

Baseline Risk Assessment



Prepared for

**Camp Stanley Storage Activity
Bexar County, Texas**

January 7, 2014

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ACRONYMS AND ABBREVIATIONS

\leq	less than or equal to
μg	micrograms
<i>cis</i> -1,2-DCE	<i>cis</i> -1,2-dichloroethene
ADAF	Age Dependent Adjustment Factors
AOC	area of concern
ATSDR	Agency for Toxic Substances and Disease Registry
bgs	below ground surface
BFZ	Balcones Fault Zone
BS	Bexar Shale
CC	Cow Creek
CMI	corrective measure implementation
CMS	corrective measure study
COPC	contaminant of potential concern
CSM	conceptual site model
CSSA	Camp Stanley Storage Activity
CY	cubic yard
DNAPL	dense, non-aqueous phase liquid
EPC	exposure point concentration
GAC	granular activated charcoal
GBRA	Guadalupe Blanco River Authority
^{GW} GW _{Ing}	Ingestion of Groundwater PCL
HEAST	Health Effects Assessment Tables
HHRA	human health risk assessment
HpL	hydrophysical logging
HQ	hazard quotient
IEUBK	Integrated Exposure and Uptake Biokinetic
IIW	ISCO injection well
IM	interim/stabilization measure
ISCO	in situ chemical oxidation
IRIS	Integrated Risk Information System
L	liter
LGR	lower Glen Rose
LOAEL	lowest observed adverse effect level
MCL	maximum contaminant level
MDL	method detection limit
mg	milligrams
MOA	mode of action
MRL	Minimal Risk Level
NOAEL	no observed adverse effect level
OEHHA	Office of Environmental Health Hazard Assessment
Order, the	Administrative Order on Consent under Section 3008(h) of RCRA on May 5, 1999
PCE	tetrachloroethene

ACRONYMS AND ABBREVIATIONS (*continued*)

PCL	Protective concentration level
PFC	plaque forming cell
ppb	parts per billion
PPRTV	Provisional Peer Reviewed Toxicity Value
RAGS	Risk Assessment Guidance for Superfund
RCRA	Resource Conservation and Recovery Act
REL	reference exposure level
RfC	reference concentration
RfD	reference dose
RFI	RCRA Facility Investigation
RL	reporting limit
RMU	range management unit
RRS1	Risk Reduction Standard 1
RSL	Regional Screening Levels
s	second
SAWS	San Antonio Water System
SIM	selective ion monitoring
SIW	steam injection well
STSC	Superfund Health Risk Technical Support Center
SVE	soil vapor extraction
SWMU	solid waste management unit
TAC	Texas Administrative Code
TCE	trichloroethylene
TRRP	Texas Risk Reduction Program
UGR	upper Glen Rose
USEPA	U.S. Environmental Protection Agency
VEW	vapor extraction well
VOC	volatile organic compound

1. INTRODUCTION

1.1 Purpose and Report Organization

As a result of groundwater contamination and findings on the solid waste management unit (SWMU) B-20 site (as described in the Site Management Plan, Parsons, 2010), U.S. Environmental Protection Agency (USEPA) issued Camp Stanley Storage Activity (CSSA) an Administrative Order on Consent (the Order) under Section 3008(h) of Resource Conservation and Recovery Act (RCRA) on May 5, 1999. The Order requires CSSA to identify, investigate, and prevent the further spread of releases of hazardous waste and/or hazardous constituents to the environment at and/or from CSSA, and to ensure that corrective action activities are implemented to protect human health and the environment. The Order requires CSSA to: (1) perform interim/stabilization measures (IM) at the facility to prevent or minimize the further migration of contaminants due to releases of hazardous constituents to the environment, or to mitigate current or potential threats to human health or the environment; (2) perform a RCRA Facility Investigation (RFI) to determine the nature and extent of any release(s) of hazardous waste or hazardous constituents at or from the facility; (3) perform a Corrective Measure Study (CMS) to identify and evaluate alternatives for corrective action(s) to prevent or mitigate any migration of release(s) of hazardous waste or hazardous constituents at or from the facility, and to collect any other information necessary to support the selection of corrective measures at the facility; and (4) implement the corrective measures [Corrective Measure Implementation (CMI)] selected by the USEPA for the facility (Parsons, 2010). A risk assessment is also required as part of the Order. Therefore, this risk assessment is presented to satisfy the Order.

Section 1 of this Risk Assessment report is an introduction, including a description of the site. The general format of the remainder of the report follows the four basic steps of a risk assessment as outlined in USEPA's Risk Assessment Guidance for Superfund, Part A (USEPA, 1989). Therefore, Section 2 describes the data evaluation and selection of chemicals of potential concern (COPC). Section 3 describes the exposure assessment. Section 4 describes the toxicity assessment. Section 5 is the risk characterization and uncertainties. Section 6 presents the conclusions. Section 7 presents the references used in preparation of this document. Tables and figures referenced in this report follow Section 7.

1.2 Site History and Description

Due to the long history of remediation efforts at CSSA, numerous documents have been prepared related to:

- SWMU investigations and closures;
- Quarterly groundwater monitoring;
- Hydrogeological conceptual site model (CSM); and
- Treatability studies.

These documents have been used as source documents for this risk assessment, and all are available in the Administrative Record (www.stanley.army.mil).

1.2.1 Site History

CSSA is located in northwestern Bexar County, about 19 miles northwest of downtown San Antonio. The installation consists of 4,004 acres immediately east of Ralph Fair Road, and approximately 0.5 mile east of Interstate Highway 10 (**Figure 1.1**). Camp Bullis borders CSSA completely on the east, and partially on the north and south.

The land where CSSA is located was used for ranching and agriculture until the early 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 military campgrounds and cavalry shelters.

In October 1917, the installation was re-designated Camp Stanley. Extensive construction started during World War I to provide 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 a number of historical waste sites, including SWMUs and areas of concern (AOC).

Tables 1.1 and 1.2 and Figure 1.2 describe the status of the CSSA sites as of December 2013. As of December 2013, a total of 84 sites, including 38 SWMUs, 41 AOCs, and 5 range management units (RMU), have been identified at CSSA and investigations have been conducted at a total of 79 of those sites (**Table 1.1**). As of December 2013, 75 sites were closed, 2 sites are pending TCEQ approval of closure, and 2 sites (the subjects of this report) are in the process of remediation (**Table 1.2**). The first site was closed in 1995, and the most recent closure was approved by TCEQ in December 2013. Cleanup and closures were conducted in accordance with the State of Texas RCRA requirements.

Over the course of these site closures, RCRA requirements have changed. Through May 2005, the clean-up or closure strategy for CSSA's SWMUs and AOCs followed TCEQ Risk Reduction Rules (30 Texas Administrative Code [TAC] §335 Subchapter S). Since May 2005, the clean-up and closure strategy for these sites has been in accordance with the Texas Risk Reduction Program (TRRP) 30 TAC §350, which became effective May 1, 2000. All sites in the process of being remediated using the Risk Reduction Standard 1 (RRS1) after May 1, 2000, were allowed to complete closure under those criteria until April 30, 2005. As of December 2013, TCEQ approved RRS1 closure of 37 sites, TRRP closure of 7 sites, de-listing of 7 sites, and No Further Action for 24 sites (**Tables 1.1 and 1.2**).

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.

1.2.2 Volatile Organic Compound Contamination at CSSA

In 1991, routine water well testing by the Texas Department of Health detected the presence of dissolved tetrachloroethene (PCE), trichloroethene (TCE), and *cis*-1,2-dichloroethene (*cis*-1,2-DCE) in a CSSA water supply well (Well 16 [CS-16]) above maximum contaminant levels (MCL) and the well was taken out of service. Subsequent sampling showed volatile organic compound (VOC) contaminant concentrations greater than MCLs in several other wells. The potential sources of the waste constituents were believed to be the former oxidation pond (SWMU O-1) and Burn Area 3 (later renamed SWMU B-3); this is referred to as Plume 1 (**Figure 1.3**). Later, AOC-65 was identified as another source of groundwater contamination, referred to as Plume 2 (**Figure 1.3**). By 1999, VOCs had been detected in privately owned wells off-post. A synopsis of historical use and remedial activities at each of these sites is detailed below.

SWMU O-1. The oxidation pond, also referred to as SWMU O-1, was reportedly constructed in 1975 to receive waste from Building 90-1 (spillage, change-out, etc.). Building 90-1 was a gun bluing facility. The frequency of waste delivery to the pond varied upon the level of bluing activity. In 1982, an estimated 24,000 gallons were contained in the pond. During Fall 1985, the pond liner was damaged during bulldozing activities. No records are available to indicate whether or not disposal of the sludge or residue contained in the oxidation pond occurred before destruction of the liner. Several environmental investigations were conducted at the site, including soil gas surveys, geophysics, soil borings, and an electrokinetic treatability study. Eventually, the contents of the oxidation pond were excavated and backfilled with clean material.

Excavation of subsurface soil from the known extent of contamination within SWMU O-1 began on July 24, 2000. Excavation and removal of approximately 1,515 cubic yards (CY) of contaminated soil were completed with soil material transported and disposed of at a permitted facility. The area of excavation encompassed approximately 7,000 square feet. Excavation continued until the soil was removed within and slightly beyond the lateral extent of contamination to a depth where bedrock was encountered. The resulting excavation was approximately 5 feet deep.

After confirmation samples had been collected, the excavation was backfilled to create a solid foundation for the overlying clay cover. A low-permeability clay liner was constructed over the site. Six inches of topsoil were placed on top of the clay liner, and a vegetative surface was established on the topsoil. CSSA sought a partial facility closure of the surface soil zone located within the boundaries of SWMU O-1. The cover serves to prevent infiltration of precipitation into and through the bedrock and remaining contaminated groundwater, thereby serving to mitigate, control, abate, and minimize spread of contamination in the groundwater below. The partial facility closure was approved by the TCEQ in April 2002.

The underlying limestone and the groundwater-bearing zones were not included in the partial facility closure. The limestone/groundwater zone is being addressed as part of the neighboring SWMU B-3 bioreactor system, described further below. A groundwater

extraction well (B3-EXW02-LGR) has been drilled at the site, and is actively capturing contaminated groundwater for the SMWU B-3 bioreactor system.

SWMU B-3. SWMU B-3 was a landfill area thought to have been used primarily for garbage disposal and trash burning, presumably during the 1980's. Subsequent source investigations identified an area of open burn pits and disposal trenches containing PCE and its degradation products. The six trenches varied in depth from 5 to 15 feet, and were approximately 350 to 400 feet long and 12 to 20 feet wide. Groundwater beneath the landfill footprint occurs within a fractured bedrock aquifer composed of limestone and shales. The depth to the water table is typically 150 feet below ground surface (bgs), but can vary from 70 to 300 feet bgs depending on rainfall and recharge. Numerous environmental investigations have occurred at SWMU B-3, including soil gas surveys, geophysical surveys, soil boring and groundwater well installations, and soil vapor extraction (SVE) pilot study.

To remediate contaminated groundwater, an in situ "bioreactor" was created in 2007 by removing the waste in the disposal trenches, backfilling with a gravel/mulch mixture, and infiltrating contaminated groundwater. Microbial activity was augmented with addition of the KB-1 commercial culture of *dehalococcoides*. The current system distributes contaminated groundwater collected from seven extraction wells (CS-EXW01-LGR, CS-EXW02-LGR, CS-EXW03-LGR, CS-EXW04-LGR, CS-EXW05-LGR, CS-MW16-LGR, and CS-MW16-CC) located around the perimeter of the site into the bioreactor trenches where the water encounters microbial activity which degrades the organic contaminants. Approximately 50,000 gallons of contaminated groundwater from extraction wells is treated within the bioreactor each day. Groundwater from the extraction wells typically includes PCE and TCE in concentrations exceeding 100 parts per billion (ppb).

Samples collected from within the bioreactor indicate reductive dechlorination is occurring resulting in the production of *cis*-1,2-DCE, vinyl chloride, and ethene and low (~5 ppb) to non-detect concentrations of PCE and TCE. The decrease in VOC concentrations within the vadose zone beneath the bioreactor indicates the source material is being transformed within the bioreactor. Additionally, the injected waters conditioned to promote reductive dechlorination in the bioreactor have migrated from the vadose zone along fractures and preferred pathways into saturated portions of the aquifer resulting in an increase in vinyl chloride and ethene concentrations. In addition to a lateral bioreactor influence, as evidenced in VOC concentrations in shallow monitoring wells around the site, the development of a more vertical component of bioreactor influence is evident with an increase in observed concentrations of reductive dechlorination products at depth. Large increases in the reductive dechlorination product concentrations have been observed within samples originating as much as 300 feet bgs that prior to bioreactor operation had no detections of these components.

AOC-65. AOC-65, located along the southwestern side of CSSA, consists of Building 90 and potential source areas associated with Building 90. Building 90 was used for weapons cleaning and maintenance. A metal vat, used for cleaning with chlorinated liquid solvents such as PCE and TCE, was installed in the western vault at Building 90 (main portion of AOC-65) prior to 1966 and removed in 1995. In 1995, after removal of the former

solvent vat, a metal plate was welded over the concrete vault, and PCE and TCE solvents were replaced with a citrus-based cleaner system.

In 1999, CSSA identified PCE-impacted drinking water off-post near AOC-65. The fractured nature of the underlying bedrock aquifer provided multiple flow paths for contamination within the vadose zone at AOC-65 to migrate both laterally as well as vertically. As a result, off-post VOC contamination in excess of the MCL was identified in both private and public water well systems. In response, CSSA implemented a proactive community relations plan to provide clean, potable water to the affected community and engaged in aggressive remedial investigations and treatability studies for AOC-65. These studies included source area identifications, soil boring and well installations, and pilot scale treatability studies.

A soil vapor extraction system proved ineffective after 10 years of operations due to large fluctuations in water levels within the aquifer. Extraction well screens and flow paths (fractures) were flooded during periods of higher groundwater elevations. An approach was designed for application of in situ chemical oxidation (ISCO) within AOC-65 by taking advantage of lessons learned from successful operation of the SMWU B-3 bioreactor. In 2012, the approach for injecting ISCO material at AOC-65 included the creation of a trench within a suspected point of release (i.e., drainage ditch) and backfilling this trench with alternating layers of ½-inch-sized gravel and compacted clay. Irrigation lines were installed within each of the gravel layers creating three separate infiltration galleries within the 15-foot-deep, 4.5-foot-wide, 320-foot-long trench. The infiltration galleries were configured to target injection in multiple fractures, some solutionally enlarged, that had been identified on the exposed trench walls.

Sodium persulfate activated via high pH was selected for application within the discrete galleries due to reaction life-span, solution density, and oxidation potential. In 2013, four injection wells in the upper portion of the bedrock vadose zone were installed along the post boundary to create a reactive curtain for intercepting potential PCE migration off-post.

Two ISCO injections of 10 and 22 tons of a 20 percent sodium persulfate solution occurred in 2012 and 2013, respectively. Groundwater samples collected at AOC-65 indicate the ISCO solution followed preferential flow paths. This was inferred by the positive field identification of persulfate (oxidant) and elevated pH (activator), and the presence of reaction by-products within the monitoring well network. Continued monitoring will provide data for determining the overall effectiveness of the ISCO application and the need for further ISCO application(s).

Groundwater Contamination: Based on the observed groundwater contamination described above, 119 monitoring wells were installed on-post between 1996 and 2013. Off-post contamination was first reported by CSSA in December 1999 at a private well adjacent to the facility. CSSA has identified and sampled more than 60 off-post private, commercial, and public supply wells surrounding the post. Since that time, solvent contamination has been detected above the laboratory's method detection limits (MDL) in over 30 off-post groundwater supplies.

Contamination from past disposal activities resulted in multiple groundwater units, referred to as Plume 1 (B-3 and O-1) and Plume 2 (AOC-65) (**Figure 1.3**). Contamination is most widespread within the Lower Glen Rose (LGR) water-bearing unit. Locally, the Bexar Shale (BS) serves as a confining unit between the water-bearing LGR and Cow Creek (CC) Limestone. Faults of the Balcones Fault Zone (BFZ) structurally influence and re-direct the groundwater flowpaths. Environmental studies demonstrate that most of the contamination resides within the LGR.

Plume 1 has advectively migrated primarily south-southeast toward Camp Bullis. A component of the plume has also migrated west-southwest toward CSSA well fields (CS-9, CS-10, and CS-11) and several off-post public and private wells. VOC concentrations over 500 µg/L are present in Middle Trinity aquifer wells near the source area. However, contaminant concentrations are below 1 µg/L over most of the Plume 1 area. In contrast, little to no contamination within the BS and CC Limestone has been consistently identified within Plume 1 except in association with open borehole completions. Trace concentrations associated with Plume 1 have been detected at off-post locations.

Contamination at Plume 2 originated at AOC-65, and spread southward and westward from the post. The greatest concentrations of solvents are reported at the near subsurface adjacent to the source area. Deeper in the subsurface, concentrations in excess of 100 µg/L have been reported in perched intervals above the main aquifer body in the LGR. However, as evidenced by the multi-port wells, once the main aquifer body is penetrated, the concentrations are diluted to trace levels. Off-post, concentrations in excess of MCLs have been detected in private and public wells with open borehole completions. All private groundwater wells with solvents present at concentrations greater than 90 percent of the MCL have been equipped with granular activated carbon (GAC) units and wells in the area are sampled quarterly. Only sporadic, trace concentrations of solvents have been detected in BS and CC Limestone wells within Plume 2.

1.2.3 Hydrology

Approximately 32,250 linear feet of ephemeral stream drainages on CSSA have defined channels. In particular, Salado Creek bisects CSSA, flowing east-southeast. These streams are ephemeral (run few days per year) and have no or indirect ties to permanently flowing surface waters.

1.2.4 Geology

CSSA is characterized by a rolling terrain of hills and valleys in which nearly flat-lying limestone formations have been eroded and dissected by streams draining to the east and southeast. CSSA is sited over Cretaceous-age deposits of the Travis Peak and Glen Rose Formations of the Trinity Group. The predominant structural feature in the area is the BFZ escarpment. Normal faulting has occurred near the central area and the southern boundary of the installation. Faulting in the limestone units has juxtaposed strata of different ages, but fault scarps and traces are almost absent because many of the various calcareous lithologies weather similarly. The faults are northeast-southwest trending, but most are not as

continuous as the fractures. Soil cover is relatively thin, and bedrock is frequently exposed in most areas other than stream valleys.

River and stream dissection of limestone is the major surface feature at CSSA. Most major rivers and streams originating in the Edwards Plateau northwest of CSSA tend to follow the NW-SE regional fracture patterns. Resistive limestone beds crop out as topographic highs across the landscape, resulting in the predominant physiography of hills and “saddles” which lead to stream valleys. Topographic relief across the area ranges from about 1,100 to 1,500 feet above sea level.

1.2.4.1 Stratigraphy

The oldest and deepest known rocks in the area are Paleozoic age (225 to 570 million years ago) schists of the Ouachita structural belt. They underlie the predominant Cretaceous-age carbonate lithology of the Edwards Plateau. At CSSA, the near-surface geology and aquifer are composed of Trinity Group carbonate bedrock, which includes the Glen Rose and Travis Peak Formations. In particular for CSSA, the units of interest are the Glen Rose Limestone, BS, and CC Limestone that form the Middle Trinity aquifer.

The upper member of the Trinity Group is the Glen Rose Limestone. The Glen Rose represents a thick sequence of shallow water marine shelf deposits. This formation is divided into upper and lower members. At CSSA, the Glen Rose is exposed at the surface and in stream valleys. The Upper Glen Rose (UGR) consists of beds of blue shale, limestone, and marly limestone with occasional gypsum beds (Hammond 1984). Based on well log information, the thickness of the upper member reaches 500 feet in Bexar County. The thickness of this member at CSSA is estimated from well logs to be between 20 and 150 feet. The LGR, underlying the UGR, consists of a massive fossiliferous limestone, grading upward into thin beds of limestone, marl, and shale (Ashworth, 1983). The lower member, according to area well logs, is approximately 300 feet thick at CSSA.

Underlying the Glen Rose Limestone is the Travis Peak Formation (and its downdip lateral equivalent, the Pearsall Formation), which attains a maximum thickness of about 940 feet and is divided into five members, in descending order: the Hensell Sand (and BS facies), the CC Limestone, the Hammett Shale, the Sligo Limestone, and the Hosston Sand.

The youngest member of the Travis Peak Formation is the Hensell Sand, locally known as the BS. The shale thickness averages 60-80 feet, and is composed of silty dolomite, marl, calcareous shale, and shaley limestone, and thins by interfingering into the Glen Rose Formation. The underlying CC Limestone is a massive fossiliferous, white to gray, shaley to dolomitic limestone that attains a maximum thickness of 90 feet down dip in the area. At CSSA, groundwater is produced from the LGR and CC intervals of the Middle Trinity Aquifer. The stratigraphically oldest rocks (Hammett Shale, Sligo Limestone, and Hosston Sand) comprise the Lower Trinity Aquifer, but are not developed at CSSA.

1.2.4.2 Structure

The predominant structural geologic features in the area are regional vertical fractures, the regional dip, and the BFZ escarpment. Regional fractures are the result of faulting in the Cretaceous sediments and in the deeper Paleozoic rocks. The two sets of fracture patterns trend northwest-southeast and northeast-southwest across the region. The regional dip is to the east and southeast at a grade of about 100 feet per mile near the fault zone in Bexar and Comal Counties, decreasing 10-15 feet per mile northwest of CSSA.

The BFZ is a series of high-angle normal faults that generally trend NE and SW. Total displacement in northwest Bexar County is approximately 1,200 feet. The faulting is a result of structural weakness in the underlying Paleozoic rocks and subsidence in the Gulf of Mexico basin to the southeast. The down drop blocks outcrop as progressively younger strata from northwest-southeast across the fault zone.

1.2.5 Hydrogeology

Groundwater occurrence and movement is highly variable due to the complex geologic environment. Three aquifers are present in the area of CSSA: the Upper, Middle, and Lower Trinity aquifers. These divisions are based on hydraulic continuity. The Glen Rose Formation and the Travis Peak and Pearsall Formations are the principle water-bearing units. As depicted on **Figure 1.4**, the Upper Member of the Glen Rose Formation composes the Upper Trinity Aquifer, and the Lower Member, a portion of the Middle Trinity Aquifer. The Pearsall Formation and its Travis Peak equivalent include a portion of the Middle Trinity Aquifer and the full Lower Trinity Aquifer. The Travis Peak Formation transitions into the Pearsall Formation in downdip locations very near, or just south of CSSA. Beneath these are metamorphosed Paleozoic rocks, which act as a lower hydrologic barrier. Only the Middle and Upper Trinity aquifers are typically addressed at CSSA.

1.2.5.1 Middle Trinity Aquifer

The primary groundwater source at CSSA and surrounding areas is the Middle Trinity aquifer, consisting of the LGR Limestone, the BS, and the CC Limestone. The average combined thickness of the aquifer members is approximately 460 feet. In the vicinity of CSSA, the LGR portion of the Middle Trinity aquifer is recharged by direct precipitation on the outcrop and stream flow infiltration. Likewise, over the same area, the BS acts as a hydrologic barrier to vertical leakage except where faulted; therefore, most recharge to the CC Limestone comes from overlying updip formations. The bottom of the CC Limestone forms the base of the Middle Trinity aquifer.

Information regarding the subsurface at CSSA was compiled from borehole data, geophysics, and surface mapping to create a conceptual stratigraphic model. Nearly 90 percent of the land surface at CSSA is composed of the basal section of the UGR limestone, comprising the upper confining layer of the Middle Trinity aquifer. Data indicate that the underlying LGR is typically an average thickness of 320 feet. The BS is normally 60 feet in thickness, whereas the underlying CC Limestone unit is typically 75 feet in thickness.

The bulk of the main groundwater body occurs within the basal portion of the LGR and the upper portion of the CC Limestone. The occurrence of groundwater within these units was implicitly related to the massive moldic porosity and karstic features associated with reef-building events and fossiliferous biostromes capable of storing large quantities of water. Occasionally, large volumes of groundwater can also be produced from well-developed reefs above the basal unit, or from significant perched fracture or karstic features. Otherwise, groundwater yields in the UGR and the top 250 feet of the LGR are minimal. Likewise, groundwater production from the BS is negligible.

Based on observation well measurements, regional groundwater flow is generally to the south-southeast (**Figure 1.5**). The LGR typically has a southward gradient that deviates around mounding that occurs at CSSA near the central and northern portions of the facility (CS-MW4-LGR).

Long-term monitoring shows that groundwater response to precipitation events can be swift and dramatic. Depending on the severity of a precipitation event, the groundwater response will occur within several days, or even hours. As an example, the BS exhibits the potential for either northward or southward flow, depending on the season. Likewise, the CC limestone exhibits erratic flow paths, with seasonally radial flows from mounded areas.

Significant precipitation events can result in dramatic aquifer response with regard to water levels. More than 80 feet of recharge has been measured in a well after a 4.5-inch precipitation event. Data obtained from the on-post well clusters indicate that for most of the year, a downward vertical gradient exists within the Middle Trinity aquifer. Differences in drainage rates often leave the head of the BS well above the head of the LGR and CC Limestone. The large differences in head suggest the BS reacts locally as a confining barrier between the LGR and CC Limestone.

1.2.5.2 Upper Trinity Aquifer

The Upper Trinity aquifer consists of the UGR Limestone. Recharge to the Upper Trinity aquifer is from direct precipitation to UGR Limestone outcrop and from stream flow infiltration. Movement of groundwater in the Upper Trinity is restricted to lateral flow along bedding planes between marl and limestone, where solution has enhanced permeability.

Static water levels in adjacent wells completed in different beds within the UGR are often different, demonstrating the possibility that beds are not hydraulically connected by avenues of vertical permeability. The only place where extreme development of solution channels is reported is in evaporite layers in or near the outcrop of the UGR Limestone.

Discharge from the Upper Trinity aquifer is predominantly from natural flow through seeps and springs and from pumping. The Upper Trinity aquifer is, in general, unconfined. Fluctuations in water levels in the Upper Trinity are predominantly a result of seasonal rainfalls and, in some areas, may be impacted by pumping from domestic and public wells. Upper Trinity water is generally of poor quality and most wells achieve only low production.

Evaporite beds in the Upper Trinity introduces excessive sulfate into the water. Few wells obtain water solely from the Upper Trinity aquifer.

To the northwest of CSSA where the full thickness of the UGR exists, the aquifer is utilized as a primary drinking water supply. However, because the unit is so thin at CSSA, it normally does not store appreciable quantities of water. Therefore, it is not used for water supply in the vicinity of CSSA. But in some instances, off-post wells with minimal surface casing can receive contributing UGR groundwater into the open borehole well. The primary interest of the UGR at CSSA concerns environmental investigations addressing impacts to the uppermost occurrence of groundwater.

1.2.5.3 Hydrogeologic Conceptual Site Model

Figure 1.4 presents a Hydrogeologic CSM for the occurrence of groundwater and contamination beneath the CSSA vicinity. Five stratigraphic units (UGR, LGR, BS, CC, and Hosston Sand) comprise the occurrence of shallow and deep groundwater within the Upper and Middle Trinity aquifers. The CSM shows that variable thickness of the UGR (Upper Trinity aquifer) at CSSA is a result of the topography of the site. Generally speaking, the maximum thickness of the UGR would be 400 feet along the undeveloped hilltops of CSSA, with a postwide average thickness of 50 feet. In areas along stream channels such as Salado Creek, the presence of the UGR has been completely eroded away. Because the UGR has been dissected and eroded, the presence of groundwater is perched and laterally discontinuous across the facility. The UGR receives most of the direct precipitation that falls at CSSA (89 percent by areal extent), and discharges groundwater to the surface in the form of temporal seeps and springs along the rock outcrop during high rates of recharge or during flood-scale events. Specifically, after significant rain events, groundwater can be seen entering in Salado Creek in the form of bubbling “estevellas”. Conversely, wells completed in the UGR often will go dry during periods of below-average rainfall.

The upper member of the underlying Middle Trinity aquifer is the LGR limestone, which normally occurs under a water table condition. However, perched zones are known to exist within the vadose zone above the water table. Like the UGR, these zones are also sensitive to drought, and will go dry as observed in CSSA wells. Based upon hydrophysical logging (HpL) conducted at multi-port well CS-WB04, the basal 50 feet of the LGR is the primary production zone of this unit, and accounts for more than 85 percent of groundwater produced from the LGR segment, and 79 percent from the entire Middle Trinity aquifer. While percolation of rainwater from the overlying UGR certainly contributes to the recharge of this unit, the rapid rate at which the LGR will recharge indicates that direct recharge on LGR outcrop areas (Cibolo Creek [off-post] and Salado Creek) are likely the primary mechanisms.

The shaley lithology of the BS interval serves as a confining unit between the more permeable limestones of the overlying LGR and underlying CC units. Water level measurements from four groundwater wells installed in this unit indicate the BS hydraulically separates the LGR and CC segments as a confining layer.

The CC segment of the Middle Trinity aquifer is under confined conditions due to the presence of the overlying BS and underlying HS shaley units. The upper 30 feet of the CC is its most productive interval, and accounts for approximately eight percent of Middle Trinity aquifer yield during the CS-WB04 HpL testing. Groundwater recharge to the CC unit occurs on a regional scale closer to outcrop areas and along river drainage basins. Localized minor recharge to the unit beneath CSSA is expected to occur via vertical leakage through the BS and HS confining units where the rock is structurally compromised by faults and fractures.

Figure 1.4 also conceptualizes the occurrence and transport of VOC contamination beneath CSSA. Nearly all VOC source releases (including B-3, O-1, and AOC-65) have occurred within the UGR limestone. This includes landfill disposal units or direct surface discharges to the ground. The hydrogeologic CSM illustrates a VOC release from a surface impoundment such as SMWU B-3 or O-1 within the UGR. The CSM also conceptualizes the detection and monitoring of contaminated groundwater. CSSA utilizes monitoring wells that discretely monitor UGR and LGR perched zones above the water table, and interval-specific wells for the monitoring the LGR and CC production zones, as well as the BS confining unit.

Conceptually, a VOC release travels laterally with the natural dip of the bedrock, while also vertically migrating downward into lower strata where it encounters perched UGR and LGR groundwater in the vadose zone (above the water table). Groundwater wells that monitor perched UGR intervals often detect VOCs in excess of 500 ppb. To date, no dense, non-aqueous phase liquids (DNAPL) have been encountered at the site.

As contamination moves deeper into the subsurface, the plume will stratify based upon the lithology and permeability of the bedrock. Besides the natural porosity of the rock matrix, it is secondary porosity features such as fractures and dissolution (karstic) limestone that can dictate the flowpath and velocity of groundwater. Structural features such as faults can also re-direct groundwater flow because of the presence solutionally enlarged apertures, or even act as barriers because impermeable rock has been juxtaposed against more permeable rock.

As the plume disperses across perched units within the vadose zone, the VOC concentrations may range between 100 and 500 ppb (or considerably more) near the source areas, and much less at downgradient positions. Once the VOC contamination encounters the water table, the fate and transport mechanisms of advection, dilution, dispersion begin to dominate the regime. In most areas of Plumes 1 and 2, the VOC concentration is generally less than 5 ppb. The exception would be adjacent to source areas, where 200 ppb concentrations of VOCs still are present. Because of the hydraulic properties of the LGR production zone, this is also the interval that detectable concentrations of contamination are most widespread. Pumping action of nearby supply wells also increases the rate at which the plumes will disperse and travel.

VOC results from four BS wells and eight CC wells all support the conclusion that the BS confining unit is an effective hydraulic barrier to the continued downward migration of contaminants. Analytical results from the past 10 sampling results from eight wells are completely free of VOC contamination. The remaining two BS wells and two CC wells both

have had trace detections (less than reporting limit [RL]) of VOCs in the past 10 sampling events.

Open borehole well completions are also shown on the CSM (**Figure 1.4**), which may be typical for either a public supply well or privately owned well. Open borehole wells create a couple of unique situations that can factor into the exposure potential of groundwater consumers. Note that the amount of surface casing dictates if the perched groundwater is able to enter the borehole. In older wells, surface casing may be minimal, allowing contaminated perched groundwater to enter the borehole. Because of the natural downward gradient within a well, contaminated waters would co-mingle, causing localized contamination of LGR and CC groundwater adjacent to the well. Newer wells generally follow current regulations that mandate adequate surface casing to preclude the entrance of undesirable water into a well. While the regulatory perspective is to minimize comingling of lesser quality (Class 2 and Class 3) groundwater with more pristine (Class 1) groundwater sources, the result is also effective for minimizing VOC contamination.

1.2.6 Surface Water and Groundwater Use

There are ephemeral streams at CSSA that flow after significant rainfall but, there are no perennial surface water sources at CSSA. Therefore, surface water is not a source of potable water at CSSA.

Both CSSA and the immediate surrounding areas use the Middle Trinity aquifer as a potable water source. This includes CSSA, commercial developments, private landowners, and until recently, several nearby public water systems. As of September 2013, there are three supply wells on-post (CS-1, CS-10, and CS-12) in use, one supply well on-post for emergency use only (CS-9), and approximately 55 private wells within one-quarter mile of the post boundary.

Several new housing developments neighboring CSSA are supplied by San Antonio Water System (SAWS). SAWS obtains its water primarily from the Edwards aquifer to the southeast. In addition, the neighboring City of Fair Oaks obtains its drinking water from both the Trinity aquifer and Canyon Lake, which the Guadalupe Blanco River Authority (GBRA) extracts and treats at the Western Canyon Water Treatment Plant.

1.2.7 Conceptual Site Model

A CSM is used to qualitatively define the type of potential exposures to contaminants at or migrating from a site (i.e., to systematically evaluate the effect of chemicals in relevant media on potential receptors). The CSM describes onsite release points, affected physical media, types of contaminant transport and fate mechanisms that may be involved at the site, each group of potentially exposed populations or receptors (primarily human receptors), and how each receptor group may contact site-related contamination. The CSM is used to summarize existing site characterization data, including assumptions about land and groundwater use, and to complete the qualitative exposure pathway assessment.

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. The facility currently has 14 residences that are occupied by on-site workers and their families. Part of CSSA is undeveloped woodland and is used seasonally for hunting. No changes to the CSSA mission and/or military activities are expected in the future. Camp Bullis borders much of CSSA to the north, east, and south (**Figure 1.1**). The area surrounding CSSA is residential with ranching and agricultural land intermingled with the developed communities. Although residential development could continue in the future on the west and south sides of CSSA, no other changes in land use off-post are expected in the future. **Figure 1.6** is the CSM for off-post receptors. **Figure 1.7** is the CSM for on-post receptors that use water from the on-post supply wells. **Figure 1.8** is the CSM for the CSSA sites associated with RMU-1. RMU-1 is an active range; therefore RMU-1 and the sites associated with RMU-1 (SWMUs B-2, B-8, B-20/21, and B-24) are deferred from investigation until RMU-1 is no longer active.

Based on the current land uses, potential on-post receptors include current / future residents, current / future commercial/industrial workers (including military personnel), current / future site visitors/recreational users (including hunters), future construction / excavation workers, and ecological receptors. Potential receptors off-post include current / future residents, current / future commercial/industrial workers (including agricultural workers and ranchers), current / future site visitors / recreational users, future construction workers, and ecological receptors.

Receptors could be exposed to contaminated surface soil through incidental ingestion, dermal contact, and inhalation of soil particles or vapors emitted from soil. Future construction / excavation workers (i.e., those performing intrusive or excavation activities) could also be exposed to contaminated subsurface soil through incidental ingestion, dermal contact, and inhalation of dust or vapors emitted from soil. However, because the SWMUs, AOCs, and applicable RMUs have been closed under RRS and TRRP (except those sites associated with RMU-1), surface soil and subsurface soil exposure pathways will not be evaluated further in this risk assessment. At the open sites, there is potential for hunters to be exposed to contamination via ingestion of game exposed to contamination in soil. However, based on results of the tissues samples collected (see Section 2.2.2), this exposure pathway is incomplete. There are no other complete soil exposure pathways.

Salado Creek flows intermittently east-southeast through CSSA (**Figure 1.1**). There are no perennial surface water features on-site. Therefore, there are no complete surface water / sediment exposure pathways.

The interaction between groundwater and surface water is insignificant for the following reasons:

- The nature of releases to surface water is intermittent. Releases occur only after significant rainfall events and have been infrequently observed.
- During events when groundwater would be released to surface water, the stream flow is so high that the contribution of groundwater to surface flow is low. Therefore, any release to surface water during rain events would be diluted.

- Aeration of surface water during overland flow would cause VOCs to volatilize from the surface water.

Therefore, contamination in the groundwater is not expected to migrate to the intermittent surface water and sediment and exposure pathways are incomplete for human and ecological receptors.

As previously discussed, in the CSSA vicinity, the UGR contains temporal and discontinuous perched water zones that are highly mineralized with sulfates and chlorides, and are generally less desirable water sources. Because the UGR is not a source of groundwater in the vicinity of CSSA, there are no complete groundwater exposure pathways to the UGR.

Private and supply drinking water wells supply groundwater from the Middle Trinity aquifer, with the bulk of the yield originating from the basal portion of the LGR and from the upper CC. Because COPCs are present in the groundwater in the Middle Trinity aquifer, both on-post and off-post receptors could be exposed to contamination in groundwater provided by supply wells via ingestion as drinking water, incidental ingestion, dermal contact, and inhalation of VOCs emitted from groundwater. Receptors on-post could be exposed to contaminated groundwater pumped from non-supply wells (e.g., former agricultural wells and CS-X series wells) through incidental ingestion, dermal contact, and inhalation of vapors emitted from groundwater. Because the shallow groundwater at CSSA is greater than 50 feet bgs, future construction workers are not expected to come into contact with shallow groundwater during excavation activities, so the groundwater exposure pathways are incomplete for future construction/excavation workers.

There are no complete exposure pathways for ecological receptors. Because the SWMUs, AOCs, and applicable RMUs have been closed under RRS and TRRP (except those sites associated with RMU-1), surface soil and subsurface soil exposure pathways will not be evaluated further in this risk assessment. There are no perennial surface water features on-site. Therefore, there are no complete surface water/sediment exposure pathways for ecological receptors. Finally, because the shallow groundwater at CSSA is greater than 50 feet bgs and the interaction between groundwater and surface water is insignificant, ecological receptors are not expected to come into contact with groundwater. Because there are no complete exposure pathways for ecological receptors, an ecological risk assessment was not conducted as part of this risk assessment. A summary of the exposure pathways evaluated in this risk assessment is included in **Table 1.3**.

2. DATA EVALUATION AND IDENTIFICATION OF CHEMICALS OF POTENTIAL CONCERN

2.1 Risk Assessment Process

The risk assessment evaluates the potential risks to human health posed by chemicals detected in soil gas and groundwater associated with CSSA as summarized in **Table 1.3**. As presented in USEPA guidance documents, the human health risk assessment (HHRA) is a four-step evaluation process that includes:

- Data evaluation and identification of COPC;
- Exposure assessment;
- Toxicity assessment; and
- Risk characterization.

This quantitative HHRA estimated the carcinogenic risk and noncarcinogenic hazards by calculating ratios of site concentrations to health-protective human health screening levels (further described in Section 5.1 below). This risk ratio approach satisfies the requirements of USEPA's Risk Assessment Guidance for Superfund (RAGS) because it addresses the four steps of a risk assessment (data evaluation and identification of COPCs, exposure assessment, toxicity assessment, and risk evaluation). In addition, while this risk assessment is not meant to satisfy the requirements of the TRRP, this approach is consistent with the approach outlined by TRRP for evaluating potential risk and hazard at contaminated sites.

The four steps of risk assessment provide the general outline of a quantitative risk assessment report, as listed below. This HHRA is consistent with USEPA guidelines as presented in RAGS (USEPA, 1989).

- Step 1: Data Evaluation and Identification of Chemicals of Potential Concern (This Section)
- Step 2: Exposure Assessment (Section 3)
- Step 3: Toxicity Assessment; Risk Ratio and Screening Criteria Assessment (Section 4)
- Step 4: Risk Characterization and Uncertainties (Section 5)

2.2 Data Evaluation and Identification of Chemicals of Potential Concern

2.2.1 Data Evaluation

2.2.1.1 Soil

As previously discussed, because the SWMUs, AOCs, and applicable RMUs have been closed under RRS and TRRP (except those sites associated with RMU-1), surface soil and subsurface soil exposure pathways will not be evaluated further in this risk assessment.

2.2.1.2 Vapor Intrusion

USEPA recommended an off-post investigation through indoor air sampling in commercial and residential areas. Samples were collected in February 2013 from two commercial buildings off-post, one on-post military building (CSSA Visitor Center, occupied full-time), and five off-post residential homes (including both new homes and older pier and beam homes) (**Figure 2.1**). Samples were collected over a 24-hr period and were analyzed for PCE and TCE using level IV analysis via USEPA Method TO15 Selective Ion Monitoring (SIM). **Table 2.1** presents the results of this investigation.

2.2.1.3 Tissue Samples

On February 29, 2012, USEPA provided comments to CSSA requesting evaluation of the risk associated with the consumption of game animals by hunters. As a result of this request, CSSA contracted Parsons to collect tissue samples for lead analysis. The goal of this evaluation was to collect tissue samples from animals harvested at CSSA for human consumption (i.e., deer and feral hogs) to support a human health risk assessment to determine the risk associated with consumption of animals exposed to lead-contaminated soil. Samples were collected from 20 individual animals; 19 deer and 1 feral hog harvested during the 2012 hunting season (**Table 2.2**). Samples collected from each animal included muscle tissue, liver tissue, and bone. The blind and harvest locations of the animals sampled are shown on **Figure 2.2**. The laboratory reports are included in **Appendix A**.

The animal providing deer sample GT13003M was shot in the gut, with the bullet passing through both muscle and liver, potentially cross-contaminating the sample. Further, the harvested tissue (meat/bone/liver) was washed together in a single bowl (instead of individual bowls), which could further cross-contaminate all of the tissue in the bowl. Therefore, the tissue samples from this animal were potentially contaminated as a result of the lead bullet and were excluded from the risk assessment.

Muscle tissue samples are expected to represent the most likely human exposure, as this is the tissue most consumed by humans. Therefore, the muscle tissue results were used to estimate the risk associated with consumption of animals harvested at CSSA. In order to evaluate the potential exposure of animals harvested at CSSA to lead-contaminated soil, liver and bone samples were also collected, although it is not expected that these tissues would be consumed by human receptors. The presence of lead in liver samples would indicate potential recent (i.e., short-term) exposure of the animal to lead. Lead present in contaminated soil would enter the blood stream following ingestion, and then pass through the liver before moving to the rest of the body (first-pass effect). Lead can then be eliminated from the liver through the feces. However, lead that moves through the liver and into the rest of the animal's body can be sequestered into bone due to the chemical similarities between lead and calcium (both are divalent cations). Lead that sequesters into bone tends to remain in the animal for extended periods of time. Therefore, the presence of lead in bone samples could be indicative of past exposure, but not necessarily recent exposure.

2.2.1.4 Groundwater

CSSA monitors an extensive network of more than 200 groundwater wells, both on-, and off-post (**Table 2.3**). The type, purpose, depth, and construction of a well can vary greatly between the locations, and therefore these factors have been considered when screening a well location for inclusion in this HHRA. In general, the well types evaluated include open borehole wells, screened monitoring wells, remediation wells, and multi-port (e.g., Westbay) wells.

Table 2.4 shows a total of 208 wells that were considered during this risk assessment (**Figure 2.3**). The eight multi-port wells have 69 discrete monitoring intervals associated with the eight locations. Figure 2.3 is an overview of the well locations at CSSA. The well locations for six areas of CSSA are identified on **Figures 2.4 through 2.9**.

The discriminating factors for evaluating whether a well type is included in the risk assessment is whether the monitored interval is considered a complete exposure pathway, as described in Section 1.2.7. Several factors were considered, including the depth and yield of the groundwater zone. In particular, the numerous perched zones throughout the UGR and LGR units warrant particular consideration. Generally speaking, these units yield very low quantities of highly mineralized groundwater. Under normal circumstances, these intervals would not be exploited for water development and therefore are not considered a complete pathway for exposure. Normal groundwater production zones are typically 150 feet or more below these perched zones.

In the case of CSSA, these low-yielding perched zones are important because the bulk of VOC contamination (e.g., greatest concentrations) exists within them. In fact, the HpL study (see Section 1.2.5.3) conducted at off-post well CS-WB04 determined that no appreciable groundwater inflow (less than 0.1 percent) contributed to the borehole above a depth of 200 feet. Long-term multi-port monitoring at CS-WB04 confirms that contaminated groundwater will accumulate in zones less than 200 feet bgs over long periods of time, but the yield of the interval cannot appreciably contribute groundwater to an operable water production well. Additionally, in most cases, these perched zones are isolated from the wellbore by surface casing and cement.

The intent of many environmental investigations at CSSA has been to quantify and remediate the concentration of contaminants within these perched zones. As a result, CSSA has installed over 100 perched zone wells to assess and remediate the subsurface (**Table 2.5**). These wells include vapor extraction wells (VEW), steam injection wells (SIW), ISCO injection wells (IIW), and numerous remedial performance monitoring wells. As such, these well types generally range between 5 and 50 feet deep, depending on their specific function. While the groundwater contained within these wells is contaminated, the route of exposure to the general public and construction workers is limited.

