

FINAL WORK PLAN

Contract No. W91278-06-D-0026

Task Order DY02



Prepared for:

Camp Stanley Storage Activity Boerne, Texas

Prepared by:

PARSONS

Austin, TX

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1.0 INTRODUCTION

Parsons is under contract with the U.S. Army Corps of Engineers (USACE) Fort Worth District (CESWF) to provide groundwater monitoring under Contract W91278-06-D-0026, Task Order (TO) DY02. Services will be provided for Camp Stanley Storage Activity (CSSA) at the facility located in Boerne, Texas. The work shall be performed in accordance with requirements of the Resource Conservation and Recovery Act (RCRA) 3008(h) Order in effect for CSSA.

This work plan provides a description of the activities to be conducted to complete the requirements of the scope of work in effect for DY02. Existing work plans for current and previous CSSA task orders fulfilled by Parsons are in effect and are available in the CSSA Environmental Encyclopedia, Volume 1, Work Plans. Activities to be conducted for DY02 will follow the provisions of those prior work plans, as applicable. This work plan sets out project-specific activities directly related to groundwater monitoring to be conducted under DY02.

2.0 GROUNDWATER MONITORING SCOPE OF WORK

The activities covered by this work plan include monitoring existing on- and off-post groundwater wells, sampling Westbay-equipped wells, providing data validation, and providing on- and off-post granular activated carbon (GAC) maintenance.

2.1 GROUNDWATER SAMPLING

Groundwater monitoring will be conducted in the months of September 2007, December 2007, March 2008, June 2008, September 2008, and December 2008. Fifteen months of on- and off-post GAC maintenance will be conducted (through November 2008). **Table 2-1** indicates the number of wells and sampling parameters to be completed under this TO. Wells may be removed from or included in the sampling schedule based on the recommendations of the Final Long-Term Monitoring Optimization (LTMO) Study (Parsons, 2005) and/or the provisions of the Data Quality Objectives (DQOs) for the Groundwater Monitoring Program (Parsons, 2006). Wells to be sampled are shown on Attachments 1 through 3.

Prior to sampling, each well will be purged in accordance with low-flow sampling techniques. Parsons will follow the methods approved in CSSA Quality Assurance Program Plan (QAPP) and the Sampling and Analysis Plan (SAP) for DY02. Quality Assurance/Quality Control (QA/QC) sampling and analysis will be performed to meet the requirements in the CSSA QAPP. The purge water will be containerized and transported for treatment in the GAC treatment system prior to discharge at CSSA's Outfall 002. Further details on the groundwater sampling are included in the sampling and analysis plan for DY02.

GAC maintenance includes monthly inspection and replacement of the pre-filters installed at each GAC system. The GAC system is also inspected for condition and operation. The carbon canisters at the off-post GAC systems located at (LS-6, LS-7, OFR-3, RFR-10 and RFR-11) are scheduled for replacement every six months, or as needed based on analytical results. Carbon exchange is scheduled for December 2007 and June 2008. The GAC system at wells LS-2 and

LS-3 has been transferred to Bexar Metropolitan Water District and will no longer need to be serviced by CSSA/Parsons.

2.2 ANALYTICAL VALIDATION AND VERIFICATION

The analytical validation and verification task includes issues related to analytical data, including oversight of sample collection and submittal efforts, interaction with the selected laboratory, data verification, data validation, and management of electronic analytical data. All groundwater results from the groundwater monitoring program are validated in accordance with the CSSA QAPP.

**Table 2-1
 Sample Quantities and Analytical Parameters**

		Analyses & Method					
		VOCs	Metals	Trip Blank	MS	MSD	Field Duplicates
Well Type/Total No. Wells		8260	6010	8260	8260	8260	8260
September 2007							
Total Wells	76						
CSSA Wells		36	36	3	1	1	2
Off-Post Supply Wells*		40	-	3	2	2	4
December 2007							
Total Wells	56						
CSSA Wells		16	16	3	1	1	1
Off-Post Supply Wells		40	-	3	2	2	4
March 2008							
Total Wells	62						
CSSA Wells		22	22	3	2	2	3
Off-Post Supply Wells		40	-	3	2	2	4
June 2008							
Total Wells	47						
CSSA Wells		7	7	3	1	1	1
Off-Post Supply Wells		40	-	3	2	2	4
September 2008							
Total Wells	66						
CSSA Wells		26	26	3	2	2	3
Off-Post Supply Wells		40	--	3	2	2	4

**Table 2-1
 Sample Quantities and Analytical Parameters (continued)**

		Analyses & Method					
		VOCs	Metals	Trip Blank	MS	MSD	Field Duplicates
Well Type/Total No. Wells		8260	6010	8260	8260	8260	8260
December 2008							
Total Wells	46						
CSSA Wells		6	6	3	1	1	1
Off-Post Supply Wells		40	--	3	2	2	4

*Off-post supply wells include post GAC sampling for wells with treatment systems every six months.

