RFI AND INTERIM MEASURES WASTE MANAGEMENT PLAN REVISED

Prepared for:

Camp Stanley Storage Activity
Boerne, Texas

MAY 2006

RECORD OF REVISIONS

All revisions to this waste management plan will be made in the form of replacement pages. All revisions will be recorded in the format shown below. Any revision will be made according to the following procedure:

1. Insert the new page(s).
2. Remove the affected old page(s). No existing page will be removed until a corresponding new page(s) has been inserted.
3. Enter an appropriate revision number in sequence (*e.g.*, 1, 2, 3,....). Enter the date the change was made in the record of revisions below and initial it.

Revision Number	Date	Comments/Amendments	Initials
1	5/17/2006	Revisions per TCEQ comments through 5/15/2006. Entire document revised.	

CONTENTS

LIST OF FIGURES

ADDENDA

ACRONYMS AND ABBREVIATIONS

AOC	Area of concern
ARARs	Applicable or Relevant and Appropriate Requirements
CAMU	Corrective action management unit
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CESQG	Conditionally Exempt Small Quantity Generator
CFR	Code of Federal Regulations
CMS	Corrective Measures Study
COC	Chemical of concern
CSSA	Camp Stanley Storage Activity
CWA	Clean Water Act
CY	Cubic yard
DoD	Department of Defense
DOT	Department of Transportation
DQO	Data quality objective
DRMO	Defense Reutilization and Marketing Organization
FR	Federal Register
FSP	Field Sampling Plan
FWPCA	Federal Water Pollution Control Act
GAC	Granular activated carbon
HW	Hazardous waste
HWIR	Hazardous waste identification rule
IDW	Investigative-Derived Waste
IM	Interim Measures
IRA	Interim removal action
ISCP	Installation Spill Contingency Plan
LDR	Land Disposal Restrictions
LQG	Large quantity generator
MCL	Maximum contaminant limit
MEC	Munitions and explosives of concern
mg/L	Milligram per liter
NCP	National Contingency Plan
NH	Nonhazardous
NOR	Notice of Registration
OSHA	Occupational Safety and Health Administration
O&M	Operations and maintenance
Order	USEPA Section 3008(h) Administrative Order on Consent
PCE	Perchloroethylene (or tetrachloroethylene)
PCL	Protective concentration limit

PID	Photoionization detector
QAPP	Quality Assurance Project Plan
RAP	Remedial Action Plan
RCRA	Resource Conservation and Recovery Act
RFI	RCRA Facility Investigation
SAP	Sampling and analysis plan
SARA	Superfund Amendment and Reauthorization Act
SPCCP	Spill prevention, control, and countermeasures plan
SQG	Small quantity generator
STEERS	State of Texas Electronic Environmental Reporting System
SVE	Soil vapor extraction
SWMU	Solid waste management unit
TAC	Texas Administrative Code
TCLP	Toxicity characteristic leaching procedure
TCE	Trichloroethene
TCEQ	Texas Commission on Environmental Quality
TPDES	Texas Pollutant Discharge Elimination System
TPH	Total petroleum hydrocarbon
TRRP	Texas Risk Reduction Program
TSD	Treatment, storage, and disposal
TU	Treatment Unit
U.S.	United States
U.S.C.	United States Code
USEPA	United States Environmental Protection Agency
UXO	Unexploded ordnance
UXOSO	Unexploded ordnance safety officer
VOC	Volatile organic compound
WMP	Waste management plan

SECTION 1
INTRODUCTION

1.1 PURPOSE

In 1999, Camp Stanley Storage Activity (CSSA) was issued an Administrative Order on Consent (Order), (United States Environmental Protection Agency [USEPA] identification number TX2210020739), proceeding under Section 3008(h) of Resource Conservation and Recovery Act (RCRA), as amended, 42 United States Code (U.S.C.) Section 6928(h). As a result of the Order, CSSA generates waste streams from miscellaneous Order-related activities such as RCRA Facility Investigations (RFIs), treatability studies, and removal actions. Management of contaminated media and wastes generated by these activities at CSSA is described in this RFI/Interim Measures (IM) Waste Management Plan (WMP).

This WMP is designed to ensure that the waste management tasks performed in support of the Order at the installation comply with the applicable federal, state, local, and Army regulations. The CSSA Quality Assurance Project Plan (QAPP) and Sampling and Analysis Plan (SAP), which can be found in CSSA's Environmental Encyclopedia, are supporting documents. This WMP will be used by all personnel at CSSA involved in management of investigation/remediation-derived wastes which potentially can contain hazardous waste, industrial solid waste, contaminated environmental media, municipal solid wastes, UXO, and military-related waste consistent with site usage as a military installation. Applicable regulations will be reviewed periodically and this plan updated to ensure that the complete and most current listing of waste management requirements is incorporated.

Hazardous wastes were not typically generated during post Order-related investigation and remediation activities at CSSA, and hazardous waste generation is not anticipated during future planned Order-related investigation and remediation activities. However, toxicity characteristic hazardous waste or media might be encountered during remediation activities. This waste management plan has been prepared to address hazardous waste management in the event that hazardous waste is generated. The WMP also addresses procedures for waste or contaminated media characterization. In addition, the waste management plan includes provisions to characterize and manage industrial solid waste, contaminated environmental media, municipal solid wastes, unexploded ordnance (UXO), and military-related wastes. The specific investigation/remediation activities generating potential hazardous and nonhazardous wastes are discussed in detail in Section 2, and requirements for handling this material are described later in this WMP.