For this HHRA, UGR and LGR wells that generally monitor perched groundwater zones less than 150 feet below grade (topographic-dependent) were excluded from the analysis (see **Table 2.5**). The reasoning for this is the LGR water table can rise to these elevations during times of prolific precipitation, thereby no longer rendering these zones as “perched”. Private and public supply wells obtain groundwater from the Middle Trinity aquifer, with the bulk of the

yield originating from the basal portion of the LGR and from the upper CC. Therefore, to capture the potential risk associated with exposure to groundwater obtained from these regions, perched wells in the LGR with screened depths greater than 150 feet bgs were included in the risk assessment. The end result is that 65 on-post wells and 64 off-post wells were retained for the risk assessment, while 76 on-post wells and 23 multi-port zones in the perched zones were excluded from the risk assessment (**Table 2.6**). Eight multi-port wells with a total of 46 discrete monitoring intervals associated with the eight locations were also included in the risk assessment.

Seven off-post wells have GAC units due to past exceedances (LS-7, RFR-10-A, RFR-10-B, OFR-3, RFR-11, LS-5, and LS-6; **Figures 2.4 and 2.6**). These wells are monitored to ensure VOCs in the supply groundwater do not exceed MCLs. Samples from these wells have been collected from groundwater prior to and after passing through the GAC units. Since a baseline risk assessment evaluates the risk associated with exposure to environmental media in the absence of remedial actions, the groundwater samples collected prior to passing through the GAC units are included in the risk assessment. However, because the analytical results indicate there are no exceedances of MCLs in the samples collected after the groundwater has passed through the GAC units, these samples are not included in the risk assessment.

The groundwater sample locations are included on **Figures 2.4 through 2.9**. Blue circles indicate wells included in the risk assessment, while green circles indicate wells excluded from the risk assessment.

Groundwater has been monitored quarterly on-post since December 1999 (55 sampling events) and off-post since September 2001 (48 sampling events). The most recent sampling event occurred in September 2013. Over this 14 year period of monitoring, results were analyzed using geostatistical methods to identify data gaps and optimize monitoring. As a result, the frequency of monitoring varies between wells. Based on the amount of data and the dynamic nature of contamination, the ten most recent sampling events from each well are included in this HHRA. **Table 2.7** includes the maximum detected concentrations of the six COPCs, discussed below in Section 2.2.2, based on the ten most recent sampling events.

If the last date of sampling for an on-post well occurred over five years ago, the location of the well was evaluated to determine if there was another well nearby with more recent data. If a nearby well with more recent data was available, the well with older data was not included in the HHRA. This occurred in only two instances: the most recent sample dates for wells LS-2 and LS-3 were June 21, 2006, and March 21, 2007, respectively. Nearby well L-5 (**Figure 2.6**) was most recently sampled on September 17, 2013, and is therefore considered to provide data more representative of current conditions in those locations. Well JW-32 was also excluded from the risk assessment because the owner opted out of the sampling program so there are no sample data for this location.

In addition to calculating the individual risk ratios for the on-post supply wells, the supply wells (wells CS-1, CS-10, and CS-12) were combined to evaluate the risk associated with exposure to on-post supply water. Because the water from the wells is mixed to supply water to the base, this will more accurately represent the on-site exposure to groundwater.

Data were classified as definitive (validated) or screening (not validated). Both definitive and screening data were included in the HHRA.

Data validation classified the data through the use of several qualifiers. Data without qualifiers were considered appropriate for risk assessment purposes. Following USEPA guidance (1989), data with a J qualifier were treated as detects and used for risk assessment purposes. “F” qualified data (Found) indicate the analyte was positively identified but the associated concentration is an estimation above the MDL and below the reporting limit. F-qualified data were treated as detects and used for risk assessment purposes. U-qualified data were considered to be nondetected and usable for risk assessment purposes.

Data from the last ten sampling events for all wells are included in **Appendix B**. The data tables in **Appendix B** present all samples, primary and duplicates. The “best value” sample result of all primary and duplicate results was used in the risk ratios. If both values represent detected concentrations, then the highest detected concentration was retained. If one value represents a detected concentration and one value is qualified as not detected (U-qualified), then the detected value was retained.

2.2.2 Chemicals of Potential Concern

COPCs are those site-related contaminants for which there is evidence of a release (e.g., site-related contaminant is detected at a concentration greater than the selected screening level) due to environmental media due to site activities. Soil, soil gas, tissue, and groundwater have been sampled at the site and were evaluated for the presence of COPCs. COPCs are then evaluated for their potential to pose a risk to human health.

2.2.2.1 Soil

As previously described in Section 1, the soil sites have been closed. Therefore, soil is not evaluated further in this HHRA.

2.2.2.2 Vapor Intrusion

Indoor air sampling results are summarized in **Table 2.1**. Analytical results were compared with USEPA resident air regional screening levels (RSL) (November, 2013) for PCE and TCE (9.4 and 0.43 $\mu\text{g}/\text{m}^3$, respectively). All results were below USEPA resident air RSLs (**Table 2.1**). Therefore, there are no COPCs in indoor air, and vapor intrusion is not evaluated further in this HHRA.

2.2.2.3 Tissue Samples

Using USEPA’s Integrated Exposure and Uptake Biokinetic (IEUBK) Model (2010) to estimate an acceptable exposure to lead in animal tissue resulted in the following acceptable levels of lead in muscle tissue. Assuming an acceptable blood lead level of 10 $\mu\text{g}/\text{dL}$, and assuming a child obtains 1 percent of their meat diet (i.e., the child eats meat obtained from an animal harvested at CSSA for four days out of the year), the acceptable concentration of lead in muscle tissue would be 160 mg Pb/kg tissue (**Figure 2.10**). If the assumption is changed to 10 percent of the child’s meat consumption for the year is obtained from an animal harvested at

CSSA, the acceptable concentration of lead in muscle tissue would be reduced to 16 mg Pb/kg tissue.

Analytical results indicate that lead (at a detection limit of approximately 0.50 mg Pb/kg tissue) was not detected in any of the muscle or liver samples (see Appendix A). However, lead was detected in 5 of 21 bone samples (**Figure 2.2**), ranging from 0.71 mg Pb/kg bone to 2.7 mg Pb/kg bone. All animals with detected concentrations of lead in bone were harvested from three deer blinds located in the southeast portion of CSSA, in the vicinity of RMU-1 (**Figure 2.2**).

Therefore, while lead was detected in bone obtained from individual animals harvested from the area of the active range (RMU-1), there is no risk associated with ingestion of meat obtained from these animals, since lead was not detected in muscle or liver samples. Therefore, no further evaluation of risk associated with ingestion of game harvested from CSSA was performed.

2.2.2.4 Groundwater

The groundwater COPCs at CSSA are based on historically detected analytes (since the inception of the groundwater monitoring program in 1991) and process knowledge. The following six groundwater COPCs were approved by the project team and are evaluated in this HHRA: *cis*-1,2-dichloroethene (*cis*-1,2-DCE), PCE, TCE, vinyl chloride, lead, and mercury.

Primary groundwater COPCs at CSSA are *cis*-1,2-DCE, PCE, and TCE. Vinyl chloride has also been detected in Plume 1 groundwater near SWMU B-3 and is an indicator that degradation of larger-chain chlorinated hydrocarbons is occurring at the bioreactor. Although sampled less frequently than the primary COPCs, lead and mercury are of potential concern because of the relatively high percentage of and number of wells with detections.

Some wells include both total (unfiltered) and dissolved (filtered) metal analyses, while others include only total (unfiltered) metal analyses. The maximum detected concentrations for the COPCs detected in the last ten sampling rounds are summarized in **Table 2.6**.

3. EXPOSURE ASSESSMENT

The objective of the exposure assessment is to estimate the type and magnitude of potential exposures to COPCs at the site. The exposure assessment includes identification of potential exposure pathways, receptors, and exposure scenarios, as well as quantification of exposure. Characterization of the exposure setting and identification of potentially exposed receptors and exposure pathways are discussed in this section. CSMs graphically representing the results of the exposure assessment are presented in **Figures 1.5 through 1.8**. Quantification of exposure involves quantifying the magnitude, frequency, and duration of exposure for the receptors and exposure pathways of concern.

3.1 Evaluation of Exposure Pathways and Identification of Receptors

The potentially complete exposure pathways and receptors at CSSA are identified in this section. Consistent with Risk Assessment Guidance for Superfund (USEPA, 1989), current and future land-use scenarios were considered for the site.

Site-specific CSMs for potential human exposures are depicted in **Figure 1.6 through Figure 1.8**, and are formulated according to applicable guidance, with the use of professional judgment and site-specific information on land use, water use, contaminant sources, release mechanisms, routes of migration, potential exposure points, potential routes of exposure, and potential receptor groups associated with the site.

As described in Section 1.2.7, the receptors evaluated in this HHRA based on current and future land use on-post include residents, commercial/industrial workers (including military personnel), site visitors / recreational users (including hunters), and construction / excavation workers. Receptors off-post evaluated in this HHRA include residents, commercial / industrial workers (including agricultural workers and ranchers), site visitors / recreational users, and construction workers.

As previously discussed, the soil exposure pathways are incomplete exposure pathways for all receptors. Although there is contamination detected in the perched aquifer, and therefore the possibility of volatilization of solvents from shallow groundwater, the indoor air sampling results were below the USEPA RSL for resident air. Therefore, exposure via the inhalation of volatiles from groundwater to indoor air is an incomplete pathway for all receptors. Exposure via the inhalation of volatiles emitted from groundwater into outdoor air is included in evaluation of the risk associated with exposure to groundwater.

Because COPCs are present in the groundwater in the Middle Trinity aquifer, receptors on-post and off-post could be exposed to contamination in groundwater provided by supply wells via ingestion as drinking water, incidental ingestion, dermal contact, and inhalation of VOCs emitted from groundwater. Future construction workers are not expected to come into contact with shallow groundwater during excavation activities, so the groundwater exposure pathways are incomplete for future construction/excavation workers.

3.2 Screening Values

Screening values were obtained from TCEQ TRRP and USEPA. Groundwater at CSSA is classified as Class 1 by TRRP because it is used for drinking water. Under TRRP, the groundwater ingestion exposure pathway ($^{GW}GW_{Ing}$) is applicable to Class 1 groundwater. The TCEQ TRRP protective concentration levels (PCLs) for ingestion of groundwater are used in the risk ratio calculations. The TRRP PCLs for ingestion of groundwater are based on MCLs. The lead PCL is based on the USEPA Action Level. Therefore, the PCLs are protective of residential and commercial/industrial use of groundwater, including use as drinking water.

The PCLs are not specifically protective of dermal contact with contaminated groundwater. However, it is assumed that evaluation of residential ingestion of groundwater as a drinking water source is also protective of dermal exposure to groundwater. The $^{GW}GW_{Ing}$ PCLs are not specifically protective of the inhalation of volatiles emitted from groundwater into outdoor air. However, for the COPCs evaluated, the $^{GW}GW_{Ing}$ PCLs are more conservative than the $^{air}GW_{Inh-V}$ PCLs (which account for inhalation of volatiles emitted from Class 1 groundwater) for both 0.5-acre and 30-acre source areas. Therefore, it is assumed that evaluation of residential ingestion of groundwater as a drinking water source is also protective of inhalation of volatiles from groundwater into outdoor air.

Risk ratios were also calculated using the USEPA RSLs for Tapwater (target risk 1×10^{-6} and $HQ=1.0$). Evaluation of groundwater using the USEPA RSLs for Tapwater is protective of ingestion of groundwater as drinking water and inhalation of volatiles from use of groundwater by residential and commercial/industrial receptors.

3.3 Estimation of Exposure Point Concentrations

For groundwater, the exposure point concentration (EPC) was the maximum detection of an analyte from the last ten sampling events (**Table 2.6**). Each groundwater sampling location was considered a separate exposure point, and risk was calculated for each well. The EPC from the Westbay (e.g., multi-port) wells is the maximum detected concentration from the sampled geologic units; these values are shaded in gray on **Table 2.6**. The EPC for the combined on-post supply wells is the average of the maximum detected concentrations from the most recent ten sampling events from wells CS-1, CS-10, and CS-12 (**Table 2.7**).

4. TOXICITY ASSESSMENT

Contaminants may be classified as carcinogens or non-carcinogens based on evidence from a variety of sources including controlled epidemiologic investigations, clinical studies, and experimental animal studies (USEPA, 1989). A reference dose (RfD) for oral exposure or a reference concentration (RfC) for inhalation exposure is used for evaluating noncarcinogenic effects. Various RfDs and RfCs are available depending on the route of exposure (oral or inhalation), the critical effect (developmental or other), and the length of exposure being evaluated (chronic, subchronic, or single event). There is no level of exposure to carcinogens that does not pose a finite probability, however small, of generating a carcinogenic response. Therefore, a slope factor is used for evaluating carcinogenic effects.

The groundwater COPCs at CSSA are *cis*-1,2-DCE, PCE, TCE, vinyl chloride, lead, and mercury. PCE, TCE, and vinyl chloride are evaluated as carcinogens. *cis*-1,2-DCE and mercury are evaluated as noncarcinogens. Lead is not evaluated as a carcinogen or noncarcinogen, but is evaluated based on the potential for exposure to increase blood lead levels, as described below.

The critical toxic effect used to develop the noncarcinogenic toxicity value for *cis*-1,2-DCE is increased relative kidney weight in male rats (USEPA, 2013). The critical toxic effect used to develop the noncarcinogenic toxicity value for PCE is neurotoxicity (USEPA, 2013). The critical toxic effects used to develop the noncarcinogenic toxicity value for TCE are decreased thymus weight in female B6C3F1 mice; decreased plaque-forming cell (PFC) response, increased delayed-type hypersensitivity in B6C3F1 mice; and increased fetal cardiac malformations in Sprague-Dawley rats (USEPA, 2013). The critical toxic effect used to develop the noncarcinogenic toxicity value for vinyl chloride is liver cell polymorphism (USEPA, 2013). Critical toxic effects used to develop the noncarcinogenic toxicity value for mercury are hand tremor, increases in memory disturbance, and slight subjective and objective evidence of autonomic dysfunction (USEPA, 2013).

Following USEPA guidance, lead is evaluated based on the potential for exposure to increase blood lead levels and not the potential for carcinogenic or noncarcinogenic risks. Therefore, lead concentrations detected at the site are directly compared to the screening level. If lead concentrations at the site exceed the screening level, then unacceptable risk may occur. However, if lead concentrations are lower than the screening level, then further evaluation of the risk associated with exposure to lead is not required and further management of the risk associated with exposure to lead will not be required.

As discussed in Section 3.2, screening values used in this HHRA are the TCEQ TRRP PCLs for ingestion of groundwater and the USEPA RSLs for Tapwater. The TCEQ TRRP PCLs for *cis*-1,2-DCE, PCE, TCE, vinyl chloride, and mercury are based on MCLs. An MCL is the legal threshold limit on the amount of a substance allowed in public water systems under the Safe Drinking Water Act. The PCL for lead is based on USEPA's Action Limit.

USEPA RSLs are calculated based on whether a chemical is a carcinogen, noncarcinogen, or both. If a chemical is both a carcinogen and a noncarcinogen, the lower of the two calculated

screening levels is the selected RSL. The RSLs are based on a target risk of 1×10^{-6} for carcinogens, a hazard index of 1 for noncarcinogens, or the lower of the two levels if the chemical is both a carcinogen and a noncarcinogen. USEPA RSLs use toxicity values (slope factor, IUR, RfDs) and RfCs obtained from the following hierarchy of sources:

1. USEPA's IRIS on-line database
2. USEPA's Provisional Peer Reviewed Toxicity Values (PPRTV) derived by USEPA's Superfund Health Risk Technical Support Center (STSC) for the USEPA Superfund program
3. Agency for Toxic Substances and Disease Registry (ATSDR) Minimal Risk Levels (MRL)
4. California Environmental Protection Agency Office of Environmental Health Hazard Assessment's (OEHHA) Chronic Reference Exposure Levels (REL) from February 2012 and the Cancer Potency Values from July 21, 2009
5. USEPA's PPRTV screening toxicity values
6. USEPA's Health Effects Assessment Summary Tables (HEAST)

5. RISK CHARACTERIZATION AND UNCERTAINTIES

The final step in the risk assessment process is risk characterization. The purpose of the risk characterization step is to 1) review the results from the exposure and toxicity assessments; 2) quantitatively estimate the potential for carcinogenic (i.e., risk) and noncarcinogenic (i.e., hazard) effects; and 3) assess and discuss uncertainties associated with each of the aforementioned steps.

This HHRA used a risk ratio approach using site screening levels to quantify potential carcinogenic risk and noncarcinogenic hazard for each chemical detected above background concentrations in each environmental medium. This section describes the risk ratio and screening level assessment used in this HHRA.

5.1 Risk Ratio Assessment

The risk ratio method considered risk due to exposure to groundwater at CSSA. For the risk ratio assessment, the maximum detected chemical concentrations at each exposure point were the EPCs used to calculate risk. Use of maximum concentrations provides the most health-protective estimate of exposure to a particular chemical.

In the risk ratio analysis, the ratio of the EPC was divided by the appropriate screening level for the environmental medium. The risk ratio screening criteria are the TCEQ TRRP PCLs for ingestion of groundwater.

Following calculation of the risk ratios for individual chemicals, the ratios were then summed to determine the cumulative risk due to exposure to each medium. Cumulative noncarcinogenic risk ratios greater than one indicate a potential unacceptable noncarcinogenic risk. Cumulative carcinogenic risk ratios greater than USEPA's acceptable risk range of 10^{-4} to 10^{-6} indicate a potential unacceptable carcinogenic risk.

If a well was sampled for both total (unfiltered) and dissolved (filtered), the dissolved metal concentrations were used in the cumulative risk ratio.

5.1.1 Risk Ratio Equations

Carcinogenic risks were estimated using the following equation:

$$\text{Cumulative Risk} = \sum (TR) \frac{(EPC_i)}{SL_{c-i}}$$

where:

Cumulative Risk = Cumulative risk for carcinogenic COPCs one through "i"

(unitless), where $(TR) \frac{(EPC_i)}{SL_{c-i}}$ is the chemical-specific

		carcinogenic risk for chemical “i”;
TR	=	Target lifetime excess carcinogenic risk of 10^{-6} (unitless);
EPC _i	=	Exposure point concentration for chemical “i” (µg/L); and
SL _{c-i}	=	Human health screening level (i.e., TRRP PCL or USEPA RSL) (µg/L) for carcinogenic chemical “i”.

Noncarcinogenic risks were estimated using the following equation:

$$HI = \sum (THQ) \frac{(EPC_i)}{SL_{nc-i}}$$

where:

HI	=	Cumulative hazard index for noncarcinogenic COPCs one through “i” (unitless), where $(THQ) \frac{(EPC_i)}{SL_{nc-i}}$ is the chemical-specific noncarcinogenic hazard quotient (HQ) for chemical “i”;
THQ	=	Target hazard quotient of one (unitless);
EPC _i	=	Exposure point concentration for chemical “i” (µg/L); and
SL _{nc-i}	=	Human health screening levels (i.e., TRRP PCL or USEPA RSL) (µg/L) for noncarcinogenic chemical “i”.

5.1.2 Summary of Carcinogenic and Noncarcinogenic Risk in Groundwater

The primary objective of this HHRA was to quantitatively characterize the human health risk associated with current and reasonably expected current and future exposure to groundwater at CSSA. As discussed in Section 3.1, potentially complete exposure pathways for the site were evaluated. The exposure pathways are outlined in Section 3.1 and are also shown on the CSMs (**Figure 1.6** through **Figure 1.8**). Results of the risk ratio quantification are presented in this section.

The most recent ten sampling events from each well retained for the HHRA were evaluated (**Table 2.6**). As described in Section 2.2.2, six COPCs were identified in groundwater: *cis*-1,2-DCE, PCE, TCE, vinyl chloride, mercury, and lead. Risk ratios were calculated using the maximum detected concentration from all wells within the exposure area for 2010 through 2013 to show the upper end of risk at the site. Risk ratios for each individual well retained in the risk assessment were calculated to provide a spatial representation of the risks within the exposure area. Results of this spatial risk characterization analysis are provided in **Table 5.1** through **Table 5.96** (calculations of risks in each well included in this risk assessment) and presented on **Figure 5.1** through **Figure 5.5**.

Table 5.97 provides a summary of the carcinogenic risk, noncarcinogenic hazard, and lead hazard using both the TCEQ TRRP PCLs and the USEPA RSLs for each of the wells included in this HHRA. Hazards and risks based on TCEQ TRRP PCLs are generally less than

those calculated using the USEPA RSLs. **Table 5.98** provides a summary of the unacceptable carcinogenic risks, noncarcinogenic hazards, and lead hazards in off-post and on-post wells.

5.1.2.1 Off-Post Carcinogenic and Noncarcinogenic Risk in Groundwater

The cumulative hazard risk ratios (based on TCEQ TRRP PCLs and USEPA RSLs) for noncarcinogenic COPCs for each of the off-post wells were less than 1 (**Table 5.97**), indicating no noncarcinogenic hazard is expected due to exposure to the groundwater as a potable water source.

Unacceptable cumulative carcinogenic risks were calculated using the TCEQ TRRP PCLs in the risk ratio calculations for exposure to carcinogens present in the groundwater. There are four off-post wells (I10-4, LS-5, OFR-3, and RFR-10; see **Figure 5.1**) that have cumulative carcinogenic risk ratios greater than 1×10^{-6} , which exceeds the lower limit of USEPA's acceptable risk range of 1×10^{-4} to 1×10^{-6} (**Table 5.97**). The risks in these wells range from 2×10^{-6} to 5×10^{-6} . The highest cumulative carcinogenic risk (cumulative risk ratio = 5×10^{-6}) was calculated for well RFR-10, located within Plume 2, west of AOC65. The primary contributors to the cumulative carcinogenic risk are PCE (risk ratio = 3.6×10^{-6}) and TCE (risk ratio = 1.7×10^{-6}).

Unacceptable cumulative risks were calculated using the USEPA RSLs in the risk ratio calculations for exposure to carcinogens present in the groundwater. There are 11 off-post wells that have cumulative carcinogenic risk ratios greater than 1×10^{-6} , which exceeds the lower limit of USEPA's acceptable risk range of 1×10^{-4} to 1×10^{-6} (**Table 5.1**). The risks in these wells range from 1×10^{-6} to 2×10^{-4} . The highest cumulative carcinogenic risk (cumulative risk ratio = 2×10^{-4}) was calculated for well LS-5 (**Figure 5.2**). The primary contributors to the cumulative carcinogenic risk in well LS-5 are TCE (risk ratio = 3.0×10^{-6}) and vinyl chloride (risk ratio = 2.1×10^{-4}).

As previously discussed, lead was evaluated separately from the other chemicals. The lead risk ratios (based on TCEQ TRRP PCLs and USEPA RSLs) for each of the off-post wells were less than 1, indicating no hazard is expected due to exposure to lead in potable groundwater.

5.1.2.2 On-Post Carcinogenic and Noncarcinogenic Risk in Groundwater

Unacceptable hazards were calculated using the TCEQ TRRP PCLs for exposure to noncarcinogens present in the groundwater at 12 of the on-post wells, including the Westbay wells (**Table 5.97**). Risk ratios greater than 1 indicate a potential noncarcinogenic hazard due to exposure to groundwater as a potable water source. The calculated cumulative hazards in these wells range from 2 to 29. The highest cumulative hazard (29) was calculated in well CS-9 (**Figure 5.3**), located within Plume 1. Mercury is the sole contributor to this hazard. Hazard indices exceeding 1 in the Westbay wells were calculated within the LGR geologic unit.

Unacceptable hazards were calculated using the USEPA RSLs for exposure to noncarcinogens present in the groundwater at 13 of the on-post wells, including four Westbay wells (**Table 5.97**). The calculated cumulative hazards in these wells range from 2 to 92. The highest cumulative hazard (92) was calculated in well CS-9 (**Figure 5.4**), located within

Plume 1. Mercury is the sole contributor to this hazard. Hazard indices exceeding 1 in the four Westbay wells were calculated within the BS, CC, and LGR geologic units. The calculated cumulative hazards in the four Westbay wells ranged from 2 in the BS and CC geologic units to 30 in the LGR geologic unit.

Groundwater supply well CS-9 rehabilitation was completed in June 2007. Initially, the investigation indicated debris (believed to be either old well casing, column pipe and/or an old broken pump) present in the bottom of the well borehole was the suspected source for the elevated lead and mercury detections noted after the initial well rehabilitation effort. The well was pressure-grouted to seal the debris in the bottom of the borehole. This was intended to eliminate contact with the water producing zones. The initial sampling indicated that metals concentrations were less than MCLs. However, continued sampling through 2013 has shown that lead and mercury in excess of groundwater standards (RSLs and PCLs) can still be present in the groundwater. Therefore, well CS-9 continues to be an inactive component of the CSSA distribution system.

Unacceptable cumulative carcinogenic risks were calculated using the TCEQ TRRP PCLs in the risk ratio calculations for exposure to carcinogens present in the groundwater. There are 22 on-post wells, including Westbay wells, which have cumulative carcinogenic risk ratios greater than 1×10^{-6} , which exceeds the lower limit of USEPA's acceptable risk range of 1×10^{-4} to 1×10^{-6} (**Table 5.97**). The risks in these wells range from 3×10^{-6} to 2×10^{-4} . The highest cumulative carcinogenic risk (cumulative risk ratio = 2×10^{-4}) was calculated within the LGR geologic unit of Westbay wells CS-WB05-LGR and CS-WB07-LGR, located adjacent to the B-3 bioreactor (**Figure 5.1**). The primary contributors to the cumulative carcinogenic risk in these two wells are TCE, PCE, and vinyl chloride.

Unacceptable cumulative carcinogenic risks were calculated using the USEPA RSLs in the risk ratio calculations for exposure to carcinogens present in the groundwater. There are 25 on-post wells, including Westbay wells, which have cumulative carcinogenic risk ratios greater than 1×10^{-6} , which exceeds the lower limit of USEPA's acceptable risk range of 1×10^{-4} to 1×10^{-6} (**Table 5.97**). The risks in these wells range from 2×10^{-6} to 2×10^{-2} . The highest cumulative carcinogenic risk (cumulative risk ratio = 2×10^{-2}) was calculated for well CS-WB05-LGR, located adjacent to the B-3 bioreactor (**Figure 5.2**) and within the LGR geologic unit. The primary contributors to the cumulative carcinogenic risk in well CS-WB05-LGR are PCE (risk ratio = 9.3×10^{-6}), TCE (risk ratio = 5.7×10^{-6}), and vinyl chloride (risk ratio = 2.0×10^{-2}).

As previously discussed, lead was evaluated separately from the other chemicals. The lead risk ratios (based on TCEQ TRRP PCLs and USEPA RSLs) for four on-post wells exceeded 1, indicating a potential lead hazard due to exposure to the potable groundwater (**Table 5.1**). The lead hazards in these wells range from 2 to 13. The highest lead hazard (13) was calculated for well CS-11 (**Figure 5.5**).

There are three on-post supply wells (wells CS-1, CS-10, and CS-12). In addition to calculating the individual risk ratios for the on-post supply wells, these wells were combined to evaluate the risk associated with exposure to on-post supply water. Because the water from the wells is mixed to supply water to the base, this will more accurately represent the on-site

exposure to groundwater. The cumulative carcinogenic risks calculated for the individual supply wells as well as combined supply wells were less than 1×10^{-6} , indicating no unacceptable risk is expected due to exposure to carcinogenic COPCs detected in the on-post supply groundwater (**Table 5.97**). Similarly, the cumulative noncarcinogenic hazards calculated for the individual supply wells as well as combined supply wells were less than 1, indicating no unacceptable hazard is expected due to exposure to noncarcinogenic COPCs detected in the on-post supply groundwater (**Table 5.97**). As previously discussed, lead was evaluated separately from the other chemicals.

The lead risk ratio (based on TCEQ TRRP PCLs and USEPA RSLs) for one on-post supply well exceeded 1, indicating a potential lead hazard due to exposure to the potable groundwater (**Table 5.97**). The lead hazard in this well was 1.9. However, when the on-post supply wells are combined to evaluate the lead hazard, the lead hazard ratio is less than 1, indicating there is no unacceptable hazard expected due to exposure to lead in the combined on-post supply groundwater.

5.1.3 Risk Assessment Uncertainties

All HHRA involve use of assumptions, professional judgments, and imperfect data to varying degrees, which result in uncertainty in the final estimates of risk. Risk assessment in general is often based on conservative assumptions and scenarios. Uncertainty can be introduced into a health risk assessment at every step of the process outlined in this document. Uncertainties are present in a risk assessment because it requires integration of the following:

- Release of constituents into the environment, and the areal and vertical distribution of these materials in soil and groundwater;
- Fate and transport of constituents in a variety of different and variable environments by processes that are often poorly understood or too complex to quantify accurately;
- Potential for adverse health effects in humans based on extrapolations from animal studies; and
- Probability of adverse effects in a human population that is highly variable with respect to genetics, age, activity level, and lifestyle.

This section qualitatively describes the inherent and site-specific uncertainties of the assessment process.

Uncertainty in Data Collection and Evaluation

The analysis of uncertainties focuses on determining whether the available data are representative of contaminant concentrations and site conditions, and whether features of sampling, analyses, or statistical treatment of the data result in an over- or underestimation of potential risk.

Chemicals detected at the site were retained for the HHRA regardless of the frequency of detection. The use of the maximum detected concentration introduces uncertainty into the risk assessment, since the use of one analytical result likely does not accurately represent the concentration of the constituent in the volume of water being evaluated. In cases where the analyte is infrequently detected, the use of the maximum concentration will likely overestimate

the actual exposure point concentration, resulting in an overestimate of the risk. In cases with few total samples, the use of the maximum detected concentration can either over- or underestimate the exposure concentration depending on the distribution of the actual concentrations in the groundwater.

Chemicals that were never detected in any samples were eliminated from the risk assessment. It is possible that some constituents eliminated from consideration in the risk assessment may actually have been present in samples at concentrations lower than the sample quantitation limit. If constituents eliminated from the risk assessment were actually present in the environmental medium, the cumulative risk could be underestimated.

Both definitive and screening-data were used in this HHRA. Screening data have not undergone a rigorous validation process, so there is less confidence in the screening data results compared to the definitive results that have undergone data validation. The measured concentrations in the screening data may not accurately represent current conditions and exposure concentrations. Therefore, risk ratios calculated using screening data may over or underestimate risk.

Two VEW (AOC65-VEW28a and AOC65-VEW28b) were included in the HHRA. Because these are designed to extract contamination, the results from VEWs would be biased high and would not represent actual groundwater concentrations in the area; therefore, including VEW in the risk assessment may overestimate risk. Additionally, precautions would be taken in the locations of the VEW because they are in areas of known contamination.

Steady-state conditions (i.e., the observed concentrations remain the same in groundwater for the foreseeable future) were assumed for evaluation of potential future exposures. The assumption of steady-state conditions may tend to overestimate long-term exposure and health risk because contaminant concentrations may decline over time due to natural dissipation processes (e.g., biological and chemical degradation) or dilution through transport processes. In some cases, depending on the contaminant and or the release mechanisms involved, steady-state assumptions could potentially underestimate risk (e.g., breakdown products that are more toxic than the parent compound or a continuous source contributing to contamination in another medium). As discussed in Section 1.2.2, periodic ISCO remediation is underway at AOC65 (Plume 2) and a bioreactor is in place at SWMU B-3 (Plume 1). The goal of these systems is to remediate VOC-contaminated source area groundwater. Since the goal of these systems is to reduce the concentrations of VOCs in groundwater, steady-state conditions are unlikely within the influence of the bioreactor and ISCO remediation wells. Therefore, the risks associated with exposure to VOCs are overestimated for future receptors, as it would be expected that concentrations of these constituents will decrease over time. However, the risk associated with the degradation of chlorinated solvents may be underestimated in the short term due to a temporary increase in concentrations of these breakdown products. However, over time these products will also degrade, reducing risk in the long-term.

Six off-post wells have GAC units due to past exceedances (LS-7, RFR-10, OFR-3, RFR-11, LS-5, and LS-6). These wells are monitored to ensure VOCs in the supply groundwater do not exceed MCLs. Samples from these wells have been collected from groundwater prior to and after passing through the GAC units. The risk assessment used the analytical results from

samples collected prior to the water passing through the GAC units. Therefore, the analytical results overestimate the exposure, since exposure is to groundwater that has passed through the GAC unit. Analytical results indicate there are no exceedances in the samples collected after the groundwater has passed through the GAC units. Therefore, the actual risk at these wells is likely overestimated.

Uncertainty in Exposure Assessment

HHRA estimates are conditional on actual and potential exposure pathways identified at the site. If exposure does not occur, no risks are present. Furthermore, the risk assessment process does not factor in the probability of exposure occurring. For example, there may not be a reason for a construction worker to excavate in a contaminated area, as future development is hypothetical.

Current land uses and characterization of the site's current physical setting provided the basis for predicting future land use at and in the vicinity of the site. The assumption of steady-state conditions was also used in predicting future contaminant concentrations. As discussed above, this assumption would tend to overestimate potential future exposure levels because concentrations of chemicals may decline with time.

There is also some concern as to how well an exposure scenario approximates the actual conditions that a receptor may be exposed to at a given site. Potential human exposures could deviate from those used in the risk assessment through differences in exposure frequency, contact rates, exposure durations, body weight, and life span. Each factor has a degree of uncertainty associated with it that could over- or underestimate risk.

Evaluation of risk for residential settings using the USEPA RSLs includes calculation of the risk to children. Other sensitive subpopulations such as elderly people, pregnant or nursing women, and people with chronic illnesses were not specifically evaluated in this HHRA. These subpopulations may be more sensitive to certain chemical exposures. However, USEPA generally considers sensitive subpopulations when developing toxicity factors.

The PCLs are based on MCLs. MCLs are not risk-based screening criteria, but are promulgated criteria. As such, they may not always consider sensitive subpopulations or mutagenic mode of action (MOA). Therefore, risk ratios calculated using the PCLs may over- or underestimate risk.

The PCLs and RSLs are not specifically protective of dermal contact with contaminated groundwater. This pathway is not included in the risk ratio analysis using the PCLs and RSLs but it is assumed to be conservatively evaluated under the residential ingestion of groundwater as drinking water scenario as evaluating residents provides the most conservative estimate (based on the exposure frequency and exposure duration). Therefore, the risk associated with dermal exposure to groundwater may be overestimated.

Uncertainty in Toxicity Assessment

Some uncertainty is also inherent in the toxicity values used in the HHRA. Carcinogenic slope factors and route-specific values were derived only for compounds shown to cause an

increased incidence of tumors in either human or animal studies. This dose-response curve is then assumed to be linear at low doses (e.g., those found in situations of environmental contamination) and is used to predict tumor incidence at low exposure levels. When an animal study is used, the final slope factor is adjusted to account for extrapolation of animal data to humans. If the studies used to derive the slope factor were conducted for less than the life span of the test organism, the final slope factor had also been adjusted to reflect risk associated with lifetime exposure.

The slope factor is generally an upper 95th percentile confidence limit of the probability of a response based on experimental animal data in the multistage model. This means the site-specific chemical risk is not likely to exceed the risk estimate derived through the model and is likely to be less than the predicted risk.

Screening criteria are developed using very conservative (health-protective) exposure and intake assumptions. HHRA comparisons also use conservative concentrations of the chemicals detected at the site. In addition, screening criteria used in the HHRA are considered health-protective for carcinogenic and noncarcinogenic chemical mixtures. Carcinogenic chemicals correspond to the conservative 1×10^{-6} (one in a million) excess cancer risk level, providing a very protective screening value. Noncarcinogens use a target HQ of 1 and also account for the cumulative noncarcinogenic hazard for chemicals with the same toxic endpoint or mechanism of action.

The PCLs are based on MCLs. MCLs are not risk-based screening criteria, but are promulgated criteria. Because they are promulgated, they are not updated as frequently as the RSLs with the most up-to-date information and therefore, may be considerably out-of-date. Therefore, risk ratios calculated using the PCLs may over- or underestimate risk.

The chronic RfD for a compound is based on studies where either human or animal populations were exposed to a given compound by a given route of exposure for a major portion of the life span (as a USEPA guideline, seven years to a lifetime; USEPA, 1989). RfDs are derived by determining dose-specific effect levels from available quantitative studies and applying uncertainty factors to the most appropriate effect level to determine an RfD for humans. Uncertainty factors are generally applied as multiples of 10 to represent specific areas of uncertainty in the data. Typically, an uncertainty factor of 100 to 1,000 is used in the professional judgment of uncertainties. General uncertainties in the derivation of RfDs may be associated with factors such as (1) variations in the general population (to protect sensitive receptors), (2) extrapolation of animal data to humans, (3) use of a subchronic study versus a chronic study to determine the no-observed-adverse-effect level (NOAEL), or (4) use of a lowest-observed-adverse-effect level (LOAEL) versus a NOAEL. Both the uncertainty and modifying factors are conservative in nature and tend to overestimate risk.

Uncertainty in Estimating Chemical Risk

The expression of the potential risk associated with contaminants detected at the site is a result of the combined steps of data evaluation, exposure assessment, and toxicity assessment. This combination can magnify the uncertainties present in these steps of the risk assessment process.

A collage of risk is presented herein due to the use of data spanning several years (September 2001 through September 2013). Therefore, the current risk may vary from the estimates presented herein.

If a constituent has been determined to cause cancer by a mutagenic MOA, USEPA noted it is possible that exposures to that chemical in early life may result in higher lifetime cancer risks than an adult exposure of comparable duration (USEPA, 2005a). Therefore, if chemical-specific data on susceptibility from early life exposures are available and have been used to develop cancer slope factors that specifically address any potential for differential potency in early life states, the derived cancer slope factors were used in lieu of age-dependent adjustment factors (ADAF). For example, the Integrated Risk Information System (IRIS) assessment of vinyl chloride provides two cancer slope factors, one that accounts for exposure occurring during early life and one that accounts for exposure occurring later in life. The slope factor that accounts for exposure occurring during early life was used when evaluating carcinogenic risk using the USEPA RSL for tapwater. Therefore, this may overestimate risk for non-residential receptors at CSSA.

In assessing the risk for which a mutagenic MOA has been identified by USEPA, default ADAFs were applied for those chemical lacking chemical-specific data on susceptibility from early life exposures. The *Supplemental Guidance for Assessing Cancer Susceptibility from Early Life Exposure to Carcinogens* (USEPA, 2005b) recommends the following default ADAFs:

- 10-fold adjustment for exposures during the first 2 years of life
- 3-fold adjustment for exposures from ages 2 to <16 years of age
- No adjustment for exposures after turning 16 years of age

These ADAFs are used to prorate the toxicity factors for the respective age ranges, to account for more or less sensitivity during that life stage. For example, there is assumed by default to be 10-fold greater sensitivity over the first two years of life than for an equivalent level of exposure after turning 16 years of age. ADAFs were used to calculate the USEPA RSL for tapwater for TCE. Therefore, this may overestimate risk for non-residential receptors at CSSA.

Other COPCs could theoretically function under a mutagenic MOA, and not be identified as such by USEPA. In these situations, the risk associated with early life exposures may be underestimated.

Additional uncertainties are incorporated into the risk assessment when exposures to several substances are summed. Exposure to multiple chemicals may result in interactions between the chemicals in ways that may not be predictable. The assumption is that exposure to multiple chemicals is additive, that is, the carcinogenic risk or hazard quotient for each constituent is simply added together to estimate the cumulative risk or hazard. However, in reality some constituents may produce a synergistic effect, where the risk associated with exposure to these chemicals is actually greater than the sum of the carcinogenic risk or hazard quotients. In such a case, the risk assessment will underestimate the risk. In other cases, some constituents may interact antagonistically, such that the risk associated with exposure to these chemicals is less than the sum of the carcinogenic risk or hazard quotients. In these cases, the risk assessment will overestimate the risk associated with exposure to these chemicals.

6. CONCLUSIONS

Because the SWMUs, AOCs, and applicable RMUs have undergone remediation associated with closure under RRS and TRRP (except those sites associated with RMU-1), the soil exposure pathways are incomplete exposure pathways for all receptors. Additionally, no COPCs were identified in the indoor air, so the inhalation of volatiles from vapor intrusion into indoor air exposure pathways are incomplete.

Six groundwater COPCs were evaluated in this HHRA: *cis*-1,2-DCE, PCE, TCE, vinyl chloride, lead, and mercury.

The cumulative hazard risk ratios for noncarcinogenic contaminants of concern for the off-post wells were less than 1, indicating no noncarcinogenic hazard is expected due to exposure to the groundwater as a potable water source. Lead was evaluated separately from other COPCs. The lead risk ratios for the off-post wells were less than 1, indicating no hazard is expected due to exposure to lead in potable groundwater.

Based on results of this HHRA and a review of the risk assessment objectives, unacceptable risks to human health may occur in some locations off-post from exposure to contaminants in groundwater at CSSA (**Figures 5.1 through 5.5**). Cumulative carcinogenic risks greater than the USEPA acceptable range of 1×10^{-4} to 1×10^{-6} were calculated in several off-post wells (**Figures 5.1 and 5.2**). The highest cumulative carcinogenic risk calculated using the PCLs was in well RFR-10, while the highest cumulative carcinogenic risk calculated using the RSLs was in well LS-5. As described previously, the risk assessment evaluated samples collected before GAC treatment. Both wells RFR-10 and LS-5 are equipped with GAC units.

Unacceptable risks to human health may occur in some locations on-post from exposure to contaminants in groundwater at CSSA (**Figures 5.1 through 5.5**). There are several locations on-post with cumulative noncarcinogenic hazards greater than 1 (**Figures 5.3 and 5.4**). The highest cumulative hazard was calculated in well CS-9. Additionally, cumulative carcinogenic risks greater than the USEPA acceptable range of 1×10^{-4} to 1×10^{-6} were calculated in several on-post wells (**Figures 5.1 and 5.2**). The highest cumulative carcinogenic risk was calculated within the LGR geologic unit of Westbay well CS-WB05-LGR.

Hazards due to exposure to lead in groundwater may occur in some on-post locations. The highest lead hazard was calculated for well CS-11 (**Figure 5.5**).

7. REFERENCES

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Tables

Table 1.1
Summary of Site Status as of December 2013
Camp Stanley Storage Activity, Bexar County, Texas

Site Type	Total Sites	Number of Closed Sites		Number of Open Sites
Solid Waste Management Units	38	RRSI Closures	23	1 in process of groundwater remediation (B-3) 1 pending TCEQ approval of TRRP closure (B-34) 4 within boundary of active range (B-2, B-8, B-20/21, B-24)
		TRRP Closures	3	
		NFA	4	
		Delisted	2	
Areas of Concern	41	RRSI Closures	14	1 in process of remediation (AOC65)
		TRRP Closures	3	
		NFA	18	
		Delisted	5	
Range Management Units	5	RRSI Closures	0	1 active range (RMU-1) 1 pending TCEQ approval of TRRP closure (RMU-4)
		TRRP Closures	1	
		NFA	2	
		Delisted	0	
Total Sites	84		75	9

NFA = No Further Action

RRSI = Risk Reduction Standard 1

TRRP = Texas Risk Reduction Program

Table 1.2
Site Status
Camp Stanley Storage Activity, Bexar County, Texas

<i>Unit No.</i>	<i>Description</i>	<i>Closure Approved</i>	<i>Closure Type</i>	<i>Investigation Report(s)</i>	<i>Human Health</i>	<i>Eco</i>
Solid Waste Management Units						
B-1	Powder and ammo burn area (1954).	November-02	RRS1	RFI/Closure Report July 2002	Soil sampling results at the site met RRS1 criteria for site closure.	COCs are not present at concentrations that could pose a potentially unacceptable ecological risk.
B-2	Small arms ammunition burning area (1954) - North Pasture	<i>Pending closure of RMU-1</i> Trench waste has been removed				
B-3	Landfill area (garbage disposal and burning trash); filled in 1990-91.	Remediation in Process				
B-4	Classified burn area (documents and trash).	February-13	TRRP	APAR October 2012	Soils found to have COC concentrations above their respective Tier 1 or calculated site-specific Tier 2 Residential PCLs were removed from the site.	APAR concluded risk to ecological receptors from chemical concentrations in soil is not expected to be significant.
B-5	Possible fired small arms ammo brass area. Not located.	October-02	RRS1	RFI/Closure Report July 2002	Waste materials removed and soil sampling results at the site met RRS1 criteria for site closure.	COCs are not present at concentrations that could pose a potentially unacceptable ecological risk.
B-6	Possible solid waste disposal area.	October-02	RRS1	RFI/Closure Report July 2002	Soil sampling results at the site met RRS1 criteria for site closure.	COCs are not present at concentrations that could pose a potentially unacceptable ecological risk.
B-7	Possible fired small arms ammunition brass disposal area	October-02	RRS1	RFI/Closure Report July 2002	Soil sampling results at the site met RRS1 criteria for site closure.	COCs are not present at concentrations that could pose a potentially unacceptable ecological risk.
B-8	Fired small arms ammo brass disposal area (piles of fire bricks, ammo shells) - North Pasture	<i>Pending closure of RMU-1</i> Approximately 2,750 cubic yards of soil removed				
B-9	Miscellaneous solid waste (metal and weapons) disposal area.	March-03	RRS1	RFI/Closure Report September 2002	Soil sampling results at the site met RRS1 criteria for site closure.	COCs are not present at concentrations that could pose a potentially unacceptable ecological risk.
B-10	Ammunition disposal area.	January-04	RRS1	RFI/Closure Report May 2003	Waste materials and soils with COC concentrations above their respective background levels were removed from the site in order to meet RRS1 criteria for site closure.	COCs are not present at concentrations that could pose a potentially unacceptable ecological risk.
B-11	Miscellaneous solid waste disposal (ammo, scrap metal, const. debris).	September-04	RRS1	RFI Closure Report June 04	Waste materials and soils with COC concentrations above their respective background levels were removed from the site in order to meet RRS1 criteria for site closure.	COCs are not present at concentrations that could pose a potentially unacceptable ecological risk.
B-12	Landfill, WPA trash when igloos were being built	July-05	RRS1	RFI Report April 2005	Waste materials and soils with COC concentrations above their respective background levels were removed from the site in order to meet RRS1 criteria for site closure.	COCs are not present at concentrations that could pose a potentially unacceptable ecological risk.
B-13	Trash dump area.	July-13	TRRP	RIR April 2013	Soils found to have COC concentrations above their respective Tier 1 Residential PCLs were excavated and removed.	Passed the Tier 1 Ecological Exclusion Criteria Checklist per 30 TAC §350.77.
B-14	<i>Possible fired brass area - not located.</i>	February-08	Delisting	Delisting Request November 2007	Suspected area not found.	Suspected area not found.
B-15/16	Landfill (target vehicles, weapons mounts)	September-11	NFA	RIR June 2011	Soils found to have COC concentrations above their respective Tier 1 Residential PCLs were excavated and removed.	Passed the Tier 1 Ecological Exclusion Criteria Checklist per 30 TAC §350.77.
B-19	Solid waste disposal area (metals and weapons).	September-02	RRS1	RFI/Closure Report June 2002	Soil sampling results at the site met RRS1 criteria for site closure.	COCs are not present at concentrations that could pose a potentially unacceptable ecological risk.

