, California, following the procedures outlined in the Statement of Work and CSSA QAPP, Version 1.0.

The samples in this SDG were shipped to the laboratory in two coolers. The coolers were received by the laboratory both at a temperature of 5.0°C which was within the recommended range is 2-6° C.

**EVALUATION CRITERIA**

The data submitted by the laboratory has been reviewed and verified following the guidelines outlined in the CSSA QAPP, Version 1.0. Information reviewed in the data packages included sample results; field and laboratory quality control results; calibrations; case narratives; raw data; COC forms and the cooler receipt checklist. The analyses and findings presented in this report are based on the reviewed information, and whether guidelines in the CSSA QAPP, Version 1.0, were met.

**ICP METALS**

**General**

The ICP metals portion of this SDG consisted of four (4) soil samples, one (1) EB, one (1) pair of matrix spike/matrix spike duplicate (MS/MSD), and one (1) FD. All samples were

collected on April 19, 2011 and were analyzed for arsenic, barium, cadmium, chromium, copper, lead, nickel and zinc.

The ICP metals analyses were performed using USEPA SW846 Method 6010B. All samples in this SDG were analyzed following the procedures outlined in the CSSA QAPP. All samples were prepared and analyzed within the holding time required by the method.

The ICP metals samples were digested in two batches, one for soil and one for EB.

### Accuracy

Accuracy was evaluated using the percent recovery obtained from the two laboratory control samples (LCS), one for each analytical batch and one set of MS/MSD. AOC42-BOT01 was designated for the MS/MSD analyses on the COC.

All LCS recoveries were within acceptance criteria.

All %Rs of metal failed to meet the 75 – 125% criteria in MS and/or MSD analyses. “M” flags were applied to all metal results of parent sample.

### Precision

Precision was evaluated with the relative percent difference (%RPD) of the MS/MSD results and parent/FD results. Sample AOC42-BOT01 was collected in duplicate.

All %RPD of MS/MSD met the 20% criteria except barium. Since the barium result of the parent sample has already been flagged with “M” due to accuracy issue discussed above, no further action was needed.

**AOC42-BOT01**

Metals	Parent, mg/kg	FD, mg/kg	%RPD	Criteria, %RPD
Barium	45.3	51.8	13	≤20
<b>Copper</b>	5.01	6.30	<b>23</b>	
Nickel	7.80	8.26	5.7	
Zinc	21.1	23.5	11	

“J” flags were applied to all copper results for soil samples collected from AOC42 in this SDG.

### Representativeness

Representativeness expresses the degree to which sample data accurately and precisely represents actual site conditions. Representativeness has been evaluated by:

- Comparing the COC procedures to those described in the CSSA QAPP;
- Comparing actual analytical procedures to those described in the CSSA QAPP;
- Evaluating holding times; and

- Examining laboratory blanks and EBs for cross contamination of samples during collection and analysis.

The samples in this SDG were analyzed following the COC and the analytical procedures described in the CSSA QAPP. All samples were prepared and analyzed within the holding times required by the method.

- All instrument tune criteria were met.
- All initial calibration criteria were met.
- All calibration verification criteria were met.
- All second source verification criteria were met. The ICV was prepared using a secondary source.
- All interference check criteria were met.
- All internal standard criteria were met.
- Dilution test (DT) was analyzed on sample AOC42-BOT01. The DT was applicable for all metals detected in the parent sample at a concentration of 50 times the MDL or greater. All applicable metals failed to meet criteria in the DT, as follows:

**AOC42-BOT01**

Metal	%D	Criteria
Barium	17	%D ≤ 10
Chromium	19	
Nickel	15	

- A post digestion spike (PDS) was analyzed on the same samples as the DT. All metals met criteria in the PDS:

**AOC42-BOT01**

Metal	%R	Criteria
Arsenic	87	75-125%
Barium	86	
Cadmium	78	
Chromium	85	
Copper	94	
Nickel	86	
Lead	85	
Zinc	81	

There were two method blanks (MBs), one EB, and several calibration blanks associated with the ICP analyses in this SDG. All blanks were free of any target metals at or above the RL. Barium and zinc were detected near the method detection limits (MDLs) in the EB. This minor detection had no impact to the soil sample results.

## Completeness

Completeness has been evaluated by comparing the total number of samples collected with the total number of samples with valid analytical data.

All ICP results for the samples in this SDG were considered usable. The completeness for the ICP portion of this SDG is 100%, which meets the minimum acceptance criteria of 90%.

## MERCURY

### General

The mercury portion of this SDG consisted of four (4) soil samples, one (1) EB, one (1) pair of matrix spike/matrix spike duplicate (MS/MSD), and one (1) FD. The samples were collected on April 19, 2011 and were analyzed for mercury.

The mercury analyses were performed using USEPA SW846 Method 7471A/7470A. All samples in this SDG were analyzed following the procedures outlined in the CSSA QAPP. All samples were prepared and analyzed within the holding time required by the method.

The mercury samples were prepared in three analytical batches, two for soil and one for EB.

### Accuracy

Accuracy was evaluated using the percent recovery obtained from the three LCSs and MS/MSD results. MS/MSD analyses were performed with sample AOC42-BOT01.

All LCSs and MS/MSD recoveries were within acceptance criteria.

### Precision

Precision was evaluated with the %RPD of MS/MSD results and parent/FD sample results. Sample AOC45-BOT01 was collected in duplicate.

The %RPD of the MS/MSD was compliant.

Both parent and FD samples had no mercury detected at RL.

### Representativeness

Representativeness expresses the degree to which sample data accurately and precisely represents actual site conditions. Representativeness has been evaluated by:

- Comparing the COC procedures to those described in the CSSA QAPP;
- Comparing actual analytical procedures to those described in the CSSA QAPP;
- Evaluating holding times; and
- Examining laboratory blanks and EBs for cross contamination of samples during sample collection and analysis.

The samples in this SDG were analyzed following the COC and the analytical procedures described in the CSSA QAPP. All samples were prepared and analyzed within the holding times required by the method.

- All initial calibration criteria were met.
- All calibration verification criteria were met.
- All second source verification criteria were met. The ICV was prepared using a secondary source.

There were three MBs, one EB, and several calibration blanks associated with the mercury analyses in this SDG. All blanks were free of mercury at or above the RL.

### **Completeness**

Completeness has been evaluated by comparing the total number of samples collected with the total number of samples with valid analytical data.

All mercury results for the samples in this SDG were considered usable. The completeness for the mercury portion of this SDG is 100%, which meets the minimum acceptance criteria of 90%.

### **VOLATILES**

#### **General**

This data package consisted of two (2) soil samples, one (1) FD, one (1) EB, and one (1) TB. The samples were collected on April 19, 2011 and were analyzed for a full list of VOCs.

The VOC analyses were performed using United States Environmental Protection Agency (USEPA) SW846 Method 8260B. The samples were analyzed in three analytical batches under three separate initial calibration (ICAL) curves, one for soil, one for TB and one for EB. All samples were analyzed following the procedures outlined in the CSSA QAPP. All samples were prepared and analyzed within the holding time required by the method. All samples were analyzed undiluted.

#### **Accuracy**

Accuracy was evaluated using the percent recovery (%R) obtained from the three LCSs, MS/MSD, and the surrogate spikes. MS/MSD analyses were performed on sample AOC42-BOT01.

All LCSs and surrogate spike recoveries were within acceptance criteria for all three batches.

There were several compounds failed to meet the MS/MSD %R criteria, "M" flags were applied to the parent sample results.

## Precision

Precision was evaluated with the %RPD of the MS/MSD and parent and field duplicate sample results. Sample AOC42-BOT01 was collected in duplicate.

There were few %RPD of MS/MSD failed to meet the 30%RPD criteria. "M" flags were applied.

None of the target compounds had detected amount greater than RL in both parent and FD samples.

## Representativeness

Representativeness expresses the degree to which sample data accurately and precisely represents actual site conditions. Representativeness has been evaluated by:

- Comparing the COC procedures to those described in the CSSA QAPP;
- Comparing actual analytical procedures to those described in the CSSA QAPP;
- Evaluating holding times; and
- Examining TB, EB, and laboratory blanks for cross contamination of samples during collection, transit or analysis.

All samples in this data package were analyzed following the COC and the analytical procedures described in the CSSA QAPP, Version 1.0. All samples were prepared and analyzed within the holding time required by the method.

- All instrument performance check criteria were met.
- All initial calibration criteria were met.
- All three LCS samples were prepared with a secondary source. All second source verification criteria were met.
- All initial calibration verification (ICV) criteria were met.
- All continuing calibration verification (CCV) criteria were met.
- All internal standard criteria were met.

There were three MBs, one EB, one TB, and few calibration blanks associated with the VOC analyses in this SDG. All blanks were non-detect for all target VOCs at RLs.

## Completeness

Completeness has been evaluated in accordance with the CSSA QAPP. The number of usable results has been divided by the number of possible individual analyte results and expressed as a percentage to determine the completeness of the data set.

All VOC results for the samples in this SDG were considered usable. The completeness for this SDG is 100%, which meets the minimum acceptance criteria of 95%.

## SEMI-VOLATILES

### General

This data package consisted of two (2) soil samples, one (1) FD, and one (1) EB. The samples were collected on April 19, 2011 and were analyzed for a full list of SVOCs.

The SVOC analyses were performed using United States Environmental Protection Agency (USEPA) SW846 Method 8270C. The samples were analyzed in two analytical batches under two separate initial calibration (ICAL) curves, one for each matrix. All samples were analyzed following the procedures outlined in the CSSA QAPP. All samples were prepared and analyzed within the holding time required by the method. All samples were analyzed undiluted.

### Accuracy

Accuracy was evaluated using the percent recovery (%R) obtained from the two LCSs and the surrogate spikes. MS/MSD analyses were performed with sample AOC42-BOT01.

All LCSs and surrogate spike recoveries were within acceptance criteria for both batches.

Only benzoic acid had non-compliant %Rs in the MS and MSD analyses. "M" flag was applied to the parent sample result.

### Precision

Precision was evaluated using the %RPD of MS/MSD and parent/FD sample results. Sample AOC42-BOT01 was collected in duplicate.

There were 7 compounds with non-compliant %RPD in the MS and MSD analyses. %RPD of bis(2-chloroisopropyl)ether was barely exceeded the 30% criteria, the "M" flag applied by the lab was replaced with an "U" by Parsons data validator.

### Representativeness

Representativeness expresses the degree to which sample data accurately and precisely represents actual site conditions. Representativeness has been evaluated by:

- Comparing the COC procedures to those described in the CSSA QAPP;
- Comparing actual analytical procedures to those described in the CSSA QAPP;
- Evaluating holding times; and
- Examining EB and laboratory blanks for cross contamination of samples during collection or analysis.

All samples in this data package were analyzed following the COC and the analytical procedures described in the CSSA QAPP, Version 1.0. All samples were prepared and analyzed within the holding time required by the method.

- All instrument performance check criteria were met.
- All initial calibration criteria were met.



- Both LCS samples were prepared with a secondary source. All second source verification criteria were met.
- All initial calibration verification (ICV) criteria were met.
- All continuing calibration verification (CCV) criteria were met.
- All internal standard criteria were met.

There were two MBs, one EB, and few calibration blanks associated with the SVOC analyses in this SDG. All blanks were non-detect for all target SVOCs.

### **Completeness**

Completeness has been evaluated in accordance with the CSSA QAPP. The number of usable results has been divided by the number of possible individual analyte results and expressed as a percentage to determine the completeness of the data set.

All SVOC results for the samples in this SDG were considered usable. The completeness for this SDG is 100%, which meets the minimum acceptance criteria of 95%.

## **EXPLOSIVES**

### **General**

This data package consisted of two (2) soil samples and one (1) EB. The samples were collected on April 19, 2011 and were analyzed for a full list of explosives by SW8330B.

The explosive analyses were performed using United States Environmental Protection Agency (USEPA) SW846 Method 8330B. The samples were analyzed in two analytical batches under two separate sets of initial calibration (ICAL) curves, one for each matrix. All samples were analyzed following the procedures outlined in the CSSA QAPP. All samples were prepared and analyzed within the holding time required by the method. All samples were analyzed undiluted.

### **Accuracy**

Accuracy was evaluated using the percent recovery (%R) obtained from the two LCSs, MS/MSD, and the surrogate spikes. MS/MSD analyses were performed on sample AOC42-BOT01.

All LCSs and surrogate spike recoveries were within acceptance criteria for both batches.

The only compound that did not meet the %R criteria was RDX. The control limits are 65-142% and both MS and MSD had 61%R. "M" flag was applied to the parent sample result.

### **Precision**

Precision was evaluated using the %RPD of MS/MSD and parent/FD sample results. Sample AOC42-BOT01 was collected in duplicate.

All %RPDs of the MS/MSD were compliant.

None of the target explosive target compounds were detected at or above the RL, therefore, the %RPD calculation was not applicable.

### **Representativeness**

Representativeness expresses the degree to which sample data accurately and precisely represents actual site conditions. Representativeness has been evaluated by:

- Comparing the COC procedures to those described in the CSSA QAPP;
- Comparing actual analytical procedures to those described in the CSSA QAPP;
- Evaluating holding times; and
- Examining EB and laboratory blanks for cross contamination of samples during collection or analysis.

All samples in this data package were analyzed following the COC and the analytical procedures described in the CSSA QAPP, Version 1.0. All samples were prepared and analyzed within the holding time required by the method.

- All instrument performance check criteria were met.
- All initial calibration criteria were met.
- Both LCS samples were prepared with a secondary source. All second source verification criteria were met.
- All initial calibration verification (ICV) criteria were met.
- All continuing calibration verification (CCV) criteria were met.

There were two MBs, one EB, and few calibration blanks associated with the explosive analyses in this SDG. All blanks were non-detect for all target explosives.

### **Completeness**

Completeness has been evaluated in accordance with the CSSA QAPP. The number of usable results has been divided by the number of possible individual analyte results and expressed as a percentage to determine the completeness of the data set.

All explosive results for the samples in this SDG were considered usable. The completeness for this SDG is 100%, which meets the minimum acceptance criteria of 95%.

**DATA VERIFICATION SUMMARY REPORT**  
**for samples collected from AOCs 62 and 58**  
**CAMP STANLEY STORAGE ACTIVITY**  
**BOERNE, TEXAS**

Data Verification by: Tammy Chang  
Parsons - Austin

**INTRODUCTION**

The following data verification summary report covers soil samples and the associated field quality control (QC) samples collected from Camp Stanley Storage Activity (CSSA) under Environmental Protection Support, Investigations, and Treatability Studies on April 19, 2011. The samples in the following Sample Delivery Group (SDG) included samples collected from AOCs 62 and 58:

64465

. Samples were analyzed for volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), explosives, and metals. Not all samples were analyzed for all parameters.

Field QC samples collected in association with this SDG included (1) one trip blank (TB) for VOCs; (2) one equipment blank (EB) for all above listed parameters; (3) one set of matrix spike/matrix spike duplicate (MS/MSD); and (4) one set of parent and field duplicate (FD) for AOC 58.

All samples were collected by Parsons and analyzed by Agriculture & Priority Pollutants Laboratories, Inc. (APPL) in Clovis, California, following the procedures outlined in the Statement of Work and CSSA QAPP, Version 1.0.

The samples in this SDG were shipped to the laboratory in one cooler. The cooler was received by the laboratory at a temperature of 4.0°C which was within the recommended range is 2-6° C.

**EVALUATION CRITERIA**

The data submitted by the laboratory has been reviewed and verified following the guidelines outlined in the CSSA QAPP, Version 1.0. Information reviewed in the data packages included sample results; field and laboratory quality control results; calibrations; case narratives; raw data; COC forms and the cooler receipt checklist. The analyses and findings presented in this report are based on the reviewed information, and whether guidelines in the CSSA QAPP, Version 1.0, were met.

## ICP METALS

### General

The ICP metals portion of this SDG consisted of eight (8) soil samples, one (1) EB, one (1) pair of matrix spike/matrix spike duplicate (MS/MSD), and one (1) FD. All samples were collected on April 19, 2011 and were analyzed for arsenic, barium, cadmium, chromium, copper, lead, nickel and zinc.

The ICP metals analyses were performed using USEPA SW846 Method 6010B. All samples in this SDG were analyzed following the procedures outlined in the CSSA QAPP. All samples were prepared and analyzed within the holding time required by the method.

The ICP metals samples were digested in two batches, one for soil and one for EB.

### Accuracy

Accuracy was evaluated using the percent recovery obtained from the two laboratory control samples (LCS), one for each analytical batch and one set of MS/MSD. AOC58-BOT01 was designated for the MS/MSD analyses on the COC.

All LCS recoveries were within acceptance criteria for both batches.

All %Rs of metal failed to meet the 75 – 125% criteria in MS and MSD analyses. “M” flags were applied to all metal results of parent sample.

### Precision

Precision was evaluated with the relative percent difference (%RPD) of the MS/MSD results and parent/FD results. Sample AOC58-BOT01 was collected in duplicate.

All %RPD of MS/MSD met the 20% criteria except cadmium. “M” flag has already been applied to the parent sample result due to accuracy issue. No additional flagging is needed.

#### AOC58-BOT01

Metals	Parent, mg/kg	FD, mg/kg	%RPD	Criteria, %RPD
Barium	17.5	17.6	0.57	≤20
<b>Copper</b>	10.91	5.45	<b>67</b>	
Nickel	5.26	5.08	3.5	
<b>Zinc</b>	20.8	14.8	<b>34</b>	

“J” flags were applied to all copper and zinc results for samples collected from AOC58 in this SDG.

### Representativeness

Representativeness expresses the degree to which sample data accurately and precisely represents actual site conditions. Representativeness has been evaluated by:

- Comparing the COC procedures to those described in the CSSA QAPP;

- Comparing actual analytical procedures to those described in the CSSA QAPP;
- Evaluating holding times; and
- Examining laboratory blanks and EB for cross contamination of samples during collection and analysis.

The samples in this SDG were analyzed following the COC and the analytical procedures described in the CSSA QAPP. All samples were prepared and analyzed within the holding times required by the method.

- All instrument tune criteria were met for both injection batches.
- All initial calibration criteria were met.
- All calibration verification criteria were met.
- All second source verification criteria were met. Both ICVs were prepared using a secondary source.
- All interference check criteria were met.
- All internal standard criteria were met.
- Dilution test (DT) was analyzed on sample AOC45-SS04. The DT was applicable for all metals detected in the parent sample at a concentration of 50 times the MDL or greater. All applicable metals failed to meet criteria in the DT, as follows:

**AOC58-BOT01**

Metal	%D	Criteria
<b>Barium</b>	<b>60</b>	%D ≤ 10
<b>Copper</b>	<b>48</b>	

- A post digestion spike (PDS) was analyzed on the same samples as the DT. All metals met criteria in the PDS:

**AOC58-BOT01**

Metal	%R	Criteria
Arsenic	86	75-125%
Barium	92	
<b>Cadmium</b>	<b>69</b>	
Chromium	83	
Copper	96	
Nickel	84	
Lead	83	
Zinc	80	

All cadmium results of soil samples in this SDG were flagged with “J”.

There were two method blanks (MBs), one EB, and several calibration blanks associated with the ICP analyses in this SDG. All blanks were free of any target metals at or above the RL. Barium and zinc were detected near the method detection limits (MDLs) in the EB. This minor detection had no impact to the soil sample results.

### Completeness

Completeness has been evaluated by comparing the total number of samples collected with the total number of samples with valid analytical data.

All ICP results for the samples in this SDG were considered usable. The completeness for the ICP portion of this SDG is 100%, which meets the minimum acceptance criteria of 90%.

## MERCURY

### General

The mercury portion of this SDG consisted of eight (8) soil samples, one (1) EB, one (1) pair of matrix spike/matrix spike duplicate (MS/MSD), and one (1) FD. All samples were collected on April 19, 2011 and were analyzed for mercury.

The mercury analyses were performed using USEPA SW846 Method 7471A/7470A. All samples in this SDG were analyzed following the procedures outlined in the CSSA QAPP. All samples were prepared and analyzed within the holding time required by the method.

The mercury samples were prepared in two analytical batches, one for soil and one for EB.

### Accuracy

Accuracy was evaluated using the percent recovery obtained from the two LCSs and MS/MSD results. MS/MSD analyses were performed with sample AOC58-BOT01.

Both LCS recoveries were within acceptance criteria.

MS had %R of 139% which was higher than the 77 – 120% criteria. “M” flag was applied to the parent sample result.

### Precision

Precision was evaluated with the %RPD of MS/MSD results and parent/FD sample results. Sample AOC58-BOT01 was collected in duplicate

The %RPD of the MS/MSD was compliant.

#### AOC58-BOT01

Metals	Parent, mg/kg	FD, mg/kg	%RPD	Criteria, %RPD
Mercury	0.20	0.22	9.5	≤20

### Representativeness

Representativeness expresses the degree to which sample data accurately and precisely represents actual site conditions. Representativeness has been evaluated by:

- Comparing the COC procedures to those described in the CSSA QAPP;
- Comparing actual analytical procedures to those described in the CSSA QAPP;
- Evaluating holding times; and
- Examining laboratory blanks and EB for cross contamination of samples during sample collection and analysis.

The samples in this SDG were analyzed following the COC and the analytical procedures described in the CSSA QAPP. All samples were prepared and analyzed within the holding times required by the method.

- All initial calibration criteria were met.
- All calibration verification criteria were met.
- All second source verification criteria were met. Both ICVs were prepared using a secondary source.

There were two MBs, one EB, and several calibration blanks associated with the mercury analyses in this SDG. All blanks were free of mercury at or above the RL.

### **Completeness**

Completeness has been evaluated by comparing the total number of samples collected with the total number of samples with valid analytical data.

All mercury results for the samples in this SDG were considered usable. The completeness for the mercury portion of this SDG is 100%, which meets the minimum acceptance criteria of 90%.

### **VOLATILES**

#### **General**

This data package consisted of four (4) soil samples, one (1) EB, and one (1) TB. The samples were collected on April 19, 2011 and were analyzed for a full list of VOCs.

The VOC analyses were performed using United States Environmental Protection Agency (USEPA) SW846 Method 8260B. The samples were analyzed in two analytical batches under two separate initial calibration (ICAL) curves, one for soil, one for TB and EB. All samples were analyzed following the procedures outlined in the CSSA QAPP. All samples were prepared and analyzed within the holding time required by the method. All samples were analyzed undiluted.

#### **Accuracy**

Accuracy was evaluated using the percent recovery (%R) obtained from the two LCSs, MS/MSD and the surrogate spikes. Sample AOC58-BOT01 was designated as the parent sample for MS/MSD analyses on the COC.

All LCSs and surrogate spike recoveries were within acceptance criteria for all three batches.

All non-compliant %Rs of MS/MSD are listed below:

**AOC58-BOT01**

Compound	MS, %R	MSD, %R	Criteria, %R
1,2,3-Trichlorobenzene	61	56	65-147
1,2,4-Trichlorobenzene	63	56	65-145
1,2-DCB*	(70)	64.6	65-135
1,4-DCB*	(66)	63	65-135
Bromoform*	(68)	63	65-135
Hexachlorobutadiene	(65)	57	65-135
m,p-xylene**	157	147	65-135
Naphthalene	64	57	65-135
o-xylene*	(69)	64.6	65-135

( ) indicates the %R was compliant.

\* “M” flags applied to these compounds by the lab were removed by Parsons data validator due to minor exceedance of MSD.

\*\* “M” flag applied to this compound by the lab was removed by Parsons data validator. Since the parent sample had no detection of m-p-xylene, the possibly high biased result due to matrix effect had no impact to the data quality.

### Precision

Precision was evaluated with the %RPD of the MS/MSD and parent and field duplicate sample results.

All %RPDs of MS/MSD were compliant.

None of the target compounds were detected at or above the reporting limits, therefore, the %RPD calculations were not applicable.

### Representativeness

Representativeness expresses the degree to which sample data accurately and precisely represents actual site conditions. Representativeness has been evaluated by:

- Comparing the COC procedures to those described in the CSSA QAPP;
- Comparing actual analytical procedures to those described in the CSSA QAPP;
- Evaluating holding times; and
- Examining TB, EB, and laboratory blanks for cross contamination of samples during collection, transit or analysis.



All samples in this data package were analyzed following the COC and the analytical procedures described in the CSSA QAPP, Version 1.0. All samples were prepared and analyzed within the holding time required by the method.

- All instrument performance check criteria were met.
- All initial calibration criteria were met.
- All two LCS samples were prepared with a secondary source. All second source verification criteria were met.
- All initial calibration verification (ICV) criteria were met.
- All continuing calibration verification (CCV) criteria were met.
- All internal standard criteria were met except 1,4-dichlorobenzene-d was recovered below the lower limit in sample AOC58-BOT01 FD. Since low internal standard may cause high biased associated sample results and none of the associated compounds were detected at or above the reporting limits, therefore, the impact of this non-compliance is minimum.

There were two MBs, one EB, one TB, and few calibration blanks associated with the VOC analyses in this SDG. All blanks were non-detect for all target VOCs at RLs.

### **Completeness**

Completeness has been evaluated in accordance with the CSSA QAPP. The number of usable results has been divided by the number of possible individual analyte results and expressed as a percentage to determine the completeness of the data set.

All VOC results for the samples in this SDG were considered usable. The completeness for this SDG is 100%, which meets the minimum acceptance criteria of 95%.

### **SEMI-VOLATILES**

#### **General**

This data package consisted of four (4) soil samples and one (1) EB. The samples were collected on April 19, 2011 and were analyzed for a full list of SVOCs.

The SVOC analyses were performed using United States Environmental Protection Agency (USEPA) SW846 Method 8270C. The samples were analyzed in two analytical batches under two separate initial calibration (ICAL) curves, one for each matrix. All samples were analyzed following the procedures outlined in the CSSA QAPP. All samples were prepared and analyzed within the holding time required by the method. All samples were analyzed undiluted.

#### **Accuracy**

Accuracy was evaluated using the percent recovery (%R) obtained from the two LCSs, MS/MSD, and the surrogate spikes. MS/MSD analyses were performed with sample AOC58-BOT01.