The CSSA installation is classified as a conditionally-exempt small-quantity hazardous waste generator (CESQG, Texas Solid Waste Registration Number 69026), as defined in 30 Texas Administrative Code (TAC) 335.78(a). Because CSSA operates as a municipal CESQG, there are no record-keeping, reporting, training, or contingency planning requirements for wastes generated during CSSA's Order-related or other

activities. However, if the quantities of hazardous wastes generated by CSSA's primary mission operations increase, CSSA's generator status will be modified accordingly and associated requirements will be met. This plan describes the actions regarding the recordkeeping, reporting and planning requirements that would normally be required if CSSA's generator status changed to SQG.

CSSA also generates hazardous and nonhazardous wastes from various activities associated with its primary mission. Management of these wastes is described in CSSA's *Hazardous Waste Management Plan*.

1.2 GENERAL INSTALLATION INFORMATION

CSSA, a Department of Defense (DoD) facility, is located approximately 19 miles northwest of downtown San Antonio in Bexar County, Texas, and has a total area of 4,004.18 acres. The installation location is shown in Figure 1-1. CSSA is immediately east of State Highway 3351 (Ralph Fair Road), approximately 0.5 mile from Interstate Highway 10. CSSA has an approximate workforce of 115 and is a subinstallation of McAlester Army Ammunition Plant, United States (U.S.) Army Field Support Command, Army Materiel Command, U.S. Army.

CSSA is a restricted-access installation due to its explosive ordnance storage and testing missions, and it consists of inner cantonment lands to the southwest and outer cantonment areas to the east and north. Operational buildings and igloo storage magazines are located within the inner cantonment. The locations of the inner and outer cantonments are shown in Figure 1-2.

The eastern boundary of CSSA and part of its northern and southern boundaries are contiguous with the Camp Bullis Military Training Reservation. The surrounding area to the west is primarily rural and zoned for residential use. Some residential development is also present west, northwest, and southwest of the installation.

The primary mission of CSSA is the receipt, storage, issue, and maintenance of ordnance materiel, as well as quality assurance testing and maintenance of military weapons and ammunition. CSSA personnel or other parties are allowed to hunt wildlife on a restricted basis. No changes to the CSSA mission and military activities are expected in the future.