Table 1.2
Site Status
Camp Stanley Storage Activity, Bexar County, Texas

Unit No.	Description	Closure Approved	Closure Type	Investigation Report(s)	Human Health	Eco
B-20/21	Former OB/OD area & ammunition disposal areas - North Pasture	Pending closure of RMU-1 Trench waste has been removed (B-20) UXO removed (B-20) Phosphate-Induced Metal Stabilization (B-20) Small arms ammunition debris removed (B-20/21)				
B-22	Burn area (artillery shells).	December-02	RRS1	RFI/Closure Report August 2002	Soil sampling results at the site met RRS1 criteria for site closure.	COCs are not present at concentrations that could pose a potentially unacceptable ecological risk.
B-23	Disposal trenches (two green canisters)	July-05	RRS1	RFI Report April 2005	Waste materials and soils with COC concentrations above their respective background levels were removed from the site in order to meet RRS1 criteria for site closure.	COCs are not present at concentrations that could pose a potentially unacceptable ecological risk.
B-23A	Disposal Trench (glass ampoules of liquid)	March-05	RRS1	RFI Closure Report September 2004	Waste materials and soils with COC concentrations above their respective background levels were removed from the site in order to meet RRS1 criteria for site closure.	COCs are not present at concentrations that could pose a potentially unacceptable ecological risk.
B-24	Spent ammo/rockets area - North Pasture	Pending closure of RMU-1 Trench waste has been removed				
B-25	Possible disposal trench	July-05	RRS1	RFI Report April 2005	Soils with COC concentrations above their respective background levels were removed from the site in order to meet RRS1 criteria for site closure.	COCs are not present at concentrations that could pose a potentially unacceptable ecological risk.
B-26	Possible disposal trench	November-04	Delisting	Delisting Report August 2004	No evidence of waste management activities identified at the site, and soil sampling results at the site met RRS1 criteria for site closure.	COCs are not present at concentrations that could pose a potentially unacceptable ecological risk.
B-27	Sanitary landfill, consisting of 5-6 trenches (6 ft deep, 3 ft wide).	December-11	NFA	RFI Report July 2002 RIR September 2011	Soils found to have COC concentrations above their respective Tier 1 Residential PCLs were excavated and removed or were used to calculate a 95% UCL per TAC §350.79(2)(A) that does not exceed the PCL.	Passed the Tier 1 Ecological Exclusion Criteria Checklist per 30 TAC §350.77.
B-28	Disposal trenches (molten metal, ammo, ammo parts)	November-11	NFA	RFI Report April 2002 RIR July 2011	Soils found to have COC concentrations above their respective Tier 1 Residential PCLs were excavated and removed or were used to calculate a 95% UCL per TAC §350.79(2)(A) that does not exceed the PCL.	Passed the Tier 1 Ecological Exclusion Criteria Checklist per 30 TAC §350.77.
B-29	Solid waste disposal area (in old quarry)	February-08	RRS1	RFI Report April 2005	Waste materials and soils with COC concentrations above their respective background levels were removed from the site in order to meet RRS1 criteria for site closure.	COCs are not present at concentrations that could pose a potentially unacceptable ecological risk.
B-30	Solid waste disposal area	February-05	RRS1	RFI Report September 2004	Soils found to have COC concentrations above their respective Tier 1 Residential PCLs were excavated and removed.	Passed the Tier 1 Ecological Exclusion Criteria Checklist per 30 TAC §350.77.
B-31	Lead shot/sand pipe bedding	November-02	RRS1	RFI/Closure Report July 2002	Soil sampling results at the site met RRS1 criteria for site closure.	COCs are not present at concentrations that could pose a potentially unacceptable ecological risk.
B-32	Lead shot/sand pipe bedding	November-03	RRS1	RFI/Closure Report January 2003	Soils with COC concentrations above their respective background levels were removed from the site in order to meet RRS1 criteria for site closure.	COCs are not present at concentrations that could pose a potentially unacceptable ecological risk.

**Table 1.2
Site Status
Camp Stanley Storage Activity, Bexar County, Texas**

Unit No.	Description	Closure Approved	Closure Type	Investigation Report(s)	Human Health	Eco
B-33	Lead shot/sand pipe bedding	November-04	RRS1	RFI Report September 2004	Waste materials and soils with COC concentrations above their respective background levels were removed from the site in order to meet RRS1 criteria for site closure.	COCs are not present at concentrations that could pose a potentially unacceptable ecological risk.
B-34	Maintenance pit floor drain and discharge point	<i>In Process</i>	<i>TRRP</i>	<i>RFI Report August 2002 Site-Specific Closure Report in Progress</i>	<i>Soils found to have COC concentrations above their respective Tier 1 or calculated site-specific Tier 2 Residential PCLs will be removed from the site.</i>	<i>Passed the Tier 1 Ecological Exclusion Criteria Checklist per 30 TAC §350.77.</i>
B-71	Livestock area. Inner cantonment, SW of Well 16.	October-11	TRRP	APAR	Soils found to have COC concentrations above their respective Tier 1 or calculated site-specific Tier 2 Residential PCLs were removed from the site.	APAR concluded risk to ecological receptors from chemical concentrations in soil is not expected to be significant.
Bldg 40	less-than 90-day accumulation container storage area	January-04 and January-06	RRS1	RFI/Closure Report September 2003	Samples collected from the building's interior demonstrated that all waste and waste residue had been removed from the building to meet RRS1 criteria for site closure.	Not applicable as contamination was not present outside the building.
Bldg 43	Inactive makeshift ammo demolition facility	August-05	RRS1	RFI Report April 2005	Waste materials and soils with COC concentrations above their respective background levels were removed from the site in order to meet RRS1 criteria for site closure.	COCs are not present at concentrations that could pose a potentially unacceptable ecological risk.
DD	Dud ammunition disposal area	April-05	RRS1	RFI Report January 2005	Waste materials and soils with COC concentrations above their respective background levels were removed from the site in order to meet RRS1 criteria for site closure.	COCs are not present at concentrations that could pose a potentially unacceptable ecological risk.
F-14	Hazardous waste storage area (<90-day)	November-95	RRS1	RFI/Closure Report, 1995	Soil sampling results at the site met RRS1 criteria for site closure.	COCs are not present at concentrations that could pose a potentially unacceptable ecological risk.
I-1	Inactive incinerator (built in 1943), currently used for transformer storage	November-08	NFA	RFI Report February 2003	Soil sampling results at the site did not exceed Tier 1 Residential PCLs.	Passed the Tier 1 Ecological Exclusion Criteria Checklist per 30 TAC §350.77.
O-1	Waste liquid/sludge oxidation pond (1975)	April-02	RRS1	RFI/Closure Report October 2000	Soil sampling results at the site met RRS1 criteria for site closure.	COCs are not present at concentrations that could pose a potentially unacceptable ecological risk.
Areas of Concern						
Coal Bins	Coal bins (no longer in use)	February-08	Delisting	Delisting Requested January 2003	No evidence of waste management activities identified at the site.	COCs are not present at concentrations that could pose a potentially unacceptable ecological risk.
AOC 35	Area immediately around Well 16. Northeast area of inner cantonment.	February-03	RRS1	RFI/Closure Report October 2002	Soil sampling results at the site met RRS1 criteria for site closure.	COCs are not present at concentrations that could pose a potentially unacceptable ecological risk.
AOC 36	Area between Well 16 and B-3. Possible waste verified not present by magnetometer survey.	August-02	RRS1	RFI/Closure Report April 2002	Waste materials and soils with COC concentrations above their respective background levels were removed from the site in order to meet RRS1 criteria for site closure.	COCs are not present at concentrations that could pose a potentially unacceptable ecological risk.
AOC 37	Livestock area. NW of Well 16 and N of Well D.	January-05	NFA	RFI/Closure Report June 2004	Soil gas and geophysical investigations at the site indicated no waste present, thereby meeting NFA criteria.	COCs are not present at concentrations that could pose a potentially unacceptable ecological risk.

Table 1.2
Site Status
Camp Stanley Storage Activity, Bexar County, Texas

Unit No.	Description	Closure Approved	Closure Type	Investigation Report(s)	Human Health	Eco
AOC 38	Livestock area. Inner cantonment, SW of Well 16.	February-05	RRS1	RFI Report September 2004	Soil sampling results at the site met RRS1 criteria for site closure.	COCs are not present at concentrations that could pose a potentially unacceptable ecological risk.
AOC 39	None. Area west of Well 16 between North Outer Rd and cantonment fence.	September-02	RRS1	RFI/Closure Report April 2002	Soil sampling results at the site met RRS1 criteria for site closure.	COCs are not present at concentrations that could pose a potentially unacceptable ecological risk.
AOC 40	None. Area east of Well 16 between North Outer Rd and cantonment fence.	August-02	RRS1	RFI/Closure Report May 2002	Soil sampling results at the site met RRS1 criteria for site closure.	COCs are not present at concentrations that could pose a potentially unacceptable ecological risk.
AOC 41	Gate area east of well 16. North Pasture, north of gate 6.	July-05	NFA	NFA Report April 2005	Soil gas and geophysical investigations at the site indicated no waste present, thereby meeting NFA criteria.	COCs are not present at concentrations that could pose a potentially unacceptable ecological risk.
AOC 42	None. South of SWMUs B-28 and B-19, west of B-4.	December-11	NFA	RFI Report October 2002 RIR August 2011	Soils found to have COC concentrations above their respective Tier 1 Residential PCLs were excavated and removed.	Passed the Tier 1 Ecological Exclusion Criteria Checklist per 30 TAC §350.77.
AOC 43	Shallow trench without mounds. Metal, UXO. Located 50 ft south of B-7.	February-03	RRS1	RFI/Closure Report October 2002	Soil sampling results at the site met RRS1 criteria for site closure.	COCs are not present at concentrations that could pose a potentially unacceptable ecological risk.
AOC 44	Fox holes and trenches south of B-9 along west slope of hill. UXO includes Stokes mortars and 20-lb bombs.	July-05	Delisting	Delisting Report April 2005	Scattered metal debris removed from the site; no other evidence of waste management present.	COCs are not present at concentrations that could pose a potentially unacceptable ecological risk.
AOC 45	Flat area with spent and undamaged bullets. Located east of B-31, near bend in road.	October-11	NFA	RIR July 2011	Soils found to have COC concentrations above their respective Tier 1 Residential PCLs were excavated and removed or were used to calculate a 95% UCL per TAC §350.79(2)(A) that does not exceed the PCL.	Passed the Tier 1 Ecological Exclusion Criteria Checklist per 30 TAC §350.77.
AOC 46	Bermed area with stockpile of lead shot and sand. Located south of Engineering on east side of Thompsons Road.	July-05	RRS1	RFI/Closure Report April 2005	Soils with COC concentrations above their respective background levels were removed from the site in order to meet RRS1 criteria for site closure.	COCs are not present at concentrations that could pose a potentially unacceptable ecological risk.
AOC 47	Area of trenches and mounds (similar to B-15/16). South of B-15/16, in SW area of East Pasture.	September-02	RRS1	RFI/Closure Report June 2002	Soil sampling results at the site met RRS1 criteria for site closure.	COCs are not present at concentrations that could pose a potentially unacceptable ecological risk.
AOC 48	Three N-S trending mounds and a construction debris pile. Located north of B-15/16.	November-04	Delisting	Delisting Report August 2004	Geophysical and intrusive investigations at the site indicated no waste management activities were conducted at the site.	COCs are not present at concentrations that could pose a potentially unacceptable ecological risk.
AOC 49	Trench (4 x 7 ft) without surficial debris. Located SW of deer stand 41 in central East Pasture.	July-05	Delisting	Delisting Report April 2005	No evidence of waste management activities identified at the site.	COCs are not present at concentrations that could pose a potentially unacceptable ecological risk.
AOC 50	Area with orange discolored material (most likely nickel penetrate) at ground surface. South of B-30 along gravel road.	April-05	RRS1	RFI/Closure Report January 2005	Soils with COC concentrations above their respective background levels were removed from the site in order to meet RRS1 criteria for site closure.	COCs are not present at concentrations that could pose a potentially unacceptable ecological risk.

Table 1.2
Site Status
Camp Stanley Storage Activity, Bexar County, Texas

Unit No.	Description	Closure Approved	Closure Type	Investigation Report(s)	Human Health	Eco
AOC 51	East pasture, east of active range, approximately 25 acres, area around B-9	October-12	NFA	RIR July 2012	Soils found to have COC concentrations above their respective Tier 1 Residential PCLs were excavated and removed or were used to calculate a 95% UCL per TAC §350.79(2)(A) that does not exceed the PCL.	Passed the Tier 1 Ecological Exclusion Criteria Checklist per 30 TAC §350.77.
AOC 52	Area west of B-4 towards Salado Creek near trees, two trenches	December-11	NFA	RIR August 2011	Soils found to have COC concentrations above their respective Tier 1 Residential PCLs were excavated and removed.	Passed the Tier 1 Ecological Exclusion Criteria Checklist per 30 TAC §350.77.
AOC 53	Building foundation near B-27 at Central Road and road to "D" Tank, batteries at rear of slab	July-05	RRS1	RFI/Closure Report April 2005	Soil sampling results at the site met RRS1 criteria for site closure.	COCs are not present at concentrations that could pose a potentially unacceptable ecological risk.
AOC 54	Area near gutting pit, east of Welding Shop Building, right side of road batteries were stored in the area	November-04	RRS1	Closure Report July 2004	Soils with COC concentrations above their respective background levels were removed from the site in order to meet RRS1 criteria for site closure.	COCs are not present at concentrations that could pose a potentially unacceptable ecological risk.
AOC 55	Landfill, south of Tenberg Drive, east of Salado Creek	June-08	RRS1	RFI/Closure Report Feb 04	Waste materials removed and soil sampling results at the site met RRS1 criteria for site closure.	COCs are not present at concentrations that could pose a potentially unacceptable ecological risk.
AOC 56	Landfill, at intersection of Bernard Road and East Outer Road, surface depression on south side of intersection	September-04	RRS1	Closure Report June 04	Waste materials and soils with COC concentrations above their respective background levels were removed from the site in order to meet RRS1 criteria for site closure.	COCs are not present at concentrations that could pose a potentially unacceptable ecological risk.
AOC 57	East of Building 98 and KOA Area, cleaning/maintenance activities performed at temporary structures	September-11	NFA	RIR May 2011	Soil sampling results at the site met RRS1 criteria for site closure.	Passed the Tier 1 Ecological Exclusion Criteria Checklist per 30 TAC §350.77.
AOC 58	Suspected disposal trench within Inner Cantonment	December-11	NFA	RFI Report October 2002 RIR August 2011	Soils found to have COC concentrations above their respective Tier 1 Residential PCLs were excavated and removed.	Passed the Tier 1 Ecological Exclusion Criteria Checklist per 30 TAC §350.77.
AOC 59	Trench-type anomaly located west Test Pad in the East Pasture	October-11	NFA	RIR July 2011	Soils found to have COC concentrations above their respective Tier 1 Residential PCLs were excavated and removed or were used to calculate a 95% UCL per TAC §350.79(2)(A) that does not exceed the PCL.	Passed the Tier 1 Ecological Exclusion Criteria Checklist per 30 TAC §350.77.
AOC 60	Trench located west of tunnel and entrance roadway in the East Pasture.	July-05	Delisting	Delisting Report April 2005	No evidence of waste management activities identified at the site.	COCs are not present at concentrations that could pose a potentially unacceptable ecological risk.
AOC 61	Suspected landfill	February-03	RRS1	RFI/Closure Report October 2002	Geophysical and intrusive investigations at the site indicated no waste management activities were conducted at the site.	COCs are not present at concentrations that could pose a potentially unacceptable ecological risk.
AOC 62	Located west of monitoring well MW-2 and east of Salado Creek.	December-11	NFA	RIR August 2011	Soils found to have COC concentrations above their respective Tier 1 Residential PCLs were excavated and removed.	Passed the Tier 1 Ecological Exclusion Criteria Checklist per 30 TAC §350.77.
AOC 63	Area consisting of 3 barrels containing rocks, south of deer stand 41 in the East Pasture.	July-09	TRRP	APAR October 2008	Soils found to have COC concentrations above their respective Tier 1 or calculated site-specific Tier 2 Residential PCLs were removed from the site.	APAR concluded risk to ecological receptors from chemical concentrations in soil is not present.

Table 1.2
Site Status
Camp Stanley Storage Activity, Bexar County, Texas

Unit No.	Description	Closure Approved	Closure Type	Investigation Report(s)	Human Health	Eco
AOC-64	Area east of SWMU B-4; flares observed in the area	October 2011	TRRP	APAR	Soils found to have COC concentrations above their respective Tier 1 or calculated site-specific Tier 2 Residential PCLs were removed from the site.	APAR concluded risk to ecological receptors from chemical concentrations in soil is not expected to be significant.
AOC 65	A concrete pit area that housed a metal vat that contained TCE and PCE.	Remediation in Process				
AOC 66	Area north of Well 16 in the outer cantonment.	February-05	NFA	Closure Report June 04	Soil gas investigations at the site indicated no waste present, thereby meeting NFA criteria.	COCs are not present at concentrations that could pose a potentially unacceptable ecological risk.
AOC 67	Concrete pad near Building 90 housed a vat containing cleaning solvents.	September-10	NFA	RIR July 2010	Soils found to have COC concentrations above their respective Tier 1 Residential PCLs were excavated and removed.	Passed the Tier 1 Ecological Exclusion Criteria Checklist per 30 TAC §350.77.
AOC 68	Area includes metal slag/debris storage area from Wheelabrator operations next to Building 90-2.	September-10	NFA	RIR July 2010	Soils found to have COC concentrations above their respective Tier 1 Residential PCLs were excavated and removed.	Passed the Tier 1 Ecological Exclusion Criteria Checklist per 30 TAC §350.77.
AOC 69	Located on west side of CSSA.	October-09	NFA	RIR June 2009	Soils found to have COC concentrations above their respective Tier 1 Residential PCLs were excavated and removed.	Passed the Tier 1 Ecological Exclusion Criteria Checklist per 30 TAC §350.77.
AOC 70	Building used to mix pesticides. Near Building 1.	September-11	NFA	RIR June 2011	Soil sampling results at the site did not exceed Tier 1 Residential PCLs.	Passed the Tier 1 Ecological Exclusion Criteria Checklist per 30 TAC §350.77.
AOC 72	Area containing concrete, possible asbestos. Located east of Building 94, in SW CSSA.	May-12	NFA	RIR March 2012	Soils found to have COC concentrations above their respective Tier 1 Residential PCLs were excavated and removed.	Passed the Tier 1 Ecological Exclusion Criteria Checklist per 30 TAC §350.77.
AOC 73	Ranch landfill with overgrown trenches. Near Well 11, in northwest corner of CSSA.	January-09	NFA	RIR September 2008	Soils found to have COC concentrations above their respective Tier 1 Residential PCLs were excavated and removed.	Passed the Tier 1 Ecological Exclusion Criteria Checklist per 30 TAC §350.77.
AOC 74	Area with scattered building debris near Building 605 in the inner cantonment.	May-12	NFA	RIR February 2012	Soils found to have COC concentrations above their respective Tier 1 Residential PCLs were excavated and removed or were used to calculate a 95% UCL per TAC §350.79(2)(A) that does not exceed the PCL.	Passed the Tier 1 Ecological Exclusion Criteria Checklist per 30 TAC §350.77.
AOC 75	Area with high levels of mercury and barium.	December-13	TRRP	RIR August 2013	Soils found to have COC concentrations above their respective Tier 1 Residential PCLs were excavated and removed.	Passed the Tier 1 Ecological Exclusion Criteria Checklist per 30 TAC §350.77.
Range Management Units						
RMU1	Active firing range in the East Pasture	Active Range				
RMU2	Rifle range located in the inner cantonment.	February-12	NFA	RIR November 2011	Soils found to have COC concentrations above their respective Tier 1 Residential PCLs were excavated and removed or were used to calculate a 95% UCL per TAC §350.79(2)(A) that does not exceed the PCL.	Passed the Tier 1 Ecological Exclusion Criteria Checklist per 30 TAC §350.77.
RMU3	Firing range berm.	September-13	TRRP	RIR May 2013	Soils found to have COC concentrations above their respective Tier 1 Residential PCLs were excavated and removed.	Passed the Tier 1 Ecological Exclusion Criteria Checklist per 30 TAC §350.77.
RMU4	Former rifle range in East Pasture.	In Process	TRRP	RIR Submitted October 2013	Soils found to have COC concentrations above their respective Tier 1 Residential PCLs were excavated and removed.	Passed the Tier 1 Ecological Exclusion Criteria Checklist per 30 TAC §350.77.

Table 1.2
Site Status
Camp Stanley Storage Activity, Bexar County, Texas

<i>Unit No.</i>	<i>Description</i>	<i>Closure Approved</i>	<i>Closure Type</i>	<i>Investigation Report(s)</i>	<i>Human Health</i>	<i>Eco</i>
RMU5	Former rocket range in North Pasture.	September-12	NFA	RIR June 2012	Soils found to have COC concentrations above their respective Tier 1 Residential PCLs were excavated and removed or were used to calculate a 95% UCL per TAC §350.79(2)(A) that does not exceed the PCL.	Passed the Tier 1 Ecological Exclusion Criteria Checklist per 30 TAC §350.77.

Table 1.3
Summary of Media Evaluated for Inclusion in Risk Assessment
Camp Stanley Storage Activity, Bexar County, Texas

Medium	Pathway Evaluated?	
	Human Health	Ecological
Soil	No - SWMUs, AOCs, and RMUs have been closed under RRS or TRRP*	No - SWMUs, AOCs, and RMUs have been closed under RRS or TRRP*
Surface Water/Sediment	No - no perennial surface water features on-site	No - no perennial surface water features on-site
Soil Gas	Yes	No - toxicological criteria are not available to evaluate ecological receptors
Groundwater	Yes	No - ecological receptors not exposed to groundwater

*except those sites associated with RMU-1.

Table 2.1
Indoor Air Sample Results
Camp Stanley Storage Activity, Bexar County, Texas

VOC Compound	Date Sampled	Sample Identification	Result ($\mu\text{g}/\text{m}^3$)	Qualifier	USEPA RSL ⁽¹⁾ ($\mu\text{g}/\text{m}^3$)
Trichloroethene (TCE)	2/19/2013	LS-5 House	0.024	U	0.43
	2/27/2013	LS-6 House	0.021	U	
	2/19/2013	LS-7 House 1	0.027	U	
	2/19/2013	LS-7 House 2	0.025	U	
	2/20/2013	RFR House	0.024	U	
	2/19/2013	RFR-10 House 1	0.035	F	
	2/19/2013	RFR-10 House 2	0.028	F	
	2/27/2013	RFR-11 House	0.023	U	
	2/27/2013	RFR-11 Well House	0.039	F	
	2/19/2013	Leon Springs FD	0.024	U	
	3/1/2013	CSSA Visitor Center	0.0076	U	
	2/19/2013	RFR-10-OUT ⁽²⁾	0.027	U	
Tetrachloroethene (PCE)	2/19/2013	LS-5 House	0.051	F	9.4
	2/27/2013	LS-6 House	0.042	F	
	2/19/2013	LS-7 House 1	0.080	F	
	2/19/2013	LS-7 House 2	0.67		
	2/20/2013	RFR House	0.26		
	2/19/2013	RFR-10 House 1	0.069	F	
	2/19/2013	RFR-10 House 2	0.27		
	2/27/2013	RFR-11 House	0.10	F	
	2/27/2013	RFR-11 Well House	6.7		
	2/19/2013	Leon Springs FD	0.052	F	
	3/1/2013	CSSA Visitor Center	0.15	F	
	2/19/2013	RFR-10-OUT ⁽²⁾	0.050	F	

⁽¹⁾ U.S. Environmental Protection Agency (USEPA) Regional Screening Levels (RSLs) for Resident Air. Target risk 1E-6, HQ = 1. November 2013 (http://www.epa.gov/reg3hwmd/risk/human/rb-concentration_table/Generic_Tables/docs/master_sl_table_run_NOV2013.pdf)

⁽²⁾ Sample collected outside to represent ambient air conditions.

Detections are bolded.

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

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

Table 2.2
Validated Analytical Results for CSSA Animal Tissue
November 2012 through January 2013

SAMPLE ID:		GT12012	GT12014	GT12016	GT12018	GT12020	GT12021	GT12022	GT12023	GT12024	GT12025	GT12026	GT12027
DATE SAMPLED:		11/4/2012	11/4/2012	11/3/2012	11/3/2012	11/5/2012	11/7/2012	11/9/2012	11/12/2012	11/12/2012	11/14/2012	11/14/2012	11/17/2012
LAB SAMPLE ID:		AY71475	AY71476	AY71473	AY71474	AY71477	AY71558	AY71797	AY71800	AY71803	AY71930	AY71933	AY72095
		AY71482	AY71484	AY71478	AY71480	AY71486	AY71559	AY71798	AY71801	AY71804	AY71931	AY71934	AY72096
		AY71483	AY71485	AY71479	AY71481	AY71487	AY71560	AY71799	AY71802	AY71805	AY71932	AY71935	AY72097
ANIMAL:		Buck	Buck	Buck	Buck	Buck	Buck	Buck	Doe	Buck	Buck	Pig	Buck
ESTIMATED AGE (years):		4.5	5.5	5.5	4.5	4	3-4	4	3	6.5	3.5	5.5	4.5
WEIGHT LIVE (lbs):		130	173	125	--	136	155	130	80	160	130	235	170
WEIGHT DRESSED (lbs):		95	140	--	--	109	130	110	65	135	116	195	140
STAND:		46	24	44	13	11	11	45	40	42	39	40	35
Metals - SW6010B		Units											
Lead - Bone	mg/kg	0.82	0.50 U	2.7	0.50 U	0.50 U	0.50 U	0.50 U	2.2	0.50 U	0.50 U	0.71	0.50 UJ
Lead - Liver	mg/kg	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
Lead - Muscle	mg/kg	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U

QA NOTES AND DATA QUALIFIERS:

- (NO CODE) - Confirmed identification.
- U - Analyte was not detected above the indicated Reporting Limit (RL).
- J - Analyte was positively identified, but the quantitation is an estimation due to discrepancies in meeting certain analyte-specific quality control criteria.
- UJ - Analyte was not detected above the indicated RL; however, the result is estimated due to discrepancies in meeting certain analyte-specific quality control criteria.
- Detections are bolded.
- - Information not provided by hunter.

Table 2.2
Validated Analytical Results for CSSA Animal Tissue
November 2012 through January 2013

SAMPLE ID:		GT12028	GT12029	GT12030	GT12031	GT12032	GT12033	GT13002	GT13003
DATE SAMPLED:		11/17/2012	11/17/2012	11/24/2012	11/24/2012	11/28/2012	12/12/2012	1/6/2013	1/6/2013
LAB SAMPLE ID:		AY72098	AY72101	AY72185	AY72188	AY72368	AY72937	AY73778	AY73775
		AY72099	AY72102	AY72186	AY72189	AY72369	AY72938	AY73779	AY73776
		AY72100	AY72103	AY72187	AY72190	AY72370	AY72939	AY73780	AY73777
ANIMAL:		Buck	Buck	Buck	Buck	Doe	Buck	Doe	Doe
ESTIMATED AGE (years):		5.5	3.5	4.5	5.5	4.5	3	--	--
WEIGHT LIVE (lbs):		160	120	145	160	100	138	118	110
WEIGHT DRESSED (lbs):		140	100	120	140	80	115	97	88
STAND:		10	46	4	10	11	14	22	22
Metals - SW6010B	Units								
Lead - Bone	mg/kg	0.50 UJ	1.2 J	0.50 UJ	0.50 UJ	0.50 UJ	0.50 U	0.50 U	1.1 U
Lead - Liver	mg/kg	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
Lead - Muscle	mg/kg	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U	112

QA NOTES AND DATA QUALIFIE

(NO CODE) - Confirmed identification.
U - Analyte was not detected above the indicated Reporting Limit (RL).
J - Analyte was positively identified, but the quantitation is an estimation due to discrepancies in meeting certain analyte-specific quality control criteria.
UJ - Analyte was not detected above the indicated RL; however, the result is estimated due to discrepancies in meeting certain analyte-specific quality control criteria.
Detections are bolded.
-- - Information not provided by hunter.

Table 2.3
Well Types for Inclusion in the Risk Assessment
Camp Stanley Storage Activity, Bexar County, Texas

Type	Description	On-Post	Off-Post
Open Borehole Wells (On- and Off-Post)	Wells completed into either the LGR or CC intervals with only surface casing resulting in long open intervals of borehole	<ul style="list-style-type: none"> · Former Agricultural Wells · Public Supply Wells · CS-X series of wells 	<ul style="list-style-type: none"> · Private Supply Wells · Public Supply Wells · Commercial Supply Wells · BSR, DOM, FO, HS, I10, JW, LS, OFR, OW, RFR , and SLD series of wells
Screened Monitoring Wells	Wells discretely completed into either the UGR, LGR, BS, or CC intervals with casing and screen resulting in shorter intervals of open borehole	<ul style="list-style-type: none"> · CS-MW series of wells 	<ul style="list-style-type: none"> · None
Remediation Wells	Wells associated with remedial activities with SWMU B-3 and AOC-65	<ul style="list-style-type: none"> · AOC65-IIW series of wells · AOC65-PZ series of wells · AOC65-TSW series of wells · AOC65-VEW series of wells · B3-EXW series of wells · B3-MW series of wells 	<ul style="list-style-type: none"> · None
Multi-Port Wells	Specialized Multi-Port Wells that discretely monitor multiple depth intervals in a single borehole	<ul style="list-style-type: none"> · CS-WB01 · CS-WB02 · CS-WB03 · CS-WB05 · CS-WB06 · CS-WB07 · CS-WB08 	<ul style="list-style-type: none"> · CS-WB04

Table 2.4
Summary Statistics for CSSA Monitoring Well Network
Camp Stanley Storage Activity, Bexar County, Texas

	On-Post	Off-Post	Multi-Port Zones
Open Borehole	11	66	-
Remediation Well	84	-	-
Basewide Monitoing Well	39	-	-
Multi-Port Well	7	1	69
Total Well Locations - 208	141	67	69

Table 2.5
Selection of Wells for Inclusion in the Risk Assessment
Camp Stanley Storage Activity, Bexar County, Texas

	Well ID	Geographic Location	Well Type	Open (or Screened) Interval (feet below ground surface)	Monitoring Zone	Risk Assessment Inclusion
REMEDATION WELLS	AOC65-IIW-01	On-Post	Remediation Well	11-125	LGR-Perched	No
	AOC65-IIW-02	On-Post	Remediation Well	11-125	LGR-Perched	No
	AOC65-IIW-03	On-Post	Remediation Well	11-125	LGR-Perched	No
	AOC65-IIW-04	On-Post	Remediation Well	11-125	LGR-Perched	No
	AOC65-MW1	On-Post	Remediation Well	17-32	UGR-Perched	No
	AOC65-MW2A	On-Post	Remediation Well	9-19	UGR-Perched	No
	AOC65-MW2B	On-Post	Remediation Well	23-33	UGR-Perched	No
	AOC65-MW3	On-Post	Remediation Well	17-32	UGR-Perched	No
	AOC65-PZ01-LGR	On-Post	Remediation Well	105 - 130	LGR-Perched	No
	AOC65-PZ02-LGR	On-Post	Remediation Well	23 - 48	UGR-Perched	No
	AOC65-PZ03-LGR	On-Post	Remediation Well	107 - 132.5	LGR-Perched	No
	AOC65-PZ04-LGR	On-Post	Remediation Well	16 - 41	UGR-Perched	No
	AOC65-PZ05-LGR	On-Post	Remediation Well	89 - 124	LGR-Perched	No
	AOC65-PZ06-LGR	On-Post	Remediation Well	16 - 41	UGR-Perched	No
	AOC65-SIW-01	On-Post	Remediation Well	13-24.65	UGR-Perched	No
	AOC65-SIW-02	On-Post	Remediation Well	10-28.2	UGR-Perched	No
	AOC65-TSW-01	On-Post	Remediation Well	10-40	UGR-Perched	No
	AOC65-TSW-02	On-Post	Remediation Well	10-40	UGR-Perched	No
	AOC65-TSW-03	On-Post	Remediation Well	10-40	UGR-Perched	No
	AOC65-TSW-04	On-Post	Remediation Well	10-40	UGR-Perched	No
	AOC65-TSW-05	On-Post	Remediation Well	10-40	UGR-Perched	No
	AOC65-TSW-06	On-Post	Remediation Well	19 - 49	UGR-Perched	No
	AOC65-TSW-07	On-Post	Remediation Well	10-40	UGR-Perched	No
	AOC65-VEW01	On-Post	Remediation Well	2.5 - 10.5	UGR-Perched	No
	AOC65-VEW02	On-Post	Remediation Well	2.5 - 10	UGR-Perched	No
	AOC65-VEW03	On-Post	Remediation Well	2.5 - 9.8	UGR-Perched	No
	AOC65-VEW04	On-Post	Remediation Well	2.5 - 6.6	UGR-Perched	No
	AOC65-VEW05	On-Post	Remediation Well	2.5 - 9	UGR-Perched	No
	AOC65-VEW06	On-Post	Remediation Well	2.5 - 5	UGR-Perched	No
	AOC65-VEW07	On-Post	Remediation Well	2.5 - 5	UGR-Perched	No
	AOC65-VEW08	On-Post	Remediation Well	2.5 - 9.7	UGR-Perched	No
	AOC65-VEW09	On-Post	Remediation Well	2.5 - 9.75	UGR-Perched	No
	AOC65-VEW10	On-Post	Remediation Well	2.5 - 5.1	UGR-Perched	No
	AOC65-VEW11	On-Post	Remediation Well	2.5 - 9.3	UGR-Perched	No
	AOC65-VEW12	On-Post	Remediation Well	2.5 - 9.4	UGR-Perched	No
	AOC65-VEW13	On-Post	Remediation Well	15 - 40	UGR-Perched	No
	AOC65-VEW14	On-Post	Remediation Well	40 - 60	LGR-Perched	No
	AOC65-VEW15	On-Post	Remediation Well	5-12	UGR-Perched	No
	AOC65-VEW16	On-Post	Remediation Well	15 - 40	UGR-Perched	No
	AOC65-VEW17	On-Post	Remediation Well	22 - 52	UGR-Perched	No
	AOC65-VEW18	On-Post	Remediation Well	15.5 - 55.5	UGR-Perched	No
	AOC65-VEW19	On-Post	Remediation Well	5-25	UGR-Perched	No
	AOC65-VEW20	On-Post	Remediation Well	10-25	UGR-Perched	No
	AOC65-VEW21	On-Post	Remediation Well	12-27	UGR-Perched	No
	AOC65-VEW22	On-Post	Remediation Well	25 - 56	UGR-Perched	No
	AOC65-VEW23	On-Post	Remediation Well	6-21	UGR-Perched	No
	AOC65-VEW24	On-Post	Remediation Well	25 - 50	UGR-Perched	No
	AOC65-VEW25	On-Post	Remediation Well	6-21	UGR-Perched	No
	AOC65-VEW26	On-Post	Remediation Well	25 - 50	UGR-Perched	No
	AOC65-VEW27	On-Post	Remediation Well	6-21	UGR-Perched	No
	AOC65-VEW28A	On-Post	Remediation Well	80 - 120	LGR-Perched	Yes
	AOC65-VEW28B	On-Post	Remediation Well	139.3 - 179.3	LGR-Perched	Yes
	AOC65-VEW29	On-Post	Remediation Well	5-40	UGR-Perched	No
	AOC65-VEW30	On-Post	Remediation Well	5-20	UGR-Perched	No
	AOC65-VEW31	On-Post	Remediation Well	5-20	UGR-Perched	No
	AOC65-VEW32	On-Post	Remediation Well	5-20	UGR-Perched	No
	AOC65-VEW33	On-Post	Remediation Well	5-20	UGR-Perched	No
	B3-EXW01	On-Post	Remediation Well	199-345	LGR-Production Zone	Yes
	B3-EXW02	On-Post	Remediation Well	65-358	LGR-Production Zone	Yes
	B3-EXW03	On-Post	Remediation Well	65-340	LGR-Production Zone	Yes
	B3-EXW04	On-Post	Remediation Well	55-335	LGR-Production Zone	Yes
	B3-EXW05	On-Post	Remediation Well	90-380	LGR-Production Zone	Yes
	CS-B3-MW01	On-Post	Remediation Well	277 - 287	LGR-Production Zone	Yes
	B3-MW26-UGR	On-Post	Remediation Well	7.5 - 17.5	UGR-Perched	No
	B3-MW27-UGR	On-Post	Remediation Well	7-17	UGR-Perched	No
	B3-MW28-UGR	On-Post	Remediation Well	5.5 - 15.5	UGR-Perched	No
	B3-MW29-UGR	On-Post	Remediation Well	7.5 - 17.5	UGR-Perched	No
	B3-MW30-UGR	On-Post	Remediation Well	10.8 - 20.8	UGR-Perched	No
	B3-MW31-UGR	On-Post	Remediation Well	16 - 36	UGR-Perched	No
	B3-MW32-UGR	On-Post	Remediation Well	26 - 56	UGR-Perched	No
	B3-MW33-UGR	On-Post	Remediation Well	6-26	UGR-Perched	No
	B3-MW34-UGR	On-Post	Remediation Well	12-22	UGR-Perched	No

Table 2.5
Selection of Wells for Inclusion in the Risk Assessment
Camp Stanley Storage Activity, Bexar County, Texas

	Well ID	Geographic Location	Well Type	Open (or Screened) Interval (feet below ground surface)	Monitoring Zone	Risk Assessment Inclusion
REMEDATION WELLS	B3-T1-1	On-Post	Remediation Well	7.9-12.9	Infiltration Trench	No
	B3-T1-2	On-Post	Remediation Well	7.4-12.4	Infiltration Trench	No
	B3-T1-3	On-Post	Remediation Well	7.9-12.9	Infiltration Trench	No
	B3-T2-1	On-Post	Remediation Well	4.7-9.7	Infiltration Trench	No
	B3-T2-2	On-Post	Remediation Well	5.0-10.0	Infiltration Trench	No
	B3-T3-1	On-Post	Remediation Well	5.0-10.0	Infiltration Trench	No
	B3-T3-2	On-Post	Remediation Well	2.4-7.4	Infiltration Trench	No
	B3-T4-1	On-Post	Remediation Well	1.3-6.3	Infiltration Trench	No
	B3-T5-1	On-Post	Remediation Well	4.3-9.3	Infiltration Trench	No
	B3-T5-2	On-Post	Remediation Well	3.0-8.0	Infiltration Trench	No
	B3-T6-1	On-Post	Remediation Well	6.5-11.5	Infiltration Trench	No
	B3-T6-2	On-Post	Remediation Well	7.3-12.3	Infiltration Trench	No
ON-POST OPEN BOREHOLE WELLS	CS-1	On-Post	Open Borehole	126 - 432	LGR-Production Zone	Yes
	CS-2	On-Post	Open Borehole	205 - 350	LGR-Production Zone	Yes
	CS-4	On-Post	Open Borehole	200 - 251.5	LGR-Production Zone	Yes
	CS-9	On-Post	Open Borehole	60 - 548	LGR/CC-Production Zone	Yes
	CS-10	On-Post	Open Borehole	392 - 580	LGR/CC-Production Zone	Yes
	CS-11	On-Post	Open Borehole	378 - 555	LGR/CC-Production Zone	Yes
	CS-12	On-Post	Open Borehole	149 - 460	LGR/CC-Production Zone	Yes
	CS-13	On-Post	Open Borehole	300 - 579.5	LGR/CC-Production Zone	Yes
	CS-D	On-Post	Open Borehole	205 - 263	LGR-Production Zone	Yes
	CS-G-LGR	On-Post	Open Borehole	155 - 339	LGR-Production Zone	Yes
	CS-I	On-Post	Open Borehole	258 - 361.7	LGR-Production Zone	Yes
SCREENED MONITORING WELLS	CS-MW1-LGR	On-Post	Basewide Monitoring Well	288 - 313	LGR-Production Zone	Yes
	CS-MW1-BS	On-Post	Basewide Monitoring Well	340.5 - 365.5	BS-Confining Unit	Yes
	CS-MW1-CC	On-Post	Basewide Monitoring Well	394.7 - 419.7	CC-Production Zone	Yes
	CS-MW2-LGR	On-Post	Basewide Monitoring Well	318 - 343	LGR-Production Zone	Yes
	CS-MW2-CC	On-Post	Basewide Monitoring Well	425.7 - 450.7	CC-Production Zone	Yes
	CS-MW3-LGR	On-Post	Basewide Monitoring Well	402 - 427	LGR-Production Zone	Yes
	CS-MW4-LGR	On-Post	Basewide Monitoring Well	299 - 324	LGR-Production Zone	Yes
	CS-MW5-LGR	On-Post	Basewide Monitoring Well	420 - 445	LGR-Production Zone	Yes
	CS-MW6-LGR	On-Post	Basewide Monitoring Well	340 - 365	LGR-Production Zone	Yes
	CS-MW6-BS	On-Post	Basewide Monitoring Well	397 - 422	BS-Confining Unit	Yes
	CS-MW6-CC	On-Post	Basewide Monitoring Well	451 - 476	CC-Production Zone	Yes
	CS-MW7-LGR	On-Post	Basewide Monitoring Well	322 - 347	LGR-Production Zone	Yes
	CS-MW7-CC	On-Post	Basewide Monitoring Well	430 - 455	CC-Production Zone	Yes
	CS-MW8-LGR	On-Post	Basewide Monitoring Well	332 - 357	LGR-Production Zone	Yes
	CS-MW8-CC	On-Post	Basewide Monitoring Well	439.5 - 464.5	CC-Production Zone	Yes
	CS-MW9-LGR	On-Post	Basewide Monitoring Well	296 - 321	LGR-Production Zone	Yes
	CS-MW9-BS	On-Post	Basewide Monitoring Well	352 - 377	BS-Confining Unit	Yes
	CS-MW9-CC	On-Post	Basewide Monitoring Well	425 - 450	CC-Production Zone	Yes
	CS-MW10-LGR	On-Post	Basewide Monitoring Well	370 - 395	LGR-Production Zone	Yes
	CS-MW10-CC	On-Post	Basewide Monitoring Well	470 - 495	CC-Production Zone	Yes
	CS-MW11A-LGR	On-Post	Basewide Monitoring Well	420.3 - 445.3	LGR-Production Zone	Yes
	CS-MW11B-LGR	On-Post	Basewide Monitoring Well	182 - 207	LGR-Production Zone	Yes
	CS-MW12-LGR	On-Post	Basewide Monitoring Well	333 - 358	LGR-Production Zone	Yes
	CS-MW12-BS	On-Post	Basewide Monitoring Well	382 - 407	BS-Confining Unit	Yes
	CS-MW12-CC	On-Post	Basewide Monitoring Well	440 - 465	CC-Production Zone	Yes
	CS-MW16-LGR	On-Post	Basewide Monitoring Well	199 - 310	LGR-Production Zone	Yes
	CS-MW16-CC	On-Post	Basewide Monitoring Well	406 - 431	CC-Production Zone	Yes
	CS-MW17-LGR	On-Post	Basewide Monitoring Well	367 - 392	LGR-Production Zone	Yes
	CS-MW18-LGR	On-Post	Basewide Monitoring Well	385 - 410	LGR-Production Zone	Yes
	CS-MW19-LGR	On-Post	Basewide Monitoring Well	340 - 365	LGR-Production Zone	Yes
	CS-MW20-LGR	On-Post	Basewide Monitoring Well	305 - 330	LGR-Production Zone	Yes
	CS-MW21-LGR	On-Post	Basewide Monitoring Well	289 - 314	LGR-Production Zone	Yes
	CS-MW22-LGR	On-Post	Basewide Monitoring Well	392 - 417	LGR-Production Zone	Yes
	CS-MW23-LGR	On-Post	Basewide Monitoring Well	372 - 397	LGR-Production Zone	Yes
	CS-MW24-LGR	On-Post	Basewide Monitoring Well	300 - 325	LGR-Production Zone	Yes
	CS-MW25-LGR	On-Post	Basewide Monitoring Well	352 - 377	LGR-Production Zone	Yes
	CS-MW35-LGR	On-Post	Basewide Monitoring Well	405 - 430	LGR-Production Zone	Yes
	CS-MW36-LGR	On-Post	Basewide Monitoring Well	345 - 370	LGR-Production Zone	Yes
	CS-MWH-LGR	On-Post	Basewide Monitoring Well	314.5 - 364.5	LGR-Production Zone	Yes

Table 2.5
Selection of Wells for Inclusion in the Risk Assessment
Camp Stanley Storage Activity, Bexar County, Texas