All LCSs and surrogate spike recoveries were within acceptance criteria for both batches.

Non-compliant %Rs of MS/MSD are listed below:

Compound	MS, %R	MSD, %R	Criteria, %R
Benzoic Acid	9.6	15.7	25-172
Bis(2-chloroethyl)ether	(80.1)	137	34-135

( ) indicates the %R was compliant.

“M” flags were applied to the parent sample result of these two compounds.

### Precision

Precision was evaluated based on the %RPD of MS/MSD and parent/FD sample results.

There were twenty-five compounds with non-compliant %RPD. “M” flags were applied to the parent sample results.

### Representativeness

Representativeness expresses the degree to which sample data accurately and precisely represents actual site conditions. Representativeness has been evaluated by:

- Comparing the COC procedures to those described in the CSSA QAPP;
- Comparing actual analytical procedures to those described in the CSSA QAPP;
- Evaluating holding times; and
- Examining EB and laboratory blanks for cross contamination of samples during collection or analysis.

All samples in this data package were analyzed following the COC and the analytical procedures described in the CSSA QAPP, Version 1.0. All samples were prepared and analyzed within the holding time required by the method.

- All instrument performance check criteria were met.
- All initial calibration criteria were met.
- Both LCS samples were prepared with a secondary source. All second source verification criteria were met.
- All initial calibration verification (ICV) criteria were met.
- All continuing calibration verification (CCV) criteria were met.
- All internal standard criteria were met.

There were two MBs, one EB, and few calibration blanks associated with the SVOC analyses in this SDG. All blanks were non-detect for all target SVOCs.

## Completeness

Completeness has been evaluated in accordance with the CSSA QAPP. The number of usable results has been divided by the number of possible individual analyte results and expressed as a percentage to determine the completeness of the data set.

All SVOC results for the samples in this SDG were considered usable. The completeness for this SDG is 100%, which meets the minimum acceptance criteria of 95%.

## EXPLOSIVES

### General

This data package consisted of four (4) soil samples and one (1) EB. The samples were collected on April 19, 2011 and were analyzed for a full list of explosives by SW8330B.

The explosive analyses were performed using United States Environmental Protection Agency (USEPA) SW846 Method 8330B. The samples were analyzed in two analytical batches under two separate sets of initial calibration (ICAL) curves, one for each matrix. All samples were analyzed following the procedures outlined in the CSSA QAPP. All samples were prepared and analyzed within the holding time required by the method. All samples were analyzed undiluted.

### Accuracy

Accuracy was evaluated using the percent recovery (%R) obtained from the two LCSs, MS/MSD, and the surrogate spikes.

All LCSs, MS, MSD, and surrogate spike recoveries were within acceptance criteria for both batches.

### Precision

Precision was evaluated based on the %RPD of MS/MSD and parent/FD sample results. Sample AOC58-BOT01 was collected in duplicate.

All %RPDs of MS/MSD were compliant.

None of the target explosive compounds were detected in the parent and FD samples.

### Representativeness

Representativeness expresses the degree to which sample data accurately and precisely represents actual site conditions. Representativeness has been evaluated by:

- Comparing the COC procedures to those described in the CSSA QAPP;
- Comparing actual analytical procedures to those described in the CSSA QAPP;
- Evaluating holding times; and
- Examining EB and laboratory blanks for cross contamination of samples during collection or analysis.

All samples in this data package were analyzed following the COC and the analytical procedures described in the CSSA QAPP, Version 1.0. All samples were prepared and analyzed within the holding time required by the method.

- All instrument performance check criteria were met.
- All initial calibration criteria were met.
- Both LCS samples were prepared with a secondary source. All second source verification criteria were met.
- All initial calibration verification (ICV) criteria were met.
- All continuing calibration verification (CCV) criteria were met.

There were two MBs, one EB, and few calibration blanks associated with the explosive analyses in this SDG. All blanks were non-detect for all target explosives.

### **Completeness**

Completeness has been evaluated in accordance with the CSSA QAPP. The number of usable results has been divided by the number of possible individual analyte results and expressed as a percentage to determine the completeness of the data set.

All explosive results for the samples in this SDG were considered usable. The completeness for this SDG is 100%, which meets the minimum acceptance criteria of 95%.

**DATA VERIFICATION SUMMARY REPORT**  
**for samples collected from AOCs 42 and 52**  
**CAMP STANLEY STORAGE ACTIVITY**  
**BOERNE, TEXAS**

Data Verification by: Tammy Chang  
Parsons - Austin

**INTRODUCTION**

The following data verification summary report covers soil samples and the associated field quality control (QC) samples collected from Camp Stanley Storage Activity (CSSA) under Environmental Protection Support, Investigations, and Treatability Studies on May 5, 2011. The samples in the following Sample Delivery Group (SDG) included samples collected from AOCs 42 and 52:

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. Samples were analyzed for volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), explosives, and metals including total and TCLP metals. Not all samples were analyzed for all parameters.

Field QC samples collected in association with this SDG included one trip blank (TB) for VOCs and one set of parent and field duplicate (FD).

All samples were collected by Parsons and analyzed by Agriculture & Priority Pollutants Laboratories, Inc. (APPL) in Clovis, California, following the procedures outlined in the Statement of Work and CSSA QAPP, Version 1.0.

The samples in this SDG were shipped to the laboratory in one cooler. The cooler was received by the laboratory both at a temperature of 3.0°C which was within the recommended range is 2-6° C.

**EVALUATION CRITERIA**

The data submitted by the laboratory has been reviewed and verified following the guidelines outlined in the CSSA QAPP, Version 1.0. Information reviewed in the data packages included sample results; field and laboratory quality control results; calibrations; case narratives; raw data; COC forms and the cooler receipt checklist. The analyses and findings presented in this report are based on the reviewed information, and whether guidelines in the CSSA QAPP, Version 1.0, were met.

## ICP METALS

### General

The ICP metals portion of this SDG consisted of twelve (12) soil samples and one (1) FD. All samples were collected on May 5, 2011 and were analyzed for arsenic, barium, cadmium, chromium, copper, lead, nickel and zinc. These samples were also analyzed for TCLP-antimony, arsenic, barium, beryllium, cadmium, chromium, lead, nickel, selenium and silver.

The ICP metals analyses were performed using USEPA SW846 Method 6010B. All samples in this SDG were analyzed following the procedures outlined in the CSSA QAPP. All samples were prepared and analyzed within the holding time required by the method.

The ICP metals samples were digested in two batches, one for total metals and one for TCLP metals.

### Accuracy

Accuracy was evaluated using the percent recovery (%R) obtained from the two laboratory control samples (LCS), one for each analytical batch. Lab also performed matrix spike/matrix spike duplicate (MS/MSD) analyses for both total and TCLP metals with sample AOC42-SP07.

All LCS recoveries were within acceptance criteria.

All %Rs of the MS/MSD for the TCLP-metal batch met the criteria.

Most %Rs of the MS/MSD for the total metal batch failed:

#### AOC42-SP07

Metals	MS, %R	MSD, %R	Criteria, %R
Arsenic	58	58	75 - 125
Barium	27	28	
Cadmium	12	34	
Chromium	54	56	
Copper	193	473	
Lead	25	176	
Nickel	54	57	

“M” flags were applied to the above listed metal results of the parent sample.

### Precision

Precision was evaluated with the relative percent difference (%RPD) of the MS/MSD results and parent/FD results. Sample AOC42-SP07 was collected in duplicate.

All %RPD of MS/MSD met the 20% criteria except copper and lead. Since copper and lead results of the parent sample have already been flagged with “M” due to accuracy issue discussed above, no further action was needed.

## AOC42-SP07

Metals	Parent, mg/kg	FD, mg/kg	%RPD	Criteria, %RPD
Arsenic	4.4	4.9	11	≤20
Barium	58.6	70.7	19	
Cadmium	8.58	10.01	15	
Chromium	13.1	16.0	20	
Copper	202.30	247.10	20	
Lead	40.12	47.05	16	
Nickel	17.57	21.37	20	
Zinc	296.8	349.5	16	

## AOC42-SP07

TCLP-Metals	Parent, mg/L	FD, mg/L	%RPD	Criteria, %RPD
Barium	0.7047	0.6986	0.9	≤20
Cadmium	0.0293	0.0295	0.7	
Nickel	0.049	0.049	0	

The above two tables only contain results of parent and FD result which are both greater than reporting limits.

### Representativeness

Representativeness expresses the degree to which sample data accurately and precisely represents actual site conditions. Representativeness has been evaluated by:

- Comparing the COC procedures to those described in the CSSA QAPP;
- Comparing actual analytical procedures to those described in the CSSA QAPP;
- Evaluating holding times; and
- Examining laboratory blanks for cross contamination of samples during analysis.

The samples in this SDG were analyzed following the COC and the analytical procedures described in the CSSA QAPP. All samples were prepared and analyzed within the holding times required by the method.

- All instrument tune criteria were met.
- All initial calibration criteria were met.
- All calibration verification criteria were met.
- All second source verification criteria were met. Both ICVs were prepared using a secondary source.
- All interference check criteria were met.

- All internal standard criteria were met.
- Dilution test (DT) was analyzed on sample AOC42-SP07 for the total metal batch. The DT was applicable for all metals detected in the parent sample at a concentration of 50 times the MDL or greater. All applicable metals failed to meet criteria in the DT, as follows:

**AOC42-SP07**

Metal	%D	Criteria
Cadmium	2.5	%D ≤ 10
Copper	8.8	
Nickel	1.2	
Lead	3.8	
Zinc	0.6	

- A post digestion spike (PDS) was analyzed on the same samples as the DT. All metals met criteria in the PDS:

**AOC42-BOT01**

Metal	%R	Criteria
Arsenic	94	75-125%
Barium	120	
Chromium	93	

There were two method blanks (MBs) and several calibration blanks associated with the ICP analyses in this SDG. All blanks were free of any target metals at or above the RL.

**Completeness**

Completeness has been evaluated by comparing the total number of samples collected with the total number of samples with valid analytical data.

All ICP results for the samples in this SDG were considered usable. The completeness for the ICP portion of this SDG is 100%, which meets the minimum acceptance criteria of 90%.

**MERCURY****General**

The mercury portion of this SDG consisted of twelve (12) soil samples and one (1) FD. The samples were collected on May 5, 2011 and were analyzed for mercury, both total and TCLP.

The mercury analyses were performed using USEPA SW846 Method 7471A/1311 & 7470A. All samples in this SDG were analyzed following the procedures outlined in the CSSA QAPP. All samples were prepared and analyzed within the holding time required by the method.

The mercury samples were prepared in two analytical batches, one for total mercury and one for TCLP-mercury.



## Accuracy

Accuracy was evaluated using the percent recovery obtained from the two LCSs and MS/MSD results. MS/MSD analyses were performed with sample AOC42-SP07.

All LCSs and MS/MSD recoveries were within acceptance criteria.

## Precision

Precision was evaluated with the %RPD of MS/MSD results and parent/FD sample results. Sample AOC42-SP07 was collected in duplicate. MS/MSD were performed for both total mercury and TCLP-mercury with sample AOC42-SP07.

The %RPD of the MS/MSD was compliant for both total mercury and TCLP-mercury.

Both parent and FD samples had no mercury detected at RL for the TCLP runs.

AOC42-SP07				
Metals	Parent, mg/kg	FD, mg/kg	%RPD	Criteria, %RPD
Mercury	2.30	1.51	41	≤20

“J” flags were applied to all total mercury result of all samples collected from AOC42 on May 5, 2011.

## Representativeness

Representativeness expresses the degree to which sample data accurately and precisely represents actual site conditions. Representativeness has been evaluated by:

- Comparing the COC procedures to those described in the CSSA QAPP;
- Comparing actual analytical procedures to those described in the CSSA QAPP;
- Evaluating holding times; and
- Examining laboratory blanks and EBs for cross contamination of samples during sample collection and analysis.

The samples in this SDG were analyzed following the COC and the analytical procedures described in the CSSA QAPP. All samples were prepared and analyzed within the holding times required by the method.

- All initial calibration criteria were met.
- All calibration verification criteria were met.
- All second source verification criteria were met. The ICV was prepared using a secondary source.
- DT for the total mercury analysis was performed with sample AOC42-SP07. %D = 14% which exceeded the 10% limit.

- PDS was performed with the same sample as DT. %R = 74% which was 1% below the 75-125% criteria. “J” flags were applied to all total mercury results in this SDG.

There were two MBs and several calibration blanks associated with the mercury analyses in this SDG. All blanks were free of mercury at or above the RL.

### **Completeness**

Completeness has been evaluated by comparing the total number of samples collected with the total number of samples with valid analytical data.

All mercury results for the samples in this SDG were considered usable. The completeness for the mercury portion of this SDG is 100%, which meets the minimum acceptance criteria of 90%.

### **VOLATILES**

#### **General**

This data package consisted of two (2) soil samples and one (1) TB. The samples were collected on May 5, 2011 and were analyzed for a full list of VOCs.

The VOC analyses were performed using United States Environmental Protection Agency (USEPA) SW846 Method 8260B. The samples were analyzed in two analytical batches under two separate initial calibration (ICAL) curves, one for soil, one for TB. All samples were analyzed following the procedures outlined in the CSSA QAPP. All samples were prepared and analyzed within the holding time required by the method. All samples were analyzed undiluted.

#### **Accuracy**

Accuracy was evaluated using the percent recovery (%R) obtained from the two LCSs and the surrogate spikes.

All LCSs and surrogate spike recoveries were within acceptance criteria for both batches.

#### **Precision**

Due to the lack of duplicate analysis in this SDG, the precision could not be evaluated.

#### **Representativeness**

Representativeness expresses the degree to which sample data accurately and precisely represents actual site conditions. Representativeness has been evaluated by:

- Comparing the COC procedures to those described in the CSSA QAPP;
- Comparing actual analytical procedures to those described in the CSSA QAPP;
- Evaluating holding times; and
- Examining TB and laboratory blanks for cross contamination of samples during collection, transit or analysis.

All samples in this data package were analyzed following the COC and the analytical procedures described in the CSSA QAPP, Version 1.0. All samples were prepared and analyzed within the holding time required by the method.

- All instrument performance check criteria were met.
- All initial calibration criteria were met.
- Both LCS samples were prepared with a secondary source. All second source verification criteria were met.
- All initial calibration verification (ICV) criteria were met.
- All continuing calibration verification (CCV) criteria were met.
- All internal standard criteria were met.

There were two MBs, one TB, and few calibration blanks associated with the VOC analyses in this SDG. All blanks were non-detect for all target VOCs at RLs.

### **Completeness**

Completeness has been evaluated in accordance with the CSSA QAPP. The number of usable results has been divided by the number of possible individual analyte results and expressed as a percentage to determine the completeness of the data set.

All VOC results for the samples in this SDG were considered usable. The completeness for this SDG is 100%, which meets the minimum acceptance criteria of 95%.

### **SEMI-VOLATILES**

#### **General**

This data package consisted of two (2) soil samples. The samples were collected on May 5, 2011 and were analyzed for a full list of SVOCs.

The SVOC analyses were performed using United States Environmental Protection Agency (USEPA) SW846 Method 8270C. The samples were analyzed in one analytical batch under one set of initial calibration (ICAL) curves. Both samples were analyzed following the procedures outlined in the CSSA QAPP. Both samples were prepared and analyzed within the holding time required by the method. Both samples were analyzed undiluted.

#### **Accuracy**

Accuracy was evaluated using the percent recovery (%R) obtained from the LCS and the surrogate spikes.

All LCSs and surrogate spike recoveries were within acceptance criteria for both batches.

#### **Precision**

Due to the lack of duplicate analysis in this SDG, the precision could not be evaluated.

## Representativeness

Representativeness expresses the degree to which sample data accurately and precisely represents actual site conditions. Representativeness has been evaluated by:

- Comparing the COC procedures to those described in the CSSA QAPP;
- Comparing actual analytical procedures to those described in the CSSA QAPP;
- Evaluating holding times; and
- Examining laboratory blank for cross contamination of samples during analysis.

All samples in this data package were analyzed following the COC and the analytical procedures described in the CSSA QAPP, Version 1.0. All samples were prepared and analyzed within the holding time required by the method.

- All instrument performance check criteria were met.
- All initial calibration criteria were met.
- The LCS was prepared with a secondary source. All second source verification criteria were met.
- All initial calibration verification (ICV) criteria were met.
- All continuing calibration verification (CCV) criteria were met.
- All internal standard criteria were met.

There were one MB and few calibration blanks associated with the SVOC analyses in this SDG. All blanks were non-detect for all target SVOCs.

## Completeness

Completeness has been evaluated in accordance with the CSSA QAPP. The number of usable results has been divided by the number of possible individual analyte results and expressed as a percentage to determine the completeness of the data set.

All SVOC results for the samples in this SDG were considered usable. The completeness for this SDG is 100%, which meets the minimum acceptance criteria of 95%.

## EXPLOSIVES

### General

This data package consisted of two (2) soil samples. The samples were collected on May 5, 2011 and were analyzed for a full list of explosives by SW8330B.

The explosive analyses were performed using United States Environmental Protection Agency (USEPA) SW846 Method 8330B. The samples were analyzed in one analytical batch under one set of initial calibration (ICAL) curves. Both samples were analyzed following the procedures outlined in the CSSA QAPP. Both samples were prepared and analyzed within the holding time required by the method. Both samples were analyzed undiluted.

**Accuracy**

Accuracy was evaluated using the percent recovery (%R) obtained from the LCS and the surrogate spikes.

All LCS and surrogate spike recoveries were within acceptance criteria.

**Precision**

Due to the lack of duplicate analysis in this SDG, the precision could not be evaluated.

**Representativeness**

Representativeness expresses the degree to which sample data accurately and precisely represents actual site conditions. Representativeness has been evaluated by:

- Comparing the COC procedures to those described in the CSSA QAPP;
- Comparing actual analytical procedures to those described in the CSSA QAPP;
- Evaluating holding times; and
- Examining laboratory blank for cross contamination of samples during analysis.

All samples in this data package were analyzed following the COC and the analytical procedures described in the CSSA QAPP, Version 1.0. All samples were prepared and analyzed within the holding time required by the method.

- All instrument performance check criteria were met.
- All initial calibration criteria were met.
- The LCS was prepared with a secondary source. All second source verification criteria were met.
- All initial calibration verification (ICV) criteria were met.
- All continuing calibration verification (CCV) criteria were met.

There were one MB and few calibration blanks associated with the explosive analyses in this SDG. All blanks were non-detect for all target explosives.

**Completeness**

Completeness has been evaluated in accordance with the CSSA QAPP. The number of usable results has been divided by the number of possible individual analyte results and expressed as a percentage to determine the completeness of the data set.

All explosive results for the samples in this SDG were considered usable. The completeness for this SDG is 100%, which meets the minimum acceptance criteria of 95%.

**DATA VERIFICATION SUMMARY REPORT**  
**for samples collected from AOCs 42, 52, and 62**  
**CAMP STANLEY STORAGE ACTIVITY**  
**BOERNE, TEXAS**

Data Verification by: Tammy Chang  
Parsons - Austin

**INTRODUCTION**

The following data verification summary report covers soil samples and the associated field quality control (QC) samples collected from Camp Stanley Storage Activity (CSSA) under Environmental Protection Support, Investigations, and Treatability Studies on May 5, 2011. The samples in the following Sample Delivery Group (SDG) included samples collected from AOCs 42, 52, and 62:

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• Samples were analyzed for total petroleum hydrocarbons (TPHs), volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), explosives, and metals including total and TCLP metals. Not all samples were analyzed for all parameters.

Field QC samples collected in association with this SDG included one trip blank (TB) for VOCs, three set of parent and field duplicate (FD) samples, and one set of matrix spike/matrix spike duplicate (MS/MSD).

All samples were collected by Parsons and analyzed by Agriculture & Priority Pollutants Laboratories, Inc. (APPL) in Clovis, California, following the procedures outlined in the Statement of Work and CSSA QAPP, Version 1.0.

The samples in this SDG were shipped to the laboratory in one cooler. The cooler was received by the laboratory both at a temperature of 3.0°C which was within the recommended range is 2-6° C.

**EVALUATION CRITERIA**

The data submitted by the laboratory has been reviewed and verified following the guidelines outlined in the CSSA QAPP, Version 1.0. Information reviewed in the data packages included sample results; field and laboratory quality control results; calibrations; case narratives; raw data; COC forms and the cooler receipt checklist. The analyses and findings presented in this report are based on the reviewed information, and whether guidelines in the CSSA QAPP, Version 1.0, were met.

## ICP METALS

### General

The ICP metals portion of this SDG consisted of fifteen (15) soil samples, three (3) FDs and one pair of MS/MSD. All samples were collected on May 5, 2011 and were analyzed for arsenic, barium, cadmium, chromium, copper, lead, nickel and zinc. Two samples (AOC52-T2-WC01 and AOC42-T2-WC01) were also analyzed for TCLP-antimony, arsenic, barium, beryllium, cadmium, chromium, lead, nickel, selenium and sliver.

The ICP metals analyses were performed using USEPA SW846 Method 6010B and the TCLP samples were process with SW1311 first. All samples in this SDG were analyzed following the procedures outlined in the CSSA QAPP. All samples were prepared and analyzed within the holding time required by the method.

The ICP metals samples were digested in two batches, one for total metals and one for TCLP metals.

### Accuracy

Accuracy was evaluated using the percent recovery (%R) obtained from the two laboratory control samples (LCS), one for each analytical batch. Lab also performed matrix spike/matrix spike duplicate (MS/MSD) analyses for total metals with sample AOC52-T4-BOT01.

All LCS recoveries were within acceptance criteria for both batches.

Most %Rs of the MS/MSD for the total metal batch failed:

#### AOC42-T4-BOT01

Metals	MS, %R	MSD, %R	Criteria, %R
Arsenic	64	64	75 - 125
Barium	58	(81)	
Cadmium	62	63	
Chromium	61	68	
Copper	68	72	
Lead	64	68	
Nickel	62	68	
Zinc	61	66	

( ) indicates the %R was compliant.

“M” flags were applied to the above listed metal results of the parent sample.

### Precision

Precision was evaluated with the relative percent difference (%RPD) of the MS/MSD results and parent/FD results. Samples AOC52-T3-BOT02, AOC62-T3-SW18 and AOC62-T4-SW17 were collected in duplicate.

All %RPD of MS/MSD met the 20% criteria.

**AOC52-T3-BOT02**

Metals	Parent, mg/kg	FD, mg/kg	%RPD	Criteria, %RPD
Barium	47.2	43.4	8.4	≤20
Copper	9.79	4.40	<b>76</b>	
Nickel	7.58	6.93	9.3	
Zinc	21.0	17.1	20	

**AOC62-T3-SW18**

Metals	Parent, mg/kg	FD, mg/kg	%RPD	Criteria, %RPD
Barium	35.4	34.3	3.2	≤20
Copper	5.99	5.57	7.3	
Nickel	7.13	6.90	3.3	
Zinc	14.7	21.8	<b>39</b>	

**AOC62-T3-SW17**

Metals	Parent, mg/kg	FD, mg/kg	%RPD	Criteria, %RPD
Barium	37.1	40.4	8.5	≤20
Copper	3.95	4.26	7.6	
Nickel	6.98	7.43	6.2	
Zinc	14.9	14.5	2.7	

The above three tables only contain results of parent and FD result which are both greater than reporting limits.

In general, results between parent and FD are pretty similar. The two exceedances represent the heterogeneous of soil more than the inconsistency of sampling technique; therefore, no data were flagged.

### Representativeness

Representativeness expresses the degree to which sample data accurately and precisely represents actual site conditions. Representativeness has been evaluated by:

- Comparing the COC procedures to those described in the CSSA QAPP;
- Comparing actual analytical procedures to those described in the CSSA QAPP;
- Evaluating holding times; and
- Examining laboratory blanks for cross contamination of samples during analysis.



The samples in this SDG were analyzed following the COC and the analytical procedures described in the CSSA QAPP. All samples were prepared and analyzed within the holding times required by the method.

- All instrument tune criteria were met.
- All initial calibration criteria were met.
- All calibration verification criteria were met.
- All second source verification criteria were met. Both ICVs were prepared using a secondary source.
- All interference check criteria were met.
- All internal standard criteria were met.
- Dilution test (DT) was analyzed on sample AOC52-BOT01 for the total metal batch. The DT was applicable for all metals detected in the parent sample at a concentration of 50 times the MDL or greater. All applicable metals failed to meet criteria in the DT, as follows:

**AOC52-T4-BOT01**

Metal	%D	Criteria
Barium	<b>19</b>	%D ≤ 10
Chromium	<b>24</b>	
Nickel	<b>25</b>	
Lead	<b>26</b>	

- A post digestion spike (PDS) was analyzed on the same samples as the DT. All metals met criteria in the PDS:

**AOC52-T4-BOT01**

Metal	%R	Criteria
Arsenic	93	75-125%
Barium	<b>144</b>	
Cadmium	81	
Chromium	95	
Copper	101	
Nickel	94	
Lead	89	
Zinc	87	

“J” flags were applied to all barium results in this SDG

There were two method blanks (MBs) and several calibration blanks associated with the ICP analyses in this SDG. All blanks were free of any target metals at or above the RL.

## Completeness

Completeness has been evaluated by comparing the total number of samples collected with the total number of samples with valid analytical data.

All ICP results for the samples in this SDG were considered usable. The completeness for the ICP portion of this SDG is 100%, which meets the minimum acceptance criteria of 90%.

## MERCURY

### General

The mercury portion of this SDG consisted of fifteen (15) soil samples, three (3) FDs and one pair of MS/MSD. All samples were collected on May 5, 2011 and were analyzed for mercury. Two samples were also analyzed for TCLP mercury.

The mercury analyses were performed using USEPA SW846 Method 7471A/1311 & 7470A. All samples in this SDG were analyzed following the procedures outlined in the CSSA QAPP. All samples were prepared and analyzed within the holding time required by the method.

The mercury samples were prepared in two analytical batches, one for total mercury and one for TCLP-mercury.