Parsons will oversee each sampling event, including reviewing each chain-of-custody for accuracy and completeness, verifying that the laboratory sample log-in sheets match the chain-of-custody forms, addressing any sample receipt issues (such as broken sample containers), and maintaining continuous contact with the laboratory regarding scheduling.

Laboratory data packages will be reviewed by Parsons chemists for completeness and adherence to the CSSA QAPP and the approved laboratory variances. All associated analytical QA/QC data will be examined, and all exceptions will be noted in both the case narrative and data verification report (DVR). The sample results associated with noncompliant QC performance will be qualified in accordance with the CSSA QAPP.

Following verification of the laboratory data, the data usability as related to the project DQOs will be assessed. Validation will include examination of historical data (if available), laboratory data trends, and the reasons for data collection. Based on the overall assessment of the data, flags may be removed or changed to reflect usability of the data. The basis for such changes will be detailed in the project summary report.

Electronic data submitted by the laboratories will be loaded into the CSSA GIS database, verified for accuracy, and updated to reflect all data qualifier changes incurred through the data verification and validation process. The data are to be supplied in Environmental Resource Program Information Management System (ERPIMS) compliant format.

2.3 REPORTING PROCEDURES

Various reports are required under the DY02 scope of work, including: Quarterly Groundwater Monitoring Reports, Annual Groundwater Monitoring Reports, Health and Safety Plan, Sampling and Analysis Plan, Project Activities Work Plan, Status Reports, and Meeting

Minutes. Specific reporting procedures will follow the provisions of the statement of work (SOW) and the procedures set out below.

2.3.1 Groundwater Reports

All results from the six rounds of groundwater sampling will be included in the quarterly groundwater reports and one annual groundwater report, summarizing all of 2007. The preliminary analytical data will be provided to CSSA within five days of receipt at Parsons. All reports will be prepared as both draft and final versions, with one round of government comments before issuance of the final reports. Five summary quarterly groundwater reports will be prepared and submitted to document the findings of contaminant concentration and delineation. One annual groundwater report (December 2007) will be prepared to summarize the quarterly reports for all sampling in 2007.

The samples collected from Outfalls 002 and 004 are reported in monthly discharge monitoring reports, to be submitted to TCEQ. The discharge monitoring reports will be provided each month to CSSA for submittal to TCEQ.

2.3.2 Report Distribution

From the field efforts for groundwater monitoring covered in this work plan, six reports will be submitted in draft and final versions. In addition, all technical reports produced as part of DY02 will be submitted in accordance with the SOW provisions. The project deliverables will be prepared and submitted to the entities defined in the SOW, USACE and CSSA.