	Well ID	Geographic Location	Well Type	Open (or Screened) Interval (feet below ground surface)	Monitoring Zone	Risk Assessment Inclusion
MULTI-PORT WELLS	CS-WB01	On-Post	Multi-port Well		Multi-Port (Varies)	Yes
	-UGR01			31-53	UGR-Perched	No
	-LGR01			48-91	LGR-Perched	No
	-LGR02			96-118	LGR-Perched	No
	-LGR03			123-138	LGR-Perched	No
	-LGR04			143-173	LGR-Perched	Yes
	-LGR05			178-201	LGR-Perched	Yes
	-LGR06			206-225	LGR-Perched	Yes
	-LGR07			230-254	LGR-Production Zone	Yes
	-LGR08			259-295	LGR-Production Zone	Yes
	-LGR09			300-314	LGR-Production Zone	Yes
	CS-WB02	On-Post	Multi-port Well		Multi-Port (Varies)	Yes
	-UGR01			34-46	UGR-Perched	No
	-LGR01			51-76	LGR-Perched	No
	-LGR02			81-105	LGR-Perched	No
	-LGR03			110-140	LGR-Perched	No
	-LGR04			145-463	LGR-Perched	Yes
	-LGR05			168-192	LGR-Perched	Yes
	-LGR06			197-218	LGR-Perched	Yes
	-LGR07			223-253	LGR-Production Zone	Yes
	-LGR08			258-292	LGR-Production Zone	Yes
	-LGR09			297-313	LGR-Production Zone	Yes
	CS-WB03	On-Post	Multi-port Well		Multi-Port (Varies)	Yes
	-UGR01			20-37	UGR-Perched	No
	-LGR01			42-68	LGR-Perched	No
	-LGR02			73-100	LGR-Perched	No
	-LGR03			105-127	LGR-Perched	No
	-LGR04			132-144	LGR-Perched	Yes
	-LGR05			149-185	LGR-Perched	Yes
	-LGR06			190-216	LGR-Perched	Yes
	-LGR07			221-250	LGR-Production Zone	Yes
	-LGR08			255-292	LGR-Production Zone	Yes
	-LGR09			297-312	LGR-Production Zone	Yes
	CS-WB04	Off-Post	Multi-port Well		Multi-Port (Varies)	Yes
	-UGR01			28-52	UGR-Perched	No
	-LGR01			57-84	LGR-Perched	No
	-LGR02			89-110	LGR-Perched	No
	-LGR03			115-135	LGR-Perched	No
	-LGR04			140-199	LGR-Perched	Yes
	-LGR06			204-231	LGR-Perched	Yes
	-LGR07			236-261	LGR-Production Zone	Yes
	-LGR08			266-302	LGR-Production Zone	Yes
	-LGR09			307-320	LGR-Production Zone	Yes
	-LGR10			325-345	LGR-Production Zone	Yes
	-LGR11			350-377	LGR-Production Zone	Yes
	-BS01			382-407	BS-Confining Unit	Yes
	-BS02			412-434	BS-Confining Unit	Yes
	-CC01			439-469	CC-Production Zone	Yes
	-CC02			474-490	CC-Production Zone	Yes
	-CC03			495-513	CC-Production Zone	Yes
	CS-WB05	On-Post	Multi-port Well		Multi-Port (Varies)	Yes
	-LGR01			32-109	LGR-Perched	No
	-LGR02			114-192	LGR-Perched	Yes
	-LGR03			197-272	LGR-Production Zone	Yes
	-LGR04A			277-286	LGR-Production Zone	Yes
	-LGR04B			291-342	LGR-Production Zone	Yes
	-BS01			247-390	BS-Confining Unit	Yes
	-CC01			395-444	CC-Production Zone	Yes
	-CC02			449-480	CC-Production Zone	Yes
	CS-WB06	On-Post	Multi-port Well		Multi-Port (Varies)	Yes
	-UGR01			12-30	UGR-Perched	No
	-LGR01			35-103	LGR-Perched	No
	-LGR02			108-184	LGR-Perched	Yes
	-LGR03			189-270	LGR-Production Zone	Yes
	-LGR04			275-333	LGR-Production Zone	Yes
	CS-WB07	On-Post	Multi-port Well		Multi-Port (Varies)	Yes
	-UGR01			9-24	UGR-Perched	No
	-LGR01			29-100	LGR-Perched	No
	-LGR02			105-185	LGR-Perched	Yes
	-LGR03			190-267	LGR-Production Zone	Yes
	-LGR04			272-335	LGR-Production Zone	Yes
	CS-WB08	On-Post	Multi-port Well		Multi-Port (Varies)	Yes
	-UGR01			12-48	UGR-Perched	No
	-LGR01			53-125	LGR-Perched	No
	-LGR02			130-203	LGR-Perched	Yes
	-LGR03			208-283	LGR-Production Zone	Yes
	-LGR04			288-357	LGR-Production Zone	Yes

Table 2.5
Selection of Wells for Inclusion in the Risk Assessment
Camp Stanley Storage Activity, Bexar County, Texas

	Well ID	Geographic Location	Well Type	Open (or Screened) Interval (feet below ground surface)	Monitoring Zone	Risk Assessment Inclusion
OFF-POST OPEN BOREHOLE WELLS	BSR-03	Off-Post	Open Borehole	NA	LGR/CC-Production Zone	Yes
	BSR-04	Off-Post	Open Borehole	NA	LGR/CC-Production Zone	Yes
	DOM-2	Off-Post	Open Borehole	NA	LGR/CC-Production Zone	Yes
	FO-8	Off-Post	Open Borehole	310-525	LGR/CC-Production Zone	Yes
	FO-17	Off-Post	Open Borehole	240-441	LGR/CC-Production Zone	Yes
	FO-22	Off-Post	Open Borehole	306-505	LGR/CC-Production Zone	Yes
	FO-J1	Off-Post	Open Borehole	397-496	LGR/CC-Production Zone	Yes
	HS-1	Off-Post	Open Borehole	420-880	LGR/CC-Production Zone	Yes
	HS-2	Off-Post	Open Borehole	412-880	LGR/CC-Production Zone	Yes
	HS-3	Off-Post	Open Borehole	410-910	LGR/CC-Production Zone	Yes
	I10-2	Off-Post	Open Borehole	287-472	LGR/CC-Production Zone	Yes
	I10-4	Off-Post	Open Borehole	44-361	LGR-Production Zone	Yes
	I10-5	Off-Post	Open Borehole	NA	LGR/CC-Production Zone	Yes
	I10-7	Off-Post	Open Borehole	NA	LGR/CC-Production Zone	Yes
	I10-8	Off-Post	Open Borehole	NA	LGR/CC-Production Zone	Yes
	I10-9	Off-Post	Open Borehole	NA	LGR/CC-Production Zone	Yes
	I10-10	Off-Post	Open Borehole	NA	LGR/CC-Production Zone	Yes
	JW-5	Off-Post	Open Borehole	203-565	LGR/CC-Production Zone	Yes
	JW-6	Off-Post	Open Borehole	160-525	LGR/CC-Production Zone	Yes
	JW-7	Off-Post	Open Borehole	NA	LGR/CC-Production Zone	Yes
	JW-8	Off-Post	Open Borehole	185-550	LGR/CC-Production Zone	Yes
	JW-9	Off-Post	Open Borehole	NA	LGR/CC-Production Zone	Yes
	JW-12	Off-Post	Open Borehole	NA	LGR/CC-Production Zone	Yes
	JW-13	Off-Post	Open Borehole	NA	LGR/CC-Production Zone	Yes
	JW-14	Off-Post	Open Borehole	202-425	LGR/CC-Production Zone	Yes
	JW-15	Off-Post	Open Borehole	NA	LGR-Production Zone	Yes
	JW-26	Off-Post	Open Borehole	NA	LGR/CC-Production Zone	Yes
	JW-27	Off-Post	Open Borehole	104-450	LGR/CC-Production Zone	Yes
	JW-28	Off-Post	Open Borehole	250-505	LGR/CC-Production Zone	Yes
	JW-29	Off-Post	Open Borehole	180-360	LGR-Production Zone	Yes
	JW-30	Off-Post	Open Borehole	NA	LGR/CC-Production Zone	Yes
	JW-31	Off-Post	Open Borehole	NA	LGR/CC-Production Zone	Yes
	JW-32	Off-Post	Open Borehole	240-520	LGR/CC-Production Zone	No
	LS-1	Off-Post	Open Borehole	?-435	LGR/CC-Production Zone	Yes
	LS-2*	Off-Post	Open Borehole	348-450	LGR/CC-Production Zone	No
	LS-3*	Off-Post	Open Borehole	312-404	LGR/CC-Production Zone	No
	LS-4	Off-Post	Open Borehole	204-481	LGR/CC-Production Zone	Yes
	LS-5	Off-Post	Open Borehole	300-472	LGR/CC-Production Zone	Yes
	LS-6	Off-Post	Open Borehole	NA	LGR/CC-Production Zone	Yes
	LS-7	Off-Post	Open Borehole	18 - 395	LGR-Production Zone	Yes
	OFR-1	Off-Post	Open Borehole	34-350	LGR-Production Zone	Yes
	OFR-2	Off-Post	Open Borehole	0-288	LGR-Production Zone	Yes
	OFR-3	Off-Post	Open Borehole	NA	LGR/CC-Production Zone	Yes
	OFR-4	Off-Post	Open Borehole	NA	LGR/CC-Production Zone	Yes
	OW-BARNOWL	Off-Post	Open Borehole	325-548	LGR/CC-Production Zone	Yes
	OW-CE1	Off-Post	Open Borehole	262-476	LGR/CC-Production Zone	Yes
	OW-CE2	Off-Post	Open Borehole	250-480	LGR/CC-Production Zone	Yes
	OW-DAIRYWELL	Off-Post	Open Borehole	227-506	LGR/CC-Production Zone	Yes
	OW-HH1	Off-Post	Open Borehole	253-459	LGR/CC-Production Zone	Yes
	OW-HH2	Off-Post	Open Borehole	300-520	LGR/CC-Production Zone	Yes
	OW-HH3	Off-Post	Open Borehole	300-560	LGR/CC-Production Zone	Yes
	OW-MT2	Off-Post	Open Borehole	320-615	LGR/CC-Production Zone	Yes
	RFR-3	Off-Post	Open Borehole	135-435	LGR/CC-Production Zone	Yes
	RFR-4	Off-Post	Open Borehole	30-375	LGR-Production Zone	Yes
	RFR-5	Off-Post	Open Borehole	189-500	LGR/CC-Production Zone	Yes
	RFR-6	Off-Post	Open Borehole	373-500	LGR/CC-Production Zone	Yes
	RFR-7	Off-Post	Open Borehole	NA	LGR/CC-Production Zone	Yes
	RFR-8	Off-Post	Open Borehole	NA	LGR/CC-Production Zone	Yes
	RFR-9	Off-Post	Open Borehole	NA	LGR/CC-Production Zone	Yes
	RFR-10	Off-Post	Open Borehole	22 - 483	LGR/CC-Production Zone	Yes
	RFR-11	Off-Post	Open Borehole	NA	LGR/CC-Production Zone	Yes
	RFR-12	Off-Post	Open Borehole	294-486	LGR/CC-Production Zone	Yes
	RFR-13	Off-Post	Open Borehole	? - 560	LGR/CC-Production Zone	Yes
	RFR-14	Off-Post	Open Borehole	? - 550	LGR/CC-Production Zone	Yes
	SLD-01	Off-Post	Open Borehole	NA	LGR/CC-Production Zone	Yes
	SLD-02	Off-Post	Open Borehole	NA	LGR/CC-Production Zone	Yes

Notes:

* Data from wells LS-2 and LS-3 are over five years old. More recent data is available from nearby well LS-5.

Table 2.6
Summary Statistics for CSSA Monitoring Wells
Retained for the Risk Assessment
Camp Stanley Storage Activity, Bexar County, Texas

	On-Post	Off-Post	Multi-Port Zones
Open Borehole	11	63	-
Remediation Well	8	-	-
Basewide Monitoing Well	39	-	-
Mult-Port Well	7	1	46
Total Well Locations = 130	65	64	46

Table 2.7 Groundwater Summary Data for Risk Assessment Maximum Detected Concentrations for the Ten Most Recent Sampling Events as of the Third Quarter 2013 Camp Stanley Storage Activity, Bexar County, Texas																		
			cis-1,2-Dichloroethene		Tetrachloroethene (PCE)		Trichloroethene (TCE)		Vinyl Chloride		Lead		Lead-Dissolved		Mercury		Mercury-Dissolved	
Well ID	Range of Sample Collection Dates	Unit	Maximum Concentration†	(Number of Sample Results/ Date of Max)††	Maximum Concentration†	(Number of Sample Results/ Date of Max)††	Maximum Concentration†	(Number of Sample Results/ Date of Max)††	Maximum Concentration†	(Number of Sample Results/ Date of Max)††	Maximum Concentration†	(Number of Sample Results/ Date of Max)††	Maximum Concentration†	(Number of Sample Results/ Date of Max)††	Maximum Concentration†	(Number of Sample Results/ Date of Max)††	Maximum Concentration†	(Number of Sample Results/ Date of Max)††
On-Post Wells																		
AOC65-VEW28A	08/18/2011 - 04/18/2013	µg/L	NA	(4/AII ND)	23	(4/Aug-31-2011)	10	(4/Aug-31-2011)	NA	(4/AII ND)	9.2	(2/Apr-18-2013)	NA	(1/ND)	NA	(2/AII ND)	NA	(1/ND)
AOC65-VEW28B	08/18/2011 - 04/18/2013	µg/L	NA	(5/AII ND)	46	(5/Jul-18-2012)	3.7	(5/Jul-18-2012)	NA	(5/AII ND)	NA	(1/ND)	NA	(2/AII ND)	NA	(1/ND)	NA	(2/AII ND)
B3-EXW01	01/18/2010 - 10/16/2012	µg/L	370	(10/Apr-25-2011)	310	(10/Apr-25-2011)	330	(10/Apr-25-2011)	0.74	(10/Apr-26-2010)	31	(4/Jan-18-2010)	--	--	0.072	(4/Apr-26-2010)	--	--
B3-EXW02	05/19/2010 - 10/16/2012	µg/L	150	(8/Apr-25-2011)	140	(8/Apr-25-2011)	180	(8/Apr-25-2011)	NA	(8/AII ND)	1.7	(2/Jun-02-2010)	--	--	0.060	(2/Jun-02-2010)	--	--
B3-EXW03	01/16/2013 - 04/05/2013	µg/L	120	(2/Apr-05-2013)	110	(2/Apr-05-2013)	100	(2/Apr-05-2013)	NA	(2/AII ND)	--	--	--	--	--	--	--	--
B3-EXW04	01/16/2013 - 04/05/2013	µg/L	210	(2/Apr-05-2013)	160	(2/Apr-05-2013)	250	(2/Apr-05-2013)	NA	(2/AII ND)	--	--	--	--	--	--	--	--
B3-EXW05	06/04/2012 - 04/05/2013	µg/L	28	(3/Apr-05-2013)	22	(3/Apr-05-2013)	51	(3/Apr-05-2013)	NA	(3/AII ND)	--	--	--	--	--	--	--	--
CS-B3-MW01	04/26/2010 - 04/11/2013	µg/L	360	(10/Apr-26-2010)	0.77	(10/Jul-20-2011)	1.5	(10/Apr-12-2012)	220	(10/Jul-29-2010)	5.8	(3/Jul-29-2010)	--	--	0.075	(3/Apr-26-2010)	--	--
CS-1	06/07/2011 - 09/23/2013	µg/L	NA	(11/AII ND)	NA	(11/AII ND)	0.49	(11/Jan-03-2013)	NA	(11/AII ND)	29	(12/Sep-14-2011)	--	--	NA	(12/AII ND)	--	--
CS-2	12/13/2007 - 09/05/2013	µg/L	NA	(11/AII ND)	0.64	(11/Sep-11-2008)	0.19	(11/Sep-11-2008)	NA	(11/AII ND)	3.0	(10/Sep-11-2008)	--	--	NA	(9/AII ND)	--	--
CS-4	02/24/2010 - 06/25/2013	µg/L	6.0	(10/Sep-16-2010)	6.4	(10/Sep-16-2010)	10	(10/Sep-16-2010)	NA	(10/AII ND)	NA	(8/AII ND)	--	--	0.061	(8/Apr-26-2010)	--	--
CS-9	06/07/2011 - 09/23/2013	µg/L	NA	(10/AII ND)	NA	(10/AII ND)	NA	(10/AII ND)	NA	(10/AII ND)	58	(10/Dec-15-2011)	--	--	18	(10/Dec-15-2011)	--	--
CS-10	09/14/2011 - 09/23/2013	µg/L	NA	(13/AII ND)	NA	(13/AII ND)	NA	(13/AII ND)	NA	(13/AII ND)	2.2	(14/Sep-14-2011)	--	--	NA	(14/AII ND)	--	--
CS-11	06/22/2004 - 06/09/2009	µg/L	NA	(12/AII ND)	NA	(12/AII ND)	NA	(12/AII ND)	NA	(12/AII ND)	200	(7/Sep-15-2008)	--	--	0.2	(6/Jun-09-2009)	--	--
CS-12	09/14/2011 - 09/23/2013	µg/L	NA	(12/AII ND)	NA	(12/AII ND)	NA	(12/AII ND)	NA	(12/AII ND)	5.3	(13/Sep-14-2011)	--	--	0.2	(13/Nov-15-2011)	--	--
CS-13	03/15/2012 - 06/17/2013	µg/L	NA	(5/AII ND)	NA	(5/AII ND)	NA	(5/AII ND)	NA	(5/AII ND)	10	(4/Mar-15-2012)	--	--	NA	(5/AII ND)	--	--
CS-D	04/26/2010 - 01/10/2013	µg/L	150	(10/Oct-20-2010)	150	(10/Oct-20-2010)	180	(10/Oct-20-2010)	0.30	(10/Oct-20-2010)	2.3	(8/Mar-08-2011)	--	--	0.076	(8/Apr-26-2010)	--	--
CS-MWG-LGR	06/07/2005 - 12/11/2012	µg/L	NA	(11/AII ND)	NA	(11/AII ND)	NA	(11/AII ND)	NA	(11/AII ND)	10	(8/Sep-16-2008)	--	--	NA	(8/AII ND)	--	--
CS-MWH-LGR	09/07/2004 - 12/18/2012	µg/L	NA	(10/AII ND)	NA	(10/AII ND)	NA	(10/AII ND)	NA	(10/AII ND)	8.2	(6/Dec-07-2009)	--	--	NA	(5/AII ND)	--	--
CS-I	11/29/2004 - 12/18/2012	µg/L	NA	(10/AII ND)	NA	(10/AII ND)	NA	(10/AII ND)	NA	(10/AII ND)	2.8	(7/Jun-06-2005)	--	--	NA	(7/AII ND)	--	--
CS-MW1-LGR	10/25/2011 - 09/04/2013	µg/L	20	(11/Apr-11-2013)	15	(11/Apr-11-2013)	33	(11/Apr-11-2013)	NA	(11/AII ND)	8.6	(7/Dec-14-2011)	--	--	NA	(7/AII ND)	--	--
CS-MW1-CC	03/07/2005 - 06/17/2013	µg/L	NA	(11/AII ND)	NA	(11/AII ND)	NA	(11/AII ND)	NA	(11/AII ND)	0.32	(9/Jun-13-2005)	--	--	0.054	(7/Jun-13-2005)	--	--
CS-MW1-BS	11/30/2004 - 12/18/2012	µg/L	1.4	(10/Sep-07-2010)	NA	(10/AII ND)	0.16	(10/Dec-10-2009)	NA	(10/AII ND)	0.33	(7/Jun-13-2005)	--	--	0.071	(6/Jun-13-2005)	--	--
CS-MW2-LGR	12/10/2009 - 09/04/2013	µg/L	1.7	(10/Dec-10-2009)	0.16	(10/Jun-09-2010)	0.20	(10/Dec-10-2009)	NA	(10/AII ND)	11	(10/Dec-14-2011)	--	--	0.2	(10/Sep-11-2012)	--	--
CS-MW2-CC	09/09/2004 - 06/17/2013	µg/L	NA	(11/AII ND)	NA	(11/AII ND)	NA	(11/AII ND)	NA	(11/AII ND)	2.5	(7/Sep-25-2007)	--	--	NA	(6/AII ND)	--	--
CS-MW3-LGR	03/16/2009 - 09/04/2013	µg/L	NA	(11/AII ND)	NA	(11/AII ND)	NA	(11/AII ND)	NA	(11/AII ND)	NA	(11/AII ND)	--	--	NA	(11/AII ND)	--	--
CS-MW4-LGR	09/27/2007 - 06/17/2013	µg/L	0.14	(10/Mar-12-2008)	0.37	(10/Jan-10-2013)	0.17	(10/Dec-09-2009)	NA	(10/AII ND)	1.0	(10/Sep-27-2007)	--	--	NA	(8/AII ND)	--	--
CS-MW5-LGR	03/17/2009 - 09/04/2013	µg/L	2.9	(10/Mar-13-2012)	1.9	(10/Mar-08-2011)	3.6	(10/Mar-08-2011)	NA	(10/AII ND)	2.0	(10/Jun-13-2011)	--	--	NA	(10/AII ND)	--	--
CS-MW6-LGR	08/02/2012 - 09/17/2013	µg/L	NA	(8/AII ND)	0.22	(8/Apr-22-2013)	NA	(8/AII ND)	NA	(8/AII ND)	NA	(5/AII ND)	2.9	(5/Aug-02-2012)	NA	(5/AII ND)	NA	(5/AII ND)
CS-MW6-CC	06/21/2004 - 01/14/2013	µg/L	NA	(11/AII ND)	NA	(11/AII ND)	NA	(11/AII ND)	NA	(11/AII ND)	0.40	(7/Oct-02-2007)	--	--	NA	(6/AII ND)	--	--
CS-MW6-BS	12/01/2004 - 12/13/2012	µg/L	NA	(11/AII ND)	NA	(11/AII ND)	NA	(11/AII ND)	NA	(11/AII ND)	0.11	(7/Jun-09-2005)	--	--	NA	(6/AII ND)	--	--
CS-MW7-LGR	03/20/2012 - 09/19/2013	µg/L	NA	(9/AII ND)	0.89	(9/Apr-22-2013)	NA	(9/AII ND)	NA	(9/AII ND)	NA	(6/AII ND)	NA	(5/AII ND)	0.2	(6/Mar-20-2012)	NA	(5/AII ND)
CS-MW7-CC	06/23/2004 - 01/10/2013	µg/L	NA	(12/AII ND)	NA	(12/AII ND)	NA	(12/AII ND)	NA	(12/AII ND)	0.72	(8/Jun-13-2005)	--	--	0.052	(7/Jun-13-2005)	--	--
CS-MW8-LGR	08/02/2012 - 09/17/2013	µg/L	NA	(10/AII ND)	3.0	(10/Apr-22-2013)	0.16	(10/Apr-22-2013)	NA	(10/AII ND)	NA	(7/AII ND)	2.1	(4/Aug-02-2012)	0.2	(7/Sep-11-2012)	NA	(4/AII ND)
CS-MW8-CC	09/13/2004 - 12/20/2012	µg/L	NA	(10/AII ND)	0.65	(10/Oct-02-2007)	0.19	(10/Oct-02-2007)	NA	(10/AII ND)	0.15	(6/Jun-09-2005)	--	--	NA	(5/AII ND)	--	--
CS-MW9-LGR	09/16/2008 - 09/19/2013	µg/L	NA	(11/AII ND)	0.18	(11/Mar-08-2011)	NA	(11/AII ND)	NA	(11/AII ND)	3.8	(11/Sep-16-2008)	--	--	NA	(11/AII ND)	--	--
CS-MW9-CC	09/07/2004 - 12/11/2012	µg/L	NA	(10/AII ND)	NA	(10/AII ND)	NA	(10/AII ND)	NA	(10/AII ND)	0.20	(6/Sep-25-2007)	--	--	0.080	(5/Jun-10-2005)	--	--
CS-MW9-BS	06/10/2005 - 12/11/2012	µg/L	NA	(10/AII ND)	NA	(10/AII ND)	NA	(10/AII ND)	NA	(10/AII ND)	110	(9/Sep-25-2007)	--	--	0.20	(8/Sep-11-2012)	--	--
CS-MW10-LGR	09/15/2005 - 06/18/2013	µg/L	NA	(11/AII ND)	2.3	(11/Sep-15-2005)	0.70	(11/Dec-08-2009)	NA	(11/AII ND)	9.6	(9/Dec-13-2011)	--	--	0.20	(8/Mar-20-2012)	--	--
CS-MW10-CC	06/23/2004 - 01/10/2013	µg/L	NA	(10/AII ND)	0.18	(10/Jan-10-2013)	0.18	(10/Dec-08-2009)	NA	(10/AII ND)	0.40	(6/Oct-02-2007)	--	--	NA	(5/AII ND)	--	--
CS-MW11A-LGR	06/08/2010 - 09/05/2013	µg/L	NA	(10/AII ND)	1.3	(10/Dec-13-2011)	NA	(10/AII ND)	NA	(10/AII ND)	8.2	(10/Dec-13-2011)	--	--	0.20	(10/Sep-11-2012)	--	--
CS-MW11B-LGR	05/26/2004 - 09/09/2010	µg/L	NA	(11/AII ND)	1.5	(11/Sep-15-2005)	NA	(11/AII ND)	NA	(11/AII ND)	2.1	(7/Mar-12-2008)	--	--	0.060	(5/Jun-14-2005)	--	--
CS-MW12-LGR	03/08/2007 - 09/19/2013	µg/L	NA	(14/AII ND)	NA	(14/AII ND)	NA	(14/AII ND)	NA	(14/AII ND)	2.7	(13/Jun-10-2011)	--	--	NA	(11/AII ND)	--	--
CS-MW12-CC	06/21/2004 - 12/17/2012	µg/L	NA	(10/AII ND)	NA	(10/AII ND)	NA	(10/AII ND)	NA	(10/AII ND)	0.55	(6/Jun-16-2005)	--	--	NA	(5/AII ND)	--	--
CS-MW12-BS	12/07/2004 - 12/17/2012	µg/L	NA	(10/AII ND)	NA	(10/AII ND)	NA	(10/AII ND)	0.32	(10/Dec-07-2004)	2.0	(7/Jun-10-2011)	--	--	0.049	(6/Jun-14-2005)	--	--
CS-MW16-LGR	04/26/2011 - 09/05/2013	µg/L	310	(10/Apr-26-2011)	240	(10/Apr-26-2011)	280	(10/Apr-26-2011)	0.40	(10/Oct-16-2012)	4.2	(4/Jun-07-2011)	--	--	NA	(4/AII ND)	--	--
CS-MW16-CC	04/26/2011 - 09/05/2013	µg/L	25	(11/Jul-21-2011)	1.5	(11/Jun-07-2011)	25	(11/Jun-07-2011)	NA	(11/AII ND)	NA	(5/AII ND)	--	--	NA	(5/AII ND)	--	--
CS-MW17-LGR	03/16/2005 - 06/1																	

Table 2.7 Groundwater Summary Data for Risk Assessment Maximum Detected Concentrations for the Ten Most Recent Sampling Events as of the Third Quarter 2013 Camp Stanley Storage Activity, Bexar County, Texas																		
			cis-1,2-Dichloroethene		Tetrachloroethene (PCE)		Trichloroethene (TCE)		Vinyl Chloride		Lead		Lead-Dissolved		Mercury		Mercury-Dissolved	
Well ID	Range of Sample Collection Dates	Unit	Maximum Concentration†	(Number of Sample Results/ Date of Max)††	Maximum Concentration†	(Number of Sample Results/ Date of Max)††	Maximum Concentration†	(Number of Sample Results/ Date of Max)††	Maximum Concentration†	(Number of Sample Results/ Date of Max)††	Maximum Concentration†	(Number of Sample Results/ Date of Max)††	Maximum Concentration†	(Number of Sample Results/ Date of Max)††	Maximum Concentration†	(Number of Sample Results/ Date of Max)††	Maximum Concentration†	(Number of Sample Results/ Date of Max)††
Off-Post Wells																		
BSR-03	03/09/2012 - 09/13/2013	µg/L	NA	(4/AII ND)	NA	(4/AII ND)	NA	(4/AII ND)	NA	(4/AII ND)	--	--	--	--	--	--	--	--
BSR-04	12/06/2012 - 09/12/2013	µg/L	NA	(2/AII ND)	NA	(2/AII ND)	NA	(2/AII ND)	NA	(2/AII ND)	--	--	--	--	--	--	--	--
DOM-2	09/19/2001 - 03/06/2008	µg/L	NA	(8/AII ND)	NA	(8/AII ND)	NA	(8/AII ND)	NA	(8/AII ND)	--	--	--	--	--	--	--	--
FO-8	03/22/2006 - 09/09/2013	µg/L	NA	(10/AII ND)	NA	(10/AII ND)	NA	(10/AII ND)	NA	(10/AII ND)	--	--	NA	--	--	--	--	--
FO-17	06/20/2005 - 09/09/2013	µg/L	NA	(11/AII ND)	NA	(11/AII ND)	NA	(11/AII ND)	NA	(11/AII ND)	--	--	--	--	--	--	--	--
FO-22	12/22/2005 - 09/09/2013	µg/L	NA	(11/AII ND)	NA	(11/AII ND)	NA	(11/AII ND)	NA	(11/AII ND)	--	--	--	--	--	--	--	--
FO-J1	06/03/2009 - 09/13/2013	µg/L	NA	(10/AII ND)	0.57	(10/Jun-03-2009)	NA	(10/AII ND)	NA	(10/AII ND)	--	--	--	--	--	--	--	--
HS-1	03/03/2009 - 09/11/2013	µg/L	NA	(11/AII ND)	0.24	(11/Dec-16-2010)	NA	(11/AII ND)	NA	(11/AII ND)	--	--	--	--	--	--	--	--
HS-2	06/03/2009 - 09/11/2013	µg/L	NA	(10/AII ND)	0.23	(10/Jun-03-2009)	NA	(10/AII ND)	NA	(10/AII ND)	--	--	--	--	--	--	--	--
HS-3	06/21/2005 - 09/11/2013	µg/L	NA	(10/AII ND)	NA	(10/AII ND)	NA	(10/AII ND)	NA	(10/AII ND)	--	--	--	--	--	--	--	--
I10-2	03/20/2007 - 09/09/2013	µg/L	NA	(10/AII ND)	0.20	(10/Dec-04-2012)	0.53	(10/Dec-04-2012)	NA	(10/AII ND)	--	--	--	--	--	--	--	--
I10-4	06/04/2012 - 09/09/2013	µg/L	NA	(10/AII ND)	5.2	(10/Aug-06-2012)	2.5	(10/Jun-04-2012)	NA	(10/AII ND)	NA	(1/ND)	7.0	(4/Aug-03-2012)	NA	(1/ND)	NA	(4/AII ND)
I10-5	12/16/2004 - 09/09/2013	µg/L	NA	(12/AII ND)	NA	(12/AII ND)	NA	(12/AII ND)	NA	(12/AII ND)	--	--	--	--	--	--	--	--
I10-7	12/02/2008 - 09/09/2013	µg/L	NA	(14/AII ND)	NA	(14/AII ND)	0.17	(14/Dec-03-2009)	NA	(14/AII ND)	--	--	--	--	--	--	--	--
I10-8	12/02/2009 - 09/10/2013	µg/L	NA	(12/AII ND)	NA	(12/AII ND)	NA	(12/AII ND)	NA	(12/AII ND)	--	--	--	--	--	--	--	--
I10-9	09/06/2011 - 06/04/2012	µg/L	NA	(5/AII ND)	NA	(5/AII ND)	1.4	(5/Jun-04-2012)	NA	(5/AII ND)	--	--	--	--	--	--	--	--
I10-10	09/11/2013 - 09/11/2013	µg/L	NA	(1/ND)	NA	(1/ND)	NA	(1/ND)	NA	(1/ND)	--	--	NA	(1/ND)	--	--	--	--
JW-5	06/04/2008 - 09/10/2013	µg/L	NA	(13/AII ND)	0.12	(13/Mar-01-2011)	NA	(13/AII ND)	NA	(13/AII ND)	--	--	--	--	--	--	--	--
JW-6	06/23/2005 - 09/10/2013	µg/L	NA	(13/AII ND)	NA	(13/AII ND)	NA	(13/AII ND)	NA	(13/AII ND)	--	--	--	--	--	--	--	--
JW-7	12/14/2009 - 09/10/2013	µg/L	NA	(10/AII ND)	0.47	(10/Dec-14-2010)	NA	(10/AII ND)	NA	(10/AII ND)	--	--	--	--	--	--	--	--
JW-8	12/01/2009 - 09/11/2013	µg/L	NA	(10/AII ND)	0.36	(10/Dec-01-2009)	NA	(10/AII ND)	NA	(10/AII ND)	--	--	--	--	--	--	--	--
JW-9	03/24/2005 - 09/13/2013	µg/L	NA	(11/AII ND)	NA	(11/AII ND)	NA	(11/AII ND)	NA	(11/AII ND)	--	--	--	--	--	--	--	--
JW-12	09/18/2001 - 06/05/2009	µg/L	NA	(11/AII ND)	0.21	(11/Sep-20-2007)	NA	(11/AII ND)	NA	(11/AII ND)	--	--	--	--	--	--	--	--
JW-13	06/22/2005 - 09/11/2013	µg/L	NA	(11/AII ND)	NA	(11/AII ND)	NA	(11/AII ND)	NA	(11/AII ND)	--	--	--	--	--	--	--	--
JW-14	09/01/2009 - 12/06/2012	µg/L	NA	(11/AII ND)	NA	(11/AII ND)	NA	(11/AII ND)	NA	(11/AII ND)	--	--	--	--	--	--	--	--
JW-15	03/21/2006 - 09/11/2013	µg/L	NA	(11/AII ND)	NA	(11/AII ND)	NA	(11/AII ND)	NA	(11/AII ND)	--	--	--	--	--	--	--	--
JW-26	03/10/2004 - 12/06/2012	µg/L	NA	(10/AII ND)	NA	(10/AII ND)	NA	(10/AII ND)	NA	(10/AII ND)	--	--	NA	--	--	--	--	--
JW-27	06/04/2008 - 09/11/2013	µg/L	NA	(12/AII ND)	NA	(12/AII ND)	NA	(12/AII ND)	NA	(12/AII ND)	--	--	--	--	--	--	--	--
JW-28	12/03/2009 - 09/11/2013	µg/L	NA	(10/AII ND)	NA	(10/AII ND)	NA	(10/AII ND)	NA	(10/AII ND)	--	--	--	--	--	--	--	--
JW-29	12/02/2009 - 09/11/2013	µg/L	NA	(10/AII ND)	NA	(10/AII ND)	NA	(10/AII ND)	NA	(10/AII ND)	--	--	--	--	--	--	--	--
JW-30	12/02/2009 - 09/12/2013	µg/L	0.21	(12/Mar-02-2010)	0.17	(12/Dec-16-2010)	NA	(12/AII ND)	NA	(12/AII ND)	--	--	--	--	--	--	--	--
JW-31	12/01/2009 - 09/12/2013	µg/L	NA	(10/AII ND)	NA	(10/AII ND)	NA	(10/AII ND)	NA	(10/AII ND)	--	--	--	--	--	--	--	--
LS-1	12/02/2009 - 09/11/2013	µg/L	2.5	(12/Dec-02-2009)	1.3	(12/Dec-02-2009)	0.63	(12/Dec-02-2009)	NA	(12/AII ND)	--	--	--	--	--	--	--	--
LS-4	12/02/2009 - 09/11/2013	µg/L	NA	(10/AII ND)	0.17	(10/Mar-01-2010)	NA	(10/AII ND)	NA	(10/AII ND)	--	--	--	--	--	--	--	--
LS-5	08/06/2012 - 09/17/2013	µg/L	NA	(11/AII ND)	1.3	(11/Aug-06-2012)	3.1	(11/Apr-23-2013)	NA	(11/AII ND)	2.1	(4/Sep-17-2013)	4.7	(4/Aug-06-2012)	NA	(4/AII ND)	NA	(4/AII ND)
LS-6	08/06/2012 - 09/17/2013	µg/L	NA	(11/AII ND)	1.1	(11/Apr-23-2013)	3.0	(11/Jun-19-2013)	NA	(11/AII ND)	2.7	(4/Jul-19-2013)	2.1	(4/Aug-06-2012)	NA	(4/AII ND)	NA	(4/AII ND)
LS-7	08/06/2012 - 09/17/2013	µg/L	NA	(10/AII ND)	2.8	(10/Aug-06-2012)	0.66	(10/Aug-30-2012)	NA	(10/AII ND)	NA	(4/AII ND)	3.1	(4/Aug-06-2012)	NA	(4/AII ND)	NA	(4/AII ND)
OFR-1	12/01/2009 - 09/13/2013	µg/L	NA	(12/AII ND)	0.35	(12/Dec-01-2009)	NA	(12/AII ND)	NA	(12/AII ND)	--	--	--	--	--	--	--	--
OFR-2	12/02/2003 - 03/20/2006	µg/L	NA	(12/AII ND)	0.35	(12/Mar-01-2004)	NA	(12/AII ND)	NA	(12/AII ND)	--	--	--	--	--	--	--	--
OFR-3	12/05/2011 - 04/23/2013	µg/L	0.25	(10/Apr-23-2013)	11	(10/Apr-23-2013)	7.0	(10/Apr-23-2013)	NA	(10/AII ND)	NA	(2/AII ND)	NA	(5/AII ND)	NA	(2/AII ND)	NA	(5/AII ND)
OFR-4	03/21/2006 - 09/13/2013	µg/L	NA	(12/AII ND)	NA	(12/AII ND)	NA	(12/AII ND)	NA	(12/AII ND)	--	--	--	--	--	--	--	--
OW-BARNOWL	06/01/2011 - 09/10/2013	µg/L	NA	(12/AII ND)	NA	(12/AII ND)	NA	(12/AII ND)	NA	(12/AII ND)	--	--	--	--	--	--	--	--
OW-CE1	02/28/2011 - 09/10/2013	µg/L	NA	(8/AII ND)	NA	(8/AII ND)	NA	(8/AII ND)	NA	(8/AII ND)	--	--	--	--	--	--	--	--
OW-CE2	02/28/2011 - 09/10/2013	µg/L	NA	(7/AII ND)	NA	(7/AII ND)	NA	(7/AII ND)	NA	(7/AII ND)	--	--	--	--	--	--	--	--
OW-DAIRYWELL	02/28/2011 - 09/10/2013	µg/L	NA	(7/AII ND)	NA	(7/AII ND)	NA	(7/AII ND)	NA	(7/AII ND)	--	--	--	--	--	--	--	--
OW-HH1	02/28/2011 - 09/10/2013	µg/L	NA	(9/AII ND)	NA	(9/AII ND)	NA	(9/AII ND)	NA	(9/AII ND)	--	--	--	--	--	--	--	--
OW-HH2	06/01/2011 - 09/10/2013	µg/L	NA	(12/AII ND)	NA	(12/AII ND)	NA	(12/AII ND)	NA	(12/AII ND)	--	--	--	--	--	--	--	--
OW-HH3	02/28/2011 - 09/10/2013	µg/L	NA	(7/AII ND)	NA	(7/AII ND)	NA	(7/AII ND)	NA	(7/AII ND)	--	--	--	--	--	--	--	--
OW-MT2	02/28/2011 - 09/10/2013	µg/L	NA	(7/AII ND)	NA	(7/AII ND)	NA	(7/AII ND)	NA	(7/AII ND)	--	--	--	--	--	--	--	--
RFR-3	12/20/2005 - 09/12/2013	µg/L	NA	(10/AII ND)	NA	(10/AII ND)	NA	(10/AII ND)	NA	(10/AII ND)	--	--	--	--	--	--	--	--
RFR-4	03/21/2006 - 09/12/2013	µg/L	NA	(12/AII ND)	NA	(12/AII ND)	NA	(12/AII ND)	NA	(12/AII ND)	--	--	--	--	--	--	--	--
RFR-5	03/21/2006 - 09/12/2013	µg/L	NA	(14/AII ND)	NA	(14/AII ND)	NA	(14/AII ND)	NA	(14/AII ND)	--	--	--	--	--	--	--	--
RFR-6	09/19/2001 - 12/15/2004	µg/L	NA	(4/AII ND)	NA	(4/AII ND)	NA	(4/AII ND)	NA	(4/AII ND)	--	--	--	--	--	--	--	--
RFR-7	09/19/2001 - 12/19/2005	µg/L	NA	(5/AII ND)	NA	(5/AII ND)	NA	(5/AII ND)	NA	(5/AII ND)	--	--	--	--	--	--	--	--
RFR-8	06/22/2005 - 09/12/2013	µg/L	NA	(10/AII ND)	NA	(10/AII ND)	NA	(10/AII ND)	NA	(10/AII ND)	--	--	--	--	--	--	--	--
RFR-9	09/20/2007 - 12/27/2012	µg/L	NA	(11/AII ND)	0.20	(11/Sep-04-2009)	NA	(11/AII ND)	NA	(11/AII ND)	--	--	--	--	--	--	--	--
RFR-10	08/06/2012 - 09/17/2013	µg/L	0.29	(10/Dec-03-2012)	18	(10/Dec-03-2012)	8.7	(10/Jun-19-2013)	NA	(10/AII ND)	NA	(4/AII ND)	3.9	(4/Aug-30-2012)	NA	(4/AII ND)	NA	(4/AII ND)
RFR-11	08/03/2012 - 09/17/2013	µg/L	NA	(10/AII ND)	0.80	(10/Aug-16-2012)	2.9	(10/Aug-30-2012)	NA	(10/AII ND)	NA	(4/AII ND)	2.8	(4/Aug-03-2012)	NA	(4/AII ND)	NA	(4/AII ND)
RFR-12	03/04/2008 - 09/09/2013	µg/L	NA	(11/AII ND)	0.26	(11/Mar-03-2010)	0.63	(11/Jun-15-2011)	NA	(11/AII ND)	--	--	--	--	--	--	--	--
RFR-13	03/22/2006 - 09/13/2013	µ																