### Accuracy

Accuracy was evaluated using the percent recovery obtained from the two LCSs and MS/MSD results. MS/MSD analyses were performed with sample AOC52-T4-BOT01.

All LCSs and MS/MSD recoveries were within acceptance criteria.

### Precision

Precision was evaluated with the %RPD of MS/MSD results and parent/FD sample results. Samples AOC52-T3-BOT02, AOC62-T3-SW18 and AOC62-T4-SW17 were collected in duplicate. The %RPD of the MS/MSD was compliant for total mercury.

Both parent and FD samples of the three pairs had no mercury detected at RL.

### Representativeness

Representativeness expresses the degree to which sample data accurately and precisely represents actual site conditions. Representativeness has been evaluated by:

- Comparing the COC procedures to those described in the CSSA QAPP;
- Comparing actual analytical procedures to those described in the CSSA QAPP;
- Evaluating holding times; and
- Examining laboratory blanks and EBs for cross contamination of samples during sample collection and analysis.

The samples in this SDG were analyzed following the COC and the analytical procedures described in the CSSA QAPP. All samples were prepared and analyzed within the holding times required by the method.

- All initial calibration criteria were met.
- All calibration verification criteria were met.
- All second source verification criteria were met. The ICV was prepared using a secondary source.
- DT for the total mercury analysis was performed with sample AOC42-T2-WC01. %D = 4.1% which met the 10% limit.

There were two MBs and several calibration blanks associated with the mercury analyses in this SDG. All blanks were free of mercury at or above the RL.

### **Completeness**

Completeness has been evaluated by comparing the total number of samples collected with the total number of samples with valid analytical data.

All mercury results for the samples in this SDG were considered usable. The completeness for the mercury portion of this SDG is 100%, which meets the minimum acceptance criteria of 90%.

### **VOLATILES**

#### **General**

This data package consisted of five (5) soil samples, two FDs, one pair of MS/MSD, and one (1) TB. The samples were collected on May 5, 2011 and were analyzed for a full list of VOCs.

The VOC analyses were performed using United States Environmental Protection Agency (USEPA) SW846 Method 8260B. The samples were analyzed in two analytical batches under two separate initial calibration (ICAL) curves, one for soil, one for TB. All samples were analyzed following the procedures outlined in the CSSA QAPP. All samples were prepared and analyzed within the holding time required by the method. All samples were analyzed undiluted.

#### **Accuracy**

Accuracy was evaluated using the percent recovery (%R) obtained from the two LCSs, MS, MSD, and the surrogate spikes.

All LCSs and surrogate spike recoveries were within acceptance criteria for both batches.

All MS/MSD recoveries were compliant. Lab applied "M" to the parent sample result of 1,2,3-trichlorobenzene since MS has %R of 71.1% and MSD has %R of 64.7% with control limit of 65-147%. This "M" flag was removed by Parsons data validator due to the minor exceedance of the MSD.

## Precision

Precision was evaluated using %RPD of the MS/MSD and parent/FD samples.

All %RPDs of MS/MSD were compliant.

### AOC52-T3-BOT02

Compound	Parent, mg/kg	FD, mg/kg	%RPD	Criteria, %RPD
Methylene Chloride	0.0181	0.0091	66	≤ 30

“J” flags were applied to both parent and FD sample results. Since methylene chloride is one of the lab common contaminants, “J” flags were not applied to other samples in this SDG.

### AOC62-T4-SW17

Compound	Parent, mg/kg	FD, mg/kg	%RPD	Criteria, %RPD
Methylene Chloride	0.0182	0.0153	17	≤ 30

## Representativeness

Representativeness expresses the degree to which sample data accurately and precisely represents actual site conditions. Representativeness has been evaluated by:

- Comparing the COC procedures to those described in the CSSA QAPP;
- Comparing actual analytical procedures to those described in the CSSA QAPP;
- Evaluating holding times; and
- Examining TB and laboratory blanks for cross contamination of samples during collection, transit or analysis.

All samples in this data package were analyzed following the COC and the analytical procedures described in the CSSA QAPP, Version 1.0. All samples were prepared and analyzed within the holding time required by the method.

- All instrument performance check criteria were met.
- All initial calibration criteria were met.
- Both LCS samples were prepared with a secondary source. All second source verification criteria were met.
- All initial calibration verification (ICV) criteria were met.
- All continuing calibration verification (CCV) criteria were met.
- All internal standard criteria were met.

There were two MBs, one TB, and few calibration blanks associated with the VOC analyses in this SDG. All blanks were non-detect for all target VOCs at RLs.

## Completeness

Completeness has been evaluated in accordance with the CSSA QAPP. The number of usable results has been divided by the number of possible individual analyte results and expressed as a percentage to determine the completeness of the data set.

All VOC results for the samples in this SDG were considered usable. The completeness for this SDG is 100%, which meets the minimum acceptance criteria of 95%.

## SEMI-VOLATILES

### General

This data package consisted of five (5) soil samples, two FDs, and one pair of MS/MSD. The samples were collected on May 5, 2011 and were analyzed for a full list of SVOCs.

The SVOC analyses were performed using United States Environmental Protection Agency (USEPA) SW846 Method 8270C. The samples were analyzed in one analytical batch under one set of initial calibration (ICAL) curves. All samples were analyzed following the procedures outlined in the CSSA QAPP. All samples were prepared and analyzed within the holding time required by the method. All samples were analyzed undiluted.

### Accuracy

Accuracy was evaluated using the percent recovery (%R) obtained from the LCS, MS, MSD, and the surrogate spikes.

All LCS and surrogate spike recoveries were within acceptance criteria.

The only non-compliant %Rs for the MS/MSD are:

Compounds	MS, %R	MSD, %R	Criteria, %R
2,4-Dimethylphenol	30	24	35 – 149
Benzoic Acid	0	0	25 - 172

“M” flags were applied to the parent sample result of these two compounds.

### Precision

Precision was evaluated using %RPD of the MS/MSD and parent/FD samples.

All %RPDs of MS/MSD were compliant.

None of the SVOCs were detected at or above reporting limit in the two pairs of parent and FD samples.

### Representativeness

Representativeness expresses the degree to which sample data accurately and precisely represents actual site conditions. Representativeness has been evaluated by:

- Comparing the COC procedures to those described in the CSSA QAPP;

- Comparing actual analytical procedures to those described in the CSSA QAPP;
- Evaluating holding times; and
- Examining laboratory blank for cross contamination of samples during analysis.

All samples in this data package were analyzed following the COC and the analytical procedures described in the CSSA QAPP, Version 1.0. All samples were prepared and analyzed within the holding time required by the method.

- All instrument performance check criteria were met.
- All initial calibration criteria were met.
- The LCS was prepared with a secondary source. All second source verification criteria were met.
- All initial calibration verification (ICV) criteria were met.
- All continuing calibration verification (CCV) criteria were met.
- All internal standard criteria were met.

There were one MB and few calibration blanks associated with the SVOC analyses in this SDG. All blanks were non-detect for all target SVOCs.

### **Completeness**

Completeness has been evaluated in accordance with the CSSA QAPP. The number of usable results has been divided by the number of possible individual analyte results and expressed as a percentage to determine the completeness of the data set.

All SVOC results for the samples in this SDG were considered usable. The completeness for this SDG is 100%, which meets the minimum acceptance criteria of 95%.

## **EXPLOSIVES**

### **General**

This data package consisted of four (4) soil samples and two (2) FDs. The samples were collected on May 5, 2011 and were analyzed for a full list of explosives by SW8330B.

The explosive analyses were performed using United States Environmental Protection Agency (USEPA) SW846 Method 8330B. The samples were analyzed in one analytical batch under one set of initial calibration (ICAL) curves. All samples were analyzed following the procedures outlined in the CSSA QAPP. All samples were prepared and analyzed within the holding time required by the method. All samples were analyzed undiluted.

### **Accuracy**

Accuracy was evaluated using the percent recovery (%R) obtained from the LCS, MS, MSD, and the surrogate spikes. MS/MSD were performed with sample AOC52-B4-BOT01.

All LCS and surrogate spike recoveries were within acceptance criteria.

The only compound with non-compliant %R of the MS/MSD is RDX. MS had %R of 60% and MSD had %R of 59%, with control limits of 65-142%. "M" flag was applied to the parent sample result of RDX.

### **Precision**

Precision was evaluated using %RPD of the MS/MSD and parent/FD samples.

All %RPDs of MS/MSD were compliant.

None of the two pairs of parent and FD samples had explosives detected at or above the reporting limits.

### **Representativeness**

Representativeness expresses the degree to which sample data accurately and precisely represents actual site conditions. Representativeness has been evaluated by:

- Comparing the COC procedures to those described in the CSSA QAPP;
- Comparing actual analytical procedures to those described in the CSSA QAPP;
- Evaluating holding times; and
- Examining laboratory blank for cross contamination of samples during analysis.

All samples in this data package were analyzed following the COC and the analytical procedures described in the CSSA QAPP, Version 1.0. All samples were prepared and analyzed within the holding time required by the method.

- All instrument performance check criteria were met.
- All initial calibration criteria were met.
- The LCS was prepared with a secondary source. All second source verification criteria were met.
- All initial calibration verification (ICV) criteria were met.
- All continuing calibration verification (CCV) criteria were met.

There were one MB and few calibration blanks associated with the explosive analyses in this SDG. All blanks were non-detect for all target explosives.

### **Completeness**

Completeness has been evaluated in accordance with the CSSA QAPP. The number of usable results has been divided by the number of possible individual analyte results and expressed as a percentage to determine the completeness of the data set.

All explosive results for the samples in this SDG were considered usable. The completeness for this SDG is 100%, which meets the minimum acceptance criteria of 95%.

## TOTAL PETROLEUM HYDROCARBONS

This data package consisted of one (1) soil sample. This sample was collected on May 5, 2011 and was analyzed for TPH, C6 – C28.

The explosive analyses were performed using TX1005 method. The sample was analyzed in one analytical batch under one set of initial calibration (ICAL) curves. This sample was analyzed following the procedures outlined in the CSSA QAPP and TX1005. This sample was prepared and analyzed within the holding time required by the method.

### Accuracy

Accuracy was evaluated using the percent recovery (%R) obtained from the LCS and two surrogates.

The LCS has %R met the acceptance criteria.

All surrogates had compliant %Rs except the method blank which has a low %R of one of the two surrogates. No flag was applied.

### Precision

Precision could not be evaluated due to the lack of duplicate analyses.

### Representativeness

Representativeness expresses the degree to which sample data accurately and precisely represents actual site conditions. Representativeness has been evaluated by:

- Comparing the COC procedures to those described in the CSSA QAPP and TX1005;
- Comparing actual analytical procedures to those described in the CSSA QAPP and TX1005;
- Evaluating holding time; and
- Examining laboratory blank for cross contamination of samples during analysis.

The sample in this data package was analyzed following the COC and the analytical procedures described in the CSSA QAPP, Version 1.0 and TX1005. The sample was prepared and analyzed within the holding time required by the method.

- All instrument performance check criteria were met.
- All initial calibration criteria were met.
- All continuing calibration verification (CCV) criteria were met.

There was one MB associated with the explosive analyses in this SDG. The blank was non-detect for both ranges of TPH.



## **Completeness**

Completeness has been evaluated in accordance with the CSSA QAPP. The number of usable results has been divided by the number of possible individual analyte results and expressed as a percentage to determine the completeness of the data set.

All TPH result for the sample in this SDG was considered usable. The completeness for this SDG is 100%, which meets the minimum acceptance criteria of 95%.

**DATA VERIFICATION SUMMARY REPORT**  
**for samples collected from AOCs 42/58, 52, and SCA**  
**CAMP STANLEY STORAGE ACTIVITY**  
**BOERNE, TEXAS**

Data Verification by: Tammy Chang  
Parsons - Austin

**INTRODUCTION**

The following data verification summary report covers soil samples collected from Camp Stanley Storage Activity (CSSA) under Environmental Protection Support, Investigations, and Treatability Studies on May 17, 2011. The samples in the following Sample Delivery Group (SDG) included samples collected from SCA, AOC 42/58, AOC 58 and AOC 52:

64669

. Samples were analyzed for TCLP-metals. There was one soil sample for asbestos analysis which was shipped to APPL's subcontract lab. The results are not discussed in this report.

All samples were collected by Parsons and analyzed by Agriculture & Priority Pollutants Laboratories, Inc. (APPL) in Clovis, California, following the procedures outlined in the Statement of Work and CSSA QAPP, Version 1.0.

The samples in this SDG were shipped to the laboratory in one cooler. The cooler was received by the laboratory at a temperature of 2.5°C which was within the recommended range is 2-6° C.

**EVALUATION CRITERIA**

The data submitted by the laboratory has been reviewed and verified following the guidelines outlined in the CSSA QAPP, Version 1.0. Information reviewed in the data packages included sample results; field and laboratory quality control results; calibrations; case narratives; raw data; COC forms and the cooler receipt checklist. The analyses and findings presented in this report are based on the reviewed information, and whether guidelines in the CSSA QAPP, Version 1.0, were met.

**TCLP-ICP METALS**

**General**

The TCLP-ICP metal portion of this SDG consisted of eleven (11) soil samples. All samples were collected on May 17, 2011 and were analyzed for TCLP-silver, arsenic, barium, cadmium, chromium, lead, and selenium.

The TCLP-ICP metal analyses were performed using USEPA SW846 Method 1311/6010B. All samples in this SDG were analyzed following the procedures outlined in the CSSA QAPP. All samples were prepared and analyzed within the holding time required by the method.

All soil samples were digested in one batch.

### **Accuracy**

Accuracy was evaluated using the percent recovery obtained from the Laboratory Control Sample (LCS).

All LCS recoveries were within acceptance criteria.

### **Precision**

Due to the lack of duplicate analyses, the precision could not be measured.

### **Representativeness**

Representativeness expresses the degree to which sample data accurately and precisely represents actual site conditions. Representativeness has been evaluated by:

- Comparing the COC procedures to those described in the CSSA QAPP;
- Comparing actual analytical procedures to those described in the CSSA QAPP;
- Evaluating holding times; and
- Examining laboratory blanks for cross contamination of samples during analysis.

The samples in this SDG were analyzed following the COC and the analytical procedures described in the CSSA QAPP. All samples were prepared and analyzed within the holding times required by the method.

- All instrument tune criteria were met.
- All initial calibration criteria were met.
- All calibration verification criteria were met.
- All second source verification criteria were met. The ICV was prepared using a secondary source.
- All interference check criteria were met.
- All internal standard criteria were met.

There were one method blank (MB) and several calibration blanks associated with the lead analyses in this SDG. All blanks were free of target metals at or above the RL.

### **Completeness**

Completeness has been evaluated by comparing the total number of samples collected with the total number of samples with valid analytical data.

All TCLP-metal results for the samples in this SDG were considered usable. The completeness for the TCLP-ICP metal portion of this SDG is 100%, which meets the minimum acceptance criteria of 90%.

## **TCLP-MERURY**

### **General**

The TCLP-mercury portion of this SDG consisted of eleven (11) soil samples. All samples were collected on May 17, 2011 and were analyzed for TCLP-mercury.

The TCLP-mercury analyses were performed using USEPA SW846 Method 1311/7470A. All samples in this SDG were analyzed following the procedures outlined in the CSSA QAPP. All samples were prepared and analyzed within the holding time required by the method.

All soil samples were digested in one batch.

### **Accuracy**

Accuracy was evaluated using the percent recovery obtained from the LCS.

The LCS recovery was within acceptance criteria.

### **Precision**

Due to the lack of duplicate analyses, the precision could not be measured.

### **Representativeness**

Representativeness expresses the degree to which sample data accurately and precisely represents actual site conditions. Representativeness has been evaluated by:

- Comparing the COC procedures to those described in the CSSA QAPP;
- Comparing actual analytical procedures to those described in the CSSA QAPP;
- Evaluating holding times; and
- Examining laboratory blanks for cross contamination of samples during analysis.

The samples in this SDG were analyzed following the COC and the analytical procedures described in the CSSA QAPP. All samples were prepared and analyzed within the holding times required by the method.

- All instrument tune criteria were met.
- All initial calibration criteria were met.
- All calibration verification criteria were met.
- All second source verification criteria were met. The ICV was prepared using a secondary source.

There were one MB and several calibration blanks associated with the TCLP-mercury analyses in this SDG. All blanks were free of mercury at or above the RL.

## **Completeness**

Completeness has been evaluated by comparing the total number of samples collected with the total number of samples with valid analytical data.

All TCLP-mercury for the samples in this SDG were considered usable. The completeness for the TCLP-mercury portion of this SDG is 100%, which meets the minimum acceptance criteria of 90%.

**DATA VERIFICATION SUMMARY REPORT**  
**for samples collected from AOCs 52, 58 and 45**  
**CAMP STANLEY STORAGE ACTIVITY**  
**BOERNE, TEXAS**

Data Verification by: Tammy Chang  
Parsons - Austin

**INTRODUCTION**

The following data verification summary report covers soil samples and the associated field quality control (QC) samples collected from Camp Stanley Storage Activity (CSSA) under Environmental Protection Support, Investigations, and Treatability Studies on May 24, 2011. The samples in the following Sample Delivery Group (SDG) included samples collected from AOCs 52, 58 and 45:

64741

Samples were analyzed for volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), explosives, and metals. Not all samples were analyzed for all parameters.

Field QC samples collected in association with this SDG included one set of matrix spike/matrix spike duplicate (MS/MSD) and two sets of parent and field duplicate (FD).

All samples were collected by Parsons and analyzed by Agriculture & Priority Pollutants Laboratories, Inc. (APPL) in Clovis, California, following the procedures outlined in the Statement of Work and CSSA QAPP, Version 1.0.

The samples in this SDG were shipped to the laboratory in one cooler. The cooler was received by the laboratory at a temperature of 2.5°C which was within the recommended range is 2-6° C.

**EVALUATION CRITERIA**

The data submitted by the laboratory has been reviewed and verified following the guidelines outlined in the CSSA QAPP, Version 1.0. Information reviewed in the data packages included sample results; field and laboratory quality control results; calibrations; case narratives; raw data; COC forms and the cooler receipt checklist. The analyses and findings presented in this report are based on the reviewed information, and whether guidelines in the CSSA QAPP, Version 1.0, were met.

**ICP METALS**

**General**

The ICP metals portion of this SDG consisted of eleven (11) soil samples, one (1) pair of matrix spike/matrix spike duplicate (MS/MSD), and two (2) FDs. All samples were collected on

May 24, 2011 and were analyzed for arsenic, barium, cadmium, chromium, copper, lead, nickel and zinc.

The ICP metals analyses were performed using USEPA SW846 Method 6010B. All samples in this SDG were analyzed following the procedures outlined in the CSSA QAPP. All samples were prepared and analyzed within the holding time required by the method.

The ICP metals samples were digested in two batches, one for lead only and the other one for all other metals.

### Accuracy

Accuracy was evaluated using the percent recovery obtained from the two laboratory control samples (LCS), one for lead only and one for all other metals, and one set of MS/MSD. AOC52-T2A-BOT01 was designated for the MS/MSD analyses on the COC.

All LCS recoveries were within acceptance criteria.

All %Rs of metal failed to meet the 80 – 120% criteria in MS and MSD analyses. “M” flags were applied to all metal results of the parent sample.

### Precision

Precision was evaluated with the relative percent difference (%RPD) of the MS/MSD results and parent/FD results. Samples AOC45-T2A-BOT01 and AOC52-T2A-SW01 were collected in duplicate.

All %RPD of MS/MSD met the 20% criteria.

**AOC45-T2A-BOT01**

Metals	Parent, mg/kg	FD, mg/kg	%RPD	Criteria, %RPD
Barium	27.4	29.2	6.4	≤20
Copper	3.44	3.36	2.4	
Nickel	4.90	5.25	6.9	
Zinc	10.7	11.5	7.2	

**AOC45-T2A-SW01**

Metals	Parent, mg/kg	FD, mg/kg	%RPD	Criteria, %RPD
Barium	64.6	63.9	1.1	≤20
Copper	7.18	6.81	5.3	
Nickel	8.80	8.90	1.1	
Zinc	18.8	17.2	8.9	

The above tables only contain results which are greater than reporting limits.

## Representativeness

Representativeness expresses the degree to which sample data accurately and precisely represents actual site conditions. Representativeness has been evaluated by:

- Comparing the COC procedures to those described in the CSSA QAPP;
- Comparing actual analytical procedures to those described in the CSSA QAPP;
- Evaluating holding times; and
- Examining laboratory blanks for cross contamination of samples during analysis.

The samples in this SDG were analyzed following the COC and the analytical procedures described in the CSSA QAPP. All samples were prepared and analyzed within the holding times required by the method.

- All instrument tune criteria were met.
- All initial calibration criteria were met.
- All calibration verification criteria were met.
- All second source verification criteria were met. The ICV was prepared using a secondary source.
- All interference check criteria were met.
- All internal standard criteria were met.
- Dilution test (DT) was analyzed on sample AOC52-T2A-BOT01. The DT was only applicable for barium since all other metals were not detected in the parent sample at a concentration of 50 times the MDL or greater. Barium did not meet the %D requirement the DT, as follows:

### AOC52-T2A-BOT01

Metal	%D	Criteria
Barium	44	%D ≤ 10

- A post digestion spike (PDS) was analyzed on the same samples as the DT. All metals met criteria in the PDS except cadmium:

### AOC52-T2A-BOT01

Metal	%R	Criteria
Arsenic	89	75-125%
Barium	98	
Cadmium	71	
Chromium	84	
Copper	94	
Nickel	86	
Lead	86	
Zinc	83	



“J” flags were applied to all cadmium results in this SDG.

There were two method blanks (MBs) and several calibration blanks associated with the ICP analyses in this SDG. All blanks were free of any target metals at or above the RL.

### **Completeness**

Completeness has been evaluated by comparing the total number of samples collected with the total number of samples with valid analytical data.

All ICP results for the samples in this SDG were considered usable. The completeness for the ICP portion of this SDG is 100%, which meets the minimum acceptance criteria of 90%.

## **MERCURY**

### **General**

The mercury portion of this SDG consisted of eleven (11) soil samples, one (1) pair of matrix spike/matrix spike duplicate (MS/MSD) and two (2) FDs. All samples were collected on May 24, 2011 and were analyzed for mercury.

The mercury analyses were performed using USEPA SW846 Method 7471A. All samples in this SDG were analyzed following the procedures outlined in the CSSA QAPP. All samples were prepared and analyzed within the holding time required by the method.

The mercury samples were prepared in one analytical batch.

### **Accuracy**

Accuracy was evaluated using the percent recovery obtained from the LCS and MS/MSD results. MS/MSD analyses were performed with sample AOC52-T2A-BOT01.

All LCS and MS/MSD recoveries were within acceptance criteria.

### **Precision**

Precision was evaluated with the %RPD of MS/MSD results and parent/FD sample results. Samples AOC45-T2A-BOT01 and AOC52-T2A-SW01 were collected in duplicate.

The %RPD of the MS/MSD was compliant.

Both sets of parent and FD samples had no mercury detected at RL.

### **Representativeness**

Representativeness expresses the degree to which sample data accurately and precisely represents actual site conditions. Representativeness has been evaluated by:

- Comparing the COC procedures to those described in the CSSA QAPP;
- Comparing actual analytical procedures to those described in the CSSA QAPP;
- Evaluating holding times; and
- Examining laboratory blank for cross contamination of samples during sample analysis.

The samples in this SDG were analyzed following the COC and the analytical procedures described in the CSSA QAPP. All samples were prepared and analyzed within the holding times required by the method.

- All initial calibration criteria were met.
- All calibration verification criteria were met.
- All second source verification criteria were met. The ICV was prepared using a secondary source.

There were one MB and several calibration blanks associated with the mercury analyses in this SDG. All blanks were free of mercury at or above the RL.

### **Completeness**

Completeness has been evaluated by comparing the total number of samples collected with the total number of samples with valid analytical data.

All mercury results for the samples in this SDG were considered usable. The completeness for the mercury portion of this SDG is 100%, which meets the minimum acceptance criteria of 90%.

### **VOLATILES**

#### **General**

This data package consisted of seven (7) soil samples, one (1) set of MS/MSD and one (1) pair of parent/FD. The samples were collected on May 24, 2011 and were analyzed for a full list of VOCs. The associated trip blank was logged under SDG 64742.

The VOC analyses were performed using United States Environmental Protection Agency (USEPA) SW846 Method 8260B. The samples were analyzed in two analytical batches under one set of initial calibration (ICAL) curves. All samples were analyzed following the procedures outlined in the CSSA QAPP. All samples were prepared and analyzed within the holding time required by the method. All samples were analyzed undiluted.

#### **Accuracy**

Accuracy was evaluated using the percent recovery (%R) obtained from the two LCSs, MS/MSD, and the surrogate spikes. MS/MSD were performed with sample AOC52-T2A-BOT01.

All LCSs and surrogate spike recoveries were within acceptance criteria for all three batches.

The non-compliant MS/MSD %Rs are listed below:

## AOC52-T2A-BOT01

Compounds	MS, %R	MSD, %R	Criteria, %R
1,2,3-Trichlorobenzene	51	(71)	65 – 147
1,2,4-Trichlorobenzene	58	(72)	65 – 145
1,4-DCB	64	(82)	65 - 135
Bromobenzene	64	(75)	65 – 135
Hexachlorobutadiene	49	48	65 – 135
Naphthalene	60	(77)	65 – 135

( ) indicates the %R was compliant.

The “M” flags applied to the parent sample results of 1,4-DCB and bromobenzene were removed by Parsons data validator due to minor exceedances.

### Precision

Precision was evaluated with the %RPD of the MS/MSD and parent and field duplicate sample results. Sample AOC52-T2A-BOT01 was collected in duplicate.

There were two compounds with %RPD greater than 30% of the MS/MSD analyses, 1,2,3-trichlorobenzene and hexachlorobutadiene. “M” flags have already been applied to the parent sample results due to accuracy issues, therefore, no additional flags were needed.