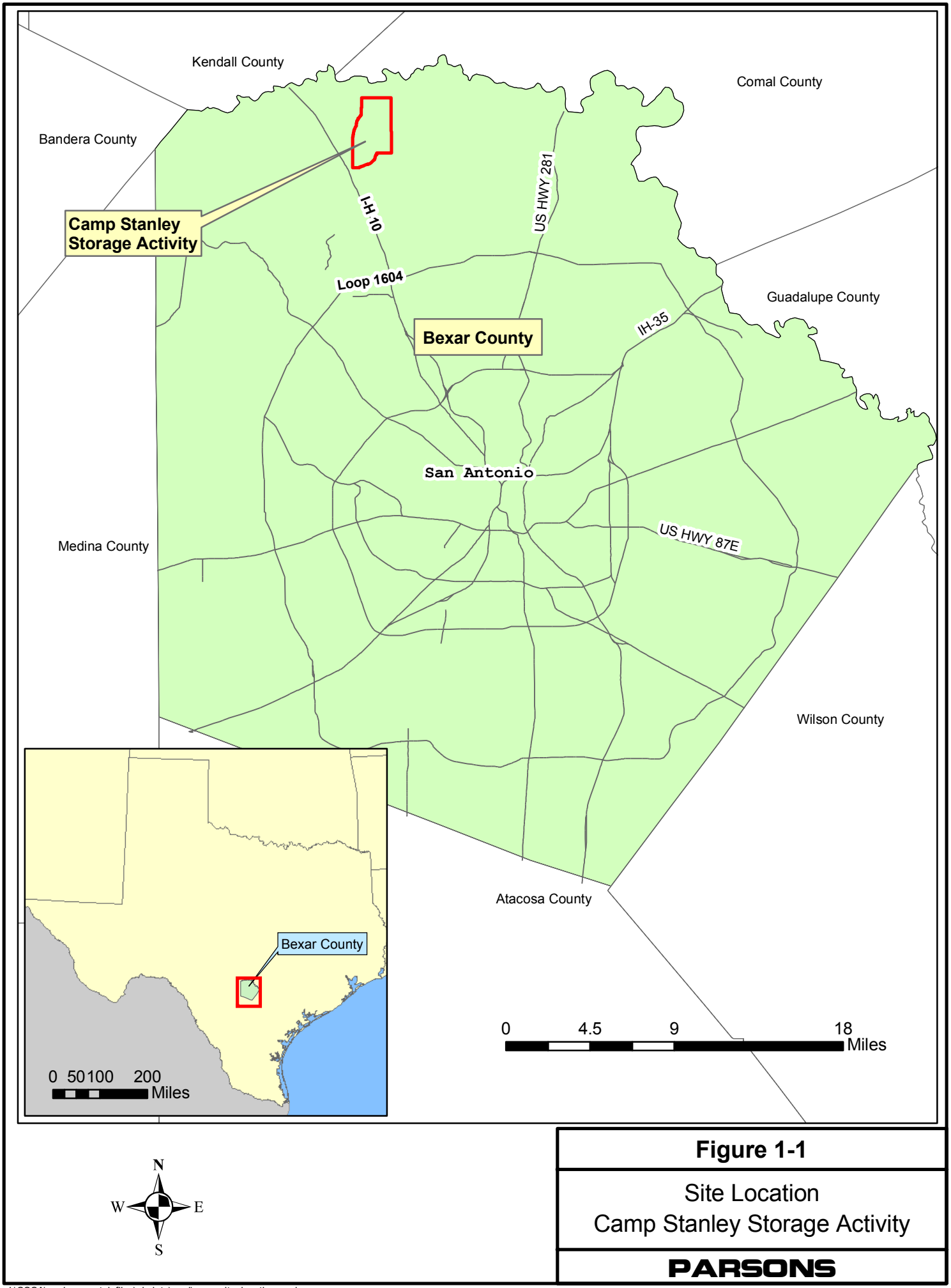

Figure 1-1

Site Location
Camp Stanley Storage Activity

PARSONS

J:\CSSA\environmental_files\gisdata\mxd\cssa_site_location.mxd

N
W E
S

0 1,000 2,000 4,000 Feet

Fence Lines

Figure 1-2

Installation Map

Camp Stanley Storage Activity

PARSONS

J:\CSSA\environmental_files\gisdata\mxd\cssa_cantonments.mxd

The name and address of the owner and operator of the installation are:

Installation Manager
Mr. Jason Shirley
Camp Stanley Storage Activity
25800 Ralph Fair Road
Boerne, Texas 78015-4800
Phone: (210) 295-7416

The designated person in charge of complying with the USEPA 3008(h) Order and related issues at the installation is the installation Environmental Program Manager.

1.3 GENERAL PLAN OVERVIEW

This version of the WMP, identified as Revision 1, is an update to the USEPA-approved August 2002 WMP (see Addendum 1 for the USEPA approval letter). Revision 1 clarifies issues identified by Texas Commission on Environmental Quality (TCEQ) and streamlines the text to make it more applicable to anticipated upcoming RFI and interim measures waste stream management. Revision 1 replaces the August 2002 WMP in its entirety.

This document contains six sections, including this introductory section. Section 2 presents a brief summary of anticipated significant waste streams generated at the facility in association with the Order. The manner in which investigation and remediation waste will be characterized is detailed in Section 3. Section 4 describes various waste management tasks. Spill prevention and response activities are described in Section 5. The recordkeeping and reporting requirements for waste management activities at the post are described in Section 6.

Any and all future revisions to this plan will be coordinated with the USEPA and TCEQ. Revisions will be incorporated by replacing the old affected pages with the new ones (or in its entirety) and documenting the revisions on a Record of Revisions page presented in front of this document (page *ii*).

SECTION 2
ANTICIPATED WASTE GENERATION ACTIVITIES

CSSA generates waste streams from miscellaneous Order-related investigation and remediation activities such as RFIs, treatability studies, and removal actions. A brief discussion of these activities is provided below.

2.1 RFI ACTIVITIES

The objectives of RFI activities include: identifying possible releases; investigating and preventing the further spread of identified releases of hazardous waste and/or hazardous constituents to the environment at and/or from the facility; and ensuring that corrective actions protect human health and the environment. To achieve these objectives, remediation or investigation derived waste may be generated. This waste may include contaminated media (soil and groundwater). Contaminated groundwater is potentially generated during monitoring well installation, development, pump tests, and sampling. Potentially contaminated soils are generated during monitoring well installation, soil sampling, test pit excavation, and other investigative or remedial activities.

2.2 TREATABILITY STUDIES

As part of the Order, CSSA is to identify candidate technologies for a treatability studies program. The treatability studies program will include the following evaluations:

(1) installation and operation of a system designed to recover and control migration of hazardous waste and constituents in groundwater, soil, and air;

(2) any additional candidate technologies for a treatability studies program. The listing of candidate technologies will cover the range of technologies required for alternatives analysis. The specific data requirements for the testing program will be determined and refined during the RFI and corrective measures study (CMS) implementation.

To date, CSSA's treatability studies program has included Soil Vapor Extraction (SVE), Electrokinetic Remediation, Phytoextraction, Density Separation, and Stabilization. Future technologies (*i.e.*, bioreactor cell planned for SWMU B-3, see Addendum 3) will continue to be investigated and are anticipated to generate potential hazardous waste and nonhazardous waste.

2.3 REMOVAL ACTIONS

As part of the Order, CSSA may remove waste and contaminated media from a site. At the majority of CSSA's SWMUs and AOCs, wastes normally encountered are: municipal waste, industrial solid waste, potentially hazardous waste, potentially

hazardous media, UXO and/or munitions and explosive of concern (MEC). Examples are metal bands, wooden palettes, ammunition crates, ash, metal fragments from spent lead bullets, scrap metal, and "exotics", e.g., time delay ampoules, etc.

SECTION 3
WASTE CHARACTERIZATION

Site-specific addenda to this WMP will be prepared for each waste-generating Order-related investigation or remediation activity. A site-specific addenda for the upcoming SWMU B-3 Interim Removal Action is included as Addendum 3. The procedures described below provide an overall approach to investigation or remediation waste characterization. The use of Texas Risk Reduction Program (TRRP) Tier 1 Protective Concentration Limits (PCLs) or Maximum Contaminant Limits (MCLs) standards in determining characterization of investigative-derived media are as applicable or relevant and appropriate requirements (ARARs).