Table 2.7
Groundwater Summary Data for Risk Assessment
Maximum Detected Concentrations for the Ten Most Recent Sampling Events as of the Third Quarter 2013
Camp Stanley Storage Activity, Bexar County, Texas

			cis-1,2-Dichloroethene		Tetrachloroethene (PCE)		Trichloroethene (TCE)		Vinyl Chloride		Lead		Lead-Dissolved		Mercury		Mercury-Dissolved	
Well ID	Range of Sample Collection Dates	Unit	Maximum Concentration†	(Number of Sample Results/ Date of Max)††	Maximum Concentration†	(Number of Sample Results/ Date of Max)††	Maximum Concentration†	(Number of Sample Results/ Date of Max)††	Maximum Concentration†	(Number of Sample Results/ Date of Max)††	Maximum Concentration†	(Number of Sample Results/ Date of Max)††	Maximum Concentration†	(Number of Sample Results/ Date of Max)††	Maximum Concentration†	(Number of Sample Results/ Date of Max)††	Maximum Concentration†	(Number of Sample Results/ Date of Max)††
Westbay Wells ⁽¹⁾																		
CS-WB01-LGR-04	03/16/2009 - 06/13/2013	µg/L	0.11	(10/Jun-13-2013)	0.53	(10/Sep-02-2009)	0.26	(10/Sep-02-2009)	NA	(10/AII ND)	NA	(2/AII ND)	NA	(1/ND)	NA	(2/AII ND)	NA	(1/ND)
CS-WB01-LGR-05	03/16/2009 - 06/13/2013	µg/L	NA	(10/AII ND)	0.33	(10/Jun-13-2013)	0.61	(10/Mar-10-2010)	NA	(10/AII ND)	NA	(2/AII ND)	NA	(1/ND)	NA	(2/AII ND)	NA	(1/ND)
CS-WB01-LGR-06	03/16/2009 - 06/13/2013	µg/L	0.55	(10/Jun-13-2013)	0.70	(10/Apr-25-2013)	2.4	(10/Jul-30-2012)	NA	(10/AII ND)	NA	(2/AII ND)	NA	(1/ND)	NA	(2/AII ND)	NA	(1/ND)
CS-WB01-LGR-07	03/16/2009 - 06/13/2013	µg/L	0.26	(10/Sep-01-2010)	22	(10/Sep-02-2009)	22	(10/Sep-01-2010)	NA	(10/AII ND)	NA	(2/AII ND)	NA	(1/ND)	NA	(2/AII ND)	NA	(1/ND)
CS-WB01-LGR-08	03/16/2009 - 06/13/2013	µg/L	1.6	(10/Jun-13-2013)	5.6	(10/Jun-13-2013)	9.4	(10/Jun-13-2013)	NA	(10/AII ND)	NA	(2/AII ND)	NA	(1/ND)	NA	(2/AII ND)	NA	(1/ND)
CS-WB01-LGR-09	08/03/2012 - 09/23/2013	µg/L	0.63	(10/Apr-23-2013)	19	(10/Apr-23-2013)	25	(10/Apr-23-2013)	NA	(10/AII ND)	NA	(4/AII ND)	2.5	(4/Aug-03-2012)	NA	(4/AII ND)	NA	(4/AII ND)
CS-WB02-LGR-04	03/11/2009 - 06/12/2013	µg/L	NA	(10/AII ND)	4.7	(10/Sep-03-2009)	17	(10/Sep-03-2009)	NA	(10/AII ND)	NA	(2/AII ND)	NA	(1/ND)	NA	(2/AII ND)	NA	(1/ND)
CS-WB02-LGR-05	03/11/2009 - 06/12/2013	µg/L	NA	(10/AII ND)	2.6	(10/Jun-12-2013)	5.0	(10/Sep-03-2009)	NA	(10/AII ND)	NA	(2/AII ND)	NA	(1/ND)	0.20	(2/Jul-27-2012)	NA	(1/ND)
CS-WB02-LGR-06	03/11/2009 - 06/12/2013	µg/L	1.0	(10/Mar-14-2011)	9.0	(10/Mar-11-2010)	5.9	(10/Mar-11-2010)	NA	(10/AII ND)	NA	(2/AII ND)	NA	(1/ND)	0.20	(2/Jul-27-2012)	NA	(1/ND)
CS-WB02-LGR-07	03/11/2009 - 06/12/2013	µg/L	0.60	(10/Apr-29-2013)	2.1	(10/Jun-12-2013)	2.2	(10/Mar-11-2010)	NA	(10/AII ND)	NA	(2/AII ND)	NA	(1/ND)	0.20	(2/Jul-27-2012)	NA	(1/ND)
CS-WB02-LGR-08	03/11/2009 - 06/12/2013	µg/L	3.7	(10/Mar-14-2011)	4.0	(10/Jun-12-2013)	2.7	(10/Sep-03-2010)	NA	(10/AII ND)	NA	(2/AII ND)	NA	(1/ND)	0.20	(2/Jul-27-2012)	NA	(1/ND)
CS-WB02-LGR-09	08/03/2012 - 09/18/2013	µg/L	0.42	(10/Aug-17-2012)	260	(10/Aug-18-2013)	13	(10/Aug-17-2012)	NA	(10/AII ND)	NA	(4/AII ND)	NA	(4/AII ND)	NA	(4/AII ND)	NA	(4/AII ND)
CS-WB03-LGR-04	03/10/2009 - 06/12/2013	µg/L	NA	(10/AII ND)	30	(10/Apr-22-2013)	12	(10/Dec-05-2011)	NA	(10/AII ND)	NA	(2/AII ND)	NA	(1/ND)	NA	(2/AII ND)	NA	(1/ND)
CS-WB03-LGR-05	03/10/2009 - 06/12/2013	µg/L	NA	(10/AII ND)	30	(10/Sep-04-2009)	9.4	(10/Sep-04-2009)	NA	(10/AII ND)	NA	(2/AII ND)	NA	(1/ND)	NA	(2/AII ND)	NA	(1/ND)
CS-WB03-LGR-06	03/10/2009 - 06/12/2013	µg/L	0.75	(10/Jun-12-2013)	22	(10/Jul-24-2012)	5.3	(10/Jul-24-2012)	NA	(10/AII ND)	NA	(2/AII ND)	NA	(1/ND)	NA	(2/AII ND)	NA	(1/ND)
CS-WB03-LGR-07	03/10/2009 - 06/12/2013	µg/L	9.8	(10/Jun-12-2013)	14	(10/Sep-08-2010)	20	(10/Mar-11-2010)	NA	(10/AII ND)	NA	(2/AII ND)	NA	(1/ND)	NA	(2/AII ND)	0.20	(1/Jul-25-2012)
CS-WB03-LGR-08	03/10/2009 - 06/12/2013	µg/L	8.3	(10/Dec-05-2011)	10	(10/Sep-08-2010)	2.1	(10/Sep-05-2012)	0.42	(10/Jun-12-2013)	NA	(2/AII ND)	NA	(1/ND)	NA	(2/AII ND)	NA	(1/ND)
CS-WB03-LGR-09	08/02/2012 - 09/18/2013	µg/L	20	(9/Dec-12-2012)	4.3	(9/Aug-16-2012)	4.1	(9/Aug-16-2012)	NA	(9/AII ND)	NA	(4/AII ND)	2.5	(4/Aug-02-2012)	NA	(4/AII ND)	NA	(4/AII ND)
CS-WB04-LGR-04	03/19/2008 - 04/24/2013	µg/L	0.19	(10/Jul-26-2012)	0.41	(10/Sep-06-2012)	0.25	(10/Mar-15-2011)	NA	(10/AII ND)	NA	(2/AII ND)	NA	(1/ND)	0.20	(2/Jul-26-2012)	NA	(1/ND)
CS-WB04-LGR-06	03/15/2011 - 09/23/2013	µg/L	3.5	(10/Jun-20-2013)	39	(10/Jun-20-2013)	15	(10/Jun-20-2013)	NA	(10/AII ND)	NA	(2/AII ND)	NA	(1/ND)	NA	(2/AII ND)	NA	(1/ND)
CS-WB04-LGR-07	03/15/2011 - 09/23/2013	µg/L	3.8	(10/Mar-15-2011)	32	(10/Mar-13-2012)	19	(10/Mar-15-2011)	NA	(10/AII ND)	NA	(2/AII ND)	NA	(1/ND)	NA	(2/AII ND)	NA	(1/ND)
CS-WB04-LGR-08	03/10/2009 - 06/20/2013	µg/L	0.15	(10/2009 - 06/20/2013)	0.62	(10/Sep-03-2009)	1.1	(10/Jul-26-2012)	NA	(10/AII ND)	NA	(2/AII ND)	NA	(1/ND)	0.20	(2/Jul-26-2012)	NA	(1/ND)
CS-WB04-LGR-09	03/15/2011 - 09/23/2013	µg/L	NA	(10/AII ND)	10	(10/Mar-13-2012)	8.3	(10/Sep-23-2013)	NA	(10/AII ND)	NA	(2/AII ND)	NA	(1/ND)	NA	(2/AII ND)	NA	(1/ND)
CS-WB04-LGR-10	03/15/2011 - 09/23/2013	µg/L	NA	(10/AII ND)	1.6	(10/Jul-25-2012)	0.73	(10/Jun-20-2013)	NA	(10/AII ND)	NA	(2/AII ND)	NA	(1/ND)	NA	(2/AII ND)	0.20	(1/Jul-25-2012)
CS-WB04-LGR-11	08/06/2012 - 09/23/2013	µg/L	NA	(10/AII ND)	0.40	(10/Apr-24-2013)	NA	(10/AII ND)	NA	(10/AII ND)	NA	(4/AII ND)	2.6	(4/Aug-03-2012)	NA	(4/AII ND)	NA	(4/AII ND)
CS-WB04-CC-01	04/21/2005 - 09/06/2012	µg/L	0.60	(10/Sep-06-2012)	0.26	(10/Sep-06-2012)	0.22	(10/Mar-10-2009)	NA	(4/AII ND)	--	--	--	--	--	--	--	--
CS-WB04-CC-02	04/21/2005 - 09/06/2012	µg/L	NA	(10/AII ND)	0.47	(10/Sep-06-2012)	NA	(10/AII ND)	NA	(4/AII ND)	--	--	--	--	--	--	--	--
CS-WB04-CC-03	04/21/2005 - 09/06/2012	µg/L	NA	(10/AII ND)	2.7	(10/Sep-06-2012)	0.20	(10/Mar-10-2009)	NA	(4/AII ND)	--	--	--	--	--	--	--	--
CS-WB04-BS-01	04/21/2005 - 09/06/2012	µg/L	NA	(10/AII ND)	0.19	(10/Sep-06-2012)	NA	(10/AII ND)	NA	(4/AII ND)	--	--	--	--	--	--	--	--
CS-WB04-BS-02	04/21/2005 - 09/06/2012	µg/L	0.25	(10/Oct-03-2007)	0.33	(10/Sep-06-2012)	0.18	(10/Mar-10-2009)	NA	(4/AII ND)	--	--	--	--	--	--	--	--
CS-WB05-LGR-02	07/17/2007 - 10/26/2010	µg/L	53	(8/Oct-26-2010)	0.41	(8/Jul-17-2007)	11	(8/Oct-26-2010)	NA	(8/AII ND)	NA	(8/AII ND)	--	--	0.13	(8/Jul-17-2007)	--	--
CS-WB05-LGR03A	10/24/2007 - 04/18/2012	µg/L	130	(10/Jul-26-2010)	25	(10/Oct-15-2009)	98	(10/Oct-24-2007)	23	(10/Apr-18-2012)	NA	(8/AII ND)	--	--	0.15	(8/Oct-24-2007)	--	--
CS-WB05-LGR03B	02/22/2011 - 10/23/2012	µg/L	190	(10/May-17-2011)	6.0	(10/Apr-18-2012)	55	(10/Mar-31-2011)	25	(10/Apr-18-2012)	--	--	--	--	--	--	--	--
CS-WB05-LGR-04A	01/20/2010 - 04/08/2013	µg/L	570	(10/Apr-22-2010)	90	(10/Jan-20-2010)	250	(10/Apr-22-2010)	86	(10/Apr-08-2013)	NA	(4/AII ND)	--	--	0.081	(4/Jan-20-2010)	--	--
CS-WB05-LGR-04B	04/21/2010 - 04/04/2013	µg/L	820	(10/Apr-21-2010)	59	(10/Apr-04-2013)	160	(10/Apr-21-2010)	300	(10/Jul-22-2010)	NA	(3/AII ND)	--	--	0.071	(3/Apr-21-2010)	--	--
CS-WB05-CC-01	04/21/2010 - 04/04/2013	µg/L	4.3	(10/Apr-21-2010)	1.8	(10/Jan-24-2011)	9.2	(10/Apr-21-2010)	0.74	(10/Jul-21-2010)	NA	(3/AII ND)	--	--	0.10	(3/Oct-25-2010)	--	--
CS-WB05-CC-02	04/21/2010 - 04/04/2013	µg/L	63	(10/Apr-21-2010)	0.61	(10/Oct-25-2010)	56	(10/Oct-25-2010)	4.8	(10/Apr-21-2010)	NA	(3/AII ND)	--	--	0.050	(3/Oct-25-2010)	--	--
CS-WB05-BS-01	04/21/2010 - 04/04/2013	µg/L	60	(10/Apr-25-2011)	NA	(10/AII ND)	1.5	(10/Apr-21-2010)	12	(10/Oct-26-2011)	NA	(3/AII ND)	--	--	0.070	(3/Oct-25-2010)	--	--
CS-WB06-LGR-02	04/29/2010 - 04/09/2013	µg/L	29	(10/Jul-27-2011)	7.5	(10/Apr-29-2010)	11	(10/Apr-09-2013)	0.58	(10/Apr-09-2013)	NA	(3/AII ND)	--	--	NA	(3/AII ND)	--	--
CS-WB06-LGR03A	04/29/2010 - 04/09/2013	µg/L	270	(10/Jan-26-2011)	170	(10/Apr-29-2010)	180	(10/Apr-29-2010)	NA	(10/AII ND)	NA	(3/AII ND)	--	--	NA	(3/AII ND)	--	--
CS-WB06-LGR03B	05/17/2011 - 04/09/2013	µg/L	320	(10/May-17-2011)	120	(10/Apr-09-2013)	220	(10/May-17-2011)	NA	(10/AII ND)	--	--	--	--	--	--	--	--
CS-WB06-LGR-04	04/29/2010 - 04/08/2013	µg/L	340	(10/Jan-26-2011)	210	(10/Oct-29-2010)	170	(10/Oct-29-2010)	1.4	(10/Oct-25-2012)	NA	(3/AII ND)	--	--	0.060	(3/Apr-29-2010)	--	--
CS-WB07-LGR-02	01/25/2010 - 04/03/2013	µg/L	160	(10/Apr-23-2012)	2.3	(10/Jul-29-2011)	16	(10/Apr-23-2012)	48	(10/Apr-23-2012)	2.4	(4/Jan-25-2010)	--	--	0.071	(4/Apr-28-2010)	--	--
CS-WB07-LGR03A	01/27/2009 - 04/20/2012	µg/L	130	(10/Apr-20-2012)	55	(10/Apr-20-2012)	75	(10/Apr-20-2012)	NA	(10/AII ND)	2.7	(8/Jan-25-2010)	--	--	0.16	(8/Apr-27-2009)	--	--
CS-WB07-LGR03B	01/18/2011 - 04/02/2013	µg/L	110	(10/Apr-20-2012)	40	(10/Apr-20-2012)	53	(10/Apr-20-2012)	NA	(10/AII ND)	--	--	--	--	--	--	--	--
CS-WB07-LGR-04	01/25/2010 - 04/02/2013	µg/L	570	(10/Feb-01-2011)	440	(10/Feb-01-2011)	450	(10/Feb-01-2011)	NA	(10/AII ND)	3.0	(4/Jan-25-2010)	--	--	0.050	(4/Oct-27-2010)	--	--
CS-WB08-LGR-02	04/27/2010 - 04/01/2013	µg/L	14	(10/Apr-01-2013)	6.2	(10/Oct-30-2012)	5.6	(10/Oct-30-2012)	0.3	(10/Apr-01-2013)	NA	(3/AII ND)	--	--	0.070	(3/Oct-28-2010)	--	--
CS-WB08-LGR03A	07/26/2007 - 01/25/2011	µg/L	260	(9/Jan-30-2008)	200	(9/Oct-28-2010)	270	(9/Jan-30-2008)	NA	(9/AII ND)	3.2	(8/Jan-26-2010)	--	--	0.076	(8/Apr-27-2010)	--	--
CS-WB08-LGR03B	11/17/2010 - 10/30/2012	µg/L	350	(10/Feb-22-2011)	260	(10/Feb-22-2011)	310	(10/Feb-22-2011)	NA	(10/AII ND)	5.9	(1/Nov-17-2010)	--	--	0.070	(1/Nov-17-2010)	--	--
CS-WB08-LGR-04	04/27/2010 - 04/01/2013	µg/L	120	(10/Jul-27-2010)	31	(10/Jan-25-2011)	51	(10/Jan-25-2011)	0.44	(10/Apr-25-2012)	2.4	(3/Jul-27-2010)	--	--	0.067	(3/Apr-27-2010)	--	--

† The maximum concentration detected for the ten most recent samples collected. When all analyte results for a sample were non-detect, the maximum concentration is NA = not applicable.

†† Number of sample results in the specified range of sample collection dates and the collection date of the sample having the maximum concentration. If the maximum concentration value was detected in more than one sample, the most recent sample date is used.

-- Indicates that the analyte was not tested.

NA - Not applicable

ND- Not detected

Detections are bolded.

µg/L - micrograms per liter

(1) Westbay wells are grouped by geologic unit (BS = Bexar Shale, CC= Cow Creek Limestone, LGR = Lower Glen Rose). The maximum detected concentration for each analyte from each geologic unit is shaded gray.

Table 2.8
Exposure Point Concentrations for On-Post Supply Wells, Combined
Camp Stanley Storage Activity, Bexar County, Texas

CAS No.	Compound	Maximum Detected Concentration Well CS-1 (µg/L)	Maximum Detected Concentration Well CS-10 (µg/L)	Maximum Detected Concentration Well CS-12 (µg/L)	On-Post Supply Well EPC ⁽¹⁾ (µg/L)
Volatile Organic Compounds					
156-59-2	<i>cis</i> -1,2-Dichloroethene	ND Max	ND Max	ND Max	ND
127-18-4	Tetrachloroethylene (PCE)	ND Max	ND Max	ND Max	ND
79-01-6	Trichloroethylene (TCE)	0.49 F D Max	ND Max	ND Max	0.49
75-01-4	Vinyl Chloride	ND Max	ND Max	ND Max	ND
Metals					
7439-97-6	Mercury	ND Max	ND Max	0.20 F D Max	0.20
7439-97-6	Mercury - Dissolved	NA Max	NA Max	NA Max	NA
Lead					
7439-92-1	Lead	29 D Max	2.2 F D Max	5.3 F D Max	12
7439-92-1	Lead - Dissolved	NA Max	NA Max	NA Max	NA

⁽¹⁾ Exposure point concentration is the average of the maximum detected concentration from the ten most recent sampling events from on-post supply wells CS-1, CS-10, and CS-12

µg/kg - micrograms per Liter

NA - Not analyzed

ND - Not detected

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

D - Definitive data

Table 5.1
Risk Ratio Calculations for Potential Exposure to Groundwater by a Resident
Off-Post Well FO-J1
Camp Stanley Storage Activity, Bexar County, Texas

CAS No.	Compound	Exposure Point Concentration (EPC) ⁽¹⁾ (µg/L)		TCEQ TRRP Tier 1 Groundwater PCL - Residential Ingestion ⁽²⁾ (mg/L)	TCEQ TRRP Tier 1 Groundwater PCL - Residential Ingestion ⁽²⁾ (µg/L)	Carcino-genic?	USEPA Tapwater RSL ⁽³⁾ (µg/L)	Carcino-genic?	Non-Carc Risk Ratio (EPC/PCL-ing)	Carc Risk Ratio (EPC/PCL-ing)	Non-Carc Risk Ratio (EPC/RSL)	Carc Risk Ratio (EPC/RSL)
	Volatile Organic Compounds											
156-59-2	cis -1,2-Dichloroethene	ND	Max	7.0E-02	7.0E+01	no	2.8E+01	no	--	--	--	--
127-18-4	Tetrachloroethylene (PCE)	0.57	F D Max	5.0E-03	5.0E+00	yes	9.7E+00	yes	--	1.1E-07	--	5.9E-08
79-01-6	Trichloroethylene (TCE)	ND	Max	5.0E-03	5.0E+00	yes	4.4E-01	yes	--	--	--	--
75-01-4	Vinyl Chloride	ND	Max	2.0E-03	2.0E+00	yes	1.5E-02	yes	--	--	--	--
	Metals ⁽⁴⁾											
7439-97-6	Mercury	NA	Max	2.0E-03	2.0E+00	no	6.3E-01	no	--	--	--	--
7439-97-6	Mercury - Dissolved	NA	Max	2.0E-03	2.0E+00	no	6.3E-01	no	--	--	--	--
	Lead (not included in cumulative risk estimate)											
7439-92-1	Lead	NA	Max	1.5E-02	1.5E+01	no	1.5E+01 ⁽³⁾	no	--	--	--	--
7439-92-1	Lead - Dissolved	NA	Max	1.5E-02	1.5E+01	no	1.5E+01 ⁽³⁾	no	--	--	--	--
Cumulative Risk Ratio									--	1E-07	--	6E-08

⁽¹⁾ Exposure point concentration is the maximum detected concentration from the ten most recent sampling events

⁽²⁾ Texas Commission on Environmental Quality (TCEQ) Texas Risk Reduction Program (TRRP) Tier 1 Groundwater Protective Concentration Levels (PCLs). Table 3. June 2012 (<http://www.tceq.state.tx.us/remediation/trrp/trrppcls.html>)

⁽³⁾ U.S. Environmental Protection Agency (USEPA) Regional Screening Levels (RSLs) for Tapwater (TR = 1E-6, HQ=1). November 2013. (http://www.epa.gov/reg3hwmd/risk/human/rb-concentration_table/Generic_Tables/docs/master_sl_table_run_NOV2013.pdf)

⁽⁴⁾ If dissolved metals data are available, they are used in the cumulative risk ratio. If only total metals data are available, they are used in the risk ratio

mg/kg - milligrams per Liter

µg/kg - micrograms per Liter

-- Not applicable

NA - Not analyzed

ND - Not detected

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

D - Definitive data

Table 5.2
Risk Ratio Calculations for Potential Exposure to Groundwater by a Resident
Off-Post Well HS-1
Camp Stanley Storage Activity, Bexar County, Texas

CAS No.	Compound	Exposure Point Concentration (EPC) ⁽¹⁾ (µg/L)	TCEQ TRRP Tier 1 Groundwater PCL - Residential Ingestion ⁽²⁾ (mg/L)	TCEQ TRRP Tier 1 Groundwater PCL - Residential Ingestion ⁽²⁾ (µg/L)	Carcino- genic?	USEPA Tapwater RSL ⁽³⁾ (µg/L)	Carcino- genic?	Non-Carc Risk Ratio (EPC/PCL- ing)	Carc Risk Ratio (EPC/PCL- ing)	Non-Carc Risk Ratio (EPC/RSL)	Carc Risk Ratio (EPC/RSL)
	Volatile Organic Compounds										
156-59-2	cis-1,2-Dichloroethene	ND Max	7.0E-02	7.0E+01	no	2.8E+01	no	--	--	--	--
127-18-4	Tetrachloroethylene (PCE)	0.24 F D Max	5.0E-03	5.0E+00	yes	9.7E+00	yes	--	4.8E-08	--	2.5E-08
79-01-6	Trichloroethylene (TCE)	ND Max	5.0E-03	5.0E+00	yes	4.4E-01	yes	--	--	--	--
75-01-4	Vinyl Chloride	ND Max	2.0E-03	2.0E+00	yes	1.5E-02	yes	--	--	--	--
	Metals ⁽⁴⁾										
7439-97-6	Mercury	NA Max	2.0E-03	2.0E+00	no	6.3E-01	no	--	--	--	--
7439-97-6	Mercury - Dissolved	NA Max	2.0E-03	2.0E+00	no	6.3E-01	no	--	--	--	--
	Lead (not included in cumulative risk estimate)										
7439-92-1	Lead	NA Max	1.5E-02	1.5E+01	no	1.5E+01 ⁽³⁾	no	--	--	--	--
7439-92-1	Lead - Dissolved	NA Max	1.5E-02	1.5E+01	no	1.5E+01 ⁽³⁾	no	--	--	--	--
Cumulative Risk Ratio								--	5E-08	--	2E-08

⁽¹⁾ Exposure point concentration is the maximum detected concentration from the ten most recent sampling events

⁽²⁾ Texas Commission on Environmental Quality (TCEQ) Texas Risk Reduction Program (TRRP) Tier 1 Groundwater Protective Concentration Levels (PCLs). Table 3. June 2012 (<http://www.tceq.state.tx.us/remediation/trrp/trrppcls.html>)

⁽³⁾ U.S. Environmental Protection Agency (USEPA) Regional Screening Levels (RSLs) for Tapwater (TR = 1E-6, HQ=1). November 2013. (http://www.epa.gov/reg3hwmd/risk/human/rb-concentration_table/Generic_Tables/docs/master_sl_table_run_NOV2013.pdf)

⁽⁴⁾ If dissolved metals data are available, they are used in the cumulative risk ratio. If only total metals data are available, they are used in the risk ratio

mg/kg - milligrams per Liter

µg/kg - micrograms per Liter

-- Not applicable

NA - Not analyzed

ND - Not detected

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

D - Definitive data

Table 5.3
Risk Ratio Calculations for Potential Exposure to Groundwater by a Resident
Off-Post Well HS-2
Camp Stanley Storage Activity, Bexar County, Texas

CAS No.	Compound	Exposure Point Concentration (EPC) ⁽¹⁾ (µg/L)	TCEQ TRRP Tier 1 Groundwater PCL - Residential Ingestion ⁽²⁾ (mg/L)	TCEQ TRRP Tier 1 Groundwater PCL - Residential Ingestion ⁽²⁾ (µg/L)	Carcino- genic?	USEPA Tapwater RSL ⁽³⁾ (µg/L)	Carcino- genic?	Non-Carc Risk Ratio (EPC/PCL- ing)	Carc Risk Ratio (EPC/PCL- ing)	Non-Carc Risk Ratio (EPC/RSL)	Carc Risk Ratio (EPC/RSL)
	Volatile Organic Compounds										
156-59-2	cis-1,2-Dichloroethene	ND Max	7.0E-02	7.0E+01	no	2.8E+01	no	--	--	--	--
127-18-4	Tetrachloroethylene (PCE)	0.23 F D Max	5.0E-03	5.0E+00	yes	9.7E+00	yes	--	4.6E-08	--	2.4E-08
79-01-6	Trichloroethylene (TCE)	ND Max	5.0E-03	5.0E+00	yes	4.4E-01	yes	--	--	--	--
75-01-4	Vinyl Chloride	ND Max	2.0E-03	2.0E+00	yes	1.5E-02	yes	--	--	--	--
	Metals ⁽⁴⁾										
7439-97-6	Mercury	NA Max	2.0E-03	2.0E+00	no	6.3E-01	no	--	--	--	--
7439-97-6	Mercury - Dissolved	NA Max	2.0E-03	2.0E+00	no	6.3E-01	no	--	--	--	--
	Lead (not included in cumulative risk estimate)										
7439-92-1	Lead	NA Max	1.5E-02	1.5E+01	no	1.5E+01 ⁽³⁾	no	--	--	--	--
7439-92-1	Lead - Dissolved	NA Max	1.5E-02	1.5E+01	no	1.5E+01 ⁽³⁾	no	--	--	--	--
Cumulative Risk Ratio								--	5E-08	--	2E-08

⁽¹⁾ Exposure point concentration is the maximum detected concentration from the ten most recent sampling events

⁽²⁾ Texas Commission on Environmental Quality (TCEQ) Texas Risk Reduction Program (TRRP) Tier 1 Groundwater Protective Concentration Levels (PCLs). Table 3. June 2012 (<http://www.tceq.state.tx.us/remediation/trrp/trrppcls.html>)

⁽³⁾ U.S. Environmental Protection Agency (USEPA) Regional Screening Levels (RSLs) for Tapwater (TR = 1E-6, HQ=1). November 2013. (http://www.epa.gov/reg3hwmd/risk/human/rb-concentration_table/Generic_Tables/docs/master_sl_table_run_NOV2013.pdf)

⁽⁴⁾ If dissolved metals data are available, they are used in the cumulative risk ratio. If only total metals data are available, they are used in the risk ratio

mg/kg - milligrams per Liter

µg/kg - micrograms per Liter

-- Not applicable

NA - Not analyzed

ND - Not detected

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

D - Definitive data

Table 5.4
Risk Ratio Calculations for Potential Exposure to Groundwater by a Resident
Off-Post Well I10-2
Camp Stanley Storage Activity, Bexar County, Texas

CAS No.	Compound	Exposure Point Concentration (EPC) ⁽¹⁾ (µg/L)	TCEQ TRRP Tier 1 Groundwater PCL - Residential Ingestion ⁽²⁾ (mg/L)	TCEQ TRRP Tier 1 Groundwater PCL - Residential Ingestion ⁽²⁾ (µg/L)	Carcino- genic?	USEPA Tapwater RSL ⁽³⁾ (µg/L)	Carcino- genic?	Non-Carc Risk Ratio (EPC/PCL- ing)	Carc Risk Ratio (EPC/PCL- ing)	Non-Carc Risk Ratio (EPC/RSL)	Carc Risk Ratio (EPC/RSL)
	Volatile Organic Compounds										
156-59-2	cis-1,2-Dichloroethene	ND Max	7.0E-02	7.0E+01	no	2.8E+01	no	--	--	--	--
127-18-4	Tetrachloroethylene (PCE)	0.20 F D Max	5.0E-03	5.0E+00	yes	9.7E+00	yes	--	4.0E-08	--	2.1E-08
79-01-6	Trichloroethylene (TCE)	0.53 F D Max	5.0E-03	5.0E+00	yes	4.4E-01	yes	--	1.1E-07	--	1.2E-06
75-01-4	Vinyl Chloride	ND Max	2.0E-03	2.0E+00	yes	1.5E-02	yes	--	--	--	--
	Metals ⁽⁴⁾										
7439-97-6	Mercury	NA Max	2.0E-03	2.0E+00	no	6.3E-01	no	--	--	--	--
7439-97-6	Mercury - Dissolved	NA Max	2.0E-03	2.0E+00	no	6.3E-01	no	--	--	--	--
	Lead (not included in cumulative risk estimate)										
7439-92-1	Lead	NA Max	1.5E-02	1.5E+01	no	1.5E+01 ⁽³⁾	no	--	--	--	--
7439-92-1	Lead - Dissolved	NA Max	1.5E-02	1.5E+01	no	1.5E+01 ⁽³⁾	no	--	--	--	--
Cumulative Risk Ratio								--	1E-07	--	1E-06

⁽¹⁾ Exposure point concentration is the maximum detected concentration from the ten most recent sampling events

⁽²⁾ Texas Commission on Environmental Quality (TCEQ) Texas Risk Reduction Program (TRRP) Tier 1 Groundwater Protective Concentration Levels (PCLs). Table 3. June 2012 (<http://www.tceq.state.tx.us/remediation/trrp/trrppcls.html>)

⁽³⁾ U.S. Environmental Protection Agency (USEPA) Regional Screening Levels (RSLs) for Tapwater (TR = 1E-6, HQ=1). November 2013. (http://www.epa.gov/reg3hwmd/risk/human/rb-concentration_table/Generic_Tables/docs/master_sl_table_run_NOV2013.pdf)

⁽⁴⁾ If dissolved metals data are available, they are used in the cumulative risk ratio. If only total metals data are available, they are used in the risk ratio

mg/kg - milligrams per Liter

µg/kg - micrograms per Liter

-- Not applicable

NA - Not analyzed

ND - Not detected

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

D - Definitive data

Table 5.5
Risk Ratio Calculations for Potential Exposure to Groundwater by a Resident
Off-Post Well I10-4
Camp Stanley Storage Activity, Bexar County, Texas

CAS No.	Compound	Exposure Point Concentration (EPC) ⁽¹⁾ (µg/L)	TCEQ TRRP Tier 1 Groundwater PCL - Residential Ingestion ⁽²⁾ (mg/L)	TCEQ TRRP Tier 1 Groundwater PCL - Residential Ingestion ⁽²⁾ (µg/L)	Carcino- genic?	USEPA Tapwater RSL ⁽³⁾ (µg/L)	Carcino- genic?	Non-Carc Risk Ratio (EPC/PCL- ing)	Carc Risk Ratio (EPC/PCL- ing)	Non-Carc Risk Ratio (EPC/RSL)	Carc Risk Ratio (EPC/RSL)
	Volatile Organic Compounds										
156-59-2	cis-1,2-Dichloroethene	ND Max	7.0E-02	7.0E+01	no	2.8E+01	no	--	--	--	--
127-18-4	Tetrachloroethylene (PCE)	5.2 S Max	5.0E-03	5.0E+00	yes	9.7E+00	yes	--	1.0E-06	--	5.4E-07
79-01-6	Trichloroethylene (TCE)	2.5 D Max	5.0E-03	5.0E+00	yes	4.4E-01	yes	--	5.0E-07	--	5.7E-06
75-01-4	Vinyl Chloride	ND Max	2.0E-03	2.0E+00	yes	1.5E-02	yes	--	--	--	--
	Metals ⁽⁴⁾										
7439-97-6	Mercury	ND Max	2.0E-03	2.0E+00	no	6.3E-01	no	--	--	--	--
7439-97-6	Mercury - Dissolved	ND Max	2.0E-03	2.0E+00	no	6.3E-01	no	--	--	--	--
	Lead (not included in cumulative risk estimate)										
7439-92-1	Lead	ND Max	1.5E-02	1.5E+01	no	1.5E+01 ⁽³⁾	no	--	--	--	--
7439-92-1	Lead - Dissolved	7.0 S Max	1.5E-02	1.5E+01	no	1.5E+01 ⁽³⁾	no	0.47	--	0.47	--
Cumulative Risk Ratio								--	2E-06	--	6E-06

⁽¹⁾ Exposure point concentration is the maximum detected concentration from the ten most recent sampling events

⁽²⁾ Texas Commission on Environmental Quality (TCEQ) Texas Risk Reduction Program (TRRP) Tier 1 Groundwater Protective Concentration Levels (PCLs). Table 3. June 2012 (<http://www.tceq.state.tx.us/remediation/trrp/trrppcls.html>)

⁽³⁾ U.S. Environmental Protection Agency (USEPA) Regional Screening Levels (RSLs) for Tapwater (TR = 1E-6, HQ=1). November 2013. (http://www.epa.gov/reg3hwmd/risk/human/rb-concentration_table/Generic_Tables/docs/master_sl_table_run_NOV2013.pdf)

⁽⁴⁾ If dissolved metals data are available, they are used in the cumulative risk ratio. If only total metals data are available, they are used in the risk ratio

mg/kg - milligrams per Liter

µg/kg - micrograms per Liter

-- Not applicable

ND - Not detected

D - Definitive data

S - Screening data

Table 5.6
Risk Ratio Calculations for Potential Exposure to Groundwater by a Resident
Off-Post Well I10-7
Camp Stanley Storage Activity, Bexar County, Texas

CAS No.	Compound	Exposure Point Concentration (EPC) ⁽¹⁾ (µg/L)		TCEQ TRRP Tier 1 Groundwater PCL - Residential Ingestion ⁽²⁾ (mg/L)	TCEQ TRRP Tier 1 Groundwater PCL - Residential Ingestion ⁽²⁾ (µg/L)	Carcino-genic?	USEPA Tapwater RSL ⁽³⁾ (µg/L)	Carcino-genic?	Non-Carc Risk Ratio (EPC/PCL-ing)	Carc Risk Ratio (EPC/PCL-ing)	Non-Carc Risk Ratio (EPC/RSL)	Carc Risk Ratio (EPC/RSL)
	Volatile Organic Compounds											
156-59-2	cis -1,2-Dichloroethene	ND	Max	7.0E-02	7.0E+01	no	2.8E+01	no	--	--	--	--
127-18-4	Tetrachloroethylene (PCE)	ND	Max	5.0E-03	5.0E+00	yes	9.7E+00	yes	--	--	--	--
79-01-6	Trichloroethylene (TCE)	0.17	F D Max	5.0E-03	5.0E+00	yes	4.4E-01	yes	--	3.4E-08	--	3.9E-07
75-01-4	Vinyl Chloride	ND	Max	2.0E-03	2.0E+00	yes	1.5E-02	yes	--	--	--	--
	Metals ⁽⁴⁾											
7439-97-6	Mercury	NA	Max	2.0E-03	2.0E+00	no	6.3E-01	no	--	--	--	--
7439-97-6	Mercury - Dissolved	NA	Max	2.0E-03	2.0E+00	no	6.3E-01	no	--	--	--	--
	Lead (not included in cumulative risk estimate)											
7439-92-1	Lead	NA	Max	1.5E-02	1.5E+01	no	1.5E+01 ⁽³⁾	no	--	--	--	--
7439-92-1	Lead - Dissolved	NA	Max	1.5E-02	1.5E+01	no	1.5E+01 ⁽³⁾	no	--	--	--	--
Cumulative Risk Ratio									--	3E-08	--	4E-07

⁽¹⁾ Exposure point concentration is the maximum detected concentration from the ten most recent sampling events

⁽²⁾ Texas Commission on Environmental Quality (TCEQ) Texas Risk Reduction Program (TRRP) Tier 1 Groundwater Protective Concentration Levels (PCLs). Table 3. June 2012 (<http://www.tceq.state.tx.us/remediation/trrp/trrppcls.html>)

⁽³⁾ U.S. Environmental Protection Agency (USEPA) Regional Screening Levels (RSLs) for Tapwater (TR = 1E-6, HQ=1). November 2013. (http://www.epa.gov/reg3hwmd/risk/human/rb-concentration_table/Generic_Tables/docs/master_sl_table_run_NOV2013.pdf)

⁽⁴⁾ If dissolved metals data are available, they are used in the cumulative risk ratio. If only total metals data are available, they are used in the risk ratio

mg/kg - milligrams per Liter

µg/kg - micrograms per Liter

-- Not applicable

NA - Not analyzed

ND - Not detected

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

D - Definitive data

Table 5.7
Risk Ratio Calculations for Potential Exposure to Groundwater by a Resident
Off-Post Well I10-9
Camp Stanley Storage Activity, Bexar County, Texas

CAS No.	Compound	Exposure Point Concentration (EPC) ⁽¹⁾ (µg/L)	TCEQ TRRP Tier 1 Groundwater PCL - Residential Ingestion ⁽²⁾ (mg/L)	TCEQ TRRP Tier 1 Groundwater PCL - Residential Ingestion ⁽²⁾ (µg/L)	Carcino- genic?	USEPA Tapwater RSL ⁽³⁾ (µg/L)	Carcino- genic?	Non-Carc Risk Ratio (EPC/PCL- ing)	Carc Risk Ratio (EPC/PCL- ing)	Non-Carc Risk Ratio (EPC/RSL)	Carc Risk Ratio (EPC/RSL)
	Volatile Organic Compounds										
156-59-2	cis-1,2-Dichloroethene	ND Max	7.0E-02	7.0E+01	no	2.8E+01	no	--	--	--	--
127-18-4	Tetrachloroethylene (PCE)	ND Max	5.0E-03	5.0E+00	yes	9.7E+00	yes	--	--	--	--
79-01-6	Trichloroethylene (TCE)	1.4 D Max	5.0E-03	5.0E+00	yes	4.4E-01	yes	--	2.8E-07	--	3.2E-06
75-01-4	Vinyl Chloride	ND Max	2.0E-03	2.0E+00	yes	1.5E-02	yes	--	--	--	--
	Metals ⁽⁴⁾										
7439-97-6	Mercury	NA Max	2.0E-03	2.0E+00	no	6.3E-01	no	--	--	--	--
7439-97-6	Mercury - Dissolved	NA Max	2.0E-03	2.0E+00	no	6.3E-01	no	--	--	--	--
	Lead (not included in cumulative risk estimate)										
7439-92-1	Lead	NA Max	1.5E-02	1.5E+01	no	1.5E+01 ⁽³⁾	no	--	--	--	--
7439-92-1	Lead - Dissolved	NA Max	1.5E-02	1.5E+01	no	1.5E+01 ⁽³⁾	no	--	--	--	--
Cumulative Risk Ratio								--	3E-07	--	3E-06

⁽¹⁾ Exposure point concentration is the maximum detected concentration from the ten most recent sampling events

⁽²⁾ Texas Commission on Environmental Quality (TCEQ) Texas Risk Reduction Program (TRRP) Tier 1 Groundwater Protective Concentration Levels (PCLs). Table 3. June 2012 (<http://www.tceq.state.tx.us/remediation/trrp/trrppcls.html>)

⁽³⁾ U.S. Environmental Protection Agency (USEPA) Regional Screening Levels (RSLs) for Tapwater (TR = 1E-6, HQ=1). November 2013. (http://www.epa.gov/reg3hwmd/risk/human/rb-concentration_table/Generic_Tables/docs/master_sl_table_run_NOV2013.pdf)

⁽⁴⁾ If dissolved metals data are available, they are used in the cumulative risk ratio. If only total metals data are available, they are used in the risk ratio

mg/kg - milligrams per Liter

µg/kg - micrograms per Liter

-- Not applicable

NA - Not analyzed

ND - Not detected

D - Definitive data

Table 5.8
Risk Ratio Calculations for Potential Exposure to Groundwater by a Resident
Off-Post Well JW-5
Camp Stanley Storage Activity, Bexar County, Texas

CAS No.	Compound	Exposure Point Concentration (EPC) ⁽¹⁾ (µg/L)		TCEQ TRRP Tier 1 Groundwater PCL - Residential Ingestion ⁽²⁾ (mg/L)	TCEQ TRRP Tier 1 Groundwater PCL - Residential Ingestion ⁽²⁾ (µg/L)	Carcino-genic?	USEPA Tapwater RSL ⁽³⁾ (µg/L)	Carcino-genic?	Non-Carc Risk Ratio (EPC/PCL-ing)	Carc Risk Ratio (EPC/PCL-ing)	Non-Carc Risk Ratio (EPC/RSL)	Carc Risk Ratio (EPC/RSL)
	Volatile Organic Compounds											
156-59-2	cis -1,2-Dichloroethene	ND	Max	7.0E-02	7.0E+01	no	2.8E+01	no	--	--	--	--
127-18-4	Tetrachloroethylene (PCE)	0.12	F D Max	5.0E-03	5.0E+00	yes	9.7E+00	yes	--	2.4E-08	--	1.2E-08
79-01-6	Trichloroethylene (TCE)	ND	Max	5.0E-03	5.0E+00	yes	4.4E-01	yes	--	--	--	--
75-01-4	Vinyl Chloride	ND	Max	2.0E-03	2.0E+00	yes	1.5E-02	yes	--	--	--	--
	Metals ⁽⁴⁾											
7439-97-6	Mercury	NA	Max	2.0E-03	2.0E+00	no	6.3E-01	no	--	--	--	--
7439-97-6	Mercury - Dissolved	NA	Max	2.0E-03	2.0E+00	no	6.3E-01	no	--	--	--	--
	Lead (not included in cumulative risk estimate)											
7439-92-1	Lead	NA	Max	1.5E-02	1.5E+01	no	1.5E+01 ⁽³⁾	no	--	--	--	--
7439-92-1	Lead - Dissolved	NA	Max	1.5E-02	1.5E+01	no	1.5E+01 ⁽³⁾	no	--	--	--	--
Cumulative Risk Ratio									--	2E-08	--	1E-08

⁽¹⁾ Exposure point concentration is the maximum detected concentration from the ten most recent sampling events

⁽²⁾ Texas Commission on Environmental Quality (TCEQ) Texas Risk Reduction Program (TRRP) Tier 1 Groundwater Protective Concentration Levels (PCLs). Table 3. June 2012 (<http://www.tceq.state.tx.us/remediation/trrp/trrppcls.html>)

⁽³⁾ U.S. Environmental Protection Agency (USEPA) Regional Screening Levels (RSLs) for Tapwater (TR = 1E-6, HQ=1). November 2013. (http://www.epa.gov/reg3hwmd/risk/human/rb-concentration_table/Generic_Tables/docs/master_sl_table_run_NOV2013.pdf)

⁽⁴⁾ If dissolved metals data are available, they are used in the cumulative risk ratio. If only total metals data are available, they are used in the risk ratio

mg/kg - milligrams per Liter

µg/kg - micrograms per Liter

-- Not applicable

NA - Not analyzed

ND - Not detected

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

D - Definitive data

Table 5.9
Risk Ratio Calculations for Potential Exposure to Groundwater by a Resident
Off-Post Well JW-7
Camp Stanley Storage Activity, Bexar County, Texas

CAS No.	Compound	Exposure Point Concentration (EPC) ⁽¹⁾ (µg/L)		TCEQ TRRP Tier 1 Groundwater PCL - Residential Ingestion ⁽²⁾ (mg/L)	TCEQ TRRP Tier 1 Groundwater PCL - Residential Ingestion ⁽²⁾ (µg/L)	Carcino-genic?	USEPA Tapwater RSL ⁽³⁾ (µg/L)	Carcino-genic?	Non-Carc Risk Ratio (EPC/PCL-ing)	Carc Risk Ratio (EPC/PCL-ing)	Non-Carc Risk Ratio (EPC/RSL)	Carc Risk Ratio (EPC/RSL)
	Volatile Organic Compounds											
156-59-2	cis -1,2-Dichloroethene	ND	Max	7.0E-02	7.0E+01	no	2.8E+01	no	--	--	--	--
127-18-4	Tetrachloroethylene (PCE)	0.47	F D Max	5.0E-03	5.0E+00	yes	9.7E+00	yes	--	9.4E-08	--	4.8E-08
79-01-6	Trichloroethylene (TCE)	ND	Max	5.0E-03	5.0E+00	yes	4.4E-01	yes	--	--	--	--
75-01-4	Vinyl Chloride	ND	Max	2.0E-03	2.0E+00	yes	1.5E-02	yes	--	--	--	--
	Metals ⁽⁴⁾											
7439-97-6	Mercury	NA	Max	2.0E-03	2.0E+00	no	6.3E-01	no	--	--	--	--
7439-97-6	Mercury - Dissolved	NA	Max	2.0E-03	2.0E+00	no	6.3E-01	no	--	--	--	--
	Lead (not included in cumulative risk estimate)											
7439-92-1	Lead	NA	Max	1.5E-02	1.5E+01	no	1.5E+01 ⁽³⁾	no	--	--	--	--
7439-92-1	Lead - Dissolved	NA	Max	1.5E-02	1.5E+01	no	1.5E+01 ⁽³⁾	no	--	--	--	--
Cumulative Risk Ratio									--	9E-08	--	5E-08

⁽¹⁾ Exposure point concentration is the maximum detected concentration from the ten most recent sampling events

⁽²⁾ Texas Commission on Environmental Quality (TCEQ) Texas Risk Reduction Program (TRRP) Tier 1 Groundwater Protective Concentration Levels (PCLs). Table 3. June 2012 (<http://www.tceq.state.tx.us/remediation/trrp/trrppcls.html>)

⁽³⁾ U.S. Environmental Protection Agency (USEPA) Regional Screening Levels (RSLs) for Tapwater (TR = 1E-6, HQ=1). November 2013. (http://www.epa.gov/reg3hwmd/risk/human/rb-concentration_table/Generic_Tables/docs/master_sl_table_run_NOV2013.pdf)

⁽⁴⁾ If dissolved metals data are available, they are used in the cumulative risk ratio. If only total metals data are available, they are used in the risk ratio

mg/kg - milligrams per Liter

µg/kg - micrograms per Liter

-- Not applicable

NA - Not analyzed

ND - Not detected

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

D - Definitive data

Table 5.10
Risk Ratio Calculations for Potential Exposure to Groundwater by a Resident
Off-Post Well JW-8
Camp Stanley Storage Activity, Bexar County, Texas

CAS No.	Compound	Exposure Point Concentration (EPC) ⁽¹⁾ (µg/L)		TCEQ TRRP Tier 1 Groundwater PCL - Residential Ingestion ⁽²⁾ (mg/L)	TCEQ TRRP Tier 1 Groundwater PCL - Residential Ingestion ⁽²⁾ (µg/L)	Carcino-genic?	USEPA Tapwater RSL ⁽³⁾ (µg/L)	Carcino-genic?	Non-Carc Risk Ratio (EPC/PCL-ing)	Carc Risk Ratio (EPC/PCL-ing)	Non-Carc Risk Ratio (EPC/RSL)	Carc Risk Ratio (EPC/RSL)
	Volatile Organic Compounds											
156-59-2	cis -1,2-Dichloroethene	ND	Max	7.0E-02	7.0E+01	no	2.8E+01	no	--	--	--	--
127-18-4	Tetrachloroethylene (PCE)	0.36	F D Max	5.0E-03	5.0E+00	yes	9.7E+00	yes	--	7.2E-08	--	3.7E-08
79-01-6	Trichloroethylene (TCE)	ND	Max	5.0E-03	5.0E+00	yes	4.4E-01	yes	--	--	--	--
75-01-4	Vinyl Chloride	ND	Max	2.0E-03	2.0E+00	yes	1.5E-02	yes	--	--	--	--
	Metals ⁽⁴⁾											
7439-97-6	Mercury	NA	Max	2.0E-03	2.0E+00	no	6.3E-01	no	--	--	--	--
7439-97-6	Mercury - Dissolved	NA	Max	2.0E-03	2.0E+00	no	6.3E-01	no	--	--	--	--
	Lead (not included in cumulative risk estimate)											
7439-92-1	Lead	NA	Max	1.5E-02	1.5E+01	no	1.5E+01 ⁽³⁾	no	--	--	--	--
7439-92-1	Lead - Dissolved	NA	Max	1.5E-02	1.5E+01	no	1.5E+01 ⁽³⁾	no	--	--	--	--
Cumulative Risk Ratio									--	7E-08	--	4E-08