None of the target compounds were detected above the RLs in both parent and FD samples, therefore, the %RPD calculation is not applicable,

### Representativeness

Representativeness expresses the degree to which sample data accurately and precisely represents actual site conditions. Representativeness has been evaluated by:

- Comparing the COC procedures to those described in the CSSA QAPP;
- Comparing actual analytical procedures to those described in the CSSA QAPP;
- Evaluating holding times; and
- Examining laboratory blanks for cross contamination of samples during analysis.

All samples in this data package were analyzed following the COC and the analytical procedures described in the CSSA QAPP, Version 1.0. All samples were prepared and analyzed within the holding time required by the method.

- All instrument performance check criteria were met.
- All initial calibration criteria were met.
- All two LCS samples were prepared with a secondary source. All second source verification criteria were met.

- All initial calibration verification (ICV) criteria were met.
- All continuing calibration verification (CCV) criteria were met.

There were one MB and few calibration blanks associated with the VOC analyses in this SDG. All blanks were non-detect for all target VOCs at RLs.

### **Completeness**

Completeness has been evaluated in accordance with the CSSA QAPP. The number of usable results has been divided by the number of possible individual analyte results and expressed as a percentage to determine the completeness of the data set.

All VOC results for the samples in this SDG were considered usable. The completeness for this SDG is 100%, which meets the minimum acceptance criteria of 95%.

### **SEMI-VOLATILES**

#### **General**

This data package consisted of seven (7) soil samples. The samples were collected on May 24, 2011 and were analyzed for a full list of SVOCs.

The SVOC analyses were performed using United States Environmental Protection Agency (USEPA) SW846 Method 8270C. The samples were analyzed in one analytical batch under one set of initial calibration (ICAL) curves. All samples were analyzed following the procedures outlined in the CSSA QAPP. All samples were prepared and analyzed within the holding time required by the method. All samples were analyzed undiluted.

#### **Accuracy**

Accuracy was evaluated using the percent recovery (%R) obtained from the LCS, MS/MSD, and the surrogate spikes.

All LCSs and surrogate spike recoveries were within acceptance criteria.

The only compound with non-compliant %Rs for the MS/MSD is benzoic acid. "M" flag was applied to the parent sample result.

#### **Precision**

Precision was evaluated with the %RPD of the MS/MSD and parent and field duplicate sample results. Sample AOC52-T2A-BOT01 was collected in duplicate.

RPD for the benzoic acid was slightly exceeded the 30% RPD criteria. "M" flag has already been applied to the parent sample result due to accuracy issue. No further action is needed.

None of the target SVOCs were detected in both parent and FD at RLs.

#### **Representativeness**

Representativeness expresses the degree to which sample data accurately and precisely represents actual site conditions. Representativeness has been evaluated by:

- Comparing the COC procedures to those described in the CSSA QAPP;
- Comparing actual analytical procedures to those described in the CSSA QAPP;
- Evaluating holding times; and
- Examining laboratory blank for cross contamination of samples during analysis.

All samples in this data package were analyzed following the COC and the analytical procedures described in the CSSA QAPP, Version 1.0. All samples were prepared and analyzed within the holding time required by the method.

- All instrument performance check criteria were met.
- All initial calibration criteria were met.
- Both LCS samples were prepared with a secondary source. All second source verification criteria were met.
- All initial calibration verification (ICV) criteria were met.
- All continuing calibration verification (CCV) criteria were met.
- All internal standard criteria were met.

There were one MB and few calibration blanks associated with the SVOC analyses in this SDG. All blanks were non-detect for all target SVOCs.

### **Completeness**

Completeness has been evaluated in accordance with the CSSA QAPP. The number of usable results has been divided by the number of possible individual analyte results and expressed as a percentage to determine the completeness of the data set.

All SVOC results for the samples in this SDG were considered usable. The completeness for this SDG is 100%, which meets the minimum acceptance criteria of 95%.

## **EXPLOSIVES**

### **General**

This data package consisted of seven (7) soil samples, one FD and one set of MS/MSD. The samples were collected on May 24, 2011 and were analyzed for a full list of explosives by SW8330B.

The explosive analyses were performed using United States Environmental Protection Agency (USEPA) SW846 Method 8330B. The samples were analyzed in one analytical batch under one set of initial calibration (ICAL) curves. All samples were analyzed following the procedures outlined in the CSSA QAPP. All samples were prepared and analyzed within the holding time required by the method. All samples were analyzed undiluted.

### **Accuracy**

Accuracy was evaluated using the percent recovery (%R) obtained from the LCS, MS, MSD, and the surrogate spikes.

All LCS, MS, MSD, and surrogate spike recoveries were within acceptance criteria.

### **Precision**

Precision was evaluated with the %RPD of the MS/MSD and parent and field duplicate sample results. Sample AOC52-T2A-BOT01 was collected in duplicate.

All %RPDs of the MS/MSD results were compliant.

None of the target explosives were detected at or above RIs.

### **Representativeness**

Representativeness expresses the degree to which sample data accurately and precisely represents actual site conditions. Representativeness has been evaluated by:

- Comparing the COC procedures to those described in the CSSA QAPP;
- Comparing actual analytical procedures to those described in the CSSA QAPP;
- Evaluating holding times; and
- Examining laboratory blank for cross contamination of samples during analysis.

All samples in this data package were analyzed following the COC and the analytical procedures described in the CSSA QAPP, Version 1.0. All samples were prepared and analyzed within the holding time required by the method.

- All instrument performance check criteria were met.
- All initial calibration criteria were met.
- LCS was prepared with a secondary source. All second source verification criteria were met.
- All initial calibration verification (ICV) criteria were met.
- All continuing calibration verification (CCV) criteria were met.

There were one MB and few calibration blanks associated with the explosive analyses in this SDG. All blanks were non-detect for all target explosives.

### **Completeness**

Completeness has been evaluated in accordance with the CSSA QAPP. The number of usable results has been divided by the number of possible individual analyte results and expressed as a percentage to determine the completeness of the data set.

All explosive results for the samples in this SDG were considered usable. The completeness for this SDG is 100%, which meets the minimum acceptance criteria of 95%.

## **DATA VERIFICATION SUMMARY REPORT**

### **for samples collected from AOC 52 CAMP STANLEY STORAGE ACTIVITY BOERNE, TEXAS**

Data Verification by: Tammy Chang  
Parsons - Austin

## **INTRODUCTION**

The following data verification summary report covers soil samples and the associated field quality control (QC) sample collected from Camp Stanley Storage Activity (CSSA) under Environmental Protection Support, Investigations, and Treatability Studies on May 23, 2011. The samples in the following Sample Delivery Group (SDG) included samples collected from AOC 52:

64742

. Samples were analyzed for volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), explosives, and metals. Not all samples were analyzed for all parameters.

Field QC sample collected in association with this SDG one trip blank (TB).

All samples were collected by Parsons and analyzed by Agriculture & Priority Pollutants Laboratories, Inc. (APPL) in Clovis, California, following the procedures outlined in the Statement of Work and CSSA QAPP, Version 1.0.

The samples in this SDG were shipped to the laboratory in one cooler. The cooler was received by the laboratory at a temperature of 2.5°C which was within the recommended range is 2-6° C.

## **EVALUATION CRITERIA**

The data submitted by the laboratory has been reviewed and verified following the guidelines outlined in the CSSA QAPP, Version 1.0. Information reviewed in the data packages included sample results; field and laboratory quality control results; calibrations; case narratives; raw data; COC forms and the cooler receipt checklist. The analyses and findings presented in this report are based on the reviewed information, and whether guidelines in the CSSA QAPP, Version 1.0, were met.

## **ICP METALS**

### **General**

The ICP metals portion of this SDG consisted of six (6) soil samples. All samples were collected on May 23, 2011 and were analyzed for arsenic, barium, cadmium, chromium, copper, lead, nickel and zinc.

The ICP metals analyses were performed using USEPA SW846 Method 6010B. All samples in this SDG were analyzed following the procedures outlined in the CSSA QAPP. All samples were prepared and analyzed within the holding time required by the method.

### **Accuracy**

Accuracy was evaluated using the percent recovery obtained from the laboratory control sample (LCS).

All LCS recoveries were within acceptance criteria.

### **Precision**

Precision could not be evaluated due to the lack of duplicate analyses in this SDG.

### **Representativeness**

Representativeness expresses the degree to which sample data accurately and precisely represents actual site conditions. Representativeness has been evaluated by:

- Comparing the COC procedures to those described in the CSSA QAPP;
- Comparing actual analytical procedures to those described in the CSSA QAPP;
- Evaluating holding times; and
- Examining laboratory blanks for cross contamination of samples during analysis.

The samples in this SDG were analyzed following the COC and the analytical procedures described in the CSSA QAPP. All samples were prepared and analyzed within the holding times required by the method.

- All instrument tune criteria were met.
- All initial calibration criteria were met.
- All calibration verification criteria were met.
- All second source verification criteria were met. The ICV was prepared using a secondary source.
- All interference check criteria were met.
- All internal standard criteria were met.
- Dilution test (DT) was analyzed on sample AOC52-T2-SW04. The DT was applicable for barium, chromium, nickel and lead since all other metals were not detected in the parent sample at a concentration of 50 times the MDL or greater. Barium did not meet the %D requirement the DT, as follows:



**AOC52-T2-SW04**

Metal	%D	Criteria
Barium	14	%D ≤ 10
Chromium	12	
Nickel	13	
Lead	12	

- A post digestion spike (PDS) was analyzed on the same samples as the DT. All metals met criteria in the PDS:

**AOC52-T2-SW04**

Metal	%R	Criteria
Arsenic	84	75-125%
Barium	77	
Cadmium	76	
Chromium	83	
Copper	92	
Nickel	84	
Lead	82	
Zinc	78	

There were two method blanks (MBs) and several calibration blanks associated with the ICP analyses in this SDG. All blanks were free of any target metals at or above the RL.

**Completeness**

Completeness has been evaluated by comparing the total number of samples collected with the total number of samples with valid analytical data.

All ICP results for the samples in this SDG were considered usable. The completeness for the ICP portion of this SDG is 100%, which meets the minimum acceptance criteria of 90%.

**MERCURY****General**

The mercury portion of this SDG consisted of six (6) soil samples. All samples were collected on May 23, 2011 and were analyzed for mercury.

The mercury analyses were performed using USEPA SW846 Method 7471A. All samples in this SDG were analyzed following the procedures outlined in the CSSA QAPP. All samples were prepared and analyzed within the holding time required by the method.

The mercury samples were prepared in one analytical batch.

**Accuracy**

Accuracy was evaluated using the percent recovery obtained from the LCS.

All LCS recovery was within acceptance criteria.

### **Precision**

Precision could not be evaluated due to the lack of duplicate analyses in this SDG.

### **Representativeness**

Representativeness expresses the degree to which sample data accurately and precisely represents actual site conditions. Representativeness has been evaluated by:

- Comparing the COC procedures to those described in the CSSA QAPP;
- Comparing actual analytical procedures to those described in the CSSA QAPP;
- Evaluating holding times; and
- Examining laboratory blank for cross contamination of samples during sample analysis.

The samples in this SDG were analyzed following the COC and the analytical procedures described in the CSSA QAPP. All samples were prepared and analyzed within the holding times required by the method.

- All initial calibration criteria were met.
- All calibration verification criteria were met.
- All second source verification criteria were met. The ICV was prepared using a secondary source.

There were one MB and several calibration blanks associated with the mercury analyses in this SDG. All blanks were free of mercury at or above the RL.

### **Completeness**

Completeness has been evaluated by comparing the total number of samples collected with the total number of samples with valid analytical data.

All mercury results for the samples in this SDG were considered usable. The completeness for the mercury portion of this SDG is 100%, which meets the minimum acceptance criteria of 90%.

## **VOLATILES**

### **General**

This data package consisted of two (2) soil samples and one (1) trip blank. The samples were collected on May 23, 2011 and were analyzed for a full list of VOCs. The associated trip blank was logged under SDG 64742.

The VOC analyses were performed using United States Environmental Protection Agency (USEPA) SW846 Method 8260B. The samples were analyzed in two analytical batches under

one set of initial calibration (ICAL) curves, one batch for soil and one batch for water. All samples were analyzed following the procedures outlined in the CSSA QAPP. All samples were prepared and analyzed within the holding time required by the method. All samples were analyzed undiluted.

### **Accuracy**

Accuracy was evaluated using the percent recovery (%R) obtained from the two LCSs and the surrogate spikes.

All LCSs and surrogate spike recoveries were within acceptance criteria.

### **Precision**

Precision could not be evaluated due to the lack of duplicate analyses in this SDG.

### **Representativeness**

Representativeness expresses the degree to which sample data accurately and precisely represents actual site conditions. Representativeness has been evaluated by:

- Comparing the COC procedures to those described in the CSSA QAPP;
- Comparing actual analytical procedures to those described in the CSSA QAPP;
- Evaluating holding times; and
- Examining laboratory blanks and trip blank for cross contamination of samples during transportation and analysis.

All samples in this data package were analyzed following the COC and the analytical procedures described in the CSSA QAPP, Version 1.0. All samples were prepared and analyzed within the holding time required by the method.

- All instrument performance check criteria were met.
- All initial calibration criteria were met.
- All two LCS samples were prepared with a secondary source. All second source verification criteria were met.
- All initial calibration verification (ICV) criteria were met.
- All continuing calibration verification (CCV) criteria were met.

There were two MBs and few calibration blanks associated with the VOC analyses in this SDG. All blanks were non-detect for all target VOCs at RLs.

### **Completeness**

Completeness has been evaluated in accordance with the CSSA QAPP. The number of usable results has been divided by the number of possible individual analyte results and expressed as a percentage to determine the completeness of the data set.

All VOC results for the samples in this SDG were considered usable. The completeness for this SDG is 100%, which meets the minimum acceptance criteria of 95%.

## **SEMI-VOLATILES**

### **General**

This data package consisted of two (2) soil samples. The samples were collected on May 23, 2011 and were analyzed for a full list of SVOCs.

The SVOC analyses were performed using United States Environmental Protection Agency (USEPA) SW846 Method 8270C. The samples were analyzed in one analytical batch under one set of initial calibration (ICAL) curves. Both samples were analyzed following the procedures outlined in the CSSA QAPP. Both samples were prepared and analyzed within the holding time required by the method. Both samples were analyzed undiluted.

### **Accuracy**

Accuracy was evaluated using the percent recovery (%R) obtained from the LCS and the surrogate spikes.

All LCS and surrogate spike recoveries were within acceptance criteria.

### **Precision**

Precision could not be evaluated due to the lack of duplicate analyses in this SDG.

### **Representativeness**

Representativeness expresses the degree to which sample data accurately and precisely represents actual site conditions. Representativeness has been evaluated by:

- Comparing the COC procedures to those described in the CSSA QAPP;
- Comparing actual analytical procedures to those described in the CSSA QAPP;
- Evaluating holding times; and
- Examining laboratory blank for cross contamination of samples during analysis.

Both samples in this data package were analyzed following the COC and the analytical procedures described in the CSSA QAPP, Version 1.0. Both samples were prepared and analyzed within the holding time required by the method.

- All instrument performance check criteria were met.
- All initial calibration criteria were met.
- The LCS was prepared with a secondary source. All second source verification criteria were met.
- All initial calibration verification (ICV) criteria were met.
- All continuing calibration verification (CCV) criteria were met.

- All internal standard criteria were met.

There were one MB and few calibration blanks associated with the SVOC analyses in this SDG. All blanks were non-detect for all target SVOCs.

### **Completeness**

Completeness has been evaluated in accordance with the CSSA QAPP. The number of usable results has been divided by the number of possible individual analyte results and expressed as a percentage to determine the completeness of the data set.

All SVOC results for the samples in this SDG were considered usable. The completeness for this SDG is 100%, which meets the minimum acceptance criteria of 95%.

## **EXPLOSIVES**

### **General**

This data package consisted of two (2) soil samples. Both samples were collected on May 23, 2011 and were analyzed for a full list of explosives by SW8330B.

The explosive analyses were performed using United States Environmental Protection Agency (USEPA) SW846 Method 8330B. The samples were analyzed in one analytical batch under one set of initial calibration (ICAL) curves. Both samples were analyzed following the procedures outlined in the CSSA QAPP. Both samples were prepared and analyzed within the holding time required by the method. Both samples were analyzed undiluted.

### **Accuracy**

Accuracy was evaluated using the percent recovery (%R) obtained from the LCS and the surrogate spikes.

All LCS and surrogate spike recoveries were within acceptance criteria.

### **Precision**

Precision could not be evaluated due to the lack of duplicate analyses in this SDG.

### **Representativeness**

Representativeness expresses the degree to which sample data accurately and precisely represents actual site conditions. Representativeness has been evaluated by:

- Comparing the COC procedures to those described in the CSSA QAPP;
- Comparing actual analytical procedures to those described in the CSSA QAPP;
- Evaluating holding times; and
- Examining laboratory blank for cross contamination of samples during analysis.

Both samples in this data package were analyzed following the COC and the analytical procedures described in the CSSA QAPP, Version 1.0. Both samples were prepared and analyzed within the holding time required by the method.

- All instrument performance check criteria were met.
- All initial calibration criteria were met.
- LCS was prepared with a secondary source. All second source verification criteria were met.
- All initial calibration verification (ICV) criteria were met.
- All continuing calibration verification (CCV) criteria were met.

There were one MB and few calibration blanks associated with the explosive analyses in this SDG. All blanks were non-detect for all target explosives.

### **Completeness**

Completeness has been evaluated in accordance with the CSSA QAPP. The number of usable results has been divided by the number of possible individual analyte results and expressed as a percentage to determine the completeness of the data set.

All explosive results for the samples in this SDG were considered usable. The completeness for this SDG is 100%, which meets the minimum acceptance criteria of 95%.

**DATA VERIFICATION SUMMARY REPORT**  
**for samples collected from B27 and AOC42**  
**CAMP STANLEY STORAGE ACTIVITY**  
**BOERNE, TEXAS**

Data Verification by: Tammy Chang  
Parsons - Austin

**INTRODUCTION**

The following data verification summary report covers soil samples and the associated field quality control (QC) samples collected from Camp Stanley Storage Activity (CSSA) under Environmental Protection Support, Investigations, and Treatability Studies on August 4, 2011. The samples in the following Sample Delivery Group (SDG) included samples collected from B27 and AOC42:

65334

Samples were analyzed for volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), explosives, and total metals. TCLP-metals analyses were put on hold originally. Once Parsons gave the instruction of proceed with the TCLP-metals analyses, lab re-logged the “hold” samples under a separate SDG.

Not all samples in this SDG were analyzed for all parameters.

Field QC samples collected in association with this SDG included one trip blank (TB) for VOCs and three sets of parent and field duplicates (FDs). Not all QC samples were analyzed for all parameters.

All samples were collected by Parsons and analyzed by Agriculture & Priority Pollutants Laboratories, Inc. (APPL) in Clovis, California, following the procedures outlined in the Statement of Work and CSSA QAPP, Version 1.0.

The samples in this SDG were shipped to the laboratory in two coolers. Both coolers were received by the laboratory at a temperature of 2.0°C which was within the 2 – 6 degree recommended.

**EVALUATION CRITERIA**

The data submitted by the laboratory has been reviewed and verified following the guidelines outlined in the CSSA QAPP, Version 1.0. Information reviewed in the data packages included sample results; field and laboratory quality control results; calibrations; case narratives; raw data; COC forms and the cooler receipt checklist. The analyses and findings presented in this report are based on the reviewed information, and whether guidelines in the CSSA QAPP, Version 1.0, were met.

## ICP METALS

### General

The ICP metals portion of this SDG consisted of thirteen (13) soil samples and three FDs. All samples were collected on August 4, 2011 and were analyzed for arsenic, barium, cadmium, chromium, copper, lead, nickel and zinc.

The ICP metals analyses were performed using USEPA SW846 Method 6010B. All samples in this SDG were analyzed following the procedures outlined in the CSSA QAPP. All samples were prepared and analyzed within the holding time required by the method.

The ICP metals samples were digested in one analytical batch.

### Accuracy

Accuracy was evaluated using the percent recovery (%R) obtained from the laboratory control sample (LCS).

All LCS recoveries were within acceptance criteria.

### Precision

Precision was evaluated based on the relative percent difference (%RPD) of three sets of parent/FD results. Samples B27-SW72, B27-SW74, and AOC42-BOT04 were collected in duplicate.

%RPD calculation is applicable when both parent and FD sample results are greater than reporting limits (RLs).

#### B27-SW72

Metals	Parent, mg/kg	FD, mg/kg	%RPD	Criteria, %RPD
Barium	38.5	37.1	3.7	≤ 20
Copper	3.23	4.31	<b>29</b>	
Nickel	8.56	7.91	7.9	
Zinc	18.6	12.9	<b>36</b>	

“J” flags were applied to both parent and FD sample results of copper and zinc.

#### B27-SW74

Metals	Parent, mg/kg	FD, mg/kg	%RPD	Criteria, %RPD
Barium	90.8	77.1	16	≤ 20
Copper	6.67	6.98	4.5	
Nickel	13.96	11.76	17	
Zinc	21.6	17.9	19	



**AOC42-BOT04**

<b>Metals</b>	<b>Parent, mg/kg</b>	<b>FD, mg/kg</b>	<b>%RPD</b>	<b>Criteria, %RPD</b>
Barium	48.5	46.6	4.0	≤ 20
Copper	5.49	3.79	<b>37</b>	
Nickel	7.90	8.63	8.8	
Zinc	18.5	15.3	19	

“J” flags were applied to both parent and FD sample results of copper.

**Representativeness**

Representativeness expresses the degree to which sample data accurately and precisely represents actual site conditions. Representativeness has been evaluated by:

- Comparing the COC procedures to those described in the CSSA QAPP;
- Comparing actual analytical procedures to those described in the CSSA QAPP;
- Evaluating holding times; and
- Examining laboratory blanks for cross contamination of samples during sample analysis.

The samples in this SDG were analyzed following the COC and the analytical procedures described in the CSSA QAPP. All samples were prepared and analyzed within the holding times required by the method.

- All instrument tune criteria were met.
- All initial calibration criteria were met.
- All calibration verification criteria were met.
- All ICVs were prepared using a secondary source.
- All second source verification criteria were met.
- All interference check criteria were met.
- All internal standard criteria were met.
- The dilution test (DT) was performed on sample AOC42-BOT04 and it was applicable for barium, chromium, and nickel:

**AOC42-BOT04**

<b>Metals</b>	<b>%D</b>	<b>Criteria, %D</b>
Barium	<b>12</b>	≤10
Chromium	9.8	
Nickel	7.9	

- A PDS was analyzed on the same samples as the DT.

**AOC42-BOT04**

<b>Metals</b>	<b>%R</b>	<b>Criteria, %R</b>
Arsenic	85	75-125
Barium	82	
Cadmium	<b>74</b>	
Copper	93	
Lead	80	
Zinc	<b>74</b>	

Parsons data validator removed all “J” flags applied to all cadmium and zinc results in this SDG due to minor exceedances.

There were one method blank and several continuing calibration blanks involved in this SDG. All results were compliant.

**Completeness**

Completeness has been evaluated by comparing the total number of samples collected with the total number of samples with valid analytical data.

All ICP results for the samples in this SDG were considered usable. The completeness for the ICP portion of this SDG is 100%, which meets the minimum acceptance criteria of 90%.

**MERCURY****General**

The mercury portion of this SDG consisted of thirteen (13) soil samples and three FDs. All samples were collected on August 4, 2011 and were analyzed for mercury.

The mercury analyses were performed using USEPA SW846 Method 7471A. All samples in this SDG were analyzed following the procedures outlined in the CSSA QAPP. All samples were prepared and analyzed within the holding time required by the method.

The mercury samples were prepared in one analytical batch.

**Accuracy**

Accuracy was evaluated using the percent recovery obtained from the LCS.

The LCS recovery was within acceptance criteria.

**Precision**

Precision was evaluated based on the %RPD of three sets of parent/FD sample results.

All three sets of parent and FD samples have no detection of mercury at the reporting limit level.

## **Representativeness**

Representativeness expresses the degree to which sample data accurately and precisely represents actual site conditions. Representativeness has been evaluated by:

- Comparing the COC procedures to those described in the CSSA QAPP;
- Comparing actual analytical procedures to those described in the CSSA QAPP;
- Evaluating holding times; and
- Examining laboratory blanks for cross contamination of samples during sample analysis.

The samples in this SDG were analyzed following the COC and the analytical procedures described in the CSSA QAPP. All samples were prepared and analyzed within the holding times required by the method.

- All initial calibration criteria were met.
- All calibration verification criteria were met.
- All second source verification criteria were met. The ICV was prepared using a secondary source.

There were one MB and several calibration blanks associated with the mercury analyses in this SDG. All blanks were free of mercury at or above the RL.

## **Completeness**

Completeness has been evaluated by comparing the total number of samples collected with the total number of samples with valid analytical data.

All mercury results for the samples in this SDG were considered usable. The completeness for the mercury portion of this SDG is 100%, which meets the minimum acceptance criteria of 90%.

## **VOLATILES**

### **General**

This data package consisted of fourteen (14) soil samples and one (1) TB. These samples were collected on August 4, 2011 and were analyzed for a full list of VOCs.

The VOC analyses were performed using United States Environmental Protection Agency (USEPA) SW846 Method 8260B. The samples were analyzed in two analytical batches, one for TB and one for soil. All samples were analyzed undiluted following the procedures outlined in the CSSA QAPP, prepared and analyzed within the holding time required by the method.

### **Accuracy**

Accuracy was evaluated using the %R obtained from the two LCSs and the surrogate spikes.

All LCSs and surrogate spike recoveries were within acceptance criteria.

## Precision

Precision could not be evaluated due to the lack of duplicate analyses involved in this SDG.

## Representativeness

Representativeness expresses the degree to which sample data accurately and precisely represents actual site conditions. Representativeness has been evaluated by:

- Comparing the COC procedures to those described in the CSSA QAPP;
- Comparing actual analytical procedures to those described in the CSSA QAPP;
- Evaluating holding times; and
- Examining laboratory blanks and TB for cross contamination of samples during sample collection and analysis.