3.1 GROUNDWATER MEDIUM

Groundwater generated during Order-related investigation or remediation activities will generally be placed into 20 cubic yard (CY) water-tight roll-off containers for characterization. One representative groundwater sample will be collected in accordance with state and federal guidance to determine the appropriate management method. The sample will be analyzed for CSSA's groundwater chemicals of concern (COCs), which are detailed in the USEPA and TCEQ-approved Groundwater Data Quality Objectives (DQOs). Additional COCs may be added to address site-specific concerns or drilling methods. Should groundwater be considered toxicity characteristic, CSSA will either dispose of the groundwater according to hazardous waste requirements or treat the groundwater to meet the contained-in policy requirements.

3.2 SOIL MEDIUM

During remediation and cleanup, CSSA could potentially generate the following types of soil media:

1) Uncontaminated soils-no regulatory requirement for re-use and disposal,

2) Contaminated soil:

    a) Levels of contamination meet the Texas Risk Reduction Program (TRRP) Tier 1 Residential Protective Concentration Levels (PCLs) - no regulatory requirement for re-use and disposal and

    b) Levels of contamination meet the TRRP Tier 1 Commercial/Industrial PCLs - institutional control required;

3) Toxicity characteristics soils-CSSA will either dispose of the soils according to hazardous waste requirements or treat the soil to meet the contained-in policy requirements.

Contained-in soils (i.e., soils containing hazardous waste) may be consolidated or treated *in-situ* within the Area of Contamination (AOC) (as defined by USEPA's *Management of Remediation Waste under RCRA*, EPA530-F-98-026, October 1998). According to the policy on AOC, consolidation and treatment can be conducted within the AOC without triggering land disposal restrictions or minimum technology requirements. The AOC policy is applicable to any hazardous remediation waste (including non-media wastes) that is in or on the land. CSSA will avail of this EPA policy until characterization sampling is complete. The sampling frequency will be based on the total contaminant constituent analytical results for investigative samples at the subject site. Additionally, the potential COC will be determined on a site-specific or unit-specific basis by use of totals contaminant constituent analytical results data. CSSA and TCEQ acknowledge that the ratio 20:1 is often used as a general rule of thumb for the characterizing material/media to potentially exclude the material/media from being toxicity characteristics (i.e., Solid Waste 846 Method 1311 - Toxicity Characteristics Leaching Procedure [TCLP]). However, both CSSA and TCEQ agree that actual testing using Method 1311 is often times necessary to avoid ambiguity and to avoid a bigger inconvenience of a hazardous waste being inappropriately disposed of in a municipal landfill. Consequently, the CSSA and TCEQ will keep open lines of communication pertaining to this issue.

3.3 INDUSTRIAL SOLID WASTE

Any inherently waste-like materials (e.g., ash), if encountered, will be segregated to the extent possible and characterized separately. CSSA will follow the guidance as specified above regarding TCLP testing and use of the AOC policy, if applicable.

3.4 MUNICIPAL WASTE

Municipal waste generated during investigative/remediation activities will be characterized to industrial solid waste non-hazardous classifications (i.e., non-hazardous Class 1 or Class 2 per 30 TAC 335 Subchapter R) for disposal purposes.

3.5 MUNITIONS AND EXPLOSIVES OF CONCERN

Munitions and Explosives of Concern (MEC) which include UXO are occasionally found during excavations. CSSA will provide for proper UXO identification/management during RFI or remediation activities as necessary.

In the event that the UXO team encounters any potentially live MEC items or actual UXO, all work at the site will immediately cease and the CSSA Security Officer and CSSA Environmental Officer will be notified. CSSA will notify a U.S. Army Explosive Ordnance Detachment (EOD) for removal of the item. Work efforts will resume after the MEC/UXO item has been removed, and/or the area has been rendered safe for continued work. Scrap metal from inert munitions will be managed as described in Section 3.6. Any additional analytical data needs will be identified in a site-specific addendum to this plan.

3.6 OTHER MATERIALS

To the extent possible, other materials will be segregated from contaminated soil and characterized separately, if necessary. Scrap metal will be recycled, so no characterization sampling is necessary. To the extent possible, ash will be segregated and characterized separately, as described in Section 3.2.

Other "exotic" materials will be addressed separately on a case-by-case basis. Exotic waste classification is a term used for CSSA's efforts to describe unidentifiable materials or materials that do not clearly meet the definition of either hazardous or nonhazardous waste. For this type of material, CSSA will contact the TCEQ Waste Evaluation Section and the Remediation Division for concurrence with a determination of waste classification.

SECTION 4
WASTE MANAGEMENT TASKS

This section describes various activities involved in investigation and remediation waste management at the installation. The following is a brief description and overview of each of the waste management activities at the installation.

4.1 ENVIRONMENTAL MEDIA

Should representative samples indicate that contaminated media is hazardous according to the Contained-in Policy; the contaminated media (soil or groundwater) will be managed/disposed of as hazardous waste. Treatment of the contained-in media is allowed within the AOC. The AOC policy allows wastes and media contaminated with wastes to be consolidated or treated in situ within an AOC without triggering land disposal restrictions or minimum technology requirements. In the alternative, after treatment of the media and when the contaminated environmental media no longer contain hazardous waste (i.e.,(1) when the media no longer exhibit a characteristic of hazardous waste; and (2)when concentrations of hazardous constituents from listed hazardous waste are below health based levels), the media are considered to "no longer contain" hazardous waste and are not subject to any RCRA requirements.