⁽¹⁾ Exposure point concentration is the maximum detected concentration from the ten most recent sampling events

⁽²⁾ Texas Commission on Environmental Quality (TCEQ) Texas Risk Reduction Program (TRRP) Tier 1 Groundwater Protective Concentration Levels (PCLs). Table 3. June 2012 (<http://www.tceq.state.tx.us/remediation/trrp/trrppcls.html>)

⁽³⁾ U.S. Environmental Protection Agency (USEPA) Regional Screening Levels (RSLs) for Tapwater (TR = 1E-6, HQ=1). November 2013. (http://www.epa.gov/reg3hwmd/risk/human/rb-concentration_table/Generic_Tables/docs/master_sl_table_run_NOV2013.pdf)

⁽⁴⁾ If dissolved metals data are available, they are used in the cumulative risk ratio. If only total metals data are available, they are used in the risk ratio

mg/kg - milligrams per Liter

µg/kg - micrograms per Liter

-- Not applicable

NA - Not analyzed

ND - Not detected

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

D - Definitive data

Table 5.11
Risk Ratio Calculations for Potential Exposure to Groundwater by a Resident
Off-Post JW-12
Camp Stanley Storage Activity, Bexar County, Texas

CAS No.	Compound	Exposure Point Concentration (EPC) ⁽¹⁾ (µg/L)		TCEQ TRRP Tier 1 Groundwater PCL - Residential Ingestion ⁽²⁾ (mg/L)	TCEQ TRRP Tier 1 Groundwater PCL - Residential Ingestion ⁽²⁾ (µg/L)	Carcino-genic?	USEPA Tapwater RSL ⁽³⁾ (µg/L)	Carcino-genic?	Non-Carc Risk Ratio (EPC/PCL-ing)	Carc Risk Ratio (EPC/PCL-ing)	Non-Carc Risk Ratio (EPC/RSL)	Carc Risk Ratio (EPC/RSL)
	Volatile Organic Compounds											
156-59-2	cis -1,2-Dichloroethene	ND	Max	7.0E-02	7.0E+01	no	2.8E+01	no	--	--	--	--
127-18-4	Tetrachloroethylene (PCE)	0.21	F D Max	5.0E-03	5.0E+00	yes	9.7E+00	yes	--	4.2E-08	--	2.2E-08
79-01-6	Trichloroethylene (TCE)	ND	Max	5.0E-03	5.0E+00	yes	4.4E-01	yes	--	--	--	--
75-01-4	Vinyl Chloride	ND	Max	2.0E-03	2.0E+00	yes	1.5E-02	yes	--	--	--	--
	Metals ⁽⁴⁾											
7439-97-6	Mercury	NA	Max	2.0E-03	2.0E+00	no	6.3E-01	no	--	--	--	--
7439-97-6	Mercury - Dissolved	NA	Max	2.0E-03	2.0E+00	no	6.3E-01	no	--	--	--	--
	Lead (not included in cumulative risk estimate)											
7439-92-1	Lead	NA	Max	1.5E-02	1.5E+01	no	1.5E+01 ⁽³⁾	no	--	--	--	--
7439-92-1	Lead - Dissolved	NA	Max	1.5E-02	1.5E+01	no	1.5E+01 ⁽³⁾	no	--	--	--	--
Cumulative Risk Ratio									--	4E-08	--	2E-08

⁽¹⁾ Exposure point concentration is the maximum detected concentration from the ten most recent sampling events

⁽²⁾ Texas Commission on Environmental Quality (TCEQ) Texas Risk Reduction Program (TRRP) Tier 1 Groundwater Protective Concentration Levels (PCLs). Table 3. June 2012 (<http://www.tceq.state.tx.us/remediation/trrp/trrppcls.html>)

⁽³⁾ U.S. Environmental Protection Agency (USEPA) Regional Screening Levels (RSLs) for Tapwater (TR = 1E-6, HQ=1). November 2013. (http://www.epa.gov/reg3hwmd/risk/human/rb-concentration_table/Generic_Tables/docs/master_sl_table_run_NOV2013.pdf)

⁽⁴⁾ If dissolved metals data are available, they are used in the cumulative risk ratio. If only total metals data are available, they are used in the risk ratio

mg/kg - milligrams per Liter

µg/kg - micrograms per Liter

-- Not applicable

NA - Not analyzed

ND - Not detected

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

D - Definitive data

Table 5.12
Risk Ratio Calculations for Potential Exposure to Groundwater by a Resident
Off-Post Well JW-30
Camp Stanley Storage Activity, Bexar County, Texas

CAS No.	Compound	Exposure Point Concentration (EPC) ⁽¹⁾ (µg/L)	TCEQ TRRP Tier 1 Groundwater PCL - Residential Ingestion ⁽²⁾ (mg/L)	TCEQ TRRP Tier 1 Groundwater PCL - Residential Ingestion ⁽²⁾ (µg/L)	Carcino- genic?	USEPA Tapwater RSL ⁽³⁾ (µg/L)	Carcino- genic?	Non-Carc Risk Ratio (EPC/PCL- ing)	Carc Risk Ratio (EPC/PCL- ing)	Non-Carc Risk Ratio (EPC/RSL)	Carc Risk Ratio (EPC/RSL)
	Volatile Organic Compounds										
156-59-2	cis-1,2-Dichloroethene	0.21 F D Max	7.0E-02	7.0E+01	no	2.8E+01	no	0.0030	--	0.0075	--
127-18-4	Tetrachloroethylene (PCE)	0.17 F D Max	5.0E-03	5.0E+00	yes	9.7E+00	yes	--	3.4E-08	--	1.8E-08
79-01-6	Trichloroethylene (TCE)	ND Max	5.0E-03	5.0E+00	yes	4.4E-01	yes	--	--	--	--
75-01-4	Vinyl Chloride	ND Max	2.0E-03	2.0E+00	yes	1.5E-02	yes	--	--	--	--
	Metals ⁽⁴⁾										
7439-97-6	Mercury	NA Max	2.0E-03	2.0E+00	no	6.3E-01	no	--	--	--	--
7439-97-6	Mercury - Dissolved	NA Max	2.0E-03	2.0E+00	no	6.3E-01	no	--	--	--	--
	Lead (not included in cumulative risk estimate)										
7439-92-1	Lead	NA Max	1.5E-02	1.5E+01	no	1.5E+01 ⁽³⁾	no	--	--	--	--
7439-92-1	Lead - Dissolved	NA Max	1.5E-02	1.5E+01	no	1.5E+01 ⁽³⁾	no	--	--	--	--
Cumulative Risk Ratio								0.003	3E-08	0.008	2E-08

⁽¹⁾ Exposure point concentration is the maximum detected concentration from the ten most recent sampling events

⁽²⁾ Texas Commission on Environmental Quality (TCEQ) Texas Risk Reduction Program (TRRP) Tier 1 Groundwater Protective Concentration Levels (PCLs). Table 3. June 2012 (<http://www.tceq.state.tx.us/remediation/trrp/trrppcls.html>)

⁽³⁾ U.S. Environmental Protection Agency (USEPA) Regional Screening Levels (RSLs) for Tapwater (TR = 1E-6, HQ=1). November 2013. (http://www.epa.gov/reg3hwmd/risk/human/rb-concentration_table/Generic_Tables/docs/master_sl_table_run_NOV2013.pdf)

⁽⁴⁾ If dissolved metals data are available, they are used in the cumulative risk ratio. If only total metals data are available, they are used in the risk ratio

mg/kg - milligrams per Liter

µg/kg - micrograms per Liter

-- Not applicable

NA - Not analyzed

ND - Not detected

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

D - Definitive data

Table 5.13
Risk Ratio Calculations for Potential Exposure to Groundwater by a Resident
Off-Post Well LS-1
Camp Stanley Storage Activity, Bexar County, Texas

CAS No.	Compound	Exposure Point Concentration (EPC) ⁽¹⁾ (µg/L)	TCEQ TRRP Tier 1 Groundwater PCL - Residential Ingestion ⁽²⁾ (mg/L)	TCEQ TRRP Tier 1 Groundwater PCL - Residential Ingestion ⁽²⁾ (µg/L)	Carcino- genic?	USEPA Tapwater RSL ⁽³⁾ (µg/L)	Carcino- genic?	Non-Carc Risk Ratio (EPC/PCL- ing)	Carc Risk Ratio (EPC/PCL- ing)	Non-Carc Risk Ratio (EPC/RSL)	Carc Risk Ratio (EPC/RSL)
	Volatile Organic Compounds										
156-59-2	cis -1,2-Dichloroethene	2.5 D Max	7.0E-02	7.0E+01	no	2.8E+01	no	0.036	--	0.089	--
127-18-4	Tetrachloroethylene (PCE)	1.3 F D Max	5.0E-03	5.0E+00	yes	9.7E+00	yes	--	2.6E-07	--	1.3E-07
79-01-6	Trichloroethylene (TCE)	0.63 F D Max	5.0E-03	5.0E+00	yes	4.4E-01	yes	--	1.3E-07	--	1.4E-06
75-01-4	Vinyl Chloride	ND Max	2.0E-03	2.0E+00	yes	1.5E-02	yes	--	--	--	--
	Metals ⁽⁴⁾										
7439-97-6	Mercury	NA Max	2.0E-03	2.0E+00	no	6.3E-01	no	--	--	--	--
7439-97-6	Mercury - Dissolved	NA Max	2.0E-03	2.0E+00	no	6.3E-01	no	--	--	--	--
	Lead (not included in cumulative risk estimate)										
7439-92-1	Lead	NA Max	1.5E-02	1.5E+01	no	1.5E+01 ⁽³⁾	no	--	--	--	--
7439-92-1	Lead - Dissolved	NA Max	1.5E-02	1.5E+01	no	1.5E+01 ⁽³⁾	no	--	--	--	--
Cumulative Risk Ratio								0.04	4E-07	0.09	2E-06

⁽¹⁾ Exposure point concentration is the maximum detected concentration from the ten most recent sampling events

⁽²⁾ Texas Commission on Environmental Quality (TCEQ) Texas Risk Reduction Program (TRRP) Tier 1 Groundwater Protective Concentration Levels (PCLs). Table 3. June 2012 (<http://www.tceq.state.tx.us/remediation/trrp/trrppcls.html>)

⁽³⁾ U.S. Environmental Protection Agency (USEPA) Regional Screening Levels (RSLs) for Tapwater (TR = 1E-6, HQ=1). November 2013. (http://www.epa.gov/reg3hwmd/risk/human/rb-concentration_table/Generic_Tables/docs/master_sl_table_run_NOV2013.pdf)

⁽⁴⁾ If dissolved metals data are available, they are used in the cumulative risk ratio. If only total metals data are available, they are used in the risk ratio

mg/kg - milligrams per Liter

µg/kg - micrograms per Liter

-- Not applicable

NA - Not analyzed

ND - Not detected

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

D - Definitive data

Table 5.14
Risk Ratio Calculations for Potential Exposure to Groundwater by a Resident
Off-Post Well LS-4
Camp Stanley Storage Activity, Bexar County, Texas

CAS No.	Compound	Exposure Point Concentration (EPC) ⁽¹⁾ (µg/L)		TCEQ TRRP Tier 1 Groundwater PCL - Residential Ingestion ⁽²⁾ (mg/L)	TCEQ TRRP Tier 1 Groundwater PCL - Residential Ingestion ⁽²⁾ (µg/L)	Carcino-genic?	USEPA Tapwater RSL ⁽³⁾ (µg/L)	Carcino-genic?	Non-Carc Risk Ratio (EPC/PCL-ing)	Carc Risk Ratio (EPC/PCL-ing)	Non-Carc Risk Ratio (EPC/RSL)	Carc Risk Ratio (EPC/RSL)
	Volatile Organic Compounds											
156-59-2	cis -1,2-Dichloroethene	ND	Max	7.0E-02	7.0E+01	no	2.8E+01	no	--	--	--	--
127-18-4	Tetrachloroethylene (PCE)	0.17	F D Max	5.0E-03	5.0E+00	yes	9.7E+00	yes	--	3.4E-08	--	1.8E-08
79-01-6	Trichloroethylene (TCE)	ND	Max	5.0E-03	5.0E+00	yes	4.4E-01	yes	--	--	--	--
75-01-4	Vinyl Chloride	ND	Max	2.0E-03	2.0E+00	yes	1.5E-02	yes	--	--	--	--
	Metals ⁽⁴⁾											
7439-97-6	Mercury	NA	Max	2.0E-03	2.0E+00	no	6.3E-01	no	--	--	--	--
7439-97-6	Mercury - Dissolved	NA	Max	2.0E-03	2.0E+00	no	6.3E-01	no	--	--	--	--
	Lead (not included in cumulative risk estimate)											
7439-92-1	Lead	NA	Max	1.5E-02	1.5E+01	no	1.5E+01 ⁽³⁾	no	--	--	--	--
7439-92-1	Lead - Dissolved	NA	Max	1.5E-02	1.5E+01	no	1.5E+01 ⁽³⁾	no	--	--	--	--
Cumulative Risk Ratio									--	3E-08	--	2E-08

⁽¹⁾ Exposure point concentration is the maximum detected concentration from the ten most recent sampling events

⁽²⁾ Texas Commission on Environmental Quality (TCEQ) Texas Risk Reduction Program (TRRP) Tier 1 Groundwater Protective Concentration Levels (PCLs). Table 3. June 2012 (<http://www.tceq.state.tx.us/remediation/trrp/trrppcls.html>)

⁽³⁾ U.S. Environmental Protection Agency (USEPA) Regional Screening Levels (RSLs) for Tapwater (TR = 1E-6, HQ=1). November 2013. (http://www.epa.gov/reg3hwmd/risk/human/rb-concentration_table/Generic_Tables/docs/master_sl_table_run_NOV2013.pdf)

⁽⁴⁾ If dissolved metals data are available, they are used in the cumulative risk ratio. If only total metals data are available, they are used in the risk ratio

mg/kg - milligrams per Liter

µg/kg - micrograms per Liter

-- Not applicable

NA - Not analyzed

ND - Not detected

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

D - Definitive data

Table 5.15
Risk Ratio Calculations for Potential Exposure to Groundwater by a Resident
Off-Post Well LS-5
Camp Stanley Storage Activity, Bexar County, Texas

CAS No.	Compound	Exposure Point Concentration (EPC) ⁽¹⁾ (µg/L)	TCEQ TRRP Tier 1 Groundwater PCL - Residential Ingestion ⁽²⁾ (mg/L)	TCEQ TRRP Tier 1 Groundwater PCL - Residential Ingestion ⁽²⁾ (µg/L)	Carcino- genic?	USEPA Tapwater RSL ⁽³⁾ (µg/L)	Carcino- genic?	Non-Carc Risk Ratio (EPC/PCL- ing)	Carc Risk Ratio (EPC/PCL- ing)	Non-Carc Risk Ratio (EPC/RSL)	Carc Risk Ratio (EPC/RSL)
	Volatile Organic Compounds										
156-59-2	cis-1,2-Dichloroethene	ND Max	7.0E-02	7.0E+01	no	2.8E+01	no	--	--	--	--
127-18-4	Tetrachloroethylene (PCE)	1.3 F S Max	5.0E-03	5.0E+00	yes	9.7E+00	yes	--	--	--	--
79-01-6	Trichloroethylene (TCE)	3.1 S Max	5.0E-03	5.0E+00	yes	4.4E-01	yes	--	2.6E-07	--	3.0E-06
75-01-4	Vinyl Chloride	ND Max	2.0E-03	2.0E+00	yes	1.5E-02	yes	--	1.6E-06	--	2.1E-04
	Metals ⁽⁴⁾										
7439-97-6	Mercury	ND Max	2.0E-03	2.0E+00	no	6.3E-01	no	--	--	--	--
7439-97-6	Mercury - Dissolved	ND Max	2.0E-03	2.0E+00	no	6.3E-01	no	--	--	--	--
	Lead (not included in cumulative risk estimate)										
7439-92-1	Lead	2.1 F S Max	1.5E-02	1.5E+01	no	1.5E+01 ⁽³⁾	no	0.14	--	0.14	--
7439-92-1	Lead - Dissolved	4.7 S Max	1.5E-02	1.5E+01	no	1.5E+01 ⁽³⁾	no	0.31	--	0.31	--
Cumulative Risk Ratio								--	2E-06	--	2E-04

⁽¹⁾ Exposure point concentration is the maximum detected concentration from the ten most recent sampling events

⁽²⁾ Texas Commission on Environmental Quality (TCEQ) Texas Risk Reduction Program (TRRP) Tier 1 Groundwater Protective Concentration Levels (PCLs). Table 3. June 2012 (<http://www.tceq.state.tx.us/remediation/trrp/trrppcls.html>)

⁽³⁾ U.S. Environmental Protection Agency (USEPA) Regional Screening Levels (RSLs) for Tapwater (TR = 1E-6, HQ=1). November 2013. (http://www.epa.gov/reg3hwmd/risk/human/rb-concentration_table/Generic_Tables/docs/master_sl_table_run_NOV2013.pdf)

⁽⁴⁾ If dissolved metals data are available, they are used in the cumulative risk ratio. If only total metals data are available, they are used in the risk ratio

mg/kg - milligrams per Liter

µg/kg - micrograms per Liter

-- Not applicable

ND - Not detected

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

S - Screening data

Table 5.16
Risk Ratio Calculations for Potential Exposure to Groundwater by a Resident
Off-Post Well LS-6
Camp Stanley Storage Activity, Bexar County, Texas

CAS No.	Compound	Exposure Point Concentration (EPC) ⁽¹⁾ (µg/L)	TCEQ TRRP Tier 1 Groundwater PCL - Residential Ingestion ⁽²⁾ (mg/L)	TCEQ TRRP Tier 1 Groundwater PCL - Residential Ingestion ⁽²⁾ (µg/L)	Carcino- genic?	USEPA Tapwater RSL ⁽³⁾ (µg/L)	Carcino- genic?	Non-Carc Risk Ratio (EPC/PCL- ing)	Carc Risk Ratio (EPC/PCL- ing)	Non-Carc Risk Ratio (EPC/RSL)	Carc Risk Ratio (EPC/RSL)
	Volatile Organic Compounds										
156-59-2	cis -1,2-Dichloroethene	ND Max	7.0E-02	7.0E+01	no	2.8E+01	no	--	--	--	--
127-18-4	Tetrachloroethylene (PCE)	1.1 F S Max	5.0E-03	5.0E+00	yes	9.7E+00	yes	--	2.2E-07	--	1.1E-07
79-01-6	Trichloroethylene (TCE)	3.0 D Max	5.0E-03	5.0E+00	yes	4.4E-01	yes	--	6.0E-07	--	6.8E-06
75-01-4	Vinyl Chloride	ND Max	2.0E-03	2.0E+00	yes	1.5E-02	yes	--	--	--	--
	Metals ⁽⁴⁾										
7439-97-6	Mercury	ND Max	2.0E-03	2.0E+00	no	6.3E-01	no	--	--	--	--
7439-97-6	Mercury - Dissolved	ND Max	2.0E-03	2.0E+00	no	6.3E-01	no	--	--	--	--
	Lead (not included in cumulative risk estimate)										
7439-92-1	Lead	2.7 F S Max	1.5E-02	1.5E+01	no	1.5E+01 ⁽³⁾	no	0.18	--	0.18	--
7439-92-1	Lead - Dissolved	2.1 F S Max	1.5E-02	1.5E+01	no	1.5E+01 ⁽³⁾	no	0.14	--	0.14	--
Cumulative Risk Ratio								--	8E-07	--	7E-06

⁽¹⁾ Exposure point concentration is the maximum detected concentration from the ten most recent sampling events

⁽²⁾ Texas Commission on Environmental Quality (TCEQ) Texas Risk Reduction Program (TRRP) Tier 1 Groundwater Protective Concentration Levels (PCLs). Table 3. June 2012 (<http://www.tceq.state.tx.us/remediation/trrp/trrppcls.html>)

⁽³⁾ U.S. Environmental Protection Agency (USEPA) Regional Screening Levels (RSLs) for Tapwater (TR = 1E-6, HQ=1). November 2013. (http://www.epa.gov/reg3hwmd/risk/human/rb-concentration_table/Generic_Tables/docs/master_sl_table_run_NOV2013.pdf)

⁽⁴⁾ If dissolved metals data are available, they are used in the cumulative risk ratio. If only total metals data are available, they are used in the risk ratio

mg/kg - milligrams per Liter

µg/kg - micrograms per Liter

-- Not applicable

ND - Not detected

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

D - Definitive data

S - Screening data

Table 5.17
Risk Ratio Calculations for Potential Exposure to Groundwater by a Resident
Off-Post Well LS-7
Camp Stanley Storage Activity, Bexar County, Texas

CAS No.	Compound	Exposure Point Concentration (EPC) ⁽¹⁾ (µg/L)	TCEQ TRRP Tier 1 Groundwater PCL - Residential Ingestion ⁽²⁾ (mg/L)	TCEQ TRRP Tier 1 Groundwater PCL - Residential Ingestion ⁽²⁾ (µg/L)	Carcino- genic?	USEPA Tapwater RSL ⁽³⁾ (µg/L)	Carcino- genic?	Non-Carc Risk Ratio (EPC/PCL- ing)	Carc Risk Ratio (EPC/PCL- ing)	Non-Carc Risk Ratio (EPC/RSL)	Carc Risk Ratio (EPC/RSL)
	Volatile Organic Compounds										
156-59-2	cis -1,2-Dichloroethene	ND Max	7.0E-02	7.0E+01	no	2.8E+01	no	--	--	--	--
127-18-4	Tetrachloroethylene (PCE)	2.8 S Max	5.0E-03	5.0E+00	yes	9.7E+00	yes	--	5.6E-07	--	2.9E-07
79-01-6	Trichloroethylene (TCE)	0.66 F D Max	5.0E-03	5.0E+00	yes	4.4E-01	yes	--	1.3E-07	--	1.5E-06
75-01-4	Vinyl Chloride	ND Max	2.0E-03	2.0E+00	yes	1.5E-02	yes	--	--	--	--
	Metals ⁽⁴⁾										
7439-97-6	Mercury	ND Max	2.0E-03	2.0E+00	no	6.3E-01	no	--	--	--	--
7439-97-6	Mercury - Dissolved	ND Max	2.0E-03	2.0E+00	no	6.3E-01	no	--	--	--	--
	Lead (not included in cumulative risk estimate)										
7439-92-1	Lead	ND Max	1.5E-02	1.5E+01	no	1.5E+01 ⁽³⁾	no	--	--	--	--
7439-92-1	Lead - Dissolved	3.1 S Max	1.5E-02	1.5E+01	no	1.5E+01 ⁽³⁾	no	0.21	--	0.21	--
Cumulative Risk Ratio								--	7E-07	--	2E-06

⁽¹⁾ Exposure point concentration is the maximum detected concentration from the ten most recent sampling events

⁽²⁾ Texas Commission on Environmental Quality (TCEQ) Texas Risk Reduction Program (TRRP) Tier 1 Groundwater Protective Concentration Levels (PCLs). Table 3. June 2012 (<http://www.tceq.state.tx.us/remediation/trrp/trrppcls.html>)

⁽³⁾ U.S. Environmental Protection Agency (USEPA) Regional Screening Levels (RSLs) for Tapwater (TR = 1E-6, HQ=1). November 2013. (http://www.epa.gov/reg3hwmd/risk/human/rb-concentration_table/Generic_Tables/docs/master_sl_table_run_NOV2013.pdf)

⁽⁴⁾ If dissolved metals data are available, they are used in the cumulative risk ratio. If only total metals data are available, they are used in the risk ratio

mg/kg - milligrams per Liter

µg/kg - micrograms per Liter

-- Not applicable

ND - Not detected

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

D - Definitive data

S - Screening data

Table 5.18
Risk Ratio Calculations for Potential Exposure to Groundwater by a Resident
Off-Post Well OFR-1
Camp Stanley Storage Activity, Bexar County, Texas

CAS No.	Compound	Exposure Point Concentration (EPC) ⁽¹⁾ (µg/L)	TCEQ TRRP Tier 1 Groundwater PCL - Residential Ingestion ⁽²⁾ (mg/L)	TCEQ TRRP Tier 1 Groundwater PCL - Residential Ingestion ⁽²⁾ (µg/L)	Carcino- genic?	USEPA Tapwater RSL ⁽³⁾ (µg/L)	Carcino- genic?	Non-Carc Risk Ratio (EPC/PCL- ing)	Carc Risk Ratio (EPC/PCL- ing)	Non-Carc Risk Ratio (EPC/RSL)	Carc Risk Ratio (EPC/RSL)
	Volatile Organic Compounds										
156-59-2	cis -1,2-Dichloroethene	ND Max	7.0E-02	7.0E+01	no	2.8E+01	no	--	--	--	--
127-18-4	Tetrachloroethylene (PCE)	0.35 F D Max	5.0E-03	5.0E+00	yes	9.7E+00	yes	--	7.0E-08	--	3.6E-08
79-01-6	Trichloroethylene (TCE)	ND Max	5.0E-03	5.0E+00	yes	4.4E-01	yes	--	--	--	--
75-01-4	Vinyl Chloride	ND Max	2.0E-03	2.0E+00	yes	1.5E-02	yes	--	--	--	--
	Metals ⁽⁴⁾										
7439-97-6	Mercury	NA Max	2.0E-03	2.0E+00	no	6.3E-01	no	--	--	--	--
7439-97-6	Mercury - Dissolved	NA Max	2.0E-03	2.0E+00	no	6.3E-01	no	--	--	--	--
	Lead (not included in cumulative risk estimate)										
7439-92-1	Lead	NA Max	1.5E-02	1.5E+01	no	1.5E+01 ⁽³⁾	no	--	--	--	--
7439-92-1	Lead - Dissolved	NA Max	1.5E-02	1.5E+01	no	1.5E+01 ⁽³⁾	no	--	--	--	--
Cumulative Risk Ratio								--	7E-08	--	4E-08

⁽¹⁾ Exposure point concentration is the maximum detected concentration from the ten most recent sampling events

⁽²⁾ Texas Commission on Environmental Quality (TCEQ) Texas Risk Reduction Program (TRRP) Tier 1 Groundwater Protective Concentration Levels (PCLs). Table 3. June 2012 (<http://www.tceq.state.tx.us/remediation/trrp/trrppcls.html>)

⁽³⁾ U.S. Environmental Protection Agency (USEPA) Regional Screening Levels (RSLs) for Tapwater (TR = 1E-6, HQ=1). November 2013. (http://www.epa.gov/reg3hwmd/risk/human/rb-concentration_table/Generic_Tables/docs/master_sl_table_run_NOV2013.pdf)

⁽⁴⁾ If dissolved metals data are available, they are used in the cumulative risk ratio. If only total metals data are available, they are used in the risk ratio

mg/kg - milligrams per Liter

µg/kg - micrograms per Liter

-- Not applicable

NA - Not analyzed

ND - Not detected

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

D - Definitive data

Table 5.19
Risk Ratio Calculations for Potential Exposure to Groundwater by a Resident
Off-Post Well OFR-2
Camp Stanley Storage Activity, Bexar County, Texas

CAS No.	Compound	Exposure Point Concentration (EPC) ⁽¹⁾ (µg/L)	TCEQ TRRP Tier 1 Groundwater PCL - Residential Ingestion ⁽²⁾ (mg/L)	TCEQ TRRP Tier 1 Groundwater PCL - Residential Ingestion ⁽²⁾ (µg/L)	Carcino- genic?	USEPA Tapwater RSL ⁽³⁾ (µg/L)	Carcino- genic?	Non-Carc Risk Ratio (EPC/PCL- ing)	Carc Risk Ratio (EPC/PCL- ing)	Non-Carc Risk Ratio (EPC/RSL)	Carc Risk Ratio (EPC/RSL)
	Volatile Organic Compounds										
156-59-2	cis -1,2-Dichloroethene	ND Max	7.0E-02	7.0E+01	no	2.8E+01	no	--	--	--	--
127-18-4	Tetrachloroethylene (PCE)	0.35 F D Max	5.0E-03	5.0E+00	yes	9.7E+00	yes	--	7.0E-08	--	3.6E-08
79-01-6	Trichloroethylene (TCE)	ND Max	5.0E-03	5.0E+00	yes	4.4E-01	yes	--	--	--	--
75-01-4	Vinyl Chloride	ND Max	2.0E-03	2.0E+00	yes	1.5E-02	yes	--	--	--	--
	Metals ⁽⁴⁾										
7439-97-6	Mercury	NA Max	2.0E-03	2.0E+00	no	6.3E-01	no	--	--	--	--
7439-97-6	Mercury - Dissolved	NA Max	2.0E-03	2.0E+00	no	6.3E-01	no	--	--	--	--
	Lead (not included in cumulative risk estimate)										
7439-92-1	Lead	NA Max	1.5E-02	1.5E+01	no	1.5E+01 ⁽³⁾	no	--	--	--	--
7439-92-1	Lead - Dissolved	NA Max	1.5E-02	1.5E+01	no	1.5E+01 ⁽³⁾	no	--	--	--	--
Cumulative Risk Ratio								--	7E-08	--	4E-08

⁽¹⁾ Exposure point concentration is the maximum detected concentration from the ten most recent sampling events

⁽²⁾ Texas Commission on Environmental Quality (TCEQ) Texas Risk Reduction Program (TRRP) Tier 1 Groundwater Protective Concentration Levels (PCLs). Table 3. June 2012 (<http://www.tceq.state.tx.us/remediation/trrp/trrppcls.html>)

⁽³⁾ U.S. Environmental Protection Agency (USEPA) Regional Screening Levels (RSLs) for Tapwater (TR = 1E-6, HQ=1). November 2013. (http://www.epa.gov/reg3hwmd/risk/human/rb-concentration_table/Generic_Tables/docs/master_sl_table_run_NOV2013.pdf)

⁽⁴⁾ If dissolved metals data are available, they are used in the cumulative risk ratio. If only total metals data are available, they are used in the risk ratio

mg/kg - milligrams per Liter

µg/kg - micrograms per Liter

-- Not applicable

NA - Not analyzed

ND - Not detected

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

D - Definitive data

Table 5.20
Risk Ratio Calculations for Potential Exposure to Groundwater by a Resident
Off-Post Well OFR-3
Camp Stanley Storage Activity, Bexar County, Texas

CAS No.	Compound	Exposure Point Concentration (EPC) ⁽¹⁾ (µg/L)	TCEQ TRRP Tier 1 Groundwater PCL - Residential Ingestion ⁽²⁾ (mg/L)	TCEQ TRRP Tier 1 Groundwater PCL - Residential Ingestion ⁽²⁾ (µg/L)	Carcino- genic?	USEPA Tapwater RSL ⁽³⁾ (µg/L)	Carcino- genic?	Non-Carc Risk Ratio (EPC/PCL- ing)	Carc Risk Ratio (EPC/PCL- ing)	Non-Carc Risk Ratio (EPC/RSL)	Carc Risk Ratio (EPC/RSL)
	Volatile Organic Compounds										
156-59-2	cis-1,2-Dichloroethene	0.25 F S Max	7.0E-02	7.0E+01	no	2.8E+01	no	0.0036	--	0.0089	--
127-18-4	Tetrachloroethylene (PCE)	11 S Max	5.0E-03	5.0E+00	yes	9.7E+00	yes	--	2.2E-06	--	1.1E-06
79-01-6	Trichloroethylene (TCE)	7.0 S Max	5.0E-03	5.0E+00	yes	4.4E-01	yes	--	1.4E-06	--	1.6E-05
75-01-4	Vinyl Chloride	ND Max	2.0E-03	2.0E+00	yes	1.5E-02	yes	--	--	--	--
	Metals ⁽⁴⁾										
7439-97-6	Mercury	ND Max	2.0E-03	2.0E+00	no	6.3E-01	no	--	--	--	--
7439-97-6	Mercury - Dissolved	ND Max	2.0E-03	2.0E+00	no	6.3E-01	no	--	--	--	--
	Lead (not included in cumulative risk estimate)										
7439-92-1	Lead	ND Max	1.5E-02	1.5E+01	no	1.5E+01 ⁽³⁾	no	--	--	--	--
7439-92-1	Lead - Dissolved	ND Max	1.5E-02	1.5E+01	no	1.5E+01 ⁽³⁾	no	--	--	--	--
Cumulative Risk Ratio								0.004	4E-06	0.009	2E-05

⁽¹⁾ Exposure point concentration is the maximum detected concentration from the ten most recent sampling events

⁽²⁾ Texas Commission on Environmental Quality (TCEQ) Texas Risk Reduction Program (TRRP) Tier 1 Groundwater Protective Concentration Levels (PCLs). Table 3. June 2012 (<http://www.tceq.state.tx.us/remediation/trrp/trrppcls.html>)

⁽³⁾ U.S. Environmental Protection Agency (USEPA) Regional Screening Levels (RSLs) for Tapwater (TR = 1E-6, HQ=1). November 2013. (http://www.epa.gov/reg3hwmd/risk/human/rb-concentration_table/Generic_Tables/docs/master_sl_table_run_NOV2013.pdf)

⁽⁴⁾ If dissolved metals data are available, they are used in the cumulative risk ratio. If only total metals data are available, they are used in the risk ratio

mg/kg - milligrams per Liter

µg/kg - micrograms per Liter

-- Not applicable

ND - Not detected

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

S - Screening data

Table 5.21
Risk Ratio Calculations for Potential Exposure to Groundwater by a Resident
Off-Post Well RFR-9
Camp Stanley Storage Activity, Bexar County, Texas

CAS No.	Compound	Exposure Point Concentration (EPC) ⁽¹⁾ (µg/L)		TCEQ TRRP Tier 1 Groundwater PCL - Residential Ingestion ⁽²⁾ (mg/L)	TCEQ TRRP Tier 1 Groundwater PCL - Residential Ingestion ⁽²⁾ (µg/L)	Carcino-genic?	USEPA Tapwater RSL ⁽³⁾ (µg/L)	Carcino-genic?	Non-Carc Risk Ratio (EPC/PCL-ing)	Carc Risk Ratio (EPC/PCL-ing)	Non-Carc Risk Ratio (EPC/RSL)	Carc Risk Ratio (EPC/RSL)
	Volatile Organic Compounds											
156-59-2	cis -1,2-Dichloroethene	ND	Max	7.0E-02	7.0E+01	no	2.8E+01	no	--	--	--	--
127-18-4	Tetrachloroethylene (PCE)	0.20	F D Max	5.0E-03	5.0E+00	yes	9.7E+00	yes	--	4.0E-08	--	2.1E-08
79-01-6	Trichloroethylene (TCE)	ND	Max	5.0E-03	5.0E+00	yes	4.4E-01	yes	--	--	--	--
75-01-4	Vinyl Chloride	ND	Max	2.0E-03	2.0E+00	yes	1.5E-02	yes	--	--	--	--
	Metals ⁽⁴⁾											
7439-97-6	Mercury	NA	Max	2.0E-03	2.0E+00	no	6.3E-01	no	--	--	--	--
7439-97-6	Mercury - Dissolved	NA	Max	2.0E-03	2.0E+00	no	6.3E-01	no	--	--	--	--
	Lead (not included in cumulative risk estimate)											
7439-92-1	Lead	NA	Max	1.5E-02	1.5E+01	no	1.5E+01 ⁽³⁾	no	--	--	--	--
7439-92-1	Lead - Dissolved	NA	Max	1.5E-02	1.5E+01	no	1.5E+01 ⁽³⁾	no	--	--	--	--
Cumulative Risk Ratio									--	4E-08	--	2E-08

⁽¹⁾ Exposure point concentration is the maximum detected concentration from the ten most recent sampling events

⁽²⁾ Texas Commission on Environmental Quality (TCEQ) Texas Risk Reduction Program (TRRP) Tier 1 Groundwater Protective Concentration Levels (PCLs). Table 3. June 2012 (<http://www.tceq.state.tx.us/remediation/trrp/trrppcls.html>)

⁽³⁾ U.S. Environmental Protection Agency (USEPA) Regional Screening Levels (RSLs) for Tapwater (TR = 1E-6, HQ=1). November 2013. (http://www.epa.gov/reg3hwmd/risk/human/rb-concentration_table/Generic_Tables/docs/master_sl_table_run_NOV2013.pdf)

⁽⁴⁾ If dissolved metals data are available, they are used in the cumulative risk ratio. If only total metals data are available, they are used in the risk ratio

mg/kg - milligrams per Liter

µg/kg - micrograms per Liter

-- Not applicable

NA - Not analyzed

ND - Not detected

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

D - Definitive data

Table 5.22
Risk Ratio Calculations for Potential Exposure to Groundwater by a Resident
Off-Post Well RFR-10
Camp Stanley Storage Activity, Bexar County, Texas

CAS No.	Compound	Exposure Point Concentration (EPC) ⁽¹⁾ (µg/L)	TCEQ TRRP Tier 1 Groundwater PCL - Residential Ingestion ⁽²⁾ (mg/L)	TCEQ TRRP Tier 1 Groundwater PCL - Residential Ingestion ⁽²⁾ (µg/L)	Carcino- genic?	USEPA Tapwater RSL ⁽³⁾ (µg/L)	Carcino- genic?	Non-Carc Risk Ratio (EPC/PCL- ing)	Carc Risk Ratio (EPC/PCL- ing)	Non-Carc Risk Ratio (EPC/RSL)	Carc Risk Ratio (EPC/RSL)
	Volatile Organic Compounds										
156-59-2	<i>cis</i> -1,2-Dichloroethene	0.29 F D Max	7.0E-02	7.0E+01	no	2.8E+01	no	0.0041	--	0.010	--
127-18-4	Tetrachloroethylene (PCE)	18 D Max	5.0E-03	5.0E+00	yes	9.7E+00	yes	--	3.6E-06	--	1.9E-06
79-01-6	Trichloroethylene (TCE)	8.7 D Max	5.0E-03	5.0E+00	yes	4.4E-01	yes	--	1.7E-06	--	2.0E-05
75-01-4	Vinyl Chloride	ND Max	2.0E-03	2.0E+00	yes	1.5E-02	yes	--	--	--	--
	Metals ⁽⁴⁾										
7439-97-6	Mercury	ND Max	2.0E-03	2.0E+00	no	6.3E-01	no	--	--	--	--
7439-97-6	Mercury - Dissolved	ND Max	2.0E-03	2.0E+00	no	6.3E-01	no	--	--	--	--
	Lead (not included in cumulative risk estimate)										
7439-92-1	Lead	ND Max	1.5E-02	1.5E+01	no	1.5E+01 ⁽³⁾	no	--	--	--	--
7439-92-1	Lead - Dissolved	3.9 S Max	1.5E-02	1.5E+01	no	1.5E+01 ⁽³⁾	no	0.26	--	0.26	--
Cumulative Risk Ratio								0.004	5E-06	0.01	2E-05

⁽¹⁾ Exposure point concentration is the maximum detected concentration from the ten most recent sampling events

⁽²⁾ Texas Commission on Environmental Quality (TCEQ) Texas Risk Reduction Program (TRRP) Tier 1 Groundwater Protective Concentration Levels (PCLs). Table 3. June 2012 (<http://www.tceq.state.tx.us/remediation/trrp/trrppcls.html>)

⁽³⁾ U.S. Environmental Protection Agency (USEPA) Regional Screening Levels (RSLs) for Tapwater (TR = 1E-6, HQ=1). November 2013. (http://www.epa.gov/reg3hwmd/risk/human/rb-concentration_table/Generic_Tables/docs/master_sl_table_run_NOV2013.pdf)

⁽⁴⁾ If dissolved metals data are available, they are used in the cumulative risk ratio. If only total metals data are available, they are used in the risk ratio

mg/kg - milligrams per Liter

µg/kg - micrograms per Liter

-- Not applicable

ND - Not detected

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

D - Definitive data

S - Screening data

Table 5.23
Risk Ratio Calculations for Potential Exposure to Groundwater by a Resident
Off-Post Well RFR-11
Camp Stanley Storage Activity, Bexar County, Texas

CAS No.	Compound	Exposure Point Concentration (EPC) ⁽¹⁾ (µg/L)	TCEQ TRRP Tier 1 Groundwater PCL - Residential Ingestion ⁽²⁾ (mg/L)	TCEQ TRRP Tier 1 Groundwater PCL - Residential Ingestion ⁽²⁾ (µg/L)	Carcino- genic?	USEPA Tapwater RSL ⁽³⁾ (µg/L)	Carcino- genic?	Non-Carc Risk Ratio (EPC/PCL- ing)	Carc Risk Ratio (EPC/PCL- ing)	Non-Carc Risk Ratio (EPC/RSL)	Carc Risk Ratio (EPC/RSL)
	Volatile Organic Compounds										
156-59-2	cis -1,2-Dichloroethene	ND Max	7.0E-02	7.0E+01	no	2.8E+01	no	--	--	--	--
127-18-4	Tetrachloroethylene (PCE)	0.80 F S Max	5.0E-03	5.0E+00	yes	9.7E+00	yes	--	1.6E-07	--	8.2E-08
79-01-6	Trichloroethylene (TCE)	2.9 D Max	5.0E-03	5.0E+00	yes	4.4E-01	yes	--	5.8E-07	--	6.6E-06
75-01-4	Vinyl Chloride	ND Max	2.0E-03	2.0E+00	yes	1.5E-02	yes	--	--	--	--
	Metals ⁽⁴⁾										
7439-97-6	Mercury	ND Max	2.0E-03	2.0E+00	no	6.3E-01	no	--	--	--	--
7439-97-6	Mercury - Dissolved	ND Max	2.0E-03	2.0E+00	no	6.3E-01	no	--	--	--	--
	Lead (not included in cumulative risk estimate)										
7439-92-1	Lead	ND Max	1.5E-02	1.5E+01	no	1.5E+01 ⁽³⁾	no	--	--	--	--
7439-92-1	Lead - Dissolved	2.8 Max	1.5E-02	1.5E+01	no	1.5E+01 ⁽³⁾	no	0.19	--	0.19	--
Cumulative Risk Ratio								--	7E-07	--	7E-06

⁽¹⁾ Exposure point concentration is the maximum detected concentration from the ten most recent sampling events

⁽²⁾ Texas Commission on Environmental Quality (TCEQ) Texas Risk Reduction Program (TRRP) Tier 1 Groundwater Protective Concentration Levels (PCLs). Table 3. June 2012 (<http://www.tceq.state.tx.us/remediation/trrp/trrppcls.html>)

⁽³⁾ U.S. Environmental Protection Agency (USEPA) Regional Screening Levels (RSLs) for Tapwater (TR = 1E-6, HQ=1). November 2013. (http://www.epa.gov/reg3hwmd/risk/human/rb-concentration_table/Generic_Tables/docs/master_sl_table_run_NOV2013.pdf)

⁽⁴⁾ If dissolved metals data are available, they are used in the cumulative risk ratio. If only total metals data are available, they are used in the risk ratio

mg/kg - milligrams per Liter

µg/kg - micrograms per Liter

-- Not applicable

ND - Not detected

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

D - Definitive data

S - Screening data

Table 5.24
Risk Ratio Calculations for Potential Exposure to Groundwater by a Resident
Off-Post Well RFR-12
Camp Stanley Storage Activity, Bexar County, Texas

CAS No.	Compound	Exposure Point Concentration (EPC) ⁽¹⁾ (µg/L)	TCEQ TRRP Tier 1 Groundwater PCL - Residential Ingestion ⁽²⁾ (mg/L)	TCEQ TRRP Tier 1 Groundwater PCL - Residential Ingestion ⁽²⁾ (µg/L)	Carcino- genic?	USEPA Tapwater RSL ⁽³⁾ (µg/L)	Carcino- genic?	Non-Carc Risk Ratio (EPC/PCL- ing)	Carc Risk Ratio (EPC/PCL- ing)	Non-Carc Risk Ratio (EPC/RSL)	Carc Risk Ratio (EPC/RSL)
	Volatile Organic Compounds										
156-59-2	cis -1,2-Dichloroethene	ND Max	7.0E-02	7.0E+01	no	2.8E+01	no	--	--	--	--
127-18-4	Tetrachloroethylene (PCE)	0.26 F D Max	5.0E-03	5.0E+00	yes	9.7E+00	yes	--	5.2E-08	--	2.7E-08
79-01-6	Trichloroethylene (TCE)	0.63 F D Max	5.0E-03	5.0E+00	yes	4.4E-01	yes	--	1.3E-07	--	1.4E-06
75-01-4	Vinyl Chloride	ND Max	2.0E-03	2.0E+00	yes	1.5E-02	yes	--	--	--	--
	Metals ⁽⁴⁾										
7439-97-6	Mercury	NA Max	2.0E-03	2.0E+00	no	6.3E-01	no	--	--	--	--
7439-97-6	Mercury - Dissolved	NA Max	2.0E-03	2.0E+00	no	6.3E-01	no	--	--	--	--
	Lead (not included in cumulative risk estimate)										
7439-92-1	Lead	NA Max	1.5E-02	1.5E+01	no	1.5E+01 ⁽³⁾	no	--	--	--	--
7439-92-1	Lead - Dissolved	NA Max	1.5E-02	1.5E+01	no	1.5E+01 ⁽³⁾	no	--	--	--	--
Cumulative Risk Ratio								--	2E-07	--	1E-06