All samples were analyzed following the COC and the analytical procedures described in the CSSA QAPP, Version 1.0. All samples were prepared and analyzed within the holding time required by the method.

- All instrument performance check criteria were met.
- All initial calibration criteria were met.
- Both LCSs were prepared with a secondary source standard. All second source verification criteria were met.
- All ICV criteria were met.
- All CCV criteria were met.

There were two MB, one TB, and few calibration blanks associated with the VOC analyses in this SDG. All blanks were non-detect for all target VOCs at RLs.

## Completeness

Completeness has been evaluated in accordance with the CSSA QAPP. The number of usable results has been divided by the number of possible individual analyte results and expressed as a percentage to determine the completeness of the data set.

All VOC results for the samples in this SDG were considered usable. The completeness for this SDG is 100%, which meets the minimum acceptance criteria of 95%.

## SEMI-VOLATILES

### General

This data package consisted of fourteen (14) soil samples. These samples were collected on August 4, 2011 and were analyzed for a full list of SVOCs.

The SVOC analyses were performed using United States Environmental Protection Agency (USEPA) SW846 Method 8270C. The samples were analyzed in one analytical batch under one

set of initial calibration (ICAL) curves. All samples were analyzed following the procedures outlined in the CSSA QAPP. All samples were prepared and analyzed within the holding time required by the method. All samples were analyzed undiluted.

**Accuracy**

Accuracy was evaluated using the %R obtained from the LCS and the surrogate spikes.

All LCS and surrogate spike recoveries were within acceptance criteria.

**Precision**

Precision could not be evaluated due to the lack of duplicate analyses involved in this SDG.

**Representativeness**

Representativeness expresses the degree to which sample data accurately and precisely represents actual site conditions. Representativeness has been evaluated by:

- Comparing the COC procedures to those described in the CSSA QAPP;
- Comparing actual analytical procedures to those described in the CSSA QAPP;
- Evaluating holding times; and
- Examining laboratory blank for cross contamination of samples during sample analysis.

All samples in this data package were analyzed following the COC and the analytical procedures described in the CSSA QAPP, Version 1.0. All samples were prepared and analyzed within the holding time required by the method.

- All instrument performance check criteria were met.
- All initial calibration criteria were met.
- The LCS was prepared with a secondary source. All second source verification criteria were met.
- All initial calibration verification (ICV) criteria were met.
- All continuing calibration verification (CCV) criteria were met.
- All internal standard criteria were met.

There were one MB and few calibration blanks associated with the SVOC analyses in this SDG. All blanks were non-detect for all target SVOCs.

**Completeness**

Completeness has been evaluated in accordance with the CSSA QAPP. The number of usable results has been divided by the number of possible individual analyte results and expressed as a percentage to determine the completeness of the data set.

All SVOC results for the samples in this SDG were considered usable. The completeness for this SDG is 100%, which meets the minimum acceptance criteria of 95%.

## **EXPLOSIVES**

### **General**

This data package consisted of fourteen (7) soil samples. All samples were collected on August 4, 2011 and were analyzed for a full list of explosives by SW8330B.

The explosive analyses were performed using United States Environmental Protection Agency (USEPA) SW846 Method 8330B. The samples were analyzed in one analytical batch. All samples were analyzed following the procedures outlined in the CSSA QAPP. All samples were prepared and analyzed within the holding time required by the method. All samples were analyzed undiluted.

### **Accuracy**

Accuracy was evaluated using the percent recovery (%R) obtained from the LCS and the surrogate spikes.

All LCS and surrogate spike recoveries were within acceptance criteria.

### **Precision**

Due to the lack of duplicate analyses involved in this SDG, precision could not be measured.

### **Representativeness**

Representativeness expresses the degree to which sample data accurately and precisely represents actual site conditions. Representativeness has been evaluated by:

- Comparing the COC procedures to those described in the CSSA QAPP;
- Comparing actual analytical procedures to those described in the CSSA QAPP;
- Evaluating holding times; and
- Examining laboratory blank for cross contamination of samples during sample analysis.

All samples in this data package were analyzed following the COC and the analytical procedures described in the CSSA QAPP, Version 1.0. All samples were prepared and analyzed within the holding time required by the method.

- All instrument performance check criteria were met.
- All initial calibration criteria were met.
- The LCS was prepared with a secondary source. All second source verification criteria were met.
- All initial calibration verification (ICV) criteria were met.
- All continuing calibration verification (CCV) criteria were met.

There were one MB and few calibration blanks associated with the explosive analyses in this SDG. All blanks were non-detect for all target explosives.

## **Completeness**

Completeness has been evaluated in accordance with the CSSA QAPP. The number of usable results has been divided by the number of possible individual analyte results and expressed as a percentage to determine the completeness of the data set.

All explosive results for the samples in this SDG were considered usable. The completeness for this SDG is 100%, which meets the minimum acceptance criteria of 95%.

**APPENDIX E**

**TCEQ Approval for Non-Hazardous Soils Reuse, December 20, 2010**





DEPARTMENT OF THE ARMY  
CAMP STANLEY STORAGE ACTIVITY, RRAD  
25800 RALPH FAIR ROAD, BOERNE, TX 78015-4800

December 3, 2010

U-029-10

Mr. Kirk Coulter, P.G., Project Manager  
Texas Commission on Environmental Quality  
Corrective Action Team 1, VCP-CA Section  
Remediation Division  
PO Box 13087 (MC-127)  
Austin, TX 78711-3087

SUBJECT: Movement of Non-Hazardous Metals Impacted Soils from SWMU/AOC Closure Efforts to East Pasture Firing Range, Camp Stanley Storage Activity, Boerne, Texas  
TCEQ Industrial Solid Waste Registration #69026, EPA Identification Number TX2210020739

Dear Mr. Coulter:

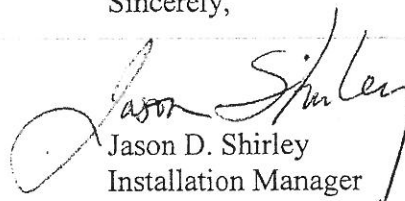
The Camp Stanley Storage Activity (CSSA), McAlester Army Ammunition Plant, U.S. Army Field Support Command, Army Material Command, U.S. Army, is providing this letter to notify the TCEQ of CSSA's plan to move and manage non-hazardous metals-impacted soils generated during remedial actions at CSSA's Solid Waste Management Units (SWMU) and Area of Concerns (AOC) to CSSA's East Pasture Firing Range Berm located in Range Management Unit 1 (RMU-1).

CSSA currently has a need for additional soils on the small arms firing range berm in the east pasture. In recent years, this berm has been modified with non-hazardous soils generated from various SWMUs and AOCs remedial actions. The non-hazardous soil movement and management within the east pasture RMU-1 was authorized by TCEQ and USEPA during a Technical Interchange Meeting held on April 19, 2006 and subsequent letter by Mr. Sonny Rayos, TCEQ Project Manager, dated May 7, 2008. This letter is provided to TCEQ to reaffirm regulatory agreement with this practice.

To verify the generated remediation soils are non-hazardous prior to movement to the east pasture, soil samples will be collected and analyzed for TCLP metals in accordance with CSSA's approved RFI/IM Waste Management Plan dated May 2006. Movement of the non-hazardous metals-impacted soils from CSSA SWMUs and AOCs to the East Pasture Firing Range Berm is expected to occur on an as needed basis as determined by CSSA.

If you have any questions regarding this notification, please contact Gabriel Moreno-Fergusson at (210) 698-5208 or Mr. Ken Rice, Parsons, at (512) 719-6050.

Sincerely,

  
Jason D. Shirley  
Installation Manager

cc: Mr. Greg Lyssy, EPA Region 6  
Mr. Jorge Salazar, TCEQ Region 13  
Ms. Julie Burdey, Parsons

## Schoepflin, Shannon

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**From:** Kirk Coulter [KCoulter@tceq.state.tx.us]  
**Sent:** Monday, December 20, 2010 2:40 PM  
**To:** Rice, Ken R  
**Subject:** Re: Revised workplan fo Vapor Intrusion Survey Investigation at AOC-65

Hi Ken

On the movement of non-haz waste letter. I am sending this E-Mail to you as an informal approval of the letter sent to me on December 3, 2010. I understand that this procedure was approved during Technical meeting held on April 19, 2006 between Camp Stanley, Mr. Sonny Rayos (TCEQ), Parsons Engineering and Mr. Greg Lyssy (EPA).

If you have any questions, please call me

Thanks

Kirk

>>> "Rice, Ken R" <[Ken.R.Rice@parsons.com](mailto:Ken.R.Rice@parsons.com)> 12/7/2010 4:48 PM >>>  
Greg,

I was preparing for our upcoming meeting in January and realized I have not set you the attached revised vapor intrusion survey work plan you requested from our last meeting. This was revised to include that three additional soil gas samples within AOC-65 southwest of building 90 for TO-15 PCE SIM analysis. We have collected soil gas samples directly west of building 90 (at CSSA's fence line) and indoor air samples within building 90. The remaining effort is to collect soil gas data similar to what may be present off-post. That is, the groundwater PCE concentrations within the LGR aquifer in the southern portion of AOC-65 are conservatively similar in off-post groundwater PCE concentrations. Therefore soil gas samples collected in the southern portion of AOC-65 may be more representative of the off-post soil gas present above similar LGR contaminated groundwater. We intend to take the soil gas samples for TO-15 PCE SIM analysis prior to our meeting so that all results may be discussed and finalization of the Vapor Intrusion Survey Report initiated. If you have any questions or concerns please do not hesitate to call or contact me.

Regards,

Ken Rice  
Parsons  
512-719-6050 (Austin)  
512-497-0075 (mobile)

Safety - Make it Personal !

**APPENDIX F**

**Waste Characterization Sampling Results for the Salado Creek Area**

### Appendix F. Waste Characterization Sampling Results for the Salado Creek Area (AOCs 42, 52, 58, and 62)

SAMPLE ID: DATE SAMPLED: LAB SAMPLE ID:		AOC42-BG01 3/23/2011 AY34397	AOC42-WP01 3/23/2011 AY34396	AOC42-SP01 4/7/2011 AY35291	AOC42-SP02 4/19/2011 AY36093	AOC42-SP03 4/19/2011 AY36104	AOC42-SP04 5/5/2011 AY36968	AOC42-SP05 5/5/2011 AY36969	AOC42-SP06 5/5/2011 AY36970	AOC42-SP07 5/5/2011 AY36974	AOC42-SP07-DUP 5/5/2011 AY36975	AOC42-SP08 5/5/2011 AY36976	AOC42-SP09 5/5/2011 AY36977	AOC42-SP10 5/5/2011 AY36978	AOC42-SP11 5/5/2011 AY36979	AOC42-SP12 5/5/2011 AY36980	AOC52-SP01 5/5/2011 AY36971	AOC52-SP02 5/5/2011 AY36972	AOC52-SP03 5/5/2011 AY36973	AOC52-SP04 5/24/2011 AY38383	AOC52-SP05 5/24/2011 AY38384
Units																					
<b>Volatile Organics - SW8260B</b>																					
1,1,1,2-Tetrachloroethane	mg/kg	--	--	0.00080 U	0.00080 U	0.00080 U	0.00080 U	--	--	--	--	--	--	--	--	--	0.00080 U	--	--	0.00080 U	0.00080 U
1,1,1-Trichloroethane	mg/kg	--	--	0.00090 U	0.00090 U	0.00090 U	0.00090 U	--	--	--	--	--	--	--	--	--	0.00090 U	--	--	0.00090 U	0.00090 U
1,1,2,2-Tetrachloroethane	mg/kg	--	--	0.00090 U	0.00090 U	0.00090 U	0.00090 U	--	--	--	--	--	--	--	--	--	0.00090 U	--	--	0.00090 U	0.00090 U
1,1,2-Trichloroethane	mg/kg	--	--	0.00090 U	0.00090 U	0.00090 U	0.00090 U	--	--	--	--	--	--	--	--	--	0.00090 U	--	--	0.00090 U	0.00090 U
1,1-Dichloroethane	mg/kg	--	--	0.0010 U	0.0010 U	0.0010 U	0.0010 U	--	--	--	--	--	--	--	--	--	0.0010 U	--	--	0.0010 U	0.0010 U
1,1-Dichloroethene	mg/kg	--	--	0.0011 U	0.0011 U	0.0011 U	0.0011 U	--	--	--	--	--	--	--	--	--	0.0011 U	--	--	0.0011 U	0.0011 U
1,1-Dichloropropene	mg/kg	--	--	0.0012 U	0.0012 U	0.0012 U	0.0012 U	--	--	--	--	--	--	--	--	--	0.0012 U	--	--	0.0012 U	0.0012 U
1,2,3-Trichlorobenzene	mg/kg	--	--	0.0010 U	0.0010 U	0.0010 U	0.0010 U	--	--	--	--	--	--	--	--	--	0.0010 U	--	--	0.0010 U	0.0010 U
1,2,3-Trichloropropane	mg/kg	--	--	0.0010 U	0.0010 U	0.0010 U	0.0010 U	--	--	--	--	--	--	--	--	--	0.0010 U	--	--	0.0010 U	0.0010 U
1,2,4-Trichlorobenzene	mg/kg	--	--	0.0010 U	0.0010 U	0.0010 U	0.0010 U	--	--	--	--	--	--	--	--	--	0.0010 U	--	--	0.0010 U	0.0010 U
1,2,4-Trimethylbenzene	mg/kg	--	--	0.0011 U	0.0011 U	0.0011 U	0.0011 U	--	--	--	--	--	--	--	--	--	0.0011 U	--	--	0.0011 U	0.0011 U
1,2-Dibromo-3-chloropropane	mg/kg	--	--	0.0020 U	0.0020 U	0.0020 U	0.0020 U	--	--	--	--	--	--	--	--	--	0.0020 U	--	--	0.0020 U	0.0020 U
1,2-Dibromoethane (EDB)	mg/kg	--	--	0.0013 U	0.0013 U	0.0013 U	0.0013 U	--	--	--	--	--	--	--	--	--	0.0013 U	--	--	0.0013 U	0.0013 U
1,2-Dichlorobenzene	mg/kg	--	--	0.0010 U	0.0010 U	0.0010 U	0.0010 U	--	--	--	--	--	--	--	--	--	0.0010 U	--	--	0.0010 U	0.0010 U
1,2-Dichloroethane	mg/kg	--	--	0.0010 U	0.0010 U	0.0010 U	0.0010 U	--	--	--	--	--	--	--	--	--	0.0010 U	--	--	0.0010 U	0.0010 U
1,2-Dichloropropane	mg/kg	--	--	0.00070 U	0.00070 U	0.00070 U	0.00070 U	--	--	--	--	--	--	--	--	--	0.00070 U	--	--	0.00070 U	0.00070 U
1,3,5-Trimethylbenzene (Mesitylene)	mg/kg	--	--	0.0011 U	0.0011 U	0.0011 U	0.0011 U	--	--	--	--	--	--	--	--	--	0.0011 U	--	--	0.0011 U	0.0011 U
1,3-Dichlorobenzene	mg/kg	--	--	0.0011 U	0.0011 U	0.0011 U	0.0011 U	--	--	--	--	--	--	--	--	--	0.0011 U	--	--	0.0011 U	0.0011 U
1,3-Dichloropropane	mg/kg	--	--	0.00070 U	0.00070 U	0.00070 U	0.00070 U	--	--	--	--	--	--	--	--	--	0.00070 U	--	--	0.00070 U	0.00070 U
1,4-Dichlorobenzene	mg/kg	--	--	0.00080 U	0.00080 U	0.00080 U	0.00080 U	--	--	--	--	--	--	--	--	--	0.00080 U	--	--	0.00080 U	0.00080 U
1-Chlorohexane	mg/kg	--	--	0.00090 U	0.00090 U	0.00090 U	0.00090 U	--	--	--	--	--	--	--	--	--	0.00090 U	--	--	0.00090 U	0.00090 U
2,2-Dichloropropane	mg/kg	--	--	0.0010 U	0.0010 U	0.0010 U	0.0010 U	--	--	--	--	--	--	--	--	--	0.0010 U	--	--	0.0010 U	0.0010 U
2-Chlorotoluene	mg/kg	--	--	0.0013 U	0.0013 U	0.0013 U	0.0013 U	--	--	--	--	--	--	--	--	--	0.0013 U	--	--	0.0013 U	0.0013 U
4-Chlorotoluene	mg/kg	--	--	0.0011 U	0.0011 U	0.0011 U	0.0011 U	--	--	--	--	--	--	--	--	--	0.0011 U	--	--	0.0011 U	0.0011 U
Benzene	mg/kg	--	--	0.00090 U	0.00090 U	0.00090 U	0.00090 U	--	--	--	--	--	--	--	--	--	0.00090 U	--	--	0.00090 U	0.00090 U
Bromobenzene	mg/kg	--	--	0.00090 U	0.00090 U	0.00090 U	0.00090 U	--	--	--	--	--	--	--	--	--	0.00090 U	--	--	0.00090 U	0.00090 U
Bromochloromethane	mg/kg	--	--	0.00080 U	0.00080 U	0.00080 U	0.00080 U	--	--	--	--	--	--	--	--	--	0.00080 U	--	--	0.00080 U	0.00080 U
Bromodichloromethane	mg/kg	--	--	0.00090 U	0.00090 U	0.00090 U	0.00090 U	--	--	--	--	--	--	--	--	--	0.00090 U	--	--	0.00090 U	0.00090 U
Bromofrom	mg/kg	--	--	0.0011 U	0.0011 U	0.0011 U	0.0011 U	--	--	--	--	--	--	--	--	--	0.0011 U	--	--	0.0011 U	0.0011 U
Bromomethane	mg/kg	--	--	0.00070 U	0.00070 U	0.00070 U	0.00070 U	--	--	--	--	--	--	--	--	--	0.00070 U	--	--	0.00070 U	0.00070 U
Carbon tetrachloride	mg/kg	--	--	0.0010 U	0.0010 U	0.0010 U	0.0010 U	--	--	--	--	--	--	--	--	--	0.0010 U	--	--	0.0010 U	0.0010 U
Chlorobenzene	mg/kg	--	--	0.00070 U	0.00070 U	0.00070 U	0.00070 U	--	--	--	--	--	--	--	--	--	0.00070 U	--	--	0.00070 U	0.00070 U
Chloroethane	mg/kg	--	--	0.0015 U	0.0015 U	0.0015 U	0.0015 U	--	--	--	--	--	--	--	--	--	0.0015 U	--	--	0.0015 U	0.0015 U
Chloroform	mg/kg	--	--	0.00070 U	0.00070 U	0.00070 U	0.00070 U	--	--	--	--	--	--	--	--	--	0.00070 U	--	--	0.00070 U	0.00070 U
Chloromethane	mg/kg	--	--	0.0015 U	0.0015 U	0.0015 U	0.0015 U	--	--	--	--	--	--	--	--	--	0.0015 U	--	--	0.0015 U	0.0015 U
cis-1,2-Dichloroethene	mg/kg	--	--	0.00080 U	0.00080 U	0.00080 U	0.00080 U	--	--	--	--	--	--	--	--	--	0.00080 U	--	--	0.00080 U	0.00080 U
cis-1,3-Dichloropropene	mg/kg	--	--	0.00090 U	0.00090 U	0.00090 U	0.00090 U	--	--	--	--	--	--	--	--	--	0.00090 U	--	--	0.00090 U	0.00090 U
Dibromochloromethane	mg/kg	--	--	0.00090 U	0.00090 U	0.00090 U	0.00090 U	--	--	--	--	--	--	--	--	--	0.00090 U	--	--	0.00090 U	0.00090 U
Dibromomethane	mg/kg	--	--	0.0010 U	0.0010 U	0.0010 U	0.0010 U	--	--	--	--	--	--	--	--	--	0.0010 U	--	--	0.0010 U	0.0010 U
Dichlorodifluoromethane	mg/kg	--	--	0.0018 U	0.0018 U	0.0018 U	0.0018 U	--	--	--	--	--	--	--	--	--	0.0018 U	--	--	0.0018 U	0.0018 U
Ethylbenzene	mg/kg	--	--	0.0010 U	0.0010 U	0.0010 U	0.0010 U	--	--	--	--	--	--	--	--	--	0.0010 U	--	--	0.0010 U	0.0010 U
Hexachlorobutadiene	mg/kg	--	--	0.0011 U	0.0011 U	0.0011 U	0.0011 U	--	--	--	--	--	--	--	--	--	0.0011 U	--	--	0.0011 U	0.0011 U
Isopropylbenzene	mg/kg	--	--	0.0010 U	0.0010 U	0.0010 U	0.0010 U	--	--	--	--	--	--	--	--	--	0.0010 U	--	--	0.0010 U	0.0010 U
m,p-Xylene	mg/kg	--	--	0.0018 U	0.0018 U	0.0018 U	0.0018 U	--	--	--	--	--	--	--	--	--	0.0018 U	--	--	0.0018 U	0.0018 U
Methylene chloride	mg/kg	--	--	0.0013 U	0.0013 U	0.0013 U	<b>0.0056</b>	--	--	--	--	--	--	--	--	--	<b>0.0023</b> F	--	--	0.0013 U	0.0013 U
Naphthalene	mg/kg	--	--	0.0010 U	0.0010 U	0.0010 U	0.0010 U	--	--	--	--	--	--	--	--	--	0.0010 U	--	--	0.0010 U	0.0010 U
n-Butylbenzene	mg/kg	--	--	0.0010 U	0.0010 U	0.0010 U	0.0010 U	--	--	--	--	--	--	--	--	--	0.0010 U	--	--	0.0010 U	0.0010 U
n-Propylbenzene	mg/kg	--	--	0.0012 U	0.0012 U	0.0012 U	0.0012 U	--	--	--	--	--	--	--	--	--	0.0012 U	--	--	0.0012 U	0.0012 U
o-Xylene	mg/kg	--	--	0.00070 U	0.00070 U	0.00070 U	0.00070 U	--	--	--	--	--	--	--	--	--	0.00070 U	--	--	0.00070 U	0.00070 U
p-Cymene (p-Isopropyltoluene)	mg/kg	--	--	0.0012 U	0.0012 U	0.0012 U	0.0012 U	--	--	--	--	--	--	--	--	--	0.0012 U	--	--	0.0012 U	0.0012 U
sec-Butylbenzene	mg/kg	--	--	0.0011 U	0.0011 U	0.0011 U	0.0011 U	--	--	--	--	--	--	--	--	--	0.0011 U	--	--	0.0011 U	0.0011 U
Styrene	mg/kg	--	--	0.00090 U	0.00090 U	0.00090 U	0.00090 U	--	--	--	--	--	--	--	--	--	0.00090 U	--	--	0.00090 U	0.00090 U
tert-Butylbenzene	mg/kg	--	--	0.0012 U	0.0012 U	0.0012 U	0.0012 U	--	--	--	--	--	--	--	--	--	0.0012 U	--	--	0.0012 U	0.0012 U
Tetrachloroethene (PCE)	mg/kg	--	--	0.00080 U	0.00080 U	0.00080 U	0.00080 U	--	--	--	--	--	--	--	--	--	0.00080 U	--	--	0.00080 U	0.00080 U
Toluene	mg/kg	--	--	0.0010 U	0.0010 U	<b>0.0011</b> F	0.0010 U	--	--	--	--	--	--	--	--	--	0.0010 U	--	--	0.0010 U	0.0010 U
trans-1,2-Dichloroethene	mg/kg	--	--	0.00080 U	0.00080 U	0.00080 U	0.00080 U	--	--	--	--	--	--	--	--	--	0.00080 U	--	--	0.00080 U	0.00080 U
trans-1,3-Dichloropropene	mg/kg	--	--	0.00090 U	0.00090 U	0.00090 U	0.00090 U	--	--	--	--	--	--	--	--	--	0.00090 U	--	--	0.00090 U	0.00090 U
Trichloroethene (TCE)	mg/kg	--	--	0.0012 U	0.0012 U	0.0012 U	0.0012 U	--	--	--	--	--	--	--	--	--	0.0012 U	--	--	0.0012 U	0.0012 U
Trichlorofluoromethane	mg/kg	--	--	0.0013 U	0.0013 U	0.0013 U	0.0013 U	--	--	--	--	--	--	--	--	--	0.0013 U	--	--	0.0013 U	0.0013 U
Vinyl chloride	mg/kg	--	--	0.0013 U	0.0013 U	0.0013 U	0.0013 U	--	--	--	--	--	--	--	--	--	0.0013 U	--	--	0.0013 U	0.0013 U