3.0 SCHEDULE

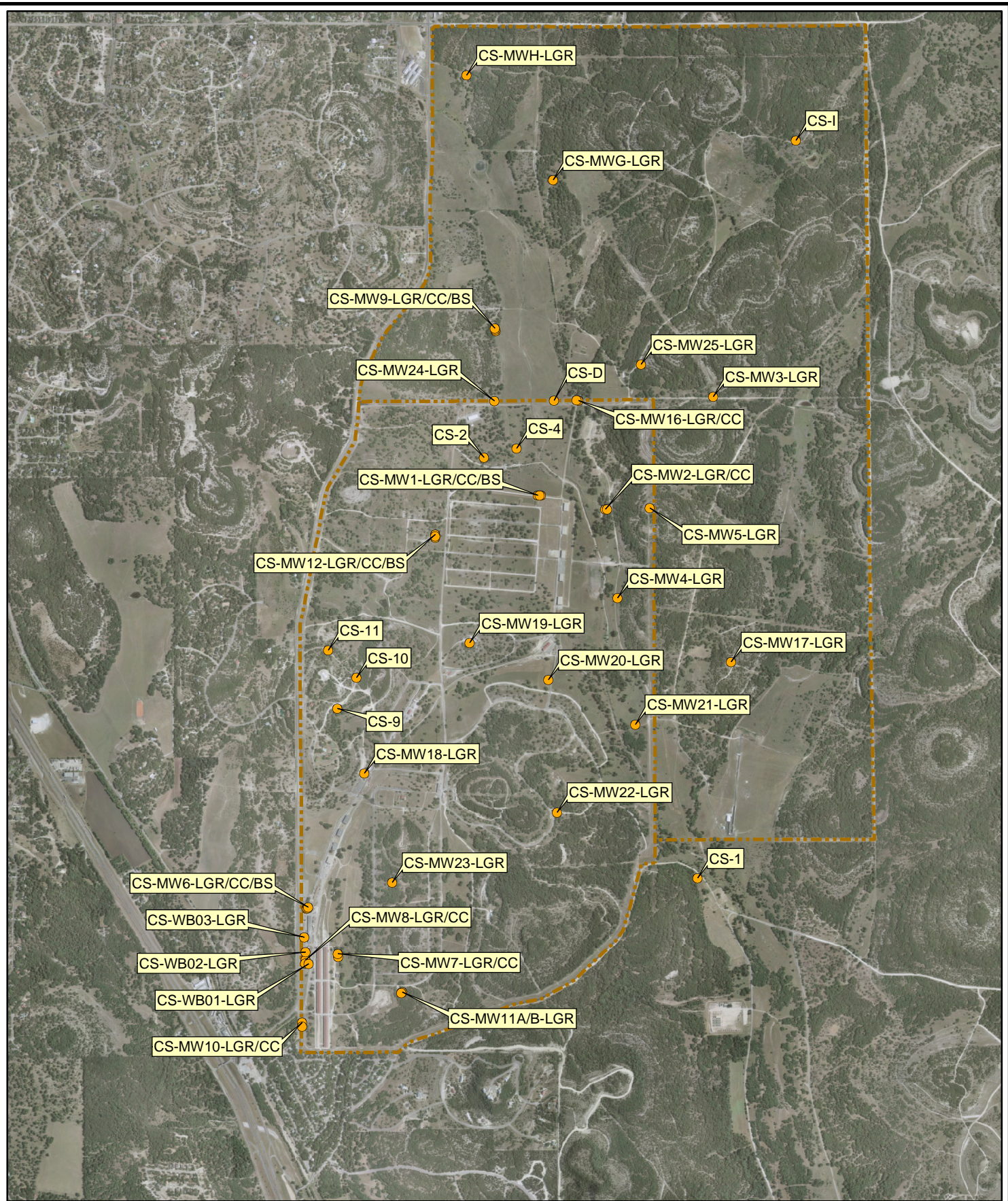
The activities covered by this work plan will be performed in accordance with the schedule given in Table 3-1.

Table 3-1 provides a tentative timeline for the progression of work. With the current scope of work, quarterly groundwater reporting will be completed by March 2009. The schedule will be maintained and updated, and submitted with the bi-monthly status reports.

ID	Task Name	Duration	Start	2008				2009					
				Apr	Jul	Oct	Jan	Apr	Jul	Oct	Jan	Apr	
1	TASK 1 - Groundwater Monitoring	367 days	Mon 9/10/07	[Task bar spanning from Sep 2007 to Jan 2009]									
2	Work Plan (WP) Addendum	28 days	Fri 11/16/07	[Task bar from Oct 2007 to Nov 2007]									
5	Health and Safety Plan (HASP) Addendum	28 days	Fri 11/16/07	[Task bar from Oct 2007 to Nov 2007]									
8	Sampling and Analysis Plan (SAP) Addendum	28 days	Fri 11/16/07	[Task bar from Oct 2007 to Nov 2007]									
11	September 2007	75 days	Mon 9/17/07	[Task bar from Sep 2007 to Dec 2007]									
15	December 2007	75 days	Mon 12/17/07	[Task bar from Dec 2007 to Feb 2008]									
19	March 2008	75 days	Mon 3/17/08	[Task bar from Mar 2008 to Jun 2008]									
23	June 2008	75 days	Mon 6/16/08	[Task bar from Jun 2008 to Sep 2008]									
27	September 2008	75 days	Mon 9/8/08	[Task bar from Sep 2008 to Dec 2008]									
31	December 2008	45 days	Tue 12/2/08	[Task bar from Dec 2008 to Jan 2009]									
35	Westbay Sampling	263 days	Mon 9/24/07	[Task bar from Sep 2007 to Jan 2009]									
39	On-post GAC Maintenance	244 days	Mon 9/10/07	[Task bar from Sep 2007 to Dec 2008]									
54	Off-post GAC Maintenance	245 days	Mon 9/10/07	[Task bar from Sep 2007 to Jan 2009]									
68	Carbon Changes off-post	139 days	Mon 3/17/08	[Task bar from Mar 2008 to Jun 2008]									