⁽¹⁾ Exposure point concentration is the maximum detected concentration from the ten most recent sampling events

⁽²⁾ Texas Commission on Environmental Quality (TCEQ) Texas Risk Reduction Program (TRRP) Tier 1 Groundwater Protective Concentration Levels (PCLs). Table 3. June 2012 (<http://www.tceq.state.tx.us/remediation/trrp/trrppcls.html>)

⁽³⁾ U.S. Environmental Protection Agency (USEPA) Regional Screening Levels (RSLs) for Tapwater (TR = 1E-6, HQ=1). November 2013. (http://www.epa.gov/reg3hwmd/risk/human/rb-concentration_table/Generic_Tables/docs/master_sl_table_run_NOV2013.pdf)

⁽⁴⁾ If dissolved metals data are available, they are used in the cumulative risk ratio. If only total metals data are available, they are used in the risk ratio

mg/kg - milligrams per Liter

µg/kg - micrograms per Liter

-- Not applicable

NA - Not analyzed

ND - Not detected

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

D - Definitive data

Table 5.25
Risk Ratio Calculations for Potential Exposure to Groundwater by a Resident
Off-Post Well RFR-14
Camp Stanley Storage Activity, Bexar County, Texas

CAS No.	Compound	Exposure Point Concentration (EPC) ⁽¹⁾ (µg/L)		TCEQ TRRP Tier 1 Groundwater PCL - Residential Ingestion ⁽²⁾ (mg/L)	TCEQ TRRP Tier 1 Groundwater PCL - Residential Ingestion ⁽²⁾ (µg/L)	Carcino-genic?	USEPA Tapwater RSL ⁽³⁾ (µg/L)	Carcino-genic?	Non-Carc Risk Ratio (EPC/PCL-ing)	Carc Risk Ratio (EPC/PCL-ing)	Non-Carc Risk Ratio (EPC/RSL)	Carc Risk Ratio (EPC/RSL)
	Volatile Organic Compounds											
156-59-2	cis -1,2-Dichloroethene	ND	Max	7.0E-02	7.0E+01	no	2.8E+01	no	--	--	--	--
127-18-4	Tetrachloroethylene (PCE)	0.21	F D Max	5.0E-03	5.0E+00	yes	9.7E+00	yes	--	4.2E-08	--	2.2E-08
79-01-6	Trichloroethylene (TCE)	ND	Max	5.0E-03	5.0E+00	yes	4.4E-01	yes	--	--	--	--
75-01-4	Vinyl Chloride	ND	Max	2.0E-03	2.0E+00	yes	1.5E-02	yes	--	--	--	--
	Metals ⁽⁴⁾											
7439-97-6	Mercury	NA	Max	2.0E-03	2.0E+00	no	6.3E-01	no	--	--	--	--
7439-97-6	Mercury - Dissolved	NA	Max	2.0E-03	2.0E+00	no	6.3E-01	no	--	--	--	--
	Lead (not included in cumulative risk estimate)											
7439-92-1	Lead	NA	Max	1.5E-02	1.5E+01	no	1.5E+01 ⁽³⁾	no	--	--	--	--
7439-92-1	Lead - Dissolved	NA	Max	1.5E-02	1.5E+01	no	1.5E+01 ⁽³⁾	no	--	--	--	--
Cumulative Risk Ratio									--	4E-08	--	2E-08

⁽¹⁾ Exposure point concentration is the maximum detected concentration from the ten most recent sampling events

⁽²⁾ Texas Commission on Environmental Quality (TCEQ) Texas Risk Reduction Program (TRRP) Tier 1 Groundwater Protective Concentration Levels (PCLs). Table 3. June 2012 (<http://www.tceq.state.tx.us/remediation/trrp/trrppcls.html>)

⁽³⁾ U.S. Environmental Protection Agency (USEPA) Regional Screening Levels (RSLs) for Tapwater (TR = 1E-6, HQ=1). November 2013. (http://www.epa.gov/reg3hwmd/risk/human/rb-concentration_table/Generic_Tables/docs/master_sl_table_run_NOV2013.pdf)

⁽⁴⁾ If dissolved metals data are available, they are used in the cumulative risk ratio. If only total metals data are available, they are used in the risk ratio

mg/kg - milligrams per Liter

µg/kg - micrograms per Liter

-- Not applicable

NA - Not analyzed

ND - Not detected

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

D - Definitive data

Table 5.26
Risk Ratio Calculations for Potential Exposure to Groundwater by a Resident
Off-Post Well SLD-01
Camp Stanley Storage Activity, Bexar County, Texas

CAS No.	Compound	Exposure Point Concentration (EPC) ⁽¹⁾ (µg/L)		TCEQ TRRP Tier 1 Groundwater PCL - Residential Ingestion ⁽²⁾ (mg/L)	TCEQ TRRP Tier 1 Groundwater PCL - Residential Ingestion ⁽²⁾ (µg/L)	Carcino-genic?	USEPA Tapwater RSL ⁽³⁾ (µg/L)	Carcino-genic?	Non-Carc Risk Ratio (EPC/PCL-ing)	Carc Risk Ratio (EPC/PCL-ing)	Non-Carc Risk Ratio (EPC/RSL)	Carc Risk Ratio (EPC/RSL)
	Volatile Organic Compounds											
156-59-2	cis -1,2-Dichloroethene	ND	Max	7.0E-02	7.0E+01	no	2.8E+01	no	--	--	--	--
127-18-4	Tetrachloroethylene (PCE)	0.24	F D Max	5.0E-03	5.0E+00	yes	9.7E+00	yes	--	4.8E-08	--	2.5E-08
79-01-6	Trichloroethylene (TCE)	ND	Max	5.0E-03	5.0E+00	yes	4.4E-01	yes	--	--	--	--
75-01-4	Vinyl Chloride	ND	Max	2.0E-03	2.0E+00	yes	1.5E-02	yes	--	--	--	--
	Metals ⁽⁴⁾											
7439-97-6	Mercury	NA	Max	2.0E-03	2.0E+00	no	6.3E-01	no	--	--	--	--
7439-97-6	Mercury - Dissolved	NA	Max	2.0E-03	2.0E+00	no	6.3E-01	no	--	--	--	--
	Lead (not included in cumulative risk estimate)											
7439-92-1	Lead	NA	Max	1.5E-02	1.5E+01	no	1.5E+01 ⁽³⁾	no	--	--	--	--
7439-92-1	Lead - Dissolved	NA	Max	1.5E-02	1.5E+01	no	1.5E+01 ⁽³⁾	no	--	--	--	--
Cumulative Risk Ratio									--	5E-08	--	2E-08

⁽¹⁾ Exposure point concentration is the maximum detected concentration from the ten most recent sampling events

⁽²⁾ Texas Commission on Environmental Quality (TCEQ) Texas Risk Reduction Program (TRRP) Tier 1 Groundwater Protective Concentration Levels (PCLs). Table 3. June 2012 (<http://www.tceq.state.tx.us/remediation/trrp/trrppcls.html>)

⁽³⁾ U.S. Environmental Protection Agency (USEPA) Regional Screening Levels (RSLs) for Tapwater (TR = 1E-6, HQ=1). November 2013. (http://www.epa.gov/reg3hwmd/risk/human/rb-concentration_table/Generic_Tables/docs/master_sl_table_run_NOV2013.pdf)

⁽⁴⁾ If dissolved metals data are available, they are used in the cumulative risk ratio. If only total metals data are available, they are used in the risk ratio

mg/kg - milligrams per Liter

µg/kg - micrograms per Liter

-- Not applicable

NA - Not analyzed

ND - Not detected

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

D - Definitive data

Table 5.27
Risk Ratio Calculations for Potential Exposure to Groundwater by a Resident
On-Post Well AOC65-VEW28A
Camp Stanley Storage Activity, Bexar County, Texas

CAS No.	Compound	Exposure Point Concentration (EPC) ⁽¹⁾ (µg/L)	TCEQ TRRP Tier 1 Groundwater PCL - Residential Ingestion ⁽²⁾ (mg/L)	TCEQ TRRP Tier 1 Groundwater PCL - Residential Ingestion ⁽²⁾ (µg/L)	Carcino- genic?	USEPA Tapwater RSL ⁽³⁾ (µg/L)	Carcino- genic?	Non-Carc Risk Ratio (EPC/PCL- ing)	Carc Risk Ratio (EPC/PCL- ing)	Non-Carc Risk Ratio (EPC/RSL)	Carc Risk Ratio (EPC/RSL)
	Volatile Organic Compounds										
156-59-2	cis-1,2-Dichloroethene	ND Max	7.0E-02	7.0E+01	no	2.8E+01	no	--	--	--	--
127-18-4	Tetrachloroethylene (PCE)	23 S Max	5.0E-03	5.0E+00	yes	9.7E+00	yes	--	4.6E-06	--	2.4E-06
79-01-6	Trichloroethylene (TCE)	10 S Max	5.0E-03	5.0E+00	yes	4.4E-01	yes	--	2.0E-06	--	2.3E-05
75-01-4	Vinyl Chloride	ND Max	2.0E-03	2.0E+00	yes	1.5E-02	yes	--	--	--	--
	Metals ⁽⁴⁾										
7439-97-6	Mercury	ND Max	2.0E-03	2.0E+00	no	6.3E-01	no	--	--	--	--
7439-97-6	Mercury - Dissolved	ND Max	2.0E-03	2.0E+00	no	6.3E-01	no	--	--	--	--
	Lead (not included in cumulative risk estimate)										
7439-92-1	Lead	9.2 S Max	1.5E-02	1.5E+01	no	1.5E+01 ⁽³⁾	no	0.61	--	0.61	--
7439-92-1	Lead - Dissolved	ND Max	1.5E-02	1.5E+01	no	1.5E+01 ⁽³⁾	no	--	--	--	--
Cumulative Risk Ratio								--	7E-06	--	3E-05

⁽¹⁾ Exposure point concentration is the maximum detected concentration from the ten most recent sampling events

⁽²⁾ Texas Commission on Environmental Quality (TCEQ) Texas Risk Reduction Program (TRRP) Tier 1 Groundwater Protective Concentration Levels (PCLs). Table 3. June 2012 (<http://www.tceq.state.tx.us/remediation/trrp/trrppcls.html>)

⁽³⁾ U.S. Environmental Protection Agency (USEPA) Regional Screening Levels (RSLs) for Tapwater (TR = 1E-6, HQ=1). November 2013. (http://www.epa.gov/reg3hwmd/risk/human/rb-concentration_table/Generic_Tables/docs/master_sl_table_run_NOV2013.pdf)

⁽⁴⁾ If dissolved metals data are available, they are used in the cumulative risk ratio. If only total metals data are available, they are used in the risk ratio

mg/kg - milligrams per Liter

µg/kg - micrograms per Liter

-- Not applicable

ND - Not detected

S - Screening data

Table 5.28
Risk Ratio Calculations for Potential Exposure to Groundwater by a Resident
On-Post Well AOC65-VEW28B
Camp Stanley Storage Activity, Bexar County, Texas

CAS No.	Compound	Exposure Point Concentration (EPC) ⁽¹⁾ (µg/L)		TCEQ TRRP Tier 1 Groundwater PCL - Residential Ingestion ⁽²⁾ (mg/L)	TCEQ TRRP Tier 1 Groundwater PCL - Residential Ingestion ⁽²⁾ (µg/L)	Carcino-genic?	USEPA Tapwater RSL ⁽³⁾ (µg/L)	Carcino-genic?	Non-Carc Risk Ratio (EPC/PCL-ing)	Carc Risk Ratio (EPC/PCL-ing)	Non-Carc Risk Ratio (EPC/RSL)	Carc Risk Ratio (EPC/RSL)
	Volatile Organic Compounds											
156-59-2	cis -1,2-Dichloroethene	ND	Max	7.0E-02	7.0E+01	no	2.8E+01	no	--	--	--	--
127-18-4	Tetrachloroethylene (PCE)	46	Max	5.0E-03	5.0E+00	yes	9.7E+00	yes	--	9.2E-06	--	4.7E-06
79-01-6	Trichloroethylene (TCE)	3.0	Max	5.0E-03	5.0E+00	yes	4.4E-01	yes	--	6.0E-07	--	6.8E-06
75-01-4	Vinyl Chloride	ND	Max	2.0E-03	2.0E+00	yes	1.5E-02	yes	--	--	--	--
	Metals ⁽⁴⁾											
7439-97-6	Mercury	ND	Max	2.0E-03	2.0E+00	no	6.3E-01	no	--	--	--	--
7439-97-6	Mercury - Dissolved	ND	Max	2.0E-03	2.0E+00	no	6.3E-01	no	--	--	--	--
	Lead (not included in cumulative risk estimate)											
7439-92-1	Lead	ND	Max	1.5E-02	1.5E+01	no	1.5E+01 ⁽³⁾	no	--	--	--	--
7439-92-1	Lead - Dissolved	ND	Max	1.5E-02	1.5E+01	no	1.5E+01 ⁽³⁾	no	--	--	--	--
Cumulative Risk Ratio									--	1E-05	--	1E-05

⁽¹⁾ Exposure point concentration is the maximum detected concentration from the ten most recent sampling events

⁽²⁾ Texas Commission on Environmental Quality (TCEQ) Texas Risk Reduction Program (TRRP) Tier 1 Groundwater Protective Concentration Levels (PCLs). Table 3. June 2012 (<http://www.tceq.state.tx.us/remediation/trrp/trrppcls.html>)

⁽³⁾ U.S. Environmental Protection Agency (USEPA) Regional Screening Levels (RSLs) for Tapwater (TR = 1E-6, HQ=1). November 2013. (http://www.epa.gov/reg3hwmd/risk/human/rb-concentration_table/Generic_Tables/docs/master_sl_table_run_NOV2013.pdf)

⁽⁴⁾ If dissolved metals data are available, they are used in the cumulative risk ratio. If only total metals data are available, they are used in the risk ratio

mg/kg - milligrams per Liter

µg/kg - micrograms per Liter

-- Not applicable

NA - Not analyzed

ND - Not detected

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

D - Definitive data

S - Screening data

Table 5.29
Risk Ratio Calculations for Potential Exposure to Groundwater by a Resident
On-Post Well B3-EXW01
Camp Stanley Storage Activity, Bexar County, Texas

CAS No.	Compound	Exposure Point Concentration (EPC) ⁽¹⁾ (µg/L)	TCEQ TRRP Tier 1 Groundwater PCL - Residential Ingestion ⁽²⁾ (mg/L)	TCEQ TRRP Tier 1 Groundwater PCL - Residential Ingestion ⁽²⁾ (µg/L)	Carcino- genic?	USEPA Tapwater RSL ⁽³⁾ (µg/L)	Carcino- genic?	Non-Carc Risk Ratio (EPC/PCL- ing)	Carc Risk Ratio (EPC/PCL- ing)	Non-Carc Risk Ratio (EPC/RSL)	Carc Risk Ratio (EPC/RSL)
	Volatile Organic Compounds										
156-59-2	cis -1,2-Dichloroethene	370 S Max	7.0E-02	7.0E+01	no	2.8E+01	no	5.3	--	13	--
127-18-4	Tetrachloroethylene (PCE)	310 S Max	5.0E-03	5.0E+00	yes	9.7E+00	yes	--	6.2E-05	--	3.2E-05
79-01-6	Trichloroethylene (TCE)	330 S Max	5.0E-03	5.0E+00	yes	4.4E-01	yes	--	6.6E-05	--	7.5E-04
75-01-4	Vinyl Chloride	0.74 F S Max	2.0E-03	2.0E+00	yes	1.5E-02	yes	--	3.7E-07	--	4.9E-05
	Metals ⁽⁴⁾										
7439-97-6	Mercury	0.072 F S Max	2.0E-03	2.0E+00	no	6.3E-01	no	0.036	--	0.11	--
7439-97-6	Mercury - Dissolved	NA Max	2.0E-03	2.0E+00	no	6.3E-01	no	--	--	--	--
	Lead (not included in cumulative risk estimate)										
7439-92-1	Lead	31 S Max	1.5E-02	1.5E+01	no	1.5E+01 ⁽³⁾	no	2.1	--	2.1	--
7439-92-1	Lead - Dissolved	NA Max	1.5E-02	1.5E+01	no	1.5E+01 ⁽³⁾	no	--	--	--	--

Cumulative Risk Ratio

5

1E-04

13

8E-04

⁽¹⁾ Exposure point concentration is the maximum detected concentration from the ten most recent sampling events

⁽²⁾ Texas Commission on Environmental Quality (TCEQ) Texas Risk Reduction Program (TRRP) Tier 1 Groundwater Protective Concentration Levels (PCLs). Table 3. June 2012 (<http://www.tceq.state.tx.us/remediation/trrp/trrppcls.html>)

⁽³⁾ U.S. Environmental Protection Agency (USEPA) Regional Screening Levels (RSLs) for Tapwater (TR = 1E-6, HQ=1). November 2013. (http://www.epa.gov/reg3hwmd/risk/human/rb-concentration_table/Generic_Tables/docs/master_sl_table_run_NOV2013.pdf)

⁽⁴⁾ If dissolved metals data are available, they are used in the cumulative risk ratio. If only total metals data are available, they are used in the risk ratio

mg/kg - milligrams per Liter

µg/kg - micrograms per Liter

-- Not applicable

NA - Not analyzed

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

S - Screening data

Table 5.30
Risk Ratio Calculations for Potential Exposure to Groundwater by a Resident
On-Post Well B3-EXW02
Camp Stanley Storage Activity, Bexar County, Texas

CAS No.	Compound	Exposure Point Concentration (EPC) ⁽¹⁾ (µg/L)		TCEQ TRRP Tier 1 Groundwater PCL - Residential Ingestion ⁽²⁾ (mg/L)	TCEQ TRRP Tier 1 Groundwater PCL - Residential Ingestion ⁽²⁾ (µg/L)	Carcino-genic?	USEPA Tapwater RSL ⁽³⁾ (µg/L)	Carcino-genic?	Non-Carc Risk Ratio (EPC/PCL-ing)	Carc Risk Ratio (EPC/PCL-ing)	Non-Carc Risk Ratio (EPC/RSL)	Carc Risk Ratio (EPC/RSL)
	Volatile Organic Compounds											
156-59-2	cis -1,2-Dichloroethene	150	S Max	7.0E-02	7.0E+01	no	2.8E+01	no	2.1	--	5.4	--
127-18-4	Tetrachloroethylene (PCE)	140	S Max	5.0E-03	5.0E+00	yes	9.7E+00	yes	--	2.8E-05	--	1.4E-05
79-01-6	Trichloroethylene (TCE)	180	S Max	5.0E-03	5.0E+00	yes	4.4E-01	yes	--	3.6E-05	--	4.1E-04
75-01-4	Vinyl Chloride	ND	Max	2.0E-03	2.0E+00	yes	1.5E-02	yes	--	--	--	--
	Metals ⁽⁴⁾											
7439-97-6	Mercury	0.060	S Max	2.0E-03	2.0E+00	no	6.3E-01	no	0.030	--	0.10	--
7439-97-6	Mercury - Dissolved	NA	Max	2.0E-03	2.0E+00	no	6.3E-01	no	--	--	--	--
	Lead (not included in cumulative risk estimate)											
7439-92-1	Lead	1.7	F S Max	1.5E-02	1.5E+01	no	1.5E+01 ⁽³⁾	no	0.11	--	0.11	--
7439-92-1	Lead - Dissolved	NA	Max	1.5E-02	1.5E+01	no	1.5E+01 ⁽³⁾	no	--	--	--	--

Cumulative Risk Ratio 2 6E-05 5 4E-04

⁽¹⁾ Exposure point concentration is the maximum detected concentration from the ten most recent sampling events

⁽²⁾ Texas Commission on Environmental Quality (TCEQ) Texas Risk Reduction Program (TRRP) Tier 1 Groundwater Protective Concentration Levels (PCLs). Table 3. June 2012 (<http://www.tceq.state.tx.us/remediation/trrp/trrppcls.html>)

⁽³⁾ U.S. Environmental Protection Agency (USEPA) Regional Screening Levels (RSLs) for Tapwater (TR = 1E-6, HQ=1). November 2013. (http://www.epa.gov/reg3hwmd/risk/human/rb-concentration_table/Generic_Tables/docs/master_sl_table_run_NOV2013.pdf)

⁽⁴⁾ If dissolved metals data are available, they are used in the cumulative risk ratio. If only total metals data are available, they are used in the risk ratio

mg/kg - milligrams per Liter

µg/kg - micrograms per Liter

-- Not applicable

NA - Not analyzed

ND - Not detected

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

S - Screening data

Table 5.31
Risk Ratio Calculations for Potential Exposure to Groundwater by a Resident
On-Post Well B3-EXW03
Camp Stanley Storage Activity, Bexar County, Texas

CAS No.	Compound	Exposure Point Concentration (EPC) ⁽¹⁾ (µg/L)	TCEQ TRRP Tier 1 Groundwater PCL - Residential Ingestion ⁽²⁾ (mg/L)	TCEQ TRRP Tier 1 Groundwater PCL - Residential Ingestion ⁽²⁾ (µg/L)	Carcino- genic?	USEPA Tapwater RSL ⁽³⁾ (µg/L)	Carcino- genic?	Non-Carc Risk Ratio (EPC/PCL- ing)	Carc Risk Ratio (EPC/PCL- ing)	Non-Carc Risk Ratio (EPC/RSL)	Carc Risk Ratio (EPC/RSL)
	Volatile Organic Compounds										
156-59-2	cis-1,2-Dichloroethene	120 S Max	7.0E-02	7.0E+01	no	2.8E+01	no	1.7	--	4.3	--
127-18-4	Tetrachloroethylene (PCE)	110.00 S Max	5.0E-03	5.0E+00	yes	9.7E+00	yes	--	2.2E-05	--	1.1E-05
79-01-6	Trichloroethylene (TCE)	100.00 S Max	5.0E-03	5.0E+00	yes	4.4E-01	yes	--	2.0E-05	--	2.3E-04
75-01-4	Vinyl Chloride	ND Max	2.0E-03	2.0E+00	yes	1.5E-02	yes	--	--	--	--
	Metals ⁽⁴⁾										
7439-97-6	Mercury	NA Max	2.0E-03	2.0E+00	no	6.3E-01	no	--	--	--	--
7439-97-6	Mercury - Dissolved	NA Max	2.0E-03	2.0E+00	no	6.3E-01	no	--	--	--	--
	Lead (not included in cumulative risk estimate)										
7439-92-1	Lead	NA Max	1.5E-02	1.5E+01	no	1.5E+01 ⁽³⁾	no	--	--	--	--
7439-92-1	Lead - Dissolved	NA Max	1.5E-02	1.5E+01	no	1.5E+01 ⁽³⁾	no	--	--	--	--

Cumulative Risk Ratio24E-0542E-04

⁽¹⁾ Exposure point concentration is the maximum detected concentration from the ten most recent sampling events

⁽²⁾ Texas Commission on Environmental Quality (TCEQ) Texas Risk Reduction Program (TRRP) Tier 1 Groundwater Protective Concentration Levels (PCLs). Table 3. June 2012 (<http://www.tceq.state.tx.us/remediation/trrp/trrppcls.html>)

⁽³⁾ U.S. Environmental Protection Agency (USEPA) Regional Screening Levels (RSLs) for Tapwater (TR = 1E-6, HQ=1). November 2013. (http://www.epa.gov/reg3hwmd/risk/human/rb-concentration_table/Generic_Tables/docs/master_sl_table_run_NOV2013.pdf)

⁽⁴⁾ If dissolved metals data are available, they are used in the cumulative risk ratio. If only total metals data are available, they are used in the risk ratio

mg/kg - milligrams per Liter

µg/kg - micrograms per Liter

-- Not applicable

NA - Not analyzed

ND - Not detected

S - Screening data

Table 5.32
Risk Ratio Calculations for Potential Exposure to Groundwater by a Resident
On-Post Well B3-EXW04
Camp Stanley Storage Activity, Bexar County, Texas

CAS No.	Compound	Exposure Point Concentration (EPC) ⁽¹⁾ (µg/L)	TCEQ TRRP Tier 1 Groundwater PCL - Residential Ingestion ⁽²⁾ (mg/L)	TCEQ TRRP Tier 1 Groundwater PCL - Residential Ingestion ⁽²⁾ (µg/L)	Carcino- genic?	USEPA Tapwater RSL ⁽³⁾ (µg/L)	Carcino- genic?	Non-Carc Risk Ratio (EPC/PCL- ing)	Carc Risk Ratio (EPC/PCL- ing)	Non-Carc Risk Ratio (EPC/RSL)	Carc Risk Ratio (EPC/RSL)
	Volatile Organic Compounds										
156-59-2	cis-1,2-Dichloroethene	210 S Max	7.0E-02	7.0E+01	no	2.8E+01	no	3.0	--	7.5	--
127-18-4	Tetrachloroethylene (PCE)	160 S Max	5.0E-03	5.0E+00	yes	9.7E+00	yes	--	3.2E-05	--	1.6E-05
79-01-6	Trichloroethylene (TCE)	250 S Max	5.0E-03	5.0E+00	yes	4.4E-01	yes	--	5.0E-05	--	5.7E-04
75-01-4	Vinyl Chloride	ND Max	2.0E-03	2.0E+00	yes	1.5E-02	yes	--	--	--	--
	Metals ⁽⁴⁾										
7439-97-6	Mercury	NA Max	2.0E-03	2.0E+00	no	6.3E-01	no	--	--	--	--
7439-97-6	Mercury - Dissolved	NA Max	2.0E-03	2.0E+00	no	6.3E-01	no	--	--	--	--
	Lead (not included in cumulative risk estimate)										
7439-92-1	Lead	NA Max	1.5E-02	1.5E+01	no	1.5E+01 ⁽³⁾	no	--	--	--	--
7439-92-1	Lead - Dissolved	NA Max	1.5E-02	1.5E+01	no	1.5E+01 ⁽³⁾	no	--	--	--	--
Cumulative Risk Ratio								3	8E-05	8	6E-04

⁽¹⁾ Exposure point concentration is the maximum detected concentration from the ten most recent sampling events

⁽²⁾ Texas Commission on Environmental Quality (TCEQ) Texas Risk Reduction Program (TRRP) Tier 1 Groundwater Protective Concentration Levels (PCLs). Table 3. June 2012 (<http://www.tceq.state.tx.us/remediation/trrp/trrppcls.html>)

⁽³⁾ U.S. Environmental Protection Agency (USEPA) Regional Screening Levels (RSLs) for Tapwater (TR = 1E-6, HQ=1). November 2013. (http://www.epa.gov/reg3hwmd/risk/human/rb-concentration_table/Generic_Tables/docs/master_sl_table_run_NOV2013.pdf)

⁽⁴⁾ If dissolved metals data are available, they are used in the cumulative risk ratio. If only total metals data are available, they are used in the risk ratio

mg/kg - milligrams per Liter

µg/kg - micrograms per Liter

-- Not applicable

NA - Not analyzed

ND - Not detected

S - Screening data

Table 5.33
Risk Ratio Calculations for Potential Exposure to Groundwater by a Resident
On-Post Well B3-EXW05
Camp Stanley Storage Activity, Bexar County, Texas

CAS No.	Compound	Exposure Point Concentration (EPC) ⁽¹⁾ (µg/L)	TCEQ TRRP Tier 1 Groundwater PCL - Residential Ingestion ⁽²⁾ (mg/L)	TCEQ TRRP Tier 1 Groundwater PCL - Residential Ingestion ⁽²⁾ (µg/L)	Carcino- genic?	USEPA Tapwater RSL ⁽³⁾ (µg/L)	Carcino- genic?	Non-Carc Risk Ratio (EPC/PCL- ing)	Carc Risk Ratio (EPC/PCL- ing)	Non-Carc Risk Ratio (EPC/RSL)	Carc Risk Ratio (EPC/RSL)
	Volatile Organic Compounds										
156-59-2	cis-1,2-Dichloroethene	28 S Max	7.0E-02	7.0E+01	no	2.8E+01	no	0.40	--	1.0	--
127-18-4	Tetrachloroethylene (PCE)	22 S Max	5.0E-03	5.0E+00	yes	9.7E+00	yes	--	4.4E-06	--	2.3E-06
79-01-6	Trichloroethylene (TCE)	51 S Max	5.0E-03	5.0E+00	yes	4.4E-01	yes	--	1.0E-05	--	1.2E-04
75-01-4	Vinyl Chloride	ND Max	2.0E-03	2.0E+00	yes	1.5E-02	yes	--	--	--	--
	Metals ⁽⁴⁾										
7439-97-6	Mercury	NA Max	2.0E-03	2.0E+00	no	6.3E-01	no	--	--	--	--
7439-97-6	Mercury - Dissolved	NA Max	2.0E-03	2.0E+00	no	6.3E-01	no	--	--	--	--
	Lead (not included in cumulative risk estimate)										
7439-92-1	Lead	NA Max	1.5E-02	1.5E+01	no	1.5E+01 ⁽³⁾	no	--	--	--	--
7439-92-1	Lead - Dissolved	NA Max	1.5E-02	1.5E+01	no	1.5E+01 ⁽³⁾	no	--	--	--	--

Cumulative Risk Ratio0.41E-0511E-04

⁽¹⁾ Exposure point concentration is the maximum detected concentration from the ten most recent sampling events

⁽²⁾ Texas Commission on Environmental Quality (TCEQ) Texas Risk Reduction Program (TRRP) Tier 1 Groundwater Protective Concentration Levels (PCLs). Table 3. June 2012 (<http://www.tceq.state.tx.us/remediation/trrp/trrppcls.html>)

⁽³⁾ U.S. Environmental Protection Agency (USEPA) Regional Screening Levels (RSLs) for Tapwater (TR = 1E-6, HQ=1). November 2013. (http://www.epa.gov/reg3hwmd/risk/human/rb-concentration_table/Generic_Tables/docs/master_sl_table_run_NOV2013.pdf)

⁽⁴⁾ If dissolved metals data are available, they are used in the cumulative risk ratio. If only total metals data are available, they are used in the risk ratio

mg/kg - milligrams per Liter

µg/kg - micrograms per Liter

-- Not applicable

NA - Not analyzed

ND - Not detected

S - Screening data

Table 5.34
Risk Ratio Calculations for Potential Exposure to Groundwater by a Resident
On-Post Well CS-B3-MW01
Camp Stanley Storage Activity, Bexar County, Texas

CAS No.	Compound	Exposure Point Concentration (EPC) ⁽¹⁾ (µg/L)	TCEQ TRRP Tier 1 Groundwater PCL - Residential Ingestion ⁽²⁾ (mg/L)	TCEQ TRRP Tier 1 Groundwater PCL - Residential Ingestion ⁽²⁾ (µg/L)	Carcino- genic?	USEPA Tapwater RSL ⁽³⁾ (µg/L)	Carcino- genic?	Non-Carc Risk Ratio (EPC/PCL- ing)	Carc Risk Ratio (EPC/PCL- ing)	Non-Carc Risk Ratio (EPC/RSL)	Carc Risk Ratio (EPC/RSL)
	Volatile Organic Compounds										
156-59-2	cis-1,2-Dichloroethene	360 S Max	7.0E-02	7.0E+01	no	2.8E+01	no	5.1	--	13	--
127-18-4	Tetrachloroethylene (PCE)	0.77 F S Max	5.0E-03	5.0E+00	yes	9.7E+00	yes	--	1.5E-07	--	7.9E-08
79-01-6	Trichloroethylene (TCE)	1.5 S Max	5.0E-03	5.0E+00	yes	4.4E-01	yes	--	3.0E-07	--	3.4E-06
75-01-4	Vinyl Chloride	220 S Max	2.0E-03	2.0E+00	yes	1.5E-02	yes	--	1.1E-04	--	1.5E-02
	Metals ⁽⁴⁾										
7439-97-6	Mercury	0.075 F S Max	2.0E-03	2.0E+00	no	6.3E-01	no	0.038	--	0.12	--
7439-97-6	Mercury - Dissolved	NA Max	2.0E-03	2.0E+00	no	6.3E-01	no	--	--	--	--
	Lead (not included in cumulative risk estimate)										
7439-92-1	Lead	5.8 S Max	1.5E-02	1.5E+01	no	1.5E+01 ⁽³⁾	no	0.39	--	0.39	--
7439-92-1	Lead - Dissolved	NA Max	1.5E-02	1.5E+01	no	1.5E+01 ⁽³⁾	no	--	--	--	--

Cumulative Risk Ratio51E-04131E-02

⁽¹⁾ Exposure point concentration is the maximum detected concentration from the ten most recent sampling events

⁽²⁾ Texas Commission on Environmental Quality (TCEQ) Texas Risk Reduction Program (TRRP) Tier 1 Groundwater Protective Concentration Levels (PCLs). Table 3. June 2012 (<http://www.tceq.state.tx.us/remediation/trrp/trrppcls.html>)

⁽³⁾ U.S. Environmental Protection Agency (USEPA) Regional Screening Levels (RSLs) for Tapwater (TR = 1E-6, HQ=1). November 2013. (http://www.epa.gov/reg3hwmd/risk/human/rb-concentration_table/Generic_Tables/docs/master_sl_table_run_NOV2013.pdf)

⁽⁴⁾ If dissolved metals data are available, they are used in the cumulative risk ratio. If only total metals data are available, they are used in the risk ratio

mg/kg - milligrams per Liter

µg/kg - micrograms per Liter

-- Not applicable

NA - Not analyzed

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

S - Screening data

Table 5.35
Risk Ratio Calculations for Potential Exposure to Groundwater by a Resident
On-Post Well CS-1
Camp Stanley Storage Activity, Bexar County, Texas

CAS No.	Compound	Exposure Point Concentration (EPC) ⁽¹⁾ (µg/L)		TCEQ TRRP Tier 1 Groundwater PCL - Residential Ingestion ⁽²⁾ (mg/L)	TCEQ TRRP Tier 1 Groundwater PCL - Residential Ingestion ⁽²⁾ (µg/L)	Carcino-genic?	USEPA Tapwater RSL ⁽³⁾ (µg/L)	Carcino-genic?	Non-Carc Risk Ratio (EPC/PCL-ing)	Carc Risk Ratio (EPC/PCL-ing)	Non-Carc Risk Ratio (EPC/RSL)	Carc Risk Ratio (EPC/RSL)
	Volatile Organic Compounds											
156-59-2	cis -1,2-Dichloroethene	ND	Max	7.0E-02	7.0E+01	no	2.8E+01	no	--	--	--	--
127-18-4	Tetrachloroethylene (PCE)	ND	Max	5.0E-03	5.0E+00	yes	9.7E+00	yes	--	--	--	--
79-01-6	Trichloroethylene (TCE)	0.49	F D Max	5.0E-03	5.0E+00	yes	4.4E-01	yes	--	9.8E-08	--	1.1E-06
75-01-4	Vinyl Chloride	ND	Max	2.0E-03	2.0E+00	yes	1.5E-02	yes	--	--	--	--
	Metals ⁽⁴⁾											
7439-97-6	Mercury	ND	Max	2.0E-03	2.0E+00	no	6.3E-01	no	--	--	--	--
7439-97-6	Mercury - Dissolved	NA	Max	2.0E-03	2.0E+00	no	6.3E-01	no	--	--	--	--
	Lead (not included in cumulative risk estimate)											
7439-92-1	Lead	29	D Max	1.5E-02	1.5E+01	no	1.5E+01 ⁽³⁾	no	1.9	--	1.9	--
7439-92-1	Lead - Dissolved	NA	Max	1.5E-02	1.5E+01	no	1.5E+01 ⁽³⁾	no	--	--	--	--
Cumulative Risk Ratio									--	1E-07	--	1E-06

⁽¹⁾ Exposure point concentration is the maximum detected concentration from the ten most recent sampling events

⁽²⁾ Texas Commission on Environmental Quality (TCEQ) Texas Risk Reduction Program (TRRP) Tier 1 Groundwater Protective Concentration Levels (PCLs). Table 3. June 2012 (<http://www.tceq.state.tx.us/remediation/trrp/trrppcls.html>)

⁽³⁾ U.S. Environmental Protection Agency (USEPA) Regional Screening Levels (RSLs) for Tapwater (TR = 1E-6, HQ=1). November 2013. (http://www.epa.gov/reg3hwmd/risk/human/rb-concentration_table/Generic_Tables/docs/master_sl_table_run_NOV2013.pdf)

⁽⁴⁾ If dissolved metals data are available, they are used in the cumulative risk ratio. If only total metals data are available, they are used in the risk ratio

mg/kg - milligrams per Liter

µg/kg - micrograms per Liter

-- Not applicable

NA - Not analyzed

ND - Not detected

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

D - Definitive data

Table 5.36
Risk Ratio Calculations for Potential Exposure to Groundwater by a Resident
On-Post Well CS-2
Camp Stanley Storage Activity, Bexar County, Texas

CAS No.	Compound	Exposure Point Concentration (EPC) ⁽¹⁾ (µg/L)		TCEQ TRRP Tier 1 Groundwater PCL - Residential Ingestion ⁽²⁾ (mg/L)	TCEQ TRRP Tier 1 Groundwater PCL - Residential Ingestion ⁽²⁾ (µg/L)	Carcino-genic?	USEPA Tapwater RSL ⁽³⁾ (µg/L)	Carcino-genic?	Non-Carc Risk Ratio (EPC/PCL-ing)	Carc Risk Ratio (EPC/PCL-ing)	Non-Carc Risk Ratio (EPC/RSL)	Carc Risk Ratio (EPC/RSL)
	Volatile Organic Compounds											
156-59-2	cis -1,2-Dichloroethene	ND	Max	7.0E-02	7.0E+01	no	2.8E+01	no	--	--	--	--
127-18-4	Tetrachloroethylene (PCE)	0.64	F D Max	5.0E-03	5.0E+00	yes	9.7E+00	yes	--	1.3E-07	--	6.6E-08
79-01-6	Trichloroethylene (TCE)	0.19	F Max	5.0E-03	5.0E+00	yes	4.4E-01	yes	--	3.8E-08	--	4.3E-07
75-01-4	Vinyl Chloride	ND	S Max	2.0E-03	2.0E+00	yes	1.5E-02	yes	--	--	--	--
	Metals ⁽⁴⁾											
7439-97-6	Mercury	ND	Max	2.0E-03	2.0E+00	no	6.3E-01	no	--	--	--	--
7439-97-6	Mercury - Dissolved	NA	Max	2.0E-03	2.0E+00	no	6.3E-01	no	--	--	--	--
	Lead (not included in cumulative risk estimate)											
7439-92-1	Lead	3.0	F D Max	1.5E-02	1.5E+01	no	1.5E+01 ⁽³⁾	no	0.20	--	0.20	--
7439-92-1	Lead - Dissolved	NA	Max	1.5E-02	1.5E+01	no	1.5E+01 ⁽³⁾	no	--	--	--	--
Cumulative Risk Ratio									--	2E-07	--	5E-07

⁽¹⁾ Exposure point concentration is the maximum detected concentration from the ten most recent sampling events

⁽²⁾ Texas Commission on Environmental Quality (TCEQ) Texas Risk Reduction Program (TRRP) Tier 1 Groundwater Protective Concentration Levels (PCLs). Table 3. June 2012 (<http://www.tceq.state.tx.us/remediation/trrp/trrppcls.html>)

⁽³⁾ U.S. Environmental Protection Agency (USEPA) Regional Screening Levels (RSLs) for Tapwater (TR = 1E-6, HQ=1). November 2013. (http://www.epa.gov/reg3hwmd/risk/human/rb-concentration_table/Generic_Tables/docs/master_sl_table_run_NOV2013.pdf)

⁽⁴⁾ If dissolved metals data are available, they are used in the cumulative risk ratio. If only total metals data are available, they are used in the risk ratio

mg/kg - milligrams per Liter

µg/kg - micrograms per Liter

-- Not applicable

NA - Not analyzed

ND - Not detected

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

D - Definitive data

S - Screening data

Table 5.37
Risk Ratio Calculations for Potential Exposure to Groundwater by a Resident
On-Post Well CS-4
Camp Stanley Storage Activity, Bexar County, Texas

CAS No.	Compound	Exposure Point Concentration (EPC) ⁽¹⁾ (µg/L)		TCEQ TRRP Tier 1 Groundwater PCL - Residential Ingestion ⁽²⁾ (mg/L)	TCEQ TRRP Tier 1 Groundwater PCL - Residential Ingestion ⁽²⁾ (µg/L)	Carcino-genic?	USEPA Tapwater RSL ⁽³⁾ (µg/L)	Carcino-genic?	Non-Carc Risk Ratio (EPC/PCL-ing)	Carc Risk Ratio (EPC/PCL-ing)	Non-Carc Risk Ratio (EPC/RSL)	Carc Risk Ratio (EPC/RSL)
	Volatile Organic Compounds											
156-59-2	cis -1,2-Dichloroethene	6.0	D Max	7.0E-02	7.0E+01	no	2.8E+01	no	0.086	--	0.21	--
127-18-4	Tetrachloroethylene (PCE)	6.4	D Max	5.0E-03	5.0E+00	yes	9.7E+00	yes	--	1.3E-06	--	6.6E-07
79-01-6	Trichloroethylene (TCE)	10	D Max	5.0E-03	5.0E+00	yes	4.4E-01	yes	--	2.0E-06	--	2.3E-05
75-01-4	Vinyl Chloride	ND	Max	2.0E-03	2.0E+00	yes	1.5E-02	yes	--	--	--	--
	Metals ⁽⁴⁾											
7439-97-6	Mercury	0.061	F S Max	2.0E-03	2.0E+00	no	6.3E-01	no	0.031	--	0.10	--
7439-97-6	Mercury - Dissolved	NA	Max	2.0E-03	2.0E+00	no	6.3E-01	no	--	--	--	--
	Lead (not included in cumulative risk estimate)											
7439-92-1	Lead	ND	Max	1.5E-02	1.5E+01	no	1.5E+01 ⁽³⁾	no	--	--	--	--
7439-92-1	Lead - Dissolved	NA	Max	1.5E-02	1.5E+01	no	1.5E+01 ⁽³⁾	no	--	--	--	--

Cumulative Risk Ratio

0.1

3E-06

0.3

2E-05

⁽¹⁾ Exposure point concentration is the maximum detected concentration from the ten most recent sampling events

⁽²⁾ Texas Commission on Environmental Quality (TCEQ) Texas Risk Reduction Program (TRRP) Tier 1 Groundwater Protective Concentration Levels (PCLs). Table 3. June 2012 (<http://www.tceq.state.tx.us/remediation/trrp/trrppcls.html>)

⁽³⁾ U.S. Environmental Protection Agency (USEPA) Regional Screening Levels (RSLs) for Tapwater (TR = 1E-6, HQ=1). November 2013. (http://www.epa.gov/reg3hwmd/risk/human/rb-concentration_table/Generic_Tables/docs/master_sl_table_run_NOV2013.pdf)

⁽⁴⁾ If dissolved metals data are available, they are used in the cumulative risk ratio. If only total metals data are available, they are used in the risk ratio

mg/kg - milligrams per Liter

µg/kg - micrograms per Liter

-- Not applicable

NA - Not analyzed

ND - Not detected

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

D - Definitive data

S - Screening data

Table 5.38
Risk Ratio Calculations for Potential Exposure to Groundwater by a Resident
On-Post Well CS-9
Camp Stanley Storage Activity, Bexar County, Texas

CAS No.	Compound	Exposure Point Concentration (EPC) ⁽¹⁾ (µg/L)	TCEQ TRRP Tier 1 Groundwater PCL - Residential Ingestion ⁽²⁾ (mg/L)	TCEQ TRRP Tier 1 Groundwater PCL - Residential Ingestion ⁽²⁾ (µg/L)	Carcino- genic?	USEPA Tapwater RSL ⁽³⁾ (µg/L)	Carcino- genic?	Non-Carc Risk Ratio (EPC/PCL- ing)	Carc Risk Ratio (EPC/PCL- ing)	Non-Carc Risk Ratio (EPC/RSL)	Carc Risk Ratio (EPC/RSL)
	Volatile Organic Compounds										
156-59-2	cis-1,2-Dichloroethene	ND Max	7.0E-02	7.0E+01	no	2.8E+01	no	--	--	--	--
127-18-4	Tetrachloroethylene (PCE)	ND Max	5.0E-03	5.0E+00	yes	9.7E+00	yes	--	--	--	--
79-01-6	Trichloroethylene (TCE)	ND Max	5.0E-03	5.0E+00	yes	4.4E-01	yes	--	--	--	--
75-01-4	Vinyl Chloride	ND Max	2.0E-03	2.0E+00	yes	1.5E-02	yes	--	--	--	--
	Metals ⁽⁴⁾										
7439-97-6	Mercury	58 D Max	2.0E-03	2.0E+00	no	6.3E-01	no	29	--	92	--
7439-97-6	Mercury - Dissolved	NA Max	2.0E-03	2.0E+00	no	6.3E-01	no	--	--	--	--
	Lead (not included in cumulative risk estimate)										
7439-92-1	Lead	18 D Max	1.5E-02	1.5E+01	no	1.5E+01 ⁽³⁾	no	1.2	--	1.2	--
7439-92-1	Lead - Dissolved	NA Max	1.5E-02	1.5E+01	no	1.5E+01 ⁽³⁾	no	--	--	--	--
Cumulative Risk Ratio								29	--	92	--

⁽¹⁾ Exposure point concentration is the maximum detected concentration from the ten most recent sampling events