## Appendix F. Waste Characterization Sampling Results for the Salado Creek Area (AOCs 42, 52, 58, and 62)

SAMPLE ID: DATE SAMPLED: LAB SAMPLE ID:		AOC58-SP01 4/7/2011 AY35292	AOC58-SP02 4/19/2011 AY36124	AOC58-SP03 5/24/2011 AY38380	AOC58-SP04 5/24/2011 AY38381	AOC58-SP05 5/24/2011 AY38382	AOC42/58-WC04 5/17/2011 AY37646	AOC42/58-WC05 5/17/2011 AY37647	AOC42/58-WC06 5/17/2011 AY37648	AOC42-T2-WC01 5/5/2011 AY36997	AOC52-T2-WC01 5/5/2011 AY36997 <b>MEDICAL DEBRIS</b>	AOC52-WC10 5/17/2011 AY37652	AOC52-WC11 5/17/2011 AY37653	AOC58-WC07 5/17/2011 AY37649	AOC58-WC08 5/17/2011 AY37650	AOC58-WC09 5/17/2011 AY37651	AOC62-WC01 3/30/2011 AY34972	SCA-WC01 5/17/2011 AY37643	SCA-WC02 5/17/2011 AY37644	SCA-WC03 5/17/2011 AY37645	
Units																					
<b>Volatile Organics - SW8260B</b>																					
1,1,1,2-Tetrachloroethane	mg/kg	0.00080	U	0.00080	U	0.00080	U	0.00080	U	0.00080	U	--	--	--	--	--	--	0.00080	U	--	--
1,1,1-Trichloroethane	mg/kg	0.00090	U	0.00090	U	0.00090	U	0.00090	U	0.00090	U	--	--	--	--	--	--	0.00090	U	--	--
1,1,2,2-Tetrachloroethane	mg/kg	0.00090	U	0.00090	U	0.00090	U	0.00090	U	0.00090	U	--	--	--	--	--	--	0.00090	U	--	--
1,1,2-Trichloroethane	mg/kg	0.00090	U	0.00090	U	0.00090	U	0.00090	U	0.00090	U	--	--	--	--	--	--	0.00090	U	--	--
1,1-Dichloroethane	mg/kg	0.0010	U	0.0010	U	0.0010	U	0.0010	U	0.0010	U	--	--	--	--	--	--	0.0010	U	--	--
1,1-Dichloroethene	mg/kg	0.0011	U	0.0011	U	0.0011	U	0.0011	U	0.0011	U	--	--	--	--	--	--	0.0011	U	--	--
1,1-Dichloropropene	mg/kg	0.0012	U	0.0012	U	0.0012	U	0.0012	U	0.0012	U	--	--	--	--	--	--	0.0012	U	--	--
1,2,3-Trichlorobenzene	mg/kg	0.0010	U	0.0010	U	0.0010	U	0.0010	U	0.0010	U	--	--	--	--	--	--	0.0010	U	--	--
1,2,3-Trichloropropane	mg/kg	0.0010	U	0.0010	U	0.0010	U	0.0010	U	0.0010	U	--	--	--	--	--	--	0.0010	U	--	--
1,2,4-Trichlorobenzene	mg/kg	0.0010	U	0.0010	U	0.0010	U	0.0010	U	0.0010	U	--	--	--	--	--	--	0.0010	U	--	--
1,2,4-Trimethylbenzene	mg/kg	0.0011	U	0.0011	U	0.0011	U	0.0011	U	0.0011	U	--	--	--	--	--	--	0.0011	U	--	--
1,2-Dibromo-3-chloropropane	mg/kg	0.0020	U	0.0020	U	0.0020	U	0.0020	U	0.0020	U	--	--	--	--	--	--	0.0020	U	--	--
1,2-Dibromoethane (EDB)	mg/kg	0.0013	U	0.0013	U	0.0013	U	0.0013	U	0.0013	U	--	--	--	--	--	--	0.0013	U	--	--
1,2-Dichlorobenzene	mg/kg	0.0010	U	0.0010	U	0.0010	U	0.0010	U	0.0010	U	--	--	--	--	--	--	0.0010	U	--	--
1,2-Dichloroethane	mg/kg	0.0010	U	0.0010	U	0.0010	U	0.0010	U	0.0010	U	--	--	--	--	--	--	0.0010	U	--	--
1,2-Dichloropropane	mg/kg	0.00070	U	0.00070	U	0.00070	U	0.00070	U	0.00070	U	--	--	--	--	--	--	0.00070	U	--	--
1,3,5-Trimethylbenzene (Mesitylene)	mg/kg	0.0011	U	0.0011	U	0.0011	U	0.0011	U	0.0011	U	--	--	--	--	--	--	0.0011	U	--	--
1,3-Dichlorobenzene	mg/kg	0.0011	U	0.0011	U	0.0011	U	0.0011	U	0.0011	U	--	--	--	--	--	--	0.0011	U	--	--
1,3-Dichloropropane	mg/kg	0.00070	U	0.00070	U	0.00070	U	0.00070	U	0.00070	U	--	--	--	--	--	--	0.00070	U	--	--
1,4-Dichlorobenzene	mg/kg	0.00080	U	0.00080	U	0.00080	U	0.00080	U	0.00080	U	--	--	--	--	--	--	0.00080	U	--	--
1-Chlorohexane	mg/kg	0.00090	U	0.00090	U	0.00090	U	0.00090	U	0.00090	U	--	--	--	--	--	--	0.00090	U	--	--
2,2-Dichloropropane	mg/kg	0.0010	U	0.0010	U	0.0010	U	0.0010	U	0.0010	U	--	--	--	--	--	--	0.0010	U	--	--
2-Chlorotoluene	mg/kg	0.0013	U	0.0013	U	0.0013	U	0.0013	U	0.0013	U	--	--	--	--	--	--	0.0013	U	--	--
4-Chlorotoluene	mg/kg	0.0011	U	0.0011	U	0.0011	U	0.0011	U	0.0011	U	--	--	--	--	--	--	0.0011	U	--	--
Benzene	mg/kg	0.00090	U	0.00090	U	0.00090	U	0.00090	U	0.00090	U	--	--	--	--	--	--	0.00090	U	--	--
Bromobenzene	mg/kg	0.00090	U	0.00090	U	0.00090	U	0.00090	U	0.00090	U	--	--	--	--	--	--	0.00090	U	--	--
Bromochloromethane	mg/kg	0.00080	U	0.00080	U	0.00080	U	0.00080	U	0.00080	U	--	--	--	--	--	--	0.00080	U	--	--
Bromodichloromethane	mg/kg	0.00090	U	0.00090	U	0.00090	U	0.00090	U	0.00090	U	--	--	--	--	--	--	0.00090	U	--	--
Bromoform	mg/kg	0.0011	U	0.0011	U	0.0011	U	0.0011	U	0.0011	U	--	--	--	--	--	--	0.0011	U	--	--
Bromomethane	mg/kg	0.00070	U	0.00070	U	0.00070	U	0.00070	U	0.00070	U	--	--	--	--	--	--	0.00070	U	--	--
Carbon tetrachloride	mg/kg	0.0010	U	0.0010	U	0.0010	U	0.0010	U	0.0010	U	--	--	--	--	--	--	0.0010	U	--	--
Chlorobenzene	mg/kg	0.00070	U	0.00070	U	0.00070	U	0.00070	U	0.00070	U	--	--	--	--	--	--	0.00070	U	--	--
Chloroethane	mg/kg	0.0015	U	0.0015	U	0.0015	U	0.0015	U	0.0015	U	--	--	--	--	--	--	0.0015	U	--	--
Chloroform	mg/kg	0.00070	U	0.00070	U	0.00070	U	0.00070	U	0.00070	U	--	--	--	--	--	--	0.00070	U	--	--
Chloromethane	mg/kg	0.0015	U	0.0015	U	0.0015	U	0.0015	U	0.0015	U	--	--	--	--	--	--	0.0015	U	--	--
cis-1,2-Dichloroethene	mg/kg	0.00080	U	0.00080	U	0.00080	U	0.00080	U	0.00080	U	--	--	--	--	--	--	0.00080	U	--	--
cis-1,3-Dichloropropene	mg/kg	0.00090	U	0.00090	U	0.00090	U	0.00090	U	0.00090	U	--	--	--	--	--	--	0.00090	U	--	--
Dibromochloromethane	mg/kg	0.00090	U	0.00090	U	0.00090	U	0.00090	U	0.00090	U	--	--	--	--	--	--	0.00090	U	--	--
Dibromomethane	mg/kg	0.0010	U	0.0010	U	0.0010	U	0.0010	U	0.0010	U	--	--	--	--	--	--	0.0010	U	--	--
Dichlorodifluoromethane	mg/kg	0.0018	U	0.0018	U	0.0018	U	0.0018	U	0.0018	U	--	--	--	--	--	--	0.0018	U	--	--
Ethylbenzene	mg/kg	0.0010	U	0.0010	U	0.0010	U	0.0010	U	0.0010	U	--	--	--	--	--	--	0.0010	U	--	--
Hexachlorobutadiene	mg/kg	0.0011	U	0.0011	U	0.0011	U	0.0011	U	0.0011	U	--	--	--	--	--	--	0.0011	U	--	--
Isopropylbenzene	mg/kg	0.0010	U	0.0010	U	0.0010	U	0.0010	U	0.0010	U	--	--	--	--	--	--	0.0010	U	--	--
m,p-Xylene	mg/kg	0.0018	U	0.0018	U	0.0018	U	0.0018	U	0.0018	U	--	--	--	--	--	--	0.0018	U	--	--
Methylene chloride	mg/kg	0.0013	U	0.0013	U	<b>0.0022</b>	F	<b>0.0040</b>	F	0.0013	U	--	--	--	--	--	--	<b>0.012</b>	U	--	--
Naphthalene	mg/kg	0.0010	U	0.0010	U	0.0010	U	0.0010	U	0.0010	U	--	--	--	--	--	--	0.0010	U	--	--
n-Butylbenzene	mg/kg	0.0010	U	0.0010	U	0.0010	U	0.0010	U	0.0010	U	--	--	--	--	--	--	0.0010	U	--	--
n-Propylbenzene	mg/kg	0.0012	U	0.0012	U	0.0012	U	0.0012	U	0.0012	U	--	--	--	--	--	--	0.0012	U	--	--
o-Xylene	mg/kg	0.00070	U	0.00070	U	0.00070	U	0.00070	U	0.00070	U	--	--	--	--	--	--	0.00070	U	--	--
p-Cymene (p-Isopropyltoluene)	mg/kg	0.0012	U	0.0012	U	0.0012	U	0.0012	U	0.0012	U	--	--	--	--	--	--	0.0012	U	--	--
sec-Butylbenzene	mg/kg	0.0011	U	0.0011	U	0.0011	U	0.0011	U	0.0011	U	--	--	--	--	--	--	0.0011	U	--	--
Styrene	mg/kg	0.00090	U	0.00090	U	0.00090	U	0.00090	U	0.00090	U	--	--	--	--	--	--	0.00090	U	--	--
tert-Butylbenzene	mg/kg	0.0012	U	0.0012	U	0.0012	U	0.0012	U	0.0012	U	--	--	--	--	--	--	0.0012	U	--	--
Tetrachloroethene (PCE)	mg/kg	0.00080	U	0.00080	U	0.00080	U	0.00080	U	0.00080	U	--	--	--	--	--	--	0.00080	U	--	--
Toluene	mg/kg	0.0010	U	0.0010	U	0.0010	U	0.0010	U	0.0010	U	--	--	--	--	--	--	0.0010	U	--	--
trans-1,2-Dichloroethene	mg/kg	0.00080	U	0.00080	U	0.00080	U	0.00080	U	0.00080	U	--	--	--	--	--	--	0.00080	U	--	--
trans-1,3-Dichloropropene	mg/kg	0.00090	U	0.00090	U	0.00090	U	0.00090	U	0.00090	U	--	--	--	--	--	--	0.00090	U	--	--
Trichloroethene (TCE)	mg/kg	0.0012	U	0.0012	U	0.0012	U	0.0012	U	0.0012	U	--	--	--	--	--	--	0.0012	U	--	--
Trichlorofluoromethane	mg/kg	0.0013	U	0.0013	U	0.0013	U	0.0013	U	0.0013	U	--	--	--	--	--	--	0.0013	U	--	--
Vinyl chloride	mg/kg	0.0013	U	0.0013	U	0.0013	U	0.0013	U	0.0013	U	--	--	--	--	--	--	0.0013			

## Appendix F. Waste Characterization Sampling Results for the Salado Creek Area (AOCs 42, 52, 58, and 62)

SAMPLE ID: DATE SAMPLED: LAB SAMPLE ID:		AOC42-BG01 3/23/2011 AY34397	AOC42-WP01 3/23/2011 AY34396	AOC42-SP01 4/7/2011 AY35291	AOC42-SP02 4/19/2011 AY36093	AOC42-SP03 4/19/2011 AY36104	AOC42-SP04 5/5/2011 AY36968	AOC42-SP05 5/5/2011 AY36969	AOC42-SP06 5/5/2011 AY36970	AOC42-SP07 5/5/2011 AY36974	AOC42-SP07-DUP 5/5/2011 AY36975	AOC42-SP08 5/5/2011 AY36976	AOC42-SP09 5/5/2011 AY36977	AOC42-SP10 5/5/2011 AY36978	AOC42-SP11 5/5/2011 AY36979	AOC42-SP12 5/5/2011 AY36980	AOC52-SP01 5/5/2011 AY36971	AOC52-SP02 5/5/2011 AY36972	AOC52-SP03 5/5/2011 AY36973	AOC52-SP04 5/24/2011 AY38383	AOC52-SP05 5/24/2011 AY38384	
Units																						
Semi-Volatile Organics - SW8270C																						
1,2,4-Trichlorobenzene	mg/kg	--	--	0.040 U	0.040 U	0.040 U	0.040 U	--	--	--	--	--	--	--	--	--	0.040 U	--	--	0.040 U	0.040 U	
1,2-Dichlorobenzene	mg/kg	--	--	0.030 U	0.030 U	0.030 U	0.030 U	--	--	--	--	--	--	--	--	--	0.030 U	--	--	0.030 U	0.030 U	
1,3-Dichlorobenzene	mg/kg	--	--	0.040 U	0.040 U	0.040 U	0.040 U	--	--	--	--	--	--	--	--	--	0.040 U	--	--	0.040 U	0.040 U	
1,4-Dichlorobenzene	mg/kg	--	--	0.030 U	0.030 U	0.030 U	0.030 U	--	--	--	--	--	--	--	--	--	0.030 U	--	--	0.030 U	0.030 U	
2,4,5-Trichlorophenol	mg/kg	--	--	0.040 U	0.040 U	0.040 U	0.040 U	--	--	--	--	--	--	--	--	--	0.040 U	--	--	0.040 U	0.040 U	
2,4,6-Trichlorophenol	mg/kg	--	--	0.040 U	0.040 U	0.040 U	0.040 U	--	--	--	--	--	--	--	--	--	0.040 U	--	--	0.040 U	0.040 U	
2,4-Dichlorophenol	mg/kg	--	--	0.040 U	0.040 U	0.040 U	0.040 U	--	--	--	--	--	--	--	--	--	0.040 U	--	--	0.040 U	0.040 U	
2,4-Dimethylphenol	mg/kg	--	--	0.080 U	0.080 U	0.080 U	0.080 U	--	--	--	--	--	--	--	--	--	0.080 U	--	--	0.080 U	0.080 U	
2,4-Dinitrophenol	mg/kg	--	--	0.030 U	0.030 U	0.030 U	0.030 U	--	--	--	--	--	--	--	--	--	0.030 U	--	--	0.030 U	0.030 U	
2,4-Dinitrotoluene	mg/kg	--	--	0.050 U	0.050 U	0.050 U	0.050 U	--	--	--	--	--	--	--	--	--	0.050 U	--	--	0.050 U	0.050 U	
2,6-Dinitrotoluene	mg/kg	--	--	0.040 U	0.040 U	0.040 U	0.040 U	--	--	--	--	--	--	--	--	--	0.040 U	--	--	0.040 U	0.040 U	
2-Chloronaphthalene	mg/kg	--	--	0.040 U	0.040 U	0.040 U	0.040 U	--	--	--	--	--	--	--	--	--	0.040 U	--	--	0.040 U	0.040 U	
2-Chlorophenol	mg/kg	--	--	0.030 U	0.030 U	0.030 U	0.030 U	--	--	--	--	--	--	--	--	--	0.030 U	--	--	0.030 U	0.030 U	
2-Methyl-4,6-dinitrophenol	mg/kg	--	--	0.030 U	0.030 U	0.030 U	0.030 U	--	--	--	--	--	--	--	--	--	0.030 U	--	--	0.030 U	0.030 U	
2-Methylnaphthalene	mg/kg	--	--	0.050 U	0.050 U	0.050 U	0.050 U	--	--	--	--	--	--	--	--	--	0.050 U	--	--	0.050 U	0.050 U	
2-Methylphenol	mg/kg	--	--	0.020 U	0.020 U	0.020 U	0.020 U	--	--	--	--	--	--	--	--	--	0.020 U	--	--	0.020 U	0.020 U	
2-Nitroaniline	mg/kg	--	--	0.040 U	0.040 U	0.040 U	0.040 U	--	--	--	--	--	--	--	--	--	0.040 U	--	--	0.040 U	0.040 U	
2-Nitrophenol	mg/kg	--	--	0.040 U	0.040 U	0.040 U	0.040 U	--	--	--	--	--	--	--	--	--	0.040 U	--	--	0.040 U	0.040 U	
3,3'-Dichlorobenzidine	mg/kg	--	--	0.020 U	0.020 U	0.020 U	0.020 U	--	--	--	--	--	--	--	--	--	0.020 U	--	--	0.020 U	0.020 U	
3-Nitroaniline	mg/kg	--	--	0.010 U	0.010 U	0.010 U	0.010 U	--	--	--	--	--	--	--	--	--	0.010 U	--	--	0.010 U	0.010 U	
4-Bromophenyl phenyl ether	mg/kg	--	--	0.050 U	0.050 U	0.050 U	0.050 U	--	--	--	--	--	--	--	--	--	0.050 U	--	--	0.050 U	0.050 U	
4-Chloro-3-methyl phenol	mg/kg	--	--	0.040 U	0.040 U	0.040 U	0.040 U	--	--	--	--	--	--	--	--	--	0.040 U	--	--	0.040 U	0.040 U	
4-Chloroaniline	mg/kg	--	--	0.040 U	0.040 U	0.040 U	0.040 U	--	--	--	--	--	--	--	--	--	0.040 U	--	--	0.040 U	0.040 U	
4-Chlorophenyl phenyl ether	mg/kg	--	--	0.040 U	0.040 U	0.040 U	0.040 U	--	--	--	--	--	--	--	--	--	0.040 U	--	--	0.040 U	0.040 U	
4-Methylphenol (p-cresol)	mg/kg	--	--	0.040 U	0.040 U	0.040 U	0.040 U	--	--	--	--	--	--	--	--	--	0.040 U	--	--	0.040 U	0.040 U	
4-Nitroaniline	mg/kg	--	--	0.030 U	0.030 U	0.030 U	0.030 U	--	--	--	--	--	--	--	--	--	0.030 U	--	--	0.030 U	0.030 U	
4-Nitrophenol	mg/kg	--	--	0.040 U	0.040 U	0.040 U	0.040 U	--	--	--	--	--	--	--	--	--	0.040 U	--	--	0.040 U	0.040 U	
Acenaphthene	mg/kg	--	--	0.040 U	0.040 U	0.040 U	0.040 U	--	--	--	--	--	--	--	--	--	0.040 U	--	--	0.040 U	0.040 U	
Acenaphthylene	mg/kg	--	--	0.030 U	0.030 U	0.030 U	0.030 U	--	--	--	--	--	--	--	--	--	0.030 U	--	--	0.030 U	0.030 U	
Anthracene	mg/kg	--	--	0.040 U	0.040 U	0.040 U	0.040 U	--	--	--	--	--	--	--	--	--	0.040 U	--	--	0.040 U	0.040 U	
Benzo(a)anthracene	mg/kg	--	--	0.040 U	0.040 U	0.040 U	0.040 U	--	--	--	--	--	--	--	--	--	0.040 U	--	--	0.040 U	0.040 U	
Benzo(a)pyrene	mg/kg	--	--	0.050 U	0.050 U	0.050 U	0.050 U	--	--	--	--	--	--	--	--	--	0.050 U	--	--	0.050 U	0.050 U	
Benzo(b)fluoranthene	mg/kg	--	--	0.060 U	0.060 U	0.060 U	0.060 U	--	--	--	--	--	--	--	--	--	0.060 U	--	--	0.060 U	0.060 U	
Benzo(g,h,i)perylene	mg/kg	--	--	0.040 U	0.040 U	0.040 U	0.040 U	--	--	--	--	--	--	--	--	--	0.040 U	--	--	0.040 U	0.040 U	
Benzoic acid	mg/kg	--	--	0.020 U	0.020 U	0.020 U	0.020 U	--	--	--	--	--	--	--	--	--	0.020 U	--	--	0.020 U	0.020 U	
Benzyl alcohol	mg/kg	--	--	0.12 U	0.12 U	0.12 U	0.12 U	--	--	--	--	--	--	--	--	--	0.12 U	--	--	0.12 U	0.12 U	
Benzyl butyl phthalate	mg/kg	--	--	0.040 U	0.040 U	0.040 U	0.040 U	--	--	--	--	--	--	--	--	--	0.040 U	--	--	0.040 U	0.040 U	
bis(2-Chloroethoxy)methane	mg/kg	--	--	0.060 U	0.060 U	0.060 U	0.060 U	--	--	--	--	--	--	--	--	--	0.060 U	--	--	0.060 U	0.060 U	
bis(2-Chloroethyl)ether	mg/kg	--	--	0.040 U	0.040 U	0.040 U	0.040 U	--	--	--	--	--	--	--	--	--	0.040 U	--	--	0.040 U	0.040 U	
bis(2-Chloroisopropyl)ether	mg/kg	--	--	0.050 U	0.050 U	0.050 U	0.050 U	--	--	--	--	--	--	--	--	--	0.050 U	--	--	0.050 U	0.050 U	
bis(2-Ethylhexyl) phthalate	mg/kg	--	--	0.030 U	0.030 U	0.030 U	<b>0.11</b>	F	--	--	--	--	--	--	--	--	0.030 U	--	--	0.030 U	0.030 U	
Chrysene	mg/kg	--	--	0.040 U	0.040 U	0.040 U	0.040 U	--	--	--	--	--	--	--	--	--	0.040 U	--	--	0.040 U	0.040 U	
Dibenzo(a,h)anthracene	mg/kg	--	--	0.040 U	0.040 U	0.040 U	0.040 U	--	--	--	--	--	--	--	--	--	0.040 U	--	--	0.040 U	0.040 U	
Dibenzofuran	mg/kg	--	--	0.040 U	0.040 U	0.040 U	0.040 U	--	--	--	--	--	--	--	--	--	0.040 U	--	--	0.040 U	0.040 U	
Diethyl phthalate	mg/kg	--	--	0.040 U	0.040 U	0.040 U	0.040 U	--	--	--	--	--	--	--	--	--	0.040 U	--	--	0.040 U	0.040 U	
Dimethyl phthalate	mg/kg	--	--	0.040 U	0.040 U	0.040 U	0.040 U	--	--	--	--	--	--	--	--	--	0.040 U	--	--	0.040 U	0.040 U	
Di-n-butyl phthalate	mg/kg	--	--	0.040 U	0.040 U	0.040 U	0.040 U	--	--	--	--	--	--	--	--	--	0.040 U	--	--	0.040 U	0.040 U	
Di-n-octyl phthalate	mg/kg	--	--	0.030 U	0.030 U	0.030 U	0.030 U	--	--	--	--	--	--	--	--	--	0.030 U	--	--	0.030 U	0.030 U	
Fluoranthene	mg/kg	--	--	0.040 U	0.040 U	0.040 U	0.040 U	--	--	--	--	--	--	--	--	--	0.040 U	--	--	0.040 U	0.040 U	
Fluorene	mg/kg	--	--	0.040 U	0.040 U	0.040 U	0.040 U	--	--	--	--	--	--	--	--	--	0.040 U	--	--	0.040 U	0.040 U	
Hexachlorobenzene	mg/kg	--	--	0.050 U	0.050 U	0.050 U	0.050 U	--	--	--	--	--	--	--	--	--	0.050 U	--	--	0.050 U	0.050 U	
Hexachlorobutadiene	mg/kg	--	--	0.060 U	0.060 U	0.060 U	0.060 U	--	--	--	--	--	--	--	--	--	0.060 U	--	--	0.060 U	0.060 U	
Hexachlorocyclopentadiene	mg/kg	--	--	0.030 U	0.030 U	0.030 U	0.030 U	--	--	--	--	--	--	--	--	--	0.030 U	--	--	0.030 U	0.030 U	
Hexachloroethane	mg/kg	--	--	0.040 U	0.040 U	0.040 U	0.040 U	--	--	--	--	--	--	--	--	--	0.040 U	--	--	0.040 U	0.040 U	
Indeno(1,2,3-cd)pyrene	mg/kg	--	--	0.040 U	0.040 U	0.040 U	0.040 U	--	--	--	--	--	--	--	--	--	0.040 U	--	--	0.040 U	0.040 U	
Isophorone	mg/kg	--	--	0.040 U	0.040 U	0.040 U	0.040 U	--	--	--	--	--	--	--	--	--	0.040 U	--	--	0.040 U	0.040 U	
Naphthalene	mg/kg	--	--	0.040 U	0.040 U	0.040 U	0.040 U	--	--	--	--	--	--	--	--	--	0.040 U	--	--	0.040 U	0.040 U	
Nitrobenzene	mg/kg	--	--	0.050 U	0.050 U	0.050 U	0.050 U	--	--	--	--	--	--	--	--	--	0.050 U	--	--	0.050 U	0.050 U	
n-Nitrosodi-n-propylamine	mg/kg	--	--	0.040 U	0.040 U	0.040 U	0.040 U	--	--	--	--	--	--	--	--	--	0.040 U	--	--	0.040 U	0.040 U	
n-Nitrosodiphenylamine	mg/kg	--	--	0.050 U	0.050 U	0.050 U	0.050 U	--	--	--	--	--	--	--	--	--	0.050 U	--	--	0.050 U	0.050 U	
Pentachlorophenol	mg/kg	--	--	0.030 U	0.030 U	0.030 U	0.030 U	--	--	--	--	--	--	--	--	--	0.030 U	--	--	0.030 U	0.030 U	
Phenanthrene	mg/kg	--	--	0.040 U	0.040 U	0.040 U	0.040 U	--	--	--	--	--	--	--	--	--	0.040 U	--	--	0.040 U	0.040 U	
Phenol	mg/kg	--	--	0.040 U	0.040 U	0.040 U	0.040 U	--	--	--	--	--	--	--	--	--	0.040 U	--	--	0.040 U	0.040 U	
Pyrene	mg/kg	--	--	0.050 U	0.050 U	0.050 U	0.050 U	--	--	--	--	--	--	--	--	--	0.050 U	--	--	0.050 U	0.050 U	