If groundwater media do not contain hazardous waste according to the contained-in policy, there are three possible management methods:

1. If any COC concentrations in groundwater are above CSSA's Texas Pollutant Discharge Elimination System (TPDES) discharge limits, the groundwater will be treated and discharged through CSSA's Outfall 002, in accordance with CSSA's TPDES permit number WQ0003849000.
2. If any COC concentrations in investigation-derived groundwater are above TRRP Tier 1 PCLs or MCLs, but below CSSA's TPDES discharge limits, the groundwater will be discharged through CSSA's Outfall 002 or 004, in accordance with CSSA's TPDES permit number WQ0003849000.
3. If all COC concentrations in investigation-derived groundwater are below TRRP Tier 1 PCLs or MCLs, the groundwater may be discharged to the ground as non-contaminated groundwater. This water will not be discharged on any known waste site.

If soil media do not contain hazardous waste according to the contained-in policy, CSSA will either manage the waste for off-site disposal or, if the constituents are greater than or equal to the Tier 1 Commercial/Industrial Protective Concentration Levels, as specified in TRRP; the media can be disposed of on-site. However, deed restrictions will be required for the disposal. If soil medium meets the Tier 1 Residential Protective Concentration Levels as specified in TRRP, the media may be managed without

regulatory restrictions.

4.2 SOLID MEDIA

After characterization of solid media has been conducted as described in Section 3, solid wastes associated with CSSA's Order-related investigation and remediation activities will be identified as either hazardous or nonhazardous waste. Treatment of impacted media or waste will require re-classification of material before management requirements are identified. It is CSSA's intent to treat impacted media/waste to Class 2 nonhazardous criteria when possible. Treatment of impacted media/waste will only occur within the Area of Contamination, which is described in Addendum 1.

4.2.1 Hazardous Waste

A waste is considered to be generated when it is moved from the original Area of Contamination as identified by investigations of the SWMU or AOC. In general, CSSA will not generate (remove) hazardous waste from its Area of Contamination until treatment, storage, or disposal arrangements have been accomplished. However, if hazardous wastes are generated during the Order-related investigation and remediation activities the following are identified as potential management methods for investigation and remediation hazardous waste.

1. Hazardous waste on-site disposal cannot occur at CSSA without a RCRA permit or interim status. The planned removal actions associated with this WMP do not plan for any on-site disposal of hazardous waste. All hazardous wastes/treatment residues (if treatment occurs) will be sent to permitted off-site treatment, storage, and disposal (TSD) facilities for final disposal.

2. In the unanticipated event that investigation or remediation hazardous waste is moved into a waste storage area prior to disposal, the hazardous waste storage facility at CSSA, which consists of a container storage area at Building 86 (TCEQ facility number 002), will be used when possible. As noted in EPA guidance *Management of Remediation Waste under RCRA*, hazardous waste may be accumulated, treated or stored at the site of generation in tanks, containers, drip pads, or containment buildings for up to 90 days without RCRA interim status or RCRA permit. CSSA is exempt from accumulation time requirements because it is a conditionally exempt small quantity generator (CESQG); however, if it exceeds CSEQG status, CSSA will follow said guidance. If the hazardous waste is being treated in an Area of Contamination then it is also exempt from time requirements, see March 13, 1996 EPA memo entitled, "Use of the Area of Contamination Concept During RCRA Cleanups" and OSWER's "Management of Remediation Waste Under RCRA," EPA530-F-98-026, October 1998. Hazardous wastes accumulated at the initial generation points may be transferred to the container storage facility for storage until transportation.

Most hazardous waste storage at CSSA is accomplished using 55-gallon drums or smaller containers. Specific requirements for waste storage, labeling, transportation, recordkeeping and reporting for CSSA can be found in CSSA's Hazardous Waste Management Plan and SPCC Plan.

3. In the unanticipated event that a waste accumulation area (staging pile) is needed, it will be authorized by the CSSA Environmental Program Manager prior to the waste accumulation activities. CSSA will comply with all applicable storage requirements. Prior to the approval of a new waste accumulation site, the Environmental Office will consider potential health and environmental consequences in the event hazardous constituents are released during a spill, fire, or explosion, or otherwise released from the accumulation site.

4.2.2 Nonhazardous Waste

Management of non-hazardous waste shall be consistent with the requirements of the Industrial Solid Waste and Municipal Hazardous Waste of the State of Texas Administrative Code Section 335.

There are few regulatory treatment requirements for nonhazardous solid wastes prior to disposal. For nonhazardous waste/media treatment in conjunction with closure standards, the treatment will be conducted in a manner that minimizes or eliminates, to the extent necessary to protect human health and the environment, the escape of wastes, contaminants, leachate, run-off or decomposition products to the surrounding environmental media. There are no specific regulations that establish procedures for accumulation or storage of nonhazardous wastes. Off-site transportation of nonhazardous solid wastes will be performed by state-permitted transporters. Nonhazardous solid wastes will be disposed of only at facilities that have been approved for receipt of such wastes. Off-site facilities for disposal of nonhazardous wastes will be state-permitted facilities.

4.2.3 Municipal Waste

Municipal waste (e.g. office trash, tires, rubbish, etc.) will be characterized to industrial non-hazardous standards for off-site disposal. Management of municipal waste shall be consistent with the requirements of the Industrial Solid Waste and Municipal Hazardous Waste of the State of Texas Administrative Code Section 335 Subchapter R.