Project: Mobile_DY01_Schedule
Date: Thu 11/29/07

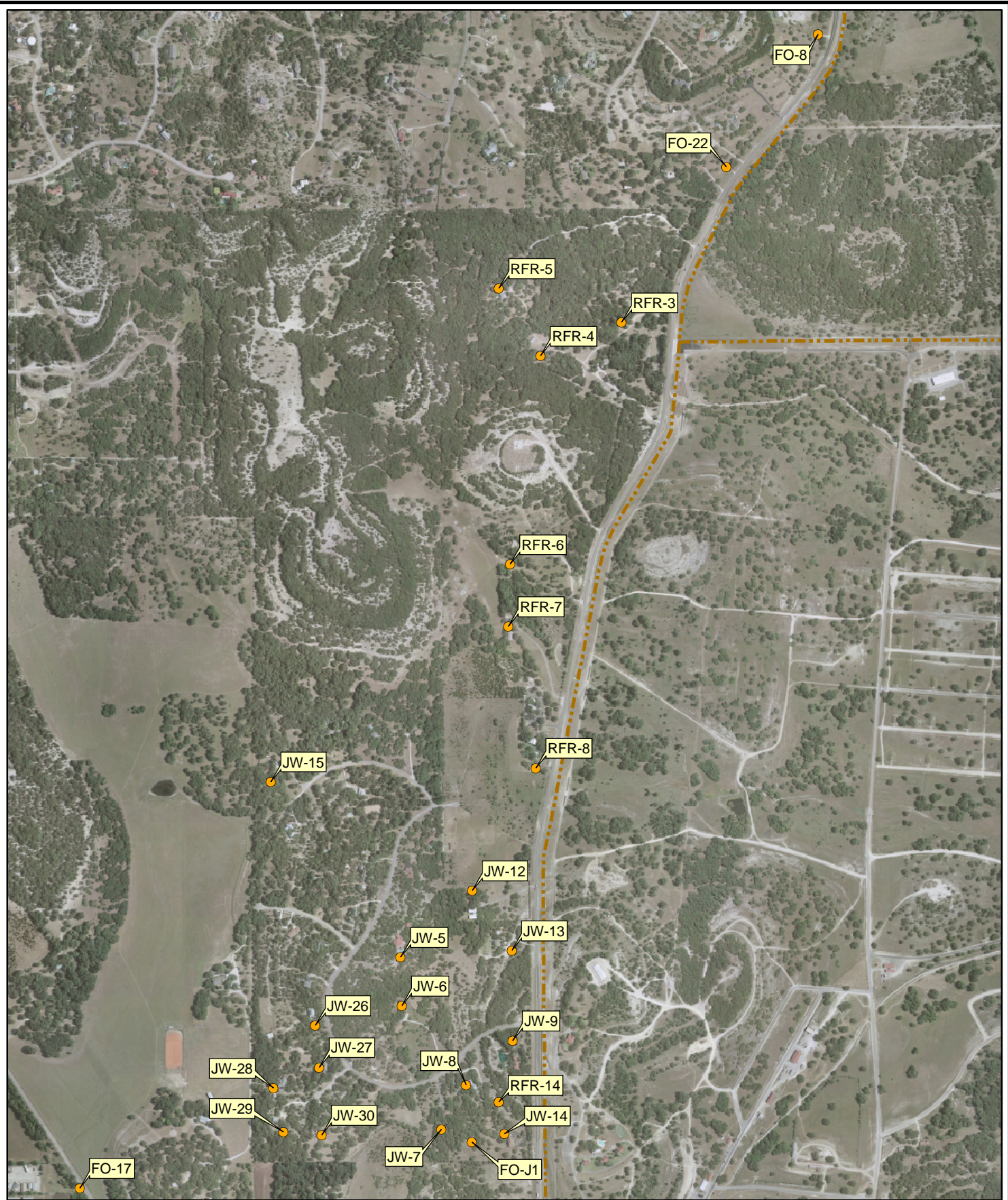
Task  Progress  Summary  External Tasks  Deadline 
 Split  Milestone  Project Summary  External Milestone 



- On-Post Wells and Off-Post Wells
- CSSA Boundary

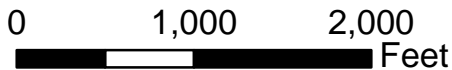
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Attachment 1
On-Post Ground Water Wells Camp Stanley Storage Activity
Parsons



● On-Post Wells and Off-Post Wells

--- CSSA Boundary



Attachment 2

Western Off-Post Ground Water Wells
Camp Stanley Storage Activity

Parsons



● On-Post Wells and Off-Post Wells

--- CSSA Boundary

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Attachment 3

South Western Off-Post Ground Water Wells
Camp Stanley Storage Activity

Parsons