## Appendix F. Waste Characterization Sampling Results for the Salado Creek Area (AOCs 42, 52, 58, and 62)

SAMPLE ID: DATE SAMPLED: LAB SAMPLE ID:		AOC58-SP01 4/7/2011 AY35292	AOC58-SP02 4/19/2011 AY36124	AOC58-SP03 5/24/2011 AY38380	AOC58-SP04 5/24/2011 AY38381	AOC58-SP05 5/24/2011 AY38382	AOC42/58-WC04 5/17/2011 AY37646	AOC42/58-WC05 5/17/2011 AY37647	AOC42/58-WC06 5/17/2011 AY37648	AOC42-T2-WC01 5/5/2011 AY36998	AOC52-T2-WC01 5/5/2011 AY36997 <b>MEDICAL DEBRIS</b>	AOC52-WC10 5/17/2011 AY37652	AOC52-WC11 5/17/2011 AY37653	AOC58-WC07 5/17/2011 AY37649	AOC58-WC08 5/17/2011 AY37650	AOC58-WC09 5/17/2011 AY37651	AOC62-WC01 3/30/2011 AY34972	SCA-WC01 5/17/2011 AY37643	SCA-WC02 5/17/2011 AY37644	SCA-WC03 5/17/2011 AY37645
Units																				
<b>Semi-Volatile Organics - SW8270C</b>																				
1,2,4-Trichlorobenzene	mg/kg	0.040 U	0.040 U	0.040 U	0.040 U	0.040 U	--	--	--	--	0.040 U	--	--	--	--	--	0.040 U	--	--	--
1,2-Dichlorobenzene	mg/kg	0.030 U	0.030 U	0.030 U	0.030 U	0.030 U	--	--	--	--	0.030 U	--	--	--	--	--	0.030 U	--	--	--
1,3-Dichlorobenzene	mg/kg	0.040 U	0.040 U	0.040 U	0.040 U	0.040 U	--	--	--	--	0.040 U	--	--	--	--	--	0.040 U	--	--	--
1,4-Dichlorobenzene	mg/kg	0.030 U	0.030 U	0.030 U	0.030 U	0.030 U	--	--	--	--	0.030 U	--	--	--	--	--	0.030 U	--	--	--
2,4,5-Trichlorophenol	mg/kg	0.040 U	0.040 U	0.040 U	0.040 U	0.040 U	--	--	--	--	0.040 U	--	--	--	--	--	0.040 U	--	--	--
2,4,6-Trichlorophenol	mg/kg	0.040 U	0.040 U	0.040 U	0.040 U	0.040 U	--	--	--	--	0.040 U	--	--	--	--	--	0.040 U	--	--	--
2,4-Dichlorophenol	mg/kg	0.040 U	0.040 U	0.040 U	0.040 U	0.040 U	--	--	--	--	0.040 U	--	--	--	--	--	0.040 U	--	--	--
2,4-Dimethylphenol	mg/kg	0.080 U	0.080 U	0.080 U	0.080 U	0.080 U	--	--	--	--	0.080 U	--	--	--	--	--	0.080 U	--	--	--
2,4-Dinitrophenol	mg/kg	0.030 U	0.030 U	0.030 U	0.030 U	0.030 U	--	--	--	--	0.030 U	--	--	--	--	--	0.030 U	--	--	--
2,4-Dinitrotoluene	mg/kg	0.050 U	0.050 U	0.050 U	0.050 U	0.050 U	--	--	--	--	0.050 U	--	--	--	--	--	0.050 U	--	--	--
2,6-Dinitrotoluene	mg/kg	0.040 U	0.040 U	0.040 U	0.040 U	0.040 U	--	--	--	--	0.040 U	--	--	--	--	--	0.040 U	--	--	--
2-Chloronaphthalene	mg/kg	0.040 U	0.040 U	0.040 U	0.040 U	0.040 U	--	--	--	--	0.040 U	--	--	--	--	--	0.040 U	--	--	--
2-Chlorophenol	mg/kg	0.030 U	0.030 U	0.030 U	0.030 U	0.030 U	--	--	--	--	0.030 U	--	--	--	--	--	0.030 U	--	--	--
2-Methyl-4,6-dinitrophenol	mg/kg	0.030 U	0.030 U	0.030 U	0.030 U	0.030 U	--	--	--	--	0.030 U	--	--	--	--	--	0.030 U	--	--	--
2-Methylnaphthalene	mg/kg	0.050 U	0.050 U	0.050 U	0.050 U	0.050 U	--	--	--	--	0.050 U	--	--	--	--	--	0.050 U	--	--	--
2-Methylphenol	mg/kg	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	--	--	--	--	0.020 U	--	--	--	--	--	0.020 U	--	--	--
2-Nitroaniline	mg/kg	0.040 U	0.040 U	0.040 U	0.040 U	0.040 U	--	--	--	--	0.040 U	--	--	--	--	--	0.040 U	--	--	--
2-Nitrophenol	mg/kg	0.040 U	0.040 U	0.040 U	0.040 U	0.040 U	--	--	--	--	0.040 U	--	--	--	--	--	0.040 U	--	--	--
3,3'-Dichlorobenzidine	mg/kg	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	--	--	--	--	0.020 U	--	--	--	--	--	0.020 U	--	--	--
3-Nitroaniline	mg/kg	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U	--	--	--	--	0.010 U	--	--	--	--	--	0.010 U	--	--	--
4-Bromophenyl phenyl ether	mg/kg	0.050 U	0.050 U	0.050 U	0.050 U	0.050 U	--	--	--	--	0.050 U	--	--	--	--	--	0.050 U	--	--	--
4-Chloro-3-methyl phenol	mg/kg	0.040 U	0.040 U	0.040 U	0.040 U	0.040 U	--	--	--	--	0.040 U	--	--	--	--	--	0.040 U	--	--	--
4-Chloroaniline	mg/kg	0.040 U	0.040 U	0.040 U	0.040 U	0.040 U	--	--	--	--	0.040 U	--	--	--	--	--	0.040 U	--	--	--
4-Chlorophenyl phenyl ether	mg/kg	0.040 U	0.040 U	0.040 U	0.040 U	0.040 U	--	--	--	--	0.040 U	--	--	--	--	--	0.040 U	--	--	--
4-Methylphenol (p-cresol)	mg/kg	0.040 U	0.040 U	0.040 U	0.040 U	0.040 U	--	--	--	--	0.040 U	--	--	--	--	--	0.040 U	--	--	--
4-Nitroaniline	mg/kg	0.030 U	0.030 U	0.030 U	0.030 U	0.030 U	--	--	--	--	0.030 U	--	--	--	--	--	0.030 U	--	--	--
4-Nitrophenol	mg/kg	0.040 U	0.040 U	0.040 U	0.040 U	0.040 U	--	--	--	--	0.040 U	--	--	--	--	--	0.040 U	--	--	--
Acenaphthene	mg/kg	0.040 U	0.040 U	0.040 U	0.040 U	0.040 U	--	--	--	--	0.040 U	--	--	--	--	--	0.040 U	--	--	--
Acenaphthylene	mg/kg	0.030 U	0.030 U	0.030 U	0.030 U	0.030 U	--	--	--	--	0.030 U	--	--	--	--	--	0.030 U	--	--	--
Anthracene	mg/kg	0.040 U	0.040 U	0.040 U	0.040 U	0.040 U	--	--	--	--	0.040 U	--	--	--	--	--	0.040 U	--	--	--
Benzo(a)anthracene	mg/kg	0.040 U	0.040 U	0.040 U	0.040 U	0.040 U	--	--	--	--	0.040 U	--	--	--	--	--	0.040 U	--	--	--
Benzo(a)pyrene	mg/kg	0.050 U	0.050 U	0.050 U	0.050 U	0.050 U	--	--	--	--	0.050 U	--	--	--	--	--	0.050 U	--	--	--
Benzo(b)fluoranthene	mg/kg	0.060 U	0.060 U	0.060 U	0.060 U	0.060 U	--	--	--	--	0.060 U	--	--	--	--	--	0.060 U	--	--	--
Benzo(g,h,i)perylene	mg/kg	0.040 U	0.040 U	0.040 U	0.040 U	0.040 U	--	--	--	--	0.040 U	--	--	--	--	--	0.040 U	--	--	--
Benzoic acid	mg/kg	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	--	--	--	--	0.020 U	--	--	--	--	--	0.020 U	--	--	--
Benzyl alcohol	mg/kg	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U	--	--	--	--	0.12 U	--	--	--	--	--	0.12 U	--	--	--
Benzyl butyl phthalate	mg/kg	0.040 U	0.040 U	0.040 U	0.040 U	0.040 U	--	--	--	--	0.040 U	--	--	--	--	--	0.040 U	--	--	--
bis(2-Chloroethoxy)methane	mg/kg	0.060 U	0.060 U	0.060 U	0.060 U	0.060 U	--	--	--	--	0.060 U	--	--	--	--	--	0.060 U	--	--	--
bis(2-Chloroethyl)ether	mg/kg	0.040 U	0.040 U	0.040 U	0.040 U	0.040 U	--	--	--	--	0.040 U	--	--	--	--	--	0.040 U	--	--	--
bis(2-Chloroisopropyl)ether	mg/kg	0.050 U	0.050 U	0.050 U	0.050 U	0.050 U	--	--	--	--	0.050 U	--	--	--	--	--	0.050 U	--	--	--
bis(2-Ethylhexyl) phthalate	mg/kg	0.030 U	0.030 U	0.030 U	0.030 U	0.030 U	--	--	--	--	<b>0.13</b> F	--	--	--	--	--	0.030 U	--	--	--
Chrysene	mg/kg	0.040 U	0.040 U	0.040 U	0.040 U	0.040 U	--	--	--	--	0.040 U	--	--	--	--	--	0.040 U	--	--	--
Dibenzo(a,h)anthracene	mg/kg	0.040 U	0.040 U	0.040 U	0.040 U	0.040 U	--	--	--	--	0.040 U	--	--	--	--	--	0.040 U	--	--	--
Dibenzofuran	mg/kg	0.040 U	0.040 U	0.040 U	0.040 U	0.040 U	--	--	--	--	0.040 U	--	--	--	--	--	0.040 U	--	--	--
Diethyl phthalate	mg/kg	0.040 U	0.040 U	0.040 U	0.040 U	0.040 U	--	--	--	--	0.040 U	--	--	--	--	--	0.040 U	--	--	--
Dimethyl phthalate	mg/kg	0.040 U	0.040 U	0.040 U	0.040 U	0.040 U	--	--	--	--	0.040 U	--	--	--	--	--	0.040 U	--	--	--
Di-n-butyl phthalate	mg/kg	0.040 U	0.040 U	0.040 U	0.040 U	0.040 U	--	--	--	--	0.040 U	--	--	--	--	--	0.040 U	--	--	--
Di-n-octyl phthalate	mg/kg	0.030 U	0.030 U	0.030 U	0.030 U	0.030 U	--	--	--	--	0.030 U	--	--	--	--	--	0.030 U	--	--	--
Fluoranthene	mg/kg	0.040 U	0.040 U	0.040 U	0.040 U	0.040 U	--	--	--	--	0.040 U	--	--	--	--	--	0.040 U	--	--	--
Fluorene	mg/kg	0.040 U	0.040 U	0.040 U	0.040 U	0.040 U	--	--	--	--	0.040 U	--	--	--	--	--	0.040 U	--	--	--
Hexachlorobenzene	mg/kg	0.050 U	0.050 U	0.050 U	0.050 U	0.050 U	--	--	--	--	0.050 U	--	--	--	--	--	0.050 U	--	--	--
Hexachlorobutadiene	mg/kg	0.060 U	0.060 U	0.060 U	0.060 U	0.060 U	--	--	--	--	0.060 U	--	--	--	--	--	0.060 U	--	--	--
Hexachlorocyclopentadiene	mg/kg	0.030 U	0.030 U	0.030 U	0.030 U	0.030 U	--	--	--	--	0.030 U	--	--	--	--	--	0.030 U	--	--	--
Hexachloroethane	mg/kg	0.040 U	0.040 U	0.040 U	0.040 U	0.040 U	--	--	--	--	0.040 U	--	--	--	--	--	0.040 U	--	--	--
Indeno(1,2,3-cd)pyrene	mg/kg	0.040 U	0.040 U	0.040 U	0.040 U	0.040 U	--	--	--	--	0.040 U	--	--	--	--	--	0.040 U	--	--	--
Isophorone	mg/kg	0.040 U	0.040 U	0.040 U	0.040 U	0.040 U	--	--	--	--	0.040 U	--	--	--	--	--	0.040 U	--	--	--
Naphthalene	mg/kg	0.040 U	0.040 U	0.040 U	0.040 U	0.040 U	--	--	--	--	0.040 U	--	--	--	--	--	0.040 U	--	--	--
Nitrobenzene	mg/kg	0.050 U	0.050 U	0.050 U	0.050 U	0.050 U	--	--	--	--	0.050 U	--	--	--	--	--	0.050 U	--	--	--
n-Nitrosodi-n-propylamine	mg/kg	0.040 U	0.040 U	0.040 U	0.040 U	0.040 U	--	--	--	--	0.040 U	--	--	--	--	--	0.040 U	--	--	--
n-Nitrosodiphenylamine	mg/kg	0.050 U	0.050 U	0.050 U	0.050 U	0.050 U	--	--	--	--	0.050 U	--	--	--	--	--	0.050 U	--	--	--
Pentachlorophenol	mg/kg	0.030 U	0.030 U	0.030 U	0.030 U	0.030 U	--	--	--	--	<b>0.27</b> F	--	--	--	--	--	0.030 U	--	--	--
Phenanthrene	mg/kg	0.040 U	0.040 U	0.040 U	0.040 U	0.040 U	--	--	--	--	0.040 U	--	--	--	--	--	0.040 U	--	--	--
Phenol	mg/kg	0.040 U	0.040 U	0.040 U	0.040 U	0.040 U	--	--	--	--	0.040 U	--								





## Appendix F. Waste Characterization Sampling Results for the Salado Creek Area (AOCs 42, 52, 58, and 62)

SAMPLE ID: DATE SAMPLED: LAB SAMPLE ID:	AOC42-BG01 3/23/2011 AY34397	AOC42-WP01 3/23/2011 AY34396	AOC42-SP01 4/7/2011 AY35291	AOC42-SP02 4/19/2011 AY36093	AOC42-SP03 4/19/2011 AY36104	AOC42-SP04 5/5/2011 AY36968	AOC42-SP05 5/5/2011 AY36969	AOC42-SP06 5/5/2011 AY36970	AOC42-SP07 5/5/2011 AY36974	AOC42-SP07-DUP 5/5/2011 AY36975	AOC42-SP08 5/5/2011 AY36976	AOC42-SP09 5/5/2011 AY36977	AOC42-SP10 5/5/2011 AY36978	AOC42-SP11 5/5/2011 AY36979	AOC42-SP12 5/5/2011 AY36980	AOC52-SP01 5/5/2011 AY36971	AOC52-SP02 5/5/2011 AY36972	AOC52-SP03 5/5/2011 AY36973	AOC52-SP04 5/24/2011 AY38383	AOC52-SP05 5/24/2011 AY38384
Units																				
<b>Explosives-SW8330</b>																				
1,3,5-Trinitrobenzene	mg/kg	--	--	0.075 U	0.075 U	0.075 U	0.075 U	--	--	--	--	--	--	--	--	0.075 U	--	--	0.075 U	0.075 U
1,3-Dinitrobenzene	mg/kg	--	--	0.075 U	0.075 U	0.075 U	0.075 U	--	--	--	--	--	--	--	--	0.075 U	--	--	0.075 U	0.075 U
2,4,6-Trinitrotoluene (TNT)	mg/kg	--	--	0.075 U	0.075 U	0.075 U	0.075 U	--	--	--	--	--	--	--	--	0.075 U	--	--	0.075 U	0.075 U
2,4-Dinitrotoluene	mg/kg	--	--	0.080 U	0.080 U	0.080 U	0.080 U	--	--	--	--	--	--	--	--	0.080 U	--	--	0.080 U	0.080 U
2,6-Dinitrotoluene	mg/kg	--	--	0.075 U	0.075 U	0.075 U	0.075 U	--	--	--	--	--	--	--	--	0.075 U	--	--	0.075 U	0.075 U
2-Nitrotoluene	mg/kg	--	--	0.075 U	0.075 U	0.075 U	0.075 U	--	--	--	--	--	--	--	--	0.075 U	--	--	0.075 U	0.075 U
3-Nitrotoluene	mg/kg	--	--	0.080 U	0.080 U	0.080 U	0.080 U	--	--	--	--	--	--	--	--	0.080 U	--	--	0.080 U	0.080 U
4-Nitrotoluene	mg/kg	--	--	0.080 U	0.080 U	0.080 U	0.080 U	--	--	--	--	--	--	--	--	0.080 U	--	--	0.080 U	0.080 U
Hexahydro-1,3,5-Trinitro-1,3,5,7-Tetrazocin	mg/kg	--	--	0.080 U	0.080 U	0.080 U	0.080 U	--	--	--	--	--	--	--	--	0.080 U	--	--	0.080 U	0.080 U
Nitrobenzene	mg/kg	--	--	0.075 U	0.075 U	0.075 U	0.075 U	--	--	--	--	--	--	--	--	0.075 U	--	--	0.075 U	0.075 U
Octahydro-1,3,5,7-Tetranitro-1,3,5,7-Tetra	mg/kg	--	--	0.080 U	0.080 U	0.080 U	0.080 U	--	--	--	--	--	--	--	--	0.080 U	--	--	0.080 U	0.080 U
Tetryl	mg/kg	--	--	0.075 U	0.075 U	0.075 U	0.075 U	--	--	--	--	--	--	--	--	0.075 U	--	--	0.075 U	0.075 U

SAMPLE ID: DATE SAMPLED: LAB SAMPLE ID:	AOC58-SP01 4/7/2011 AY35292	AOC58-SP02 4/19/2011 AY36124	AOC58-SP03 5/24/2011 AY38380	AOC58-SP04 5/24/2011 AY38381	AOC58-SP05 5/24/2011 AY38382	AOC42/58-WC04 5/17/2011 AY37646	AOC42/58-WC05 5/17/2011 AY37647	AOC42/58-WC06 5/17/2011 AY37648	AOC42-T2-WC01 5/5/2011 AY36998	AOC52-T2-WC01 5/5/2011 AY36997	AOC52-WC10 5/17/2011 AY37652	AOC52-WC11 5/17/2011 AY37653	AOC58-WC07 5/17/2011 AY37649	AOC58-WC08 5/17/2011 AY37650	AOC58-WC09 5/17/2011 AY37651	AOC62-WC01 3/30/2011 AY34972	SCA-WC01 5/17/2011 AY37643	SCA-WC02 5/17/2011 AY37644	SCA-WC03 5/17/2011 AY37645
Units																			
<b>Explosives-SW8330</b>																			
1,3,5-Trinitrobenzene	mg/kg	0.075 U	0.075 U	0.075 U	0.075 U	0.075 U	--	--	--	--	--	--	--	--	--	0.075 U	--	--	--
1,3-Dinitrobenzene	mg/kg	0.075 U	0.075 U	0.075 U	0.075 U	0.075 U	--	--	--	--	--	--	--	--	--	0.075 U	--	--	--
2,4,6-Trinitrotoluene (TNT)	mg/kg	0.075 U	0.075 U	0.075 U	0.075 U	0.075 U	--	--	--	--	--	--	--	--	--	0.075 U	--	--	--
2,4-Dinitrotoluene	mg/kg	0.080 U	0.080 U	0.080 U	0.080 U	0.080 U	--	--	--	--	--	--	--	--	--	0.080 U	--	--	--
2,6-Dinitrotoluene	mg/kg	0.075 U	0.075 U	0.075 U	0.075 U	0.075 U	--	--	--	--	--	--	--	--	--	0.075 U	--	--	--
2-Nitrotoluene	mg/kg	0.075 U	0.075 U	0.075 U	0.075 U	0.075 U	--	--	--	--	--	--	--	--	--	0.075 U	--	--	--
3-Nitrotoluene	mg/kg	0.080 U	0.080 U	0.080 U	0.080 U	0.080 U	--	--	--	--	--	--	--	--	--	0.080 U	--	--	--
4-Nitrotoluene	mg/kg	0.080 U	0.080 U	0.080 U	0.080 U	0.080 U	--	--	--	--	--	--	--	--	--	0.080 U	--	--	--
Hexahydro-1,3,5-Trinitro-1,3,5,7-Tetrazocin	mg/kg	0.080 U	0.080 U	0.080 U	0.080 U	0.080 U	--	--	--	--	--	--	--	--	--	0.080 U	--	--	--
Nitrobenzene	mg/kg	0.075 U	0.075 U	0.075 U	0.075 U	0.075 U	--	--	--	--	--	--	--	--	--	0.075 U	--	--	--
Octahydro-1,3,5,7-Tetranitro-1,3,5,7-Tetra	mg/kg	0.080 U	0.080 U	0.080 U	0.080 U	0.080 U	--	--	--	--	--	--	--	--	--	0.080 U	--	--	--
Tetryl	mg/kg	0.075 U	0.075 U	0.075 U	0.075 U	0.075 U	--	--	--	--	--	--	--	--	--	0.075 U	--	--	--

SAMPLE ID: DATE SAMPLED: LAB SAMPLE ID:	AOC42-BG01 3/23/2011 AY34397	AOC42-WP01 3/23/2011 AY34396	AOC42-SP01 4/7/2011 AY35291	AOC42-SP02 4/19/2011 AY36093	AOC42-SP03 4/19/2011 AY36104	AOC42-SP04 5/5/2011 AY36968	AOC42-SP05 5/5/2011 AY36969	AOC42-SP06 5/5/2011 AY36970	AOC42-SP07 5/5/2011 AY36974	AOC42-SP07-DUP 5/5/2011 AY36975	AOC42-SP08 5/5/2011 AY36976	AOC42-SP09 5/5/2011 AY36977	AOC42-SP10 5/5/2011 AY36978	AOC42-SP11 5/5/2011 AY36979	AOC42-SP12 5/5/2011 AY36980	AOC52-SP01 5/5/2011 AY36971	AOC52-SP02 5/5/2011 AY36972	AOC52-SP03 5/5/2011 AY36973	AOC52-SP04 5/24/2011 AY38383	AOC52-SP05 5/24/2011 AY38384
Units																				
<b>TCLP Metals - SW6010B/SW7470A</b>																				
Antimony	mg/L	--	--	--	--	0.0010 U	0.0010 U	0.0010 U	<b>0.0030</b> F	<b>0.0020</b> F	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	--
Arsenic	mg/L	--	--	--	--	<b>0.024</b> F	<b>0.028</b> F	<b>0.026</b> F	<b>0.025</b> F	<b>0.025</b> F	<b>0.028</b> F	<b>0.028</b> F	<b>0.027</b> F	<b>0.028</b> F	<b>0.026</b> F	<b>0.024</b> F	<b>0.025</b> F	<b>0.024</b> F	<b>0.024</b> F	--
Barium	mg/L	--	--	--	--	<b>0.77</b>	<b>0.84</b>	<b>1.3</b>	<b>0.70</b>	<b>0.70</b>	<b>0.77</b>	<b>0.77</b>	<b>0.73</b>	<b>0.82</b>	<b>0.66</b>	<b>0.83</b>	<b>0.79</b>	--	--	--
Beryllium	mg/L	--	--	--	--	0.00020 U	0.00020 U	0.00020 U	0.00020 U	0.00020 U	0.00020 U	0.00020 U	0.00020 U	0.00020 U	0.00020 U	0.00020 U	0.00020 U	0.00020 U	0.00020 U	--
Cadmium	mg/L	--	--	--	--	<b>0.0034</b> F	<b>0.0047</b> F	<b>0.018</b>	<b>0.029</b>	<b>0.029</b>	<b>0.031</b>	<b>0.029</b>	<b>0.052</b>	<b>0.024</b>	<b>0.071</b>	0.00030 U	0.00030 U	0.00030 U	0.00030 U	--
Chromium	mg/L	--	--	--	--	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	--
Lead	mg/L	--	--	--	--	0.0012 U	0.0012 U	0.0012 U	0.0012 U	0.0012 U	0.0012 U	0.0012 U	0.0012 U	0.0012 U	0.0012 U	0.0012 U	0.0012 U	0.0012 U	0.0012 U	--
Mercury	mg/L	--	--	--	--	0.00010 U	0.00010 U	0.00010 U	0.00010 U	0.00010 U	0.00010 U	0.00010 U	0.00010 U	0.00010 U	0.00010 U	0.00010 U	0.00010 U	0.00010 U	0.00010 U	--
Nickel	mg/L	--	--	--	--	<b>0.020</b>	<b>0.018</b>	<b>0.040</b>	<b>0.049</b>	<b>0.049</b>	<b>0.042</b>	<b>0.11</b>	<b>0.089</b>	<b>0.038</b>	<b>0.066</b>	<b>0.0080</b> F	<b>0.013</b>	<b>0.013</b>	--	--
Selenium	mg/L	--	--	--	--	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	--
Silver	mg/L	--	--	--	--	<b>0.0078</b> F	<b>0.0073</b> F	<b>0.0055</b> F	<b>0.0056</b> F	<b>0.0050</b> F	<b>0.0050</b> F	<b>0.0079</b> F	<b>0.0048</b> F	<b>0.0059</b> F	<b>0.0062</b> F	<b>0.0045</b> F	<b>0.0045</b> F	<b>0.0057</b> F	--	