4.2.4 Munitions and Explosives of Concern

In the event that the UXO team encounters any potentially live MEC items or actual UXO, all work at the site will immediately cease and the CSSA Security Officer and CSSA Environmental Officer will be notified. CSSA will notify a U.S. Army EOD for removal of the item. Work efforts will resume after the MEC/UXO item has been

removed, and/or the area has been rendered safe for continued work. Scrap metal from inert munitions will be managed as described in Section 3.6.

SECTION 5
SPILL PREVENTION, REPORTING, AND RESPONSE

Accidental spills and releases may occur at the installation during various steps of hazardous materials and waste management activities. These spills may occur at process and operation areas using or generating hazardous substances, or at waste accumulation, transfer, storage, treatment, and/or disposal facilities. Spill response actions are required for any imminent or actual spills or releases at CSSA. For details, see CSSA's current *SPCC Plan*.

SECTION 6
RECORDKEEPING AND REPORTING

Federal and state regulations establish requirements for record keeping and reporting for various waste management activities conducted at CSSA. These requirements cover activities including waste generation; waste analysis; waste storage, treatment, and disposal; and spills and releases. The hazardous waste program under RCRA requires "cradle to grave" tracking of hazardous wastes; that is, managing wastes from the point of generation to the point of treatment, storage, or disposal. For details of recordkeeping and reporting requirements see CSSA's current *Hazardous Waste Management Plan*.

SECTION 7
CONTACTS

CAMP STANLEY STORAGE ACTIVITY

Glaré Sanchez
CSSA Environmental Program Manager
25800 Ralph Fair Road
Boerne, TX 78015-4800
Telephone: (210)698-5208
Facsimile: (210)295-7386
E-mail: sanchezg@envirodept.net

Jason Shirley (LTC, Retired)
CSSA Installation Manager
25800 Ralph Fair Road
Boerne, TX 78015-4800
Telephone: (210)295-7416
Facsimile: (210)295-7386

U.S. ENVIRONMENTAL PROTECTION AGENCY

Greg Lyssy
USEPA, Region 6
1445 Ross Avenue (6PD-N)
Dallas, TX 75202-2733
Telephone: (214)665-8317
Facsimile: (214)665-6660
E-mail: lyssy.gregory@epa.gov

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Abigail Power
TCEQ Region 13
14250 Judson Rd.
San Antonio, TX 78233-4480
Telephone: (210)403-4064
E-mail: apower@tceq.state.tx.us

Jorge Salazar
TCEQ Region 13
14250 Judson Rd.
San Antonio, TX 78233-4480
Telephone: (210)403-4059
E-mail: jsalazar@tceq.state.tx.us

Henry Karnei, Jr
TCEQ Region 13
14250 Judson Rd.
San Antonio, TX 78233-4480
Telephone: (210)403-4010
E-mail: hkarnei@tceq.state.tx.us

Sonny Rayos
Corrective Action Section
Texas Commission on Environmental Quality
MC-127, P.O. Box 13087
Austin, TX 78711-3087
Telephone: (512)239-2371

Scott Green
Technical Analysis Team
Texas Commission on Environmental Quality
MC-127, P.O. Box 13087
Austin, TX 78711-3087
Telephone: (512)239-6381

PARSONS

Julie Burdey
Parsons
8000 Centre Park Drive, Suite 200
Austin, TX 78754
Telephone: (512)719-6062
Facsimile: (512)719-6099
E-mail: julie.burdey@parsons.com

Brian Vanderglas
Parsons
8000 Centre Park Drive, Suite 200
Austin, TX 78754
Telephone: (512)719-6059
Facsimile: (512)719-6099
E-mail: brian.vanderglas@parsons.com

ADDENDUM 1
USEPA AUTHORIZATION OF CSSA RFI/IM WASTE MANAGEMENT PLAN DATED AUGUST 2002

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 6
SUPERFUND DIVISION
1445 Ross Avenue
Dallas, Texas 75202

October 17, 2002

Mr. Brian K. Murphy
Camp Stanley Storage Activity
25800 Ralph Fair Road
Boerne, Texas 78015-4800

RE: *Camp Stanley Storage Activity Administrative Order on Consent Deliverable Review for the RCRA Facility Investigation and Interim Measures Waste Management Plan*

Dear Mr. Murphy:

In accordance with the final Resource Conservation and Recovery Act (RCRA) Section 3008(h) Administrative Order on Consent (Order) for the Camp Stanley Storage Activity (CSSA), Docket No. RCRA-VI 002(h)99-H FY99, dated May 5, 1999, the following document has been received and reviewed by the U.S. Environmental Protection Agency (EPA) and the Texas Commission on Environmental Quality (TCEQ):

- *RCRA Facility Investigation (RFI) and Interim Measures Waste Management Plan*, dated August 2002.

Pursuant to Section XVI of the Order, the above referenced document is hereby approved. If CSSA, or your technical consultants, have any questions regarding the *Waste Management Plan*, please do not hesitate to call me at 214.665.8317, or I may be contacted via e-mail at *lyssy.gregory@epa.gov*. You may also contact Kirk Coulter at TCEQ at 512.239.2572 with questions. Please continue to keep me informed of the activities associated with the field work.

Sincerely,

Greg J. Lyssy
RPM

cc: Kirk Coulter, Texas Natural Resource Conservation Commission

ADDENDUM 2
APPLICABLE HAZARDOUS WASTE TREATMENT APPROACHES

Various federal, state, and local regulations govern waste management and treatment activities. This section presents a brief introduction to these approaches related to the waste management treatment activities at the installation.