SAMPLE ID: DATE SAMPLED: LAB SAMPLE ID:	AOC58-SP01 4/7/2011 AY35292	AOC58-SP02 4/19/2011 AY36124	AOC58-SP03 5/24/2011 AY38380	AOC58-SP04 5/24/2011 AY38381	AOC58-SP05 5/24/2011 AY38382	AOC42/58-WC04 5/17/2011 AY37646	AOC42/58-WC05 5/17/2011 AY37647	AOC42/58-WC06 5/17/2011 AY37648	AOC42-T2-WC01 5/5/2011 AY36998	AOC52-T2-WC01 5/5/2011 AY36997	AOC52-WC10 5/17/2011 AY37652	AOC52-WC11 5/17/2011 AY37653	AOC58-WC07 5/17/2011 AY37649	AOC58-WC08 5/17/2011 AY37650	AOC58-WC09 5/17/2011 AY37651	AOC62-WC01 3/30/2011 AY34972	SCA-WC01 5/17/2011 AY37643	SCA-WC02 5/17/2011 AY37644	SCA-WC03 5/17/2011 AY37645
Units																			
<b>TCLP Metals - SW6010B/SW7470A</b>																			
Antimony	mg/L	--	--	--	--	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	--	--	--	--	--	<b>0.0050</b> F	--	--	--
Arsenic	mg/L	--	--	--	--	<b>0.033</b>	<b>0.027</b> F	<b>0.029</b> F	<b>0.023</b> F	<b>0.022</b> F	<b>0.028</b> F	<b>0.034</b>	<b>0.022</b> F	<b>0.026</b> F	<b>0.028</b> F	<b>0.014</b> F	<b>0.035</b>	<b>0.028</b> F	<b>0.032</b>
Barium	mg/L	--	--	--	--	<b>0.62</b>	<b>0.67</b>	<b>0.64</b>	<b>0.80</b>	<b>0.61</b>	<b>0.58</b>	<b>0.65</b>	<b>0.40</b>	<b>1.1</b>	<b>0.57</b>	<b>0.54</b>	<b>0.59</b>	<b>0.59</b>	<b>0.66</b>
Beryllium	mg/L	--	--	--	--	0.00020 U	0.00020 U	0.00020 U	0.00020 U	0.00020 U	0.00020 U	0.00020 U	0.00020 U	0.00020 U	0.00020 U	0.00020 U	0.00020 U	0.00020 U	0.00020 U
Cadmium	mg/L	--	--	--	--	<b>0.0036</b> F	<b>0.0028</b> F	<b>0.0022</b> F	<b>0.043</b>	0.00030 U	<b>0.0046</b> F	<b>0.0057</b> F	<b>0.015</b>	<b>0.12</b>	<b>0.11</b>	0.00030 U	<b>0.0053</b> F	<b>0.0019</b> F	<b>0.0018</b> F
Chromium	mg/L	--	--	--	--	<b>0.0040</b> F	<b>0.0040</b> F	<b>0.0040</b> F	0.0010 U	0.0010 U	<b>0.0050</b> F	<b>0.0050</b> F	<b>0.0040</b> F	<b>0.0030</b> F	<b>0.0040</b> F	0.0010 U	<b>0.0050</b> F	<b>0.0040</b> F	<b>0.0040</b> F
Lead	mg/L	--	--	--	--	0.0012 U	0.0012 U	0.0012 U	0.0012 U	0.0012 U	0.0012 U	0.0012 U	0.0012 U	0.0012 U	0.0012 U	0.0012 U	0.0012 U	0.0012 U	0.0012 U
Mercury	mg/L	--	--	--	--	0.00010 U	0.00010 U	0.00010 U	0.00010 U	0.00010 U	0.00010 U	0.00010 U	0.00010 U	0.00010 U	0.00010 U	0.00010 U	0.00010 U	0.00010 U	0.00010 U
Nickel	mg/L	--	--	--	--	--	--	--	<b>0.022</b>	<b>0.0080</b> F	--	--	--	--	<b>0.0090</b> F	--	--	--	--
Selenium																			

## Appendix F. Waste Characterization Sampling Results for the Salado Creek Area (AOCs 42, 52, 58, and 62)

SAMPLE ID: DATE SAMPLED: LAB SAMPLE ID:	AOC42-BG01 3/23/2011 AY34397	AOC42-WP01 3/23/2011 AY34396	AOC42-SP01 4/7/2011 AY35291	AOC42-SP02 4/19/2011 AY36093	AOC42-SP03 4/19/2011 AY36104	AOC42-SP04 5/5/2011 AY36968	AOC42-SP05 5/5/2011 AY36969	AOC42-SP06 5/5/2011 AY36970	AOC42-SP07 5/5/2011 AY36974	AOC42-SP07-DUP 5/5/2011 AY36975	AOC42-SP08 5/5/2011 AY36976	AOC42-SP09 5/5/2011 AY36977	AOC42-SP10 5/5/2011 AY36978	AOC42-SP11 5/5/2011 AY36979	AOC42-SP12 5/5/2011 AY36980	AOC52-SP01 5/5/2011 AY36971	AOC52-SP02 5/5/2011 AY36972	AOC52-SP03 5/5/2011 AY36973	AOC52-SP04 5/24/2011 AY38383	AOC52-SP05 5/24/2011 AY38384	
Cyanide - SW9014	0.28 U	0.28 U	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Units																					
Cyanide	mg/kg																				
SAMPLE ID: DATE SAMPLED: LAB SAMPLE ID:	AOC58-SP01 4/7/2011 AY35292	AOC58-SP02 4/19/2011 AY36124	AOC58-SP03 5/24/2011 AY38380	AOC58-SP04 5/24/2011 AY38381	AOC58-SP05 5/24/2011 AY38382	AOC42/58-WC04 5/17/2011 AY37646	AOC42/58-WC05 5/17/2011 AY37647	AOC42/58-WC06 5/17/2011 AY37648	AOC42-T2-WC01 5/5/2011 AY36998	AOC52-T2-WC01 5/5/2011 AY36997	AOC52-WC10 5/17/2011 AY37652	AOC52-WC11 5/17/2011 AY37653	AOC58-WC07 5/17/2011 AY37649	AOC58-WC08 5/17/2011 AY37650	AOC58-WC09 5/17/2011 AY37651	AOC62-WC01 3/30/2011 AY34972	SCA-WC01 5/17/2011 AY37643	SCA-WC02 5/17/2011 AY37644	SCA-WC03 5/17/2011 AY37645		
Cyanide - SW9014	--	--	--	--	--	--	--	--	--	MEDICAL DEBRIS	--	--	--	--	--	--	--	--	--	--	
Units																					
Cyanide	mg/kg																				
SAMPLE ID: DATE SAMPLED: LAB SAMPLE ID:	AOC42-BG01 3/23/2011 AY34397	AOC42-WP01 3/23/2011 AY34396	AOC42-SP01 4/7/2011 AY35291	AOC42-SP02 4/19/2011 AY36093	AOC42-SP03 4/19/2011 AY36104	AOC42-SP04 5/5/2011 AY36968	AOC42-SP05 5/5/2011 AY36969	AOC42-SP06 5/5/2011 AY36970	AOC42-SP07 5/5/2011 AY36974	AOC42-SP07-DUP 5/5/2011 AY36975	AOC42-SP08 5/5/2011 AY36976	AOC42-SP09 5/5/2011 AY36977	AOC42-SP10 5/5/2011 AY36978	AOC42-SP11 5/5/2011 AY36979	AOC42-SP12 5/5/2011 AY36980	AOC52-SP01 5/5/2011 AY36971	AOC52-SP02 5/5/2011 AY36972	AOC52-SP03 5/5/2011 AY36973	AOC52-SP04 5/24/2011 AY38383	AOC52-SP05 5/24/2011 AY38384	
Sulfide - EPA 376.1	12 U	5.0 U	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Units																					
Sulfide	mg/kg																				
SAMPLE ID: DATE SAMPLED: LAB SAMPLE ID:	AOC58-SP01 4/7/2011 AY35292	AOC58-SP02 4/19/2011 AY36124	AOC58-SP03 5/24/2011 AY38380	AOC58-SP04 5/24/2011 AY38381	AOC58-SP05 5/24/2011 AY38382	AOC42/58-WC04 5/17/2011 AY37646	AOC42/58-WC05 5/17/2011 AY37647	AOC42/58-WC06 5/17/2011 AY37648	AOC42-T2-WC01 5/5/2011 AY36998	AOC52-T2-WC01 5/5/2011 AY36997	AOC52-WC10 5/17/2011 AY37652	AOC52-WC11 5/17/2011 AY37653	AOC58-WC07 5/17/2011 AY37649	AOC58-WC08 5/17/2011 AY37650	AOC58-WC09 5/17/2011 AY37651	AOC62-WC01 3/30/2011 AY34972	SCA-WC01 5/17/2011 AY37643	SCA-WC02 5/17/2011 AY37644	SCA-WC03 5/17/2011 AY37645		
Sulfide - EPA 376.1	--	--	--	--	--	--	--	--	--	MEDICAL DEBRIS	--	--	--	--	--	--	--	--	--	--	
Units																					
Sulfide	mg/kg																				
SAMPLE ID: DATE SAMPLED: LAB SAMPLE ID:	AOC42-BG01 3/23/2011 AY34397	AOC42-WP01 3/23/2011 AY34396	AOC42-SP01 4/7/2011 AY35291	AOC42-SP02 4/19/2011 AY36093	AOC42-SP03 4/19/2011 AY36104	AOC42-SP04 5/5/2011 AY36968	AOC42-SP05 5/5/2011 AY36969	AOC42-SP06 5/5/2011 AY36970	AOC42-SP07 5/5/2011 AY36974	AOC42-SP07-DUP 5/5/2011 AY36975	AOC42-SP08 5/5/2011 AY36976	AOC42-SP09 5/5/2011 AY36977	AOC42-SP10 5/5/2011 AY36978	AOC42-SP11 5/5/2011 AY36979	AOC42-SP12 5/5/2011 AY36980	AOC52-SP01 5/5/2011 AY36971	AOC52-SP02 5/5/2011 AY36972	AOC52-SP03 5/5/2011 AY36973	AOC52-SP04 5/24/2011 AY38383	AOC52-SP05 5/24/2011 AY38384	
Petroleum Hydrocarbons - TX1005 Petroleum Hydrocarbons C6 - C28	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
Units																					
Petroleum Hydrocarbons C6 - C28	µg/kg																				
SAMPLE ID: DATE SAMPLED: LAB SAMPLE ID:	AOC58-SP01 4/7/2011 AY35292	AOC58-SP02 4/19/2011 AY36124	AOC58-SP03 5/24/2011 AY38380	AOC58-SP04 5/24/2011 AY38381	AOC58-SP05 5/24/2011 AY38382	AOC42/58-WC04 5/17/2011 AY37646	AOC42/58-WC05 5/17/2011 AY37647	AOC42/58-WC06 5/17/2011 AY37648	AOC42-T2-WC01 5/5/2011 AY36998	AOC52-T2-WC01 5/5/2011 AY36997	AOC52-WC10 5/17/2011 AY37652	AOC52-WC11 5/17/2011 AY37653	AOC58-WC07 5/17/2011 AY37649	AOC58-WC08 5/17/2011 AY37650	AOC58-WC09 5/17/2011 AY37651	AOC62-WC01 3/30/2011 AY34972	SCA-WC01 5/17/2011 AY37643	SCA-WC02 5/17/2011 AY37644	SCA-WC03 5/17/2011 AY37645		
Petroleum Hydrocarbons - TX1005 Petroleum Hydrocarbons C6 - C28	--	--	--	--	--	--	--	--	14,000 U	--	--	--	--	--	--	--	--	--	--	--	
Units																					
Petroleum Hydrocarbons C6 - C28	µg/kg																				

## Appendix F. Waste Characterization Sampling Results for the Salado Creek Area (AOCs 42, 52, 58, and 62)

SAMPLE ID: DATE SAMPLED: LAB SAMPLE ID:	AOC42-BG01 3/23/2011 AY34397	AOC42-WP01 3/23/2011 AY34396	AOC42-SP01 4/7/2011 AY35291	AOC42-SP02 4/19/2011 AY36093	AOC42-SP03 4/19/2011 AY36104	AOC42-SP04 5/5/2011 AY36968	AOC42-SP05 5/5/2011 AY36969	AOC42-SP06 5/5/2011 AY36970	AOC42-SP07 5/5/2011 AY36974	AOC42-SP07-DUP 5/5/2011 AY36975	AOC42-SP08 5/5/2011 AY36976	AOC42-SP09 5/5/2011 AY36977	AOC42-SP10 5/5/2011 AY36978	AOC42-SP11 5/5/2011 AY36979	AOC42-SP12 5/5/2011 AY36980	AOC52-SP01 5/5/2011 AY36971	AOC52-SP02 5/5/2011 AY36972	AOC52-SP03 5/5/2011 AY36973	AOC52-SP04 5/24/2011 AY38383	AOC52-SP05 5/24/2011 AY38384	
Units																					
Ignitability - SW1030																					
Ignitability	mm/sec	0.0 U	0.0 U	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

SAMPLE ID: DATE SAMPLED: LAB SAMPLE ID:	AOC58-SP01 4/7/2011 AY35292	AOC58-SP02 4/19/2011 AY36124	AOC58-SP03 5/24/2011 AY38380	AOC58-SP04 5/24/2011 AY38381	AOC58-SP05 5/24/2011 AY38382	AOC42/58-WC04 5/17/2011 AY37646	AOC42/58-WC05 5/17/2011 AY37647	AOC42/58-WC06 5/17/2011 AY37648	AOC42-T2-WC01 5/5/2011 AY36998	AOC52-T2-WC01 5/5/2011 AY36997	AOC52-WC10 5/17/2011 AY37652	AOC52-WC11 5/17/2011 AY37653	AOC58-WC07 5/17/2011 AY37649	AOC58-WC08 5/17/2011 AY37650	AOC58-WC09 5/17/2011 AY37651	AOC62-WC01 3/30/2011 AY34972	SCA-WC01 5/17/2011 AY37643	SCA-WC02 5/17/2011 AY37644	SCA-WC03 5/17/2011 AY37645	
Units										MEDICAL DEBRIS										
Ignitability - SW1030																				
Ignitability	mm/sec	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

SAMPLE ID: DATE SAMPLED: LAB SAMPLE ID:	AOC42-BG01 3/23/2011 AY34397	AOC42-WP01 3/23/2011 AY34396	AOC42-SP01 4/7/2011 AY35291	AOC42-SP02 4/19/2011 AY36093	AOC42-SP03 4/19/2011 AY36104	AOC42-SP04 5/5/2011 AY36968	AOC42-SP05 5/5/2011 AY36969	AOC42-SP06 5/5/2011 AY36970	AOC42-SP07 5/5/2011 AY36974	AOC42-SP07-DUP 5/5/2011 AY36975	AOC42-SP08 5/5/2011 AY36976	AOC42-SP09 5/5/2011 AY36977	AOC42-SP10 5/5/2011 AY36978	AOC42-SP11 5/5/2011 AY36979	AOC42-SP12 5/5/2011 AY36980	AOC52-SP01 5/5/2011 AY36971	AOC52-SP02 5/5/2011 AY36972	AOC52-SP03 5/5/2011 AY36973	AOC52-SP04 5/24/2011 AY38383	AOC52-SP05 5/24/2011 AY38384	
Units																					
pH - SW9045																					
pH	pH units	8.3	8.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

SAMPLE ID: DATE SAMPLED: LAB SAMPLE ID:	AOC58-SP01 4/7/2011 AY35292	AOC58-SP02 4/19/2011 AY36124	AOC58-SP03 5/24/2011 AY38380	AOC58-SP04 5/24/2011 AY38381	AOC58-SP05 5/24/2011 AY38382	AOC42/58-WC04 5/17/2011 AY37646	AOC42/58-WC05 5/17/2011 AY37647	AOC42/58-WC06 5/17/2011 AY37648	AOC42-T2-WC01 5/5/2011 AY36998	AOC52-T2-WC01 5/5/2011 AY36997	AOC52-WC10 5/17/2011 AY37652	AOC52-WC11 5/17/2011 AY37653	AOC58-WC07 5/17/2011 AY37649	AOC58-WC08 5/17/2011 AY37650	AOC58-WC09 5/17/2011 AY37651	AOC62-WC01 3/30/2011 AY34972	SCA-WC01 5/17/2011 AY37643	SCA-WC02 5/17/2011 AY37644	SCA-WC03 5/17/2011 AY37645	
Units										MEDICAL DEBRIS										
pH - SW9045																				
pH	pH units	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

**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

M = Concentration is estimated due to a matrix effect.

Detections are **bolded**.

**APPENDIX G**

**1995 Soil Gas Results for the Salado Creek Area**

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**GROUNDWATER INVESTIGATION AND ASSOCIATED SOURCE  
CHARACTERIZATION APPENDIX F - TECHNICAL MEMORANDUM ON  
SOIL GAS SURVEYS**

## **Section 9.5 – Salado Creek**

### **9.5.1 Site Description**

The Salado Creek site is located south of SWMUs B-28 and B-19 and west of SWMU B-4. The site is bounded by trees and SWMU B-4 to the east, B-28 and B-19 to the north, and Salado Creek to the west. The site is relatively clear except for a few scattered trees and a wood pile. Soil gas results are shown on the PCE summary map (**Figure 5.3-2**).

### **9.5.2 Soil Gas Survey Results**

PCE was detected in soil gas samples from this site during the reconnaissance survey. Additional samples were collected from this site during the second phase of the investigation to define the extent of contamination. A complete listing of the soil gas survey results for the reconnaissance phase is given in **Table 9.1** and for the follow-up survey in **Table 9.2**. Soil gas samples were collected at the soil and bedrock interface or at refusal with sampling depths varying from 1.5 to 8 feet.

In the initial phase, the highest concentration of PCE detected was 0.19 ug/L and was detected at location 0,40. Based on the levels of PCE detected, a distinct source area of PCE does not appear to exist at this site.

In the follow-up phase, PCE was detected at a maximum concentration of 2.0 ug/L at location 0,-10. The occurrence of PCE in the area immediately south of the Salado Creek site could reflect migration of PCE contamination from Oxidation Pond. The lower concentrations beneath Salado Creek site could be due to a geologic barrier, such as clay blocking the migration of PCE into the shallow subsurface. Low permeability areas were observed in Salado Creek and B-4A areas.

**TABLE 9.1 - SUMMARY OF SOIL GAS SURVEY DATA FOR SALADO CREEK**  
**(ALL UNITS IN µg/L)**

Date	Location	Depth (ft BGL)	Benzene	Toluene	Ethyl benzene	Total xylenes	Total Hydrocarbons	cis- 1,2-DCE	TCE	PCE
<b>Salado Creek</b>										
18-Jul-95	10,10	5	0.2 U	0.2 U	0.3 U	0.3 U	0.2 U	0.3 U	0.02 U	0.01 U
18-Jul-95	10,50	3.5	0.2 U	0.2 U	0.3 U	0.3 U	0.2 U	0.3 U	0.02 U	0.04
18-Jul-95	0,50	2.5	0.2 U	0.2 U	0.3 U	0.3 U	0.2 U	0.3 U	0.02 U	0.01 U
18-Jul-95	10,30	5	0.2 U	0.2 U	0.3 U	0.3 U	0.2 U	0.3 U	0.02 U	0.01 U
18-Jul-95	25,0	3	0.2 U	0.2 U	0.3 U	0.3 U	0.2 U	0.3 U	0.02 U	0.01 U
18-Jul-95	0,15	5	0.2 U	0.2 U	0.3 U	0.3 U	0.2 U	0.3 U	0.02 U	0.04
18-Jul-95	0,10	6	0.2 U	0.2 U	0.3 U	0.3 U	0.2 U	0.3 U	0.02 U	0.02
18-Jul-95	20,10	4.5	0.2 U	0.2 U	0.3 U	0.3 U	0.2 U	0.3 U	0.02 U	0.08
18-Jul-95	20,20	6	0.2 U	0.2 U	0.3 U	0.3 U	0.2 U	0.3 U	0.02 U	0.15
18-Jul-95	0,0	6	0.2 U	0.2 U	0.3 U	0.3 U	0.2 U	0.3 U	0.02 U	0.16
18-Jul-95	0,40	5	0.2 U	0.2 U	0.3 U	0.3 U	0.2 U	0.3 U	0.02 U	0.19
18-Jul-95	10,40	4.5	0.2 U	0.2 U	0.3 U	0.3 U	0.2 U	0.3 U	0.02 U	0.03
18-Jul-95	0,60	1.5	0.2 U	0.2 U	0.3 U	0.3 U	0.2 U	0.3 U	0.02 U	0.11
18-Jul-95	-5,25	4.5	0.2 U	0.2 U	0.3 U	0.3 U	0.2 U	0.3 U	0.02 U	0.03
18-Jul-95	20,20 Dup	6	0.2 U	0.2 U	0.3 U	0.3 U	0.2 U	0.3 U	0.02 U	0.15
18-Jul-95	0,0 Dup	6	0.2 U	0.2 U	0.3 U	0.3 U	0.2 U	0.3 U	0.02 U	0.16

### GLOSSARY OF TABLE ABBREVIATIONS AND DATA VALIDATION QUALIFIERS

**U** - The analyte was analyzed for and is not present above the level of the associated value. The associated numerical value indicates the approximate concentration necessary to detect the analyte in the sample.

**J** - The analyte was analyzed for and was positively identified, but the associated numerical value may be imprecise due to a quality control (QC) anomaly. The data are considered usable for many purposes.

**ft bgl** - Feet below ground level

**DUP** - Sample duplicate

**TABLE 9.2 - SUMMARY OF SOIL GAS SURVEY DATA FOR SALADO CREEK**  
**(ALL UNITS IN µg/L)**

Date	Location	Depth (ft BGL)	cis- 1,2-DCE	TCE	PCE
<b>Salado Creek</b>					
15-Nov-95	0,-90	4.5	0.3 U	0.02 U	0.04
15-Nov-95	0,-80	3	0.3 U	0.02 U	0.04
17-Nov-95	20,-70	2.5	0.3 U	0.05 U	0.01 U
17-Nov-95	20,-60	3	0.3 U	0.07 U	0.11
30-Nov-95	20,-80	6	0.3 U	0.02 U	0.04
9-Nov-95	0,-10	8	0.3 U	0.26	1.3
9-Nov-95	0,-30	4	0.3 U	0.02 U	1.1
9-Nov-95	0,-20	8	0.3 U	0.19	2.2
9-Nov-95	10,-30	6.5	0.3 U	0.02	1.7
9-Nov-95	10,-10	6.5	0.3 U	0.1	1.3
13-Nov-95	0,-70	3.5	0.3 U	0.02 U	0.15
13-Nov-95	0,-60	5.5	0.3 U	0.02 U	0.18
13-Nov-95	0,-40	6	0.3 U	0.03	1.6
13-Nov-95	0,-40 Dup	6	0.3 U	0.03	1.5
13-Nov-95	0,-50	6	0.3 U	0.02 U	0.44
1-Dec-95	25,-10	6	0.3 U	0.02 U	0.04
1-Dec-95	25,-30	2.5	0.3 U	0.02 U	0.06
1-Dec-95	25,-20	4	0.3 U	0.02 U	0.05
1-Dec-95	30,-60	6	0.3 U	0.02 U	0.1
1-Dec-95	30,-80	6	0.3 U	0.02 U	0.06

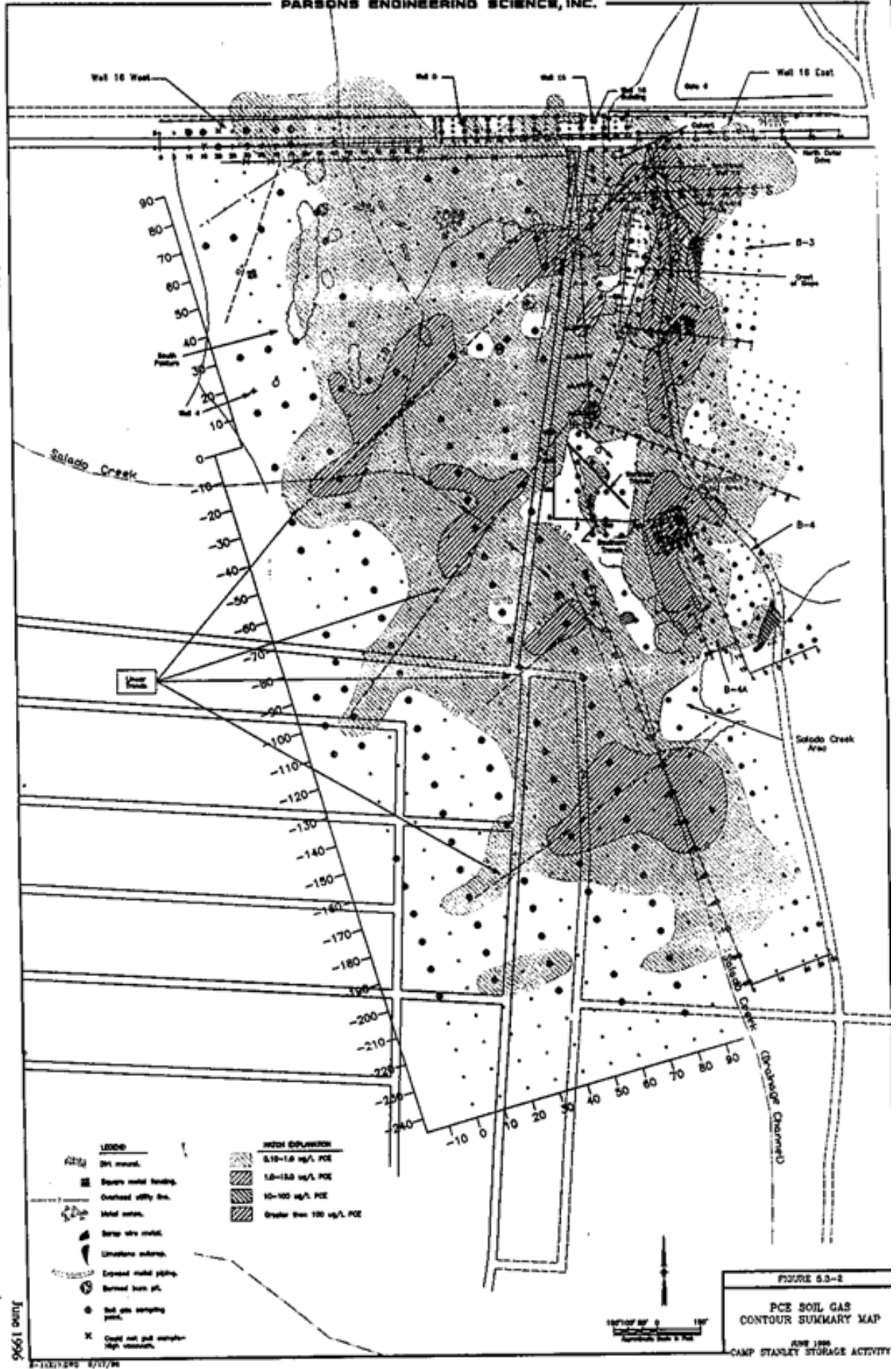
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June 1996