WASTE TREATMENT AND DISPOSAL

Wastes generated and accumulated at a facility will have to be ultimately treated and/or disposed. Waste treatment and disposal may take place either at an onsite or an off-site facility, or a combination of both. Specific treatment requirements have been established for most hazardous wastes prior to disposal. There are few regulatory treatment requirements for nonhazardous solid wastes prior to disposal. For nonhazardous waste/media treatment in conjunction with closure standards the treatment will be conducted in a manner that minimizes or eliminates, to the extent necessary to protect human health and the environment, the escape of wastes, contaminants, leachate, run-off or decomposition products to the surrounding environmental media. The treatment and disposal standards for the installation wastewater and storm water discharges are established under CWA and TPDES.

Nonhazardous solid wastes can be disposed of only at facilities that have been approved for receipt of such wastes. Off-site facilities for disposal of nonhazardous wastes must be state-permitted facilities. However, on-site facilities for disposal of nonhazardous wastes do not require permitting, but do require notification to the TCEQ and incorporation of such facilities into the installation NOR.

Hazardous waste TSD activities are governed by various state and federal regulations. The majority of state regulations incorporate federal regulations by reference. CSSA is not a permitted facility for the treatment or disposal of hazardous waste. However, CSSA intends to treat hazardous soil media in-site prior to generation. The rules and regulations are included below for an overview of hazardous waste treatment approaches which are applicable and relevant during CSSA's order-related investigation and remediation activities.

Hazardous Waste Treatment

Many of the IRA's will involve the short-term management (*i.e.,* storage or treatment) of remediation waste. For example, wastes may be placed in tanks or containers prior to consolidation for treatment or treated in situ within a designated area of contamination. Normally, RCRA regulations would require CSSA to comply with all requirements of 40 CFR 264 and obtain a full operating permit for storage and/or treatment of hazardous waste. The designation of the unit as an Area of Contamination

provides the flexibility for short-term management of remediation waste in situ without the burden of compliance with the full 40 CFR 264 standards and without permit requirements. The Area of Contamination concept facilitates cleanups under RCRA corrective action and provides flexibility in completing clean-up activities within governmental oversight.

Within the final Hazardous Waste Identification Rule (HWIR)-Media the manner in which remediation wastes can be managed were promulgated to include the use of corrective action management and treatment units. Also, USEPA finalized the land disposal restrictions (LDR) treatment standards for hazardous contaminated soil, which were included in the HWIR-Media proposal, as part of the LDR Phase IV final rule (63 Federal Register [FR] 28604, May 26, 1998). The HWIR-Media final rule has the following elements that affected management of remediation wastes. CSSA is authorized to utilize these management units under the USEPA 3008(h) Administrative Order by provision X. However, it is not CSSA's intent to routinely utilize these management units for the remediation of hazardous media with the exception of the "area of contamination" concept. Options for hazardous waste management include the following:

1. The existing definitions of "corrective action management unit (CAMU)" and "remediation waste" in 40 CFR 260.10 were modified (as discussed above) to clarify that remediation waste need not be generated by corrective actions conducted pursuant to RCRA in order to qualify for management in a CAMU or temporary unit.
2. A new type of RCRA permit, a Remedial Action Plan (RAP), with a streamlined permitting process is established for governing treatment, storage, and disposal of hazardous remediation wastes. A RAP does not document and enforce site-specific alternative management requirements for hazardous contaminated media because the HWIR-Media final rule does not provide for such media to be exempted from RCRA Subtitle C, as was proposed. Instead, a RAP offers a streamlined permitting process for treating, storing, and disposing of hazardous remediation wastes, including hazardous contaminated media, in accordance with RCRA Subtitle C. USEPA uses the term "remediation-only facility" to refer to facilities that require RCRA permits solely because they manage hazardous remediation wastes (63 FR 65880).
3. A definition for the term "remediation waste management site" is added to 40 CFR 260.10. A remediation waste management site is defined as "a facility where an owner or operator is or will be treating, storing or disposing of hazardous remediation waste." [63 FR 65937]. This definition allows wastes managed at off-site locations to qualify as remediation waste, even if they are removed from their site of origin. The HWIR-Media final regulations governing remediation waste management sites differ from those governing other hazardous waste management facilities in the following

three respects [63 FR 65882]. Remediation waste management sites can be permitted using either the new RAP, or a traditional RCRA permit. If a remediation waste management site is located at a remediation-only facility, facility-wide corrective action is not required, whether the remediation waste management site is permitted using a traditional RCRA permit or a RAP. Remediation waste management sites must comply with performance standards that address general facility requirements, preparedness and prevention, and contingency planning and emergency procedures. They are not compelled to comply with 40 CFR 264, Subparts B, C, and D, which govern the same activities at other hazardous waste management facilities.

4. A new type of hazardous waste management unit, the staging pile, is created for accumulation and temporary storage of solid, non-flowing hazardous remediation waste. A definition for the term "staging pile" was also added to 40 CFR 260.10. The HWIR-Media final rule defines a staging pile as "an accumulation of solid, non-flowing remediation waste (as defined in [40 CFR] §260.10) that is not a containment building and is used only during remedial operations for temporary storage at a facility" [63 FR 65939, codifying 40 CFR 264.554(a)]. A staging pile must be located within the contiguous property under the control of the owner/operator where the wastes to be managed in the staging pile originate. Remediation waste may be stored in the staging pile for a maximum of two years, with the possibility of one 180-day extension.

5. The use of an Area of Contamination concept for *in situ* treatment of hazardous wastes within discrete area of generally dispersed contamination. The discussions of the Area of Contamination approach were discussed in detail in the preamble of the National Contingency Plan (NCP) (55 FR 8758-8760, March 8, 1990). In this discussion, USEPA clarified that certain discrete areas of generally dispersed contamination (called “Areas of Contamination” or “AOCs”) could be equated to a RCRA landfill and that movement of hazardous wastes within those areas would not be considered land disposal and would not trigger RCRA land disposal restrictions. Additionally, consolidation of wastes within an Area of Contamination and treatment of waste *in situ* within an Area of Contamination are not considered “placement” of hazardous wastes, therefore a duty to comply with LDRs is not triggered. Because an Area of Contamination is equated to a RCRA land-based unit, consolidation and in situ treatment of hazardous waste within the Area of Contamination do not create a new point of hazardous waste generation for the purpose of RCRA.

In summary, hazardous waste treatment at CSSA can occur without a RCRA permit or interim status. CSSA will utilize the Area of Contamination concept in managing and treatment of contaminated media or waste. Treatment efforts include the stabilization of hazardous inorganic impacted media in situ before generation, thus rendering the media non-hazardous before disposal.

ADDENDUM 3
SITE-SPECIFIC PLANS

A. SWMU B-3 INTERIM REMOVAL ACTION

A removal action will be performed to remove impacted media and waste located at SWMU B-3 to remove potential sources of chlorinated hydrocarbons that have contaminated the underlying aquifer. The methodology and removal action procedures are described in the respective workplan [(CSSA, 2006]. Background information on SWMU B-3 can be found in the RFI Work Plan Addendum for SWMU B-3, dated January 2006 (Volume 3-1 of the CSSA Environmental Encyclopedia). Specific activities associated with this RFI/IM WMP and planned RFI/IM Waste/Contaminated Media Management is associated with this addendum.

The removal action for SWMU B-3 will include temporary stockpile areas, silt fencing for sediment control, and storm water diversion berms constructed as required for the work. The exact location of these features will be field-determined, but will remain within the SWMU B-3 delineated area. The SWMU B-3 delineated area is shown in Figure A3-1.

Prior to excavation, the existing SVE system will be dismantled. CSSA will remove the power to the SVE and disconnect electrical utilities, leaving all underground electrical utilities dead. Parsons will salvage the blower and remove above ground piping as needed.

Once the SVE system has been removed, the upper soil cover and debris-free overburden will be removed and stockpiled nearby for future use as fill or top soil. For the media excavated from SWMU B-3, waste characterization sampling will occur at a frequency rate of 1 TCLP sample per 200 CY of media/waste for VOCs, and metals, and for total petroleum hydrocarbons (TX 1005).

Ordnance material was discovered in the SWMU B-3 area during the first week of commencing removal actions, causing the excavation activities to be temporarily halted to revise the safety and sampling protocols for completing the removal actions. With the identification of UXO in the material, excavation activities will be supervised by UXO technicians to provide UXO identification and avoidance for the workers and equipment performing the removal action activities and to address safety issues associated with ordnance material. Soil will be stockpiled and staged in 200 CY lots for sampling purposes. Each 200 CY lot of excavated soil which contains any UXO items will be sampled for total explosives (SW 846 Method 8330) and TCLP SVOCs, in addition to total TPH and TCLP VOCs and TCLP metals. At a minimum, at least 10% of 200 CY lots will be tested for TCLP SVOC and total explosives analyses. Scrap inert ordnance-related metal items recovered during investigations will be recycled.

Aerial Photo Date: 2003

N
W E
S

90 45 0 90 Feet

Figure: A3-1

SWMU B-3

Camp Stanley Storage Activity

PARSONS

J:\CSSA\GIS\mxds\b3-A3-1.mxd

Each of the trench's contents and contaminated soils will be removed and placed in stockpile areas for eventual off-post disposal. The following segregated stockpile areas will be constructed based on analytical data and field screening assessments:

- Hazardous Material Stockpile,
- Nonhazardous Material Stockpile,
- Debris-free overburden soil,
- Unknown Material Stockpile, and
- Scrap Stockpile.

The nonhazardous material stockpile area will be bermed to divert run-on and to prevent run-off from the piles. Materials will be segregated based on the characterization performed during the RFI and photo-ionization detector (PID) readings taken during excavation. Metal debris that is deemed recyclable will be segregated into a scrap stockpile. Suspected hazardous or unknown materials will be segregated into separate stockpiles. The trench contents and impacted soil will be excavated to bedrock. Surveys of the excavation and stockpile will be made on a routine basis to document the volume of soil excavated and those designated for disposal. It is anticipated that as much as 22,000 CY of excavated materials will require some form of management.

CSSA will utilize the Area of Contamination concept in managing and treatment of contaminated media or waste. Treatment efforts will include the stabilization of hazardous inorganic impacted media *in situ* before generation, thus rendering the media non-hazardous before disposal. Additionally, management of remediation waste will follow USEPA guidance in a memorandum issued on October 14, 1998, Management of Remediation Waste Under RCRA, EPA 530-F-98-026.

All removal work will be performed in Level D personal protective equipment. The excavated material will be handled and disposed as determined by waste characterization testing. Sampling methodology and quality control are described in the SAP addenda **(Draft SWMU B-3 Treatability Study Work Plan, Parsons, dated December 2005).**