⁽²⁾ Texas Commission on Environmental Quality (TCEQ) Texas Risk Reduction Program (TRRP) Tier 1 Groundwater Protective Concentration Levels (PCLs). Table 3. June 2012 (<http://www.tceq.state.tx.us/remediation/trrp/trrppcls.html>)

⁽³⁾ U.S. Environmental Protection Agency (USEPA) Regional Screening Levels (RSLs) for Tapwater (TR = 1E-6, HQ=1). November 2013. (http://www.epa.gov/reg3hwmd/risk/human/rb-concentration_table/Generic_Tables/docs/master_sl_table_run_NOV2013.pdf)

⁽⁴⁾ If dissolved metals data are available, they are used in the cumulative risk ratio. If only total metals data are available, they are used in the risk ratio

mg/kg - milligrams per Liter

µg/kg - micrograms per Liter

-- Not applicable

NA - Not analyzed

ND - Not detected

D - Definitive data

Table 5.39
Risk Ratio Calculations for Potential Exposure to Groundwater by a Resident
On-Post Well CS-10
Camp Stanley Storage Activity, Bexar County, Texas

CAS No.	Compound	Exposure Point Concentration (EPC) ⁽¹⁾ (µg/L)		TCEQ TRRP Tier 1 Groundwater PCL - Residential Ingestion ⁽²⁾ (mg/L)	TCEQ TRRP Tier 1 Groundwater PCL - Residential Ingestion ⁽²⁾ (µg/L)	Carcino-genic?	USEPA Tapwater RSL ⁽³⁾ (µg/L)	Carcino-genic?	Non-Carc Risk Ratio (EPC/PCL-ing)	Carc Risk Ratio (EPC/PCL-ing)	Non-Carc Risk Ratio (EPC/RSL)	Carc Risk Ratio (EPC/RSL)
	Volatile Organic Compounds											
156-59-2	cis -1,2-Dichloroethene	ND	Max	7.0E-02	7.0E+01	no	2.8E+01	no	--	--	--	--
127-18-4	Tetrachloroethylene (PCE)	ND	Max	5.0E-03	5.0E+00	yes	9.7E+00	yes	--	--	--	--
79-01-6	Trichloroethylene (TCE)	ND	Max	5.0E-03	5.0E+00	yes	4.4E-01	yes	--	--	--	--
75-01-4	Vinyl Chloride	ND	Max	2.0E-03	2.0E+00	yes	1.5E-02	yes	--	--	--	--
	Metals ⁽⁴⁾											
7439-97-6	Mercury	ND	Max	2.0E-03	2.0E+00	no	6.3E-01	no	--	--	--	--
7439-97-6	Mercury - Dissolved	NA	Max	2.0E-03	2.0E+00	no	6.3E-01	no	--	--	--	--
	Lead (not included in cumulative risk estimate)											
7439-92-1	Lead	2.2	F D Max	1.5E-02	1.5E+01	no	1.5E+01 ⁽³⁾	no	0.15	--	0.15	--
7439-92-1	Lead - Dissolved	NA	Max	1.5E-02	1.5E+01	no	1.5E+01 ⁽³⁾	no	--	--	--	--

Cumulative Risk Ratio -- -- -- --

⁽¹⁾ Exposure point concentration is the maximum detected concentration from the ten most recent sampling events

⁽²⁾ Texas Commission on Environmental Quality (TCEQ) Texas Risk Reduction Program (TRRP) Tier 1 Groundwater Protective Concentration Levels (PCLs). Table 3. June 2012 (<http://www.tceq.state.tx.us/remediation/trrp/trrppcls.html>)

⁽³⁾ U.S. Environmental Protection Agency (USEPA) Regional Screening Levels (RSLs) for Tapwater (TR = 1E-6, HQ=1). November 2013. (http://www.epa.gov/reg3hwmd/risk/human/rb-concentration_table/Generic_Tables/docs/master_sl_table_run_NOV2013.pdf)

⁽⁴⁾ If dissolved metals data are available, they are used in the cumulative risk ratio. If only total metals data are available, they are used in the risk ratio

mg/kg - milligrams per Liter

µg/kg - micrograms per Liter

-- Not applicable

NA - Not analyzed

ND - Not detected

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

D - Definitive data

Table 5.40
Risk Ratio Calculations for Potential Exposure to Groundwater by a Resident
On-Post Well CS-11
Camp Stanley Storage Activity, Bexar County, Texas

CAS No.	Compound	Exposure Point Concentration (EPC) ⁽¹⁾ (µg/L)		TCEQ TRRP Tier 1 Groundwater PCL - Residential Ingestion ⁽²⁾ (mg/L)	TCEQ TRRP Tier 1 Groundwater PCL - Residential Ingestion ⁽²⁾ (µg/L)	Carcino-genic?	USEPA Tapwater RSL ⁽³⁾ (µg/L)	Carcino-genic?	Non-Carc Risk Ratio (EPC/PCL-ing)	Carc Risk Ratio (EPC/PCL-ing)	Non-Carc Risk Ratio (EPC/RSL)	Carc Risk Ratio (EPC/RSL)
	Volatile Organic Compounds											
156-59-2	cis -1,2-Dichloroethene	ND	Max	7.0E-02	7.0E+01	no	2.8E+01	no	--	--	--	--
127-18-4	Tetrachloroethylene (PCE)	ND	Max	5.0E-03	5.0E+00	yes	9.7E+00	yes	--	--	--	--
79-01-6	Trichloroethylene (TCE)	ND	Max	5.0E-03	5.0E+00	yes	4.4E-01	yes	--	--	--	--
75-01-4	Vinyl Chloride	ND	Max	2.0E-03	2.0E+00	yes	1.5E-02	yes	--	--	--	--
	Metals ⁽⁴⁾											
7439-97-6	Mercury	0.20	F D Max	2.0E-03	2.0E+00	no	6.3E-01	no	0.10	--	0.32	--
7439-97-6	Mercury - Dissolved	NA	Max	2.0E-03	2.0E+00	no	6.3E-01	no	--	--	--	--
	Lead (not included in cumulative risk estimate)											
7439-92-1	Lead	200	D Max	1.5E-02	1.5E+01	no	1.5E+01 ⁽³⁾	no	13	--	13	--
7439-92-1	Lead - Dissolved	NA	Max	1.5E-02	1.5E+01	no	1.5E+01 ⁽³⁾	no	--	--	--	--
Cumulative Risk Ratio									0.1	--	0.3	--

⁽¹⁾ Exposure point concentration is the maximum detected concentration from the ten most recent sampling events

⁽²⁾ Texas Commission on Environmental Quality (TCEQ) Texas Risk Reduction Program (TRRP) Tier 1 Groundwater Protective Concentration Levels (PCLs). Table 3. June 2012 (<http://www.tceq.state.tx.us/remediation/trrp/trrppcls.html>)

⁽³⁾ U.S. Environmental Protection Agency (USEPA) Regional Screening Levels (RSLs) for Tapwater (TR = 1E-6, HQ=1). November 2013. (http://www.epa.gov/reg3hwmd/risk/human/rb-concentration_table/Generic_Tables/docs/master_sl_table_run_NOV2013.pdf)

⁽⁴⁾ If dissolved metals data are available, they are used in the cumulative risk ratio. If only total metals data are available, they are used in the risk ratio

mg/kg - milligrams per Liter

µg/kg - micrograms per Liter

-- Not applicable

NA - Not analyzed

ND - Not detected

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

D - Definitive data

Table 5.41
Risk Ratio Calculations for Potential Exposure to Groundwater by a Resident
On-Post Well CS-12
Camp Stanley Storage Activity, Bexar County, Texas

CAS No.	Compound	Exposure Point Concentration (EPC) ⁽¹⁾ (µg/L)		TCEQ TRRP Tier 1 Groundwater PCL - Residential Ingestion ⁽²⁾ (mg/L)	TCEQ TRRP Tier 1 Groundwater PCL - Residential Ingestion ⁽²⁾ (µg/L)	Carcino-genic?	USEPA Tapwater RSL ⁽³⁾ (µg/L)	Carcino-genic?	Non-Carc Risk Ratio (EPC/PCL-ing)	Carc Risk Ratio (EPC/PCL-ing)	Non-Carc Risk Ratio (EPC/RSL)	Carc Risk Ratio (EPC/RSL)
	Volatile Organic Compounds											
156-59-2	cis -1,2-Dichloroethene	ND	Max	7.0E-02	7.0E+01	no	2.8E+01	no	--	--	--	--
127-18-4	Tetrachloroethylene (PCE)	ND	Max	5.0E-03	5.0E+00	yes	9.7E+00	yes	--	--	--	--
79-01-6	Trichloroethylene (TCE)	ND	Max	5.0E-03	5.0E+00	yes	4.4E-01	yes	--	--	--	--
75-01-4	Vinyl Chloride	ND	Max	2.0E-03	2.0E+00	yes	1.5E-02	yes	--	--	--	--
	Metals ⁽⁴⁾											
7439-97-6	Mercury	0.2	F D Max	2.0E-03	2.0E+00	no	6.3E-01	no	0.10	--	0.32	--
7439-97-6	Mercury - Dissolved	NA	Max	2.0E-03	2.0E+00	no	6.3E-01	no	--	--	--	--
	Lead (not included in cumulative risk estimate)											
7439-92-1	Lead	5.3	F D Max	1.5E-02	1.5E+01	no	1.5E+01 ⁽³⁾	no	0.35	--	0.35	--
7439-92-1	Lead - Dissolved	NA	Max	1.5E-02	1.5E+01	no	1.5E+01 ⁽³⁾	no	--	--	--	--
Cumulative Risk Ratio									0.1	--	0.3	--

⁽¹⁾ Exposure point concentration is the maximum detected concentration from the ten most recent sampling events

⁽²⁾ Texas Commission on Environmental Quality (TCEQ) Texas Risk Reduction Program (TRRP) Tier 1 Groundwater Protective Concentration Levels (PCLs). Table 3. June 2012 (<http://www.tceq.state.tx.us/remediation/trrp/trrppcls.html>)

⁽³⁾ U.S. Environmental Protection Agency (USEPA) Regional Screening Levels (RSLs) for Tapwater (TR = 1E-6, HQ=1). November 2013. (http://www.epa.gov/reg3hwmd/risk/human/rb-concentration_table/Generic_Tables/docs/master_sl_table_run_NOV2013.pdf)

⁽⁴⁾ If dissolved metals data are available, they are used in the cumulative risk ratio. If only total metals data are available, they are used in the risk ratio

mg/kg - milligrams per Liter

µg/kg - micrograms per Liter

-- Not applicable

NA - Not analyzed

ND - Not detected

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

D - Definitive data

S - Screening data

Table 5.42
Risk Ratio Calculations for Potential Exposure to Groundwater by a Resident
On-Post Well CS-13
Camp Stanley Storage Activity, Bexar County, Texas

CAS No.	Compound	Exposure Point Concentration (EPC) ⁽¹⁾ (µg/L)		TCEQ TRRP Tier 1 Groundwater PCL - Residential Ingestion ⁽²⁾ (mg/L)	TCEQ TRRP Tier 1 Groundwater PCL - Residential Ingestion ⁽²⁾ (µg/L)	Carcino-genic?	USEPA Tapwater RSL ⁽³⁾ (µg/L)	Carcino-genic?	Non-Carc Risk Ratio (EPC/PCL-ing)	Carc Risk Ratio (EPC/PCL-ing)	Non-Carc Risk Ratio (EPC/RSL)	Carc Risk Ratio (EPC/RSL)
	Volatile Organic Compounds											
156-59-2	cis -1,2-Dichloroethene	ND	Max	7.0E-02	7.0E+01	no	2.8E+01	no	--	--	--	--
127-18-4	Tetrachloroethylene (PCE)	ND	Max	5.0E-03	5.0E+00	yes	9.7E+00	yes	--	--	--	--
79-01-6	Trichloroethylene (TCE)	ND	Max	5.0E-03	5.0E+00	yes	4.4E-01	yes	--	--	--	--
75-01-4	Vinyl Chloride	ND	Max	2.0E-03	2.0E+00	yes	1.5E-02	yes	--	--	--	--
	Metals ⁽⁴⁾											
7439-97-6	Mercury	ND	Max	2.0E-03	2.0E+00	no	6.3E-01	no	--	--	--	--
7439-97-6	Mercury - Dissolved	NA	Max	2.0E-03	2.0E+00	no	6.3E-01	no	--	--	--	--
	Lead (not included in cumulative risk estimate)											
7439-92-1	Lead	10	F D Max	1.5E-02	1.5E+01	no	1.5E+01 ⁽³⁾	no	0.67	--	0.67	--
7439-92-1	Lead - Dissolved	NA	Max	1.5E-02	1.5E+01	no	1.5E+01 ⁽³⁾	no	--	--	--	--

Cumulative Risk Ratio

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⁽¹⁾ Exposure point concentration is the maximum detected concentration from the ten most recent sampling events

⁽²⁾ Texas Commission on Environmental Quality (TCEQ) Texas Risk Reduction Program (TRRP) Tier 1 Groundwater Protective Concentration Levels (PCLs). Table 3. June 2012 (<http://www.tceq.state.tx.us/remediation/trrp/trrppcls.html>)

⁽³⁾ U.S. Environmental Protection Agency (USEPA) Regional Screening Levels (RSLs) for Tapwater (TR = 1E-6, HQ=1). November 2013. (http://www.epa.gov/reg3hwmd/risk/human/rb-concentration_table/Generic_Tables/docs/master_sl_table_run_NOV2013.pdf)

⁽⁴⁾ If dissolved metals data are available, they are used in the cumulative risk ratio. If only total metals data are available, they are used in the risk ratio

mg/kg - milligrams per Liter

µg/kg - micrograms per Liter

-- Not applicable

NA - Not analyzed

ND - Not detected

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

D - Definitive data

Table 5.43
Risk Ratio Calculations for Potential Exposure to Groundwater by a Resident
On-Post Well CS-D
Camp Stanley Storage Activity, Bexar County, Texas

CAS No.	Compound	Exposure Point Concentration (EPC) ⁽¹⁾ (µg/L)		TCEQ TRRP Tier 1 Groundwater PCL - Residential Ingestion ⁽²⁾ (mg/L)	TCEQ TRRP Tier 1 Groundwater PCL - Residential Ingestion ⁽²⁾ (µg/L)	Carcino-genic?	USEPA Tapwater RSL ⁽³⁾ (µg/L)	Carcino-genic?	Non-Carc Risk Ratio (EPC/PCL-ing)	Carc Risk Ratio (EPC/PCL-ing)	Non-Carc Risk Ratio (EPC/RSL)	Carc Risk Ratio (EPC/RSL)
	Volatile Organic Compounds											
156-59-2	cis -1,2-Dichloroethene	150	S Max	7.0E-02	7.0E+01	no	2.8E+01	no	2.1	--	5.4	--
127-18-4	Tetrachloroethylene (PCE)	150	S Max	5.0E-03	5.0E+00	yes	9.7E+00	yes	--	3.0E-05	--	1.5E-05
79-01-6	Trichloroethylene (TCE)	180	S Max	5.0E-03	5.0E+00	yes	4.4E-01	yes	--	3.6E-05	--	4.1E-04
75-01-4	Vinyl Chloride	0.30	Max	2.0E-03	2.0E+00	yes	1.5E-02	yes	--	1.5E-07	--	2.0E-05
	Metals ⁽⁴⁾											
7439-97-6	Mercury	0.076	F S Max	2.0E-03	2.0E+00	no	6.3E-01	no	0.038	--	0.12	--
7439-97-6	Mercury - Dissolved	NA	Max	2.0E-03	2.0E+00	no	6.3E-01	no	--	--	--	--
	Lead (not included in cumulative risk estimate)											
7439-92-1	Lead	2.3	S D Max	1.5E-02	1.5E+01	no	1.5E+01 ⁽³⁾	no	0.15	--	0.15	--
7439-92-1	Lead - Dissolved	NA	Max	1.5E-02	1.5E+01	no	1.5E+01 ⁽³⁾	no	--	--	--	--
Cumulative Risk Ratio									2	7E-05	5	4E-04

⁽¹⁾ Exposure point concentration is the maximum detected concentration from the ten most recent sampling events

⁽²⁾ Texas Commission on Environmental Quality (TCEQ) Texas Risk Reduction Program (TRRP) Tier 1 Groundwater Protective Concentration Levels (PCLs). Table 3. June 2012 (<http://www.tceq.state.tx.us/remediation/trrp/trrppcls.html>)

⁽³⁾ U.S. Environmental Protection Agency (USEPA) Regional Screening Levels (RSLs) for Tapwater (TR = 1E-6, HQ=1). November 2013. (http://www.epa.gov/reg3hwmd/risk/human/rb-concentration_table/Generic_Tables/docs/master_sl_table_run_NOV2013.pdf)

⁽⁴⁾ If dissolved metals data are available, they are used in the cumulative risk ratio. If only total metals data are available, they are used in the risk ratio

mg/kg - milligrams per Liter

µg/kg - micrograms per Liter

-- Not applicable

NA - Not analyzed

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

D - Definitive data

S - Screening data

Table 5.44
Risk Ratio Calculations for Potential Exposure to Groundwater by a Resident
On-Post Well CS-I
Camp Stanley Storage Activity, Bexar County, Texas

CAS No.	Compound	Exposure Point Concentration (EPC) ⁽¹⁾ (µg/L)		TCEQ TRRP Tier 1 Groundwater PCL - Residential Ingestion ⁽²⁾ (mg/L)	TCEQ TRRP Tier 1 Groundwater PCL - Residential Ingestion ⁽²⁾ (µg/L)	Carcino-genic?	USEPA Tapwater RSL ⁽³⁾ (µg/L)	Carcino-genic?	Non-Carc Risk Ratio (EPC/PCL-ing)	Carc Risk Ratio (EPC/PCL-ing)	Non-Carc Risk Ratio (EPC/RSL)	Carc Risk Ratio (EPC/RSL)
	Volatile Organic Compounds											
156-59-2	cis-1,2-Dichloroethene	ND	Max	7.0E-02	7.0E+01	no	2.8E+01	no	--	--	--	--
127-18-4	Tetrachloroethylene (PCE)	ND	Max	5.0E-03	5.0E+00	yes	9.7E+00	yes	--	--	--	--
79-01-6	Trichloroethylene (TCE)	ND	Max	5.0E-03	5.0E+00	yes	4.4E-01	yes	--	--	--	--
75-01-4	Vinyl Chloride	ND	Max	2.0E-03	2.0E+00	yes	1.5E-02	yes	--	--	--	--
	Metals ⁽⁴⁾											
7439-97-6	Mercury	ND	Max	2.0E-03	2.0E+00	no	6.3E-01	no	--	--	--	--
7439-97-6	Mercury - Dissolved	NA	Max	2.0E-03	2.0E+00	no	6.3E-01	no	--	--	--	--
	Lead (not included in cumulative risk estimate)											
7439-92-1	Lead	2.8	D Max	1.5E-02	1.5E+01	no	1.5E+01 ⁽³⁾	no	0.19	--	0.19	--
7439-92-1	Lead - Dissolved	NA	Max	1.5E-02	1.5E+01	no	1.5E+01 ⁽³⁾	no	--	--	--	--
Cumulative Risk Ratio									--	--	--	--

⁽¹⁾ Exposure point concentration is the maximum detected concentration from the ten most recent sampling events

⁽²⁾ Texas Commission on Environmental Quality (TCEQ) Texas Risk Reduction Program (TRRP) Tier 1 Groundwater Protective Concentration Levels (PCLs). Table 3. June 2012 (<http://www.tceq.state.tx.us/remediation/trrp/trrppcls.html>)

⁽³⁾ U.S. Environmental Protection Agency (USEPA) Regional Screening Levels (RSLs) for Tapwater (TR = 1E-6, HQ=1). November 2013. (http://www.epa.gov/reg3hwmd/risk/human/rb-concentration_table/Generic_Tables/docs/master_sl_table_run_NOV2013.pdf)

⁽⁴⁾ If dissolved metals data are available, they are used in the cumulative risk ratio. If only total metals data are available, they are used in the risk ratio

mg/kg - milligrams per Liter

µg/kg - micrograms per Liter

-- Not applicable

NA - Not analyzed

ND - Not detected

D - Definitive data

Table 5.45
Risk Ratio Calculations for Potential Exposure to Groundwater by a Resident
On-Post Supply Wells, Combined
Camp Stanley Storage Activity, Bexar County, Texas

CAS No.	Compound	Exposure Point Concentration (EPC) ⁽¹⁾ (µg/L)		TCEQ TRRP Tier 1 Groundwater PCL - Residential Ingestion ⁽²⁾ (mg/L)	TCEQ TRRP Tier 1 Groundwater PCL - Residential Ingestion ⁽²⁾ (µg/L)	Carcino- genic?	USEPA Tapwater RSL ⁽³⁾ (µg/L)	Carcino- genic?	Non-Carc Risk Ratio (EPC/PCL- ing)	Carc Risk Ratio (EPC/PCL- ing)	Non-Carc Risk Ratio (EPC/RSL)	Carc Risk Ratio (EPC/RSL)
	Volatile Organic Compounds											
156-59-2	cis-1,2-Dichloroethene	ND	Ave	7.0E-02	7.0E+01	no	2.8E+01	no	--	--	--	--
127-18-4	Tetrachloroethylene (PCE)	ND	Ave	5.0E-03	5.0E+00	yes	9.7E+00	yes	--	--	--	--
79-01-6	Trichloroethylene (TCE)	0.49	Ave	5.0E-03	5.0E+00	yes	4.4E-01	yes	--	9.8E-08	--	1.1E-06
75-01-4	Vinyl Chloride	ND	Ave	2.0E-03	2.0E+00	yes	1.5E-02	yes	--	--	--	--
	Metals ⁽⁴⁾											
7439-97-6	Mercury	0.20	Ave	2.0E-03	2.0E+00	no	6.3E-01	no	0.10	--	0.32	--
7439-97-6	Mercury - Dissolved	NA	Ave	2.0E-03	2.0E+00	no	6.3E-01	no	--	--	--	--
	Lead (not included in cumulative risk estimate)											
7439-92-1	Lead	12	Ave	1.5E-02	1.5E+01	no	1.5E+01 ⁽³⁾	no	0.80	--	0.80	--
7439-92-1	Lead - Dissolved	NA	Ave	1.5E-02	1.5E+01	no	1.5E+01 ⁽³⁾	no	--	--	--	--

Cumulative Risk Ratio0.11E-070.31E-06

⁽¹⁾ Exposure point concentration is the average of the maximum detected concentration from the ten most recent sampling events from on-post supply wells CS-1, CS-10, and CS-12

⁽²⁾ Texas Commission on Environmental Quality (TCEQ) Texas Risk Reduction Program (TRRP) Tier 1 Groundwater Protective Concentration Levels (PCLs). Table 3.
June 2012 (<http://www.tceq.state.tx.us/remediation/trrp/trrppcls.html>)

⁽³⁾ U.S. Environmental Protection Agency (USEPA) Regional Screening Levels (RSLs) for Tapwater (TR = 1E-6, HQ=1). November 2013.
(http://www.epa.gov/reg3hwmd/risk/human/rb-concentration_table/Generic_Tables/docs/master_sl_table_run_NOV2013.pdf)

⁽⁴⁾ If dissolved metals data are available, they are used in the cumulative risk ratio. If only total metals data are available, they are used in the risk ratio
mg/kg - milligrams per Liter
µg/kg - micrograms per Liter
-- Not applicable
NA - Not analyzed
ND - Not detected

Table 5.46
Risk Ratio Calculations for Potential Exposure to Groundwater by a Resident
On-Post Well CS-MW1-BS
Camp Stanley Storage Activity, Bexar County, Texas

CAS No.	Compound	Exposure Point Concentration (EPC) ⁽¹⁾ (µg/L)	TCEQ TRRP Tier 1 Groundwater PCL - Residential Ingestion ⁽²⁾ (mg/L)	TCEQ TRRP Tier 1 Groundwater PCL - Residential Ingestion ⁽²⁾ (µg/L)	Carcino- genic?	USEPA Tapwater RSL ⁽³⁾ (µg/L)	Carcino- genic?	Non-Carc Risk Ratio (EPC/PCL- ing)	Carc Risk Ratio (EPC/PCL- ing)	Non-Carc Risk Ratio (EPC/RSL)	Carc Risk Ratio (EPC/RSL)
	Volatile Organic Compounds										
156-59-2	<i>cis</i> -1,2-Dichloroethene	1.4 D Max	7.0E-02	7.0E+01	no	2.8E+01	no	0.020	--	0.050	--
127-18-4	Tetrachloroethylene (PCE)	ND Max	5.0E-03	5.0E+00	yes	9.7E+00	yes	--	--	--	--
79-01-6	Trichloroethylene (TCE)	0.16 F D Max	5.0E-03	5.0E+00	yes	4.4E-01	yes	--	3.2E-08	--	3.6E-07
75-01-4	Vinyl Chloride	ND Max	2.0E-03	2.0E+00	yes	1.5E-02	yes	--	--	--	--
	Metals ⁽⁴⁾										
7439-97-6	Mercury	0.071 F D Max	2.0E-03	2.0E+00	no	6.3E-01	no	0.036	--	0.11	--
7439-97-6	Mercury - Dissolved	NA Max	2.0E-03	2.0E+00	no	6.3E-01	no	--	--	--	--
	Lead (not included in cumulative risk estimate)										
7439-92-1	Lead	0.33 F D Max	1.5E-02	1.5E+01	no	1.5E+01 ⁽³⁾	no	0.022	--	0.022	--
7439-92-1	Lead - Dissolved	NA Max	1.5E-02	1.5E+01	no	1.5E+01 ⁽³⁾	no	--	--	--	--
Cumulative Risk Ratio								0.06	3E-08	0.2	4E-07

⁽¹⁾ Exposure point concentration is the maximum detected concentration from the ten most recent sampling events

⁽²⁾ Texas Commission on Environmental Quality (TCEQ) Texas Risk Reduction Program (TRRP) Tier 1 Groundwater Protective Concentration Levels (PCLs). Table 3. June 2012 (<http://www.tceq.state.tx.us/remediation/trrp/trrppcls.html>)

⁽³⁾ U.S. Environmental Protection Agency (USEPA) Regional Screening Levels (RSLs) for Tapwater (TR = 1E-6, HQ=1). November 2013. (http://www.epa.gov/reg3hwmd/risk/human/rb-concentration_table/Generic_Tables/docs/master_sl_table_run_NOV2013.pdf)

⁽⁴⁾ If dissolved metals data are available, they are used in the cumulative risk ratio. If only total metals data are available, they are used in the risk ratio

mg/kg - milligrams per Liter

µg/kg - micrograms per Liter

-- Not applicable

NA - Not analyzed

ND - Not detected

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

D - Definitive data

Table 5.47
Risk Ratio Calculations for Potential Exposure to Groundwater by a Resident
On-Post Well CS-MW1-CC
Camp Stanley Storage Activity, Bexar County, Texas

CAS No.	Compound	Exposure Point Concentration (EPC) ⁽¹⁾ (µg/L)		TCEQ TRRP Tier 1 Groundwater PCL - Residential Ingestion ⁽²⁾ (mg/L)	TCEQ TRRP Tier 1 Groundwater PCL - Residential Ingestion ⁽²⁾ (µg/L)	Carcino-genic?	USEPA Tapwater RSL ⁽³⁾ (µg/L)	Carcino-genic?	Non-Carc Risk Ratio (EPC/PCL-ing)	Carc Risk Ratio (EPC/PCL-ing)	Non-Carc Risk Ratio (EPC/RSL)	Carc Risk Ratio (EPC/RSL)
	Volatile Organic Compounds											
156-59-2	cis -1,2-Dichloroethene	ND	Max	7.0E-02	7.0E+01	no	2.8E+01	no	--	--	--	--
127-18-4	Tetrachloroethylene (PCE)	ND	Max	5.0E-03	5.0E+00	yes	9.7E+00	yes	--	--	--	--
79-01-6	Trichloroethylene (TCE)	ND	Max	5.0E-03	5.0E+00	yes	4.4E-01	yes	--	--	--	--
75-01-4	Vinyl Chloride	ND	Max	2.0E-03	2.0E+00	yes	1.5E-02	yes	--	--	--	--
	Metals ⁽⁴⁾											
7439-97-6	Mercury	0.054	F D Max	2.0E-03	2.0E+00	no	6.3E-01	no	0.027	--	0.086	--
7439-97-6	Mercury - Dissolved	NA	Max	2.0E-03	2.0E+00	no	6.3E-01	no	--	--	--	--
	Lead (not included in cumulative risk estimate)											
7439-92-1	Lead	0.32	F D Max	1.5E-02	1.5E+01	no	1.5E+01 ⁽³⁾	no	0.021	--	0.021	--
7439-92-1	Lead - Dissolved	NA	Max	1.5E-02	1.5E+01	no	1.5E+01 ⁽³⁾	no	--	--	--	--
Cumulative Risk Ratio									0.03	--	0.09	--

⁽¹⁾ Exposure point concentration is the maximum detected concentration from the ten most recent sampling events

⁽²⁾ Texas Commission on Environmental Quality (TCEQ) Texas Risk Reduction Program (TRRP) Tier 1 Groundwater Protective Concentration Levels (PCLs). Table 3. June 2012 (<http://www.tceq.state.tx.us/remediation/trrp/trrppcls.html>)

⁽³⁾ U.S. Environmental Protection Agency (USEPA) Regional Screening Levels (RSLs) for Tapwater (TR = 1E-6, HQ=1). November 2013. (http://www.epa.gov/reg3hwmd/risk/human/rb-concentration_table/Generic_Tables/docs/master_sl_table_run_NOV2013.pdf)

⁽⁴⁾ If dissolved metals data are available, they are used in the cumulative risk ratio. If only total metals data are available, they are used in the risk ratio

mg/kg - milligrams per Liter

µg/kg - micrograms per Liter

-- Not applicable

NA - Not analyzed

ND - Not detected

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

D - Definitive data

Table 5.48
Risk Ratio Calculations for Potential Exposure to Groundwater by a Resident
On-Post Well CS-MW1-LGR
Camp Stanley Storage Activity, Bexar County, Texas

CAS No.	Compound	Exposure Point Concentration (EPC) ⁽¹⁾ (µg/L)		TCEQ TRRP Tier 1 Groundwater PCL - Residential Ingestion ⁽²⁾ (mg/L)	TCEQ TRRP Tier 1 Groundwater PCL - Residential Ingestion ⁽²⁾ (µg/L)	Carcino- genic?	USEPA Tapwater RSL ⁽³⁾ (µg/L)	Carcino- genic?	Non-Carc Risk Ratio (EPC/PCL- ing)	Carc Risk Ratio (EPC/PCL- ing)	Non-Carc Risk Ratio (EPC/RSL)	Carc Risk Ratio (EPC/RSL)
	Volatile Organic Compounds											
156-59-2	cis -1,2-Dichloroethene	20	S Max	7.0E-02	7.0E+01	no	2.8E+01	no	0.29	--	0.71	--
127-18-4	Tetrachloroethylene (PCE)	15.00	S Max	5.0E-03	5.0E+00	yes	9.7E+00	yes	--	3.0E-06	--	1.5E-06
79-01-6	Trichloroethylene (TCE)	33.00	S Max	5.0E-03	5.0E+00	yes	4.4E-01	yes	--	6.6E-06	--	7.5E-05
75-01-4	Vinyl Chloride	ND	Max	2.0E-03	2.0E+00	yes	1.5E-02	yes	--	--	--	--
	Metals ⁽⁴⁾											
7439-97-6	Mercury	ND	Max	2.0E-03	2.0E+00	no	6.3E-01	no	--	--	--	--
7439-97-6	Mercury - Dissolved	NA	Max	2.0E-03	2.0E+00	no	6.3E-01	no	--	--	--	--
	Lead (not included in cumulative risk estimate)											
7439-92-1	Lead	8.6	F D Max	1.5E-02	1.5E+01	no	1.5E+01 ⁽³⁾	no	0.57	--	0.57	--
7439-92-1	Lead - Dissolved	NA	Max	1.5E-02	1.5E+01	no	1.5E+01 ⁽³⁾	no	--	--	--	--
Cumulative Risk Ratio									0.3	1E-05	0.7	8E-05

⁽¹⁾ Exposure point concentration is the maximum detected concentration from the ten most recent sampling events

⁽²⁾ Texas Commission on Environmental Quality (TCEQ) Texas Risk Reduction Program (TRRP) Tier 1 Groundwater Protective Concentration Levels (PCLs). Table 3. June 2012 (<http://www.tceq.state.tx.us/remediation/trrp/trrppcls.html>)

⁽³⁾ U.S. Environmental Protection Agency (USEPA) Regional Screening Levels (RSLs) for Tapwater (TR = 1E-6, HQ=1). November 2013. (http://www.epa.gov/reg3hwmd/risk/human/rb-concentration_table/Generic_Tables/docs/master_sl_table_run_NOV2013.pdf)

⁽⁴⁾ If dissolved metals data are available, they are used in the cumulative risk ratio. If only total metals data are available, they are used in the risk ratio

mg/kg - milligrams per Liter

µg/kg - micrograms per Liter

-- Not applicable

NA - Not analyzed

ND - Not detected

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

D - Definitive data

S - Screening data

Table 5.49
Risk Ratio Calculations for Potential Exposure to Groundwater by a Resident
On-Post Well CS-MW2-CC
Camp Stanley Storage Activity, Bexar County, Texas

CAS No.	Compound	Exposure Point Concentration (EPC) ⁽¹⁾ (µg/L)		TCEQ TRRP Tier 1 Groundwater PCL - Residential Ingestion ⁽²⁾ (mg/L)	TCEQ TRRP Tier 1 Groundwater PCL - Residential Ingestion ⁽²⁾ (µg/L)	Carcino-genic?	USEPA Tapwater RSL ⁽³⁾ (µg/L)	Carcino-genic?	Non-Carc Risk Ratio (EPC/PCL-ing)	Carc Risk Ratio (EPC/PCL-ing)	Non-Carc Risk Ratio (EPC/RSL)	Carc Risk Ratio (EPC/RSL)
	Volatile Organic Compounds											
156-59-2	cis-1,2-Dichloroethene	ND	Max	7.0E-02	7.0E+01	no	2.8E+01	no	--	--	--	--
127-18-4	Tetrachloroethylene (PCE)	ND	Max	5.0E-03	5.0E+00	yes	9.7E+00	yes	--	--	--	--
79-01-6	Trichloroethylene (TCE)	ND	Max	5.0E-03	5.0E+00	yes	4.4E-01	yes	--	--	--	--
75-01-4	Vinyl Chloride	ND	Max	2.0E-03	2.0E+00	yes	1.5E-02	yes	--	--	--	--
	Metals ⁽⁴⁾											
7439-97-6	Mercury	ND	Max	2.0E-03	2.0E+00	no	6.3E-01	no	--	--	--	--
7439-97-6	Mercury - Dissolved	NA	Max	2.0E-03	2.0E+00	no	6.3E-01	no	--	--	--	--
	Lead (not included in cumulative risk estimate)											
7439-92-1	Lead	2.5	D Max	1.5E-02	1.5E+01	no	1.5E+01 ⁽³⁾	no	0.17	--	0.17	--
7439-92-1	Lead - Dissolved	NA	Max	1.5E-02	1.5E+01	no	1.5E+01 ⁽³⁾	no	--	--	--	--
Cumulative Risk Ratio									--	--	--	--

⁽¹⁾ Exposure point concentration is the maximum detected concentration from the ten most recent sampling events

⁽²⁾ Texas Commission on Environmental Quality (TCEQ) Texas Risk Reduction Program (TRRP) Tier 1 Groundwater Protective Concentration Levels (PCLs). Table 3. June 2012 (<http://www.tceq.state.tx.us/remediation/trrp/trrppcls.html>)

⁽³⁾ U.S. Environmental Protection Agency (USEPA) Regional Screening Levels (RSLs) for Tapwater (TR = 1E-6, HQ=1). November 2013. (http://www.epa.gov/reg3hwmd/risk/human/rb-concentration_table/Generic_Tables/docs/master_sl_table_run_NOV2013.pdf)

⁽⁴⁾ If dissolved metals data are available, they are used in the cumulative risk ratio. If only total metals data are available, they are used in the risk ratio

mg/kg - milligrams per Liter

µg/kg - micrograms per Liter

-- Not applicable

NA - Not analyzed

ND - Not detected

D - Definitive data

Table 5.50
Risk Ratio Calculations for Potential Exposure to Groundwater by a Resident
On-Post Well CS-MW2-LGR
Camp Stanley Storage Activity, Bexar County, Texas

CAS No.	Compound	Exposure Point Concentration (EPC) ⁽¹⁾ (µg/L)	TCEQ TRRP Tier 1 Groundwater PCL - Residential Ingestion ⁽²⁾ (mg/L)	TCEQ TRRP Tier 1 Groundwater PCL - Residential Ingestion ⁽²⁾ (µg/L)	Carcino- genic?	USEPA Tapwater RSL ⁽³⁾ (µg/L)	Carcino- genic?	Non-Carc Risk Ratio (EPC/PCL- ing)	Carc Risk Ratio (EPC/PCL- ing)	Non-Carc Risk Ratio (EPC/RSL)	Carc Risk Ratio (EPC/RSL)
	Volatile Organic Compounds										
156-59-2	cis-1,2-Dichloroethene	1.7 D Max	7.0E-02	7.0E+01	no	2.8E+01	no	0.024	--	0.061	--
127-18-4	Tetrachloroethylene (PCE)	0.16 F D Max	5.0E-03	5.0E+00	yes	9.7E+00	yes	--	3.2E-08	--	1.6E-08
79-01-6	Trichloroethylene (TCE)	0.20 F D Max	5.0E-03	5.0E+00	yes	4.4E-01	yes	--	4.0E-08	--	4.5E-07
75-01-4	Vinyl Chloride	ND Max	2.0E-03	2.0E+00	yes	1.5E-02	yes	--	--	--	--
	Metals ⁽⁴⁾										
7439-97-6	Mercury	0.20 F D Max	2.0E-03	2.0E+00	no	6.3E-01	no	0.10	--	0.32	--
7439-97-6	Mercury - Dissolved	NA Max	2.0E-03	2.0E+00	no	6.3E-01	no	--	--	--	--
	Lead (not included in cumulative risk estimate)										
7439-92-1	Lead	11 F D Max	1.5E-02	1.5E+01	no	1.5E+01 ⁽³⁾	no	0.73	--	0.73	--
7439-92-1	Lead - Dissolved	NA Max	1.5E-02	1.5E+01	no	1.5E+01 ⁽³⁾	no	--	--	--	--

Cumulative Risk Ratio0.17E-080.45E-07

⁽¹⁾ Exposure point concentration is the maximum detected concentration from the ten most recent sampling events

⁽²⁾ Texas Commission on Environmental Quality (TCEQ) Texas Risk Reduction Program (TRRP) Tier 1 Groundwater Protective Concentration Levels (PCLs). Table 3. June 2012 (<http://www.tceq.state.tx.us/remediation/trrp/trrppcls.html>)

⁽³⁾ U.S. Environmental Protection Agency (USEPA) Regional Screening Levels (RSLs) for Tapwater (TR = 1E-6, HQ=1). November 2013. (http://www.epa.gov/reg3hwmd/risk/human/rb-concentration_table/Generic_Tables/docs/master_sl_table_run_NOV2013.pdf)

⁽⁴⁾ If dissolved metals data are available, they are used in the cumulative risk ratio. If only total metals data are available, they are used in the risk ratio

mg/kg - milligrams per Liter

µg/kg - micrograms per Liter

-- Not applicable

NA - Not analyzed

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

D - Definitive data

Table 5.51
Risk Ratio Calculations for Potential Exposure to Groundwater by a Resident
On-Post Well CS-MW4-LGR
Camp Stanley Storage Activity, Bexar County, Texas

CAS No.	Compound	Exposure Point Concentration (EPC) ⁽¹⁾ (µg/L)	TCEQ TRRP Tier 1 Groundwater PCL - Residential Ingestion ⁽²⁾ (mg/L)	TCEQ TRRP Tier 1 Groundwater PCL - Residential Ingestion ⁽²⁾ (µg/L)	Carcino- genic?	USEPA Tapwater RSL ⁽³⁾ (µg/L)	Carcino- genic?	Non-Carc Risk Ratio (EPC/PCL- ing)	Carc Risk Ratio (EPC/PCL- ing)	Non-Carc Risk Ratio (EPC/RSL)	Carc Risk Ratio (EPC/RSL)
	Volatile Organic Compounds										
156-59-2	cis-1,2-Dichloroethene	0.14 F D Max	7.0E-02	7.0E+01	no	2.8E+01	no	0.0020	--	0.0050	--
127-18-4	Tetrachloroethylene (PCE)	0.37 F D Max	5.0E-03	5.0E+00	yes	9.7E+00	yes	--	7.4E-08	--	3.8E-08
79-01-6	Trichloroethylene (TCE)	0.17 F D Max	5.0E-03	5.0E+00	yes	4.4E-01	yes	--	3.4E-08	--	3.9E-07
75-01-4	Vinyl Chloride	ND Max	2.0E-03	2.0E+00	yes	1.5E-02	yes	--	--	--	--
	Metals ⁽⁴⁾										
7439-97-6	Mercury	ND Max	2.0E-03	2.0E+00	no	6.3E-01	no	--	--	--	--
7439-97-6	Mercury - Dissolved	NA Max	2.0E-03	2.0E+00	no	6.3E-01	no	--	--	--	--
	Lead (not included in cumulative risk estimate)										
7439-92-1	Lead	1.0 F D Max	1.5E-02	1.5E+01	no	1.5E+01 ⁽³⁾	no	0.067	--	0.067	--
7439-92-1	Lead - Dissolved	NA Max	1.5E-02	1.5E+01	no	1.5E+01 ⁽³⁾	no	--	--	--	--
Cumulative Risk Ratio								0.002	1E-07	0.005	4E-07

⁽¹⁾ Exposure point concentration is the maximum detected concentration from the ten most recent sampling events

⁽²⁾ Texas Commission on Environmental Quality (TCEQ) Texas Risk Reduction Program (TRRP) Tier 1 Groundwater Protective Concentration Levels (PCLs). Table 3. June 2012 (<http://www.tceq.state.tx.us/remediation/trrp/trrppcls.html>)

⁽³⁾ U.S. Environmental Protection Agency (USEPA) Regional Screening Levels (RSLs) for Tapwater (TR = 1E-6, HQ=1). November 2013. (http://www.epa.gov/reg3hwmd/risk/human/rb-concentration_table/Generic_Tables/docs/master_sl_table_run_NOV2013.pdf)

⁽⁴⁾ If dissolved metals data are available, they are used in the cumulative risk ratio. If only total metals data are available, they are used in the risk ratio

mg/kg - milligrams per Liter

µg/kg - micrograms per Liter

-- Not applicable

NA - Not analyzed

ND - Not detected

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

D - Definitive data

Table 5.52
Risk Ratio Calculations for Potential Exposure to Groundwater by a Resident
On-Post Well CS-MW5-LGR
Camp Stanley Storage Activity, Bexar County, Texas

CAS No.	Compound	Exposure Point Concentration (EPC) ⁽¹⁾ (µg/L)		TCEQ TRRP Tier 1 Groundwater PCL - Residential Ingestion ⁽²⁾ (mg/L)	TCEQ TRRP Tier 1 Groundwater PCL - Residential Ingestion ⁽²⁾ (µg/L)	Carcino-genic?	USEPA Tapwater RSL ⁽³⁾ (µg/L)	Carcino-genic?	Non-Carc Risk Ratio (EPC/PCL-ing)	Carc Risk Ratio (EPC/PCL-ing)	Non-Carc Risk Ratio (EPC/RSL)	Carc Risk Ratio (EPC/RSL)
	Volatile Organic Compounds											
156-59-2	cis -1,2-Dichloroethene	2.9	D Max	7.0E-02	7.0E+01	no	2.8E+01	no	0.041	--	0.10	--
127-18-4	Tetrachloroethylene (PCE)	1.9	D Max	5.0E-03	5.0E+00	yes	9.7E+00	yes	--	3.8E-07	--	2.0E-07
79-01-6	Trichloroethylene (TCE)	3.6	D Max	5.0E-03	5.0E+00	yes	4.4E-01	yes	--	7.2E-07	--	8.2E-06
75-01-4	Vinyl Chloride	ND	Max	2.0E-03	2.0E+00	yes	1.5E-02	yes	--	--	--	--
	Metals ⁽⁴⁾											
7439-97-6	Mercury	ND	Max	2.0E-03	2.0E+00	no	6.3E-01	no	--	--	--	--
7439-97-6	Mercury - Dissolved	NA	Max	2.0E-03	2.0E+00	no	6.3E-01	no	--	--	--	--
	Lead (not included in cumulative risk estimate)											
7439-92-1	Lead	2.0	F D Max	1.5E-02	1.5E+01	no	1.5E+01 ⁽³⁾	no	0.13	--	0.13	--
7439-92-1	Lead - Dissolved	NA	Max	1.5E-02	1.5E+01	no	1.5E+01 ⁽³⁾	no	--	--	--	--
Cumulative Risk Ratio									0.04	1E-06	0.1	8E-06

⁽¹⁾ Exposure point concentration is the maximum detected concentration from the ten most recent sampling events

⁽²⁾ Texas Commission on Environmental Quality (TCEQ) Texas Risk Reduction Program (TRRP) Tier 1 Groundwater Protective Concentration Levels (PCLs). Table 3. June 2012 (<http://www.tceq.state.tx.us/remediation/trrp/trrppcls.html>)

⁽³⁾ U.S. Environmental Protection Agency (USEPA) Regional Screening Levels (RSLs) for Tapwater (TR = 1E-6, HQ=1). November 2013. (http://www.epa.gov/reg3hwmd/risk/human/rb-concentration_table/Generic_Tables/docs/master_sl_table_run_NOV2013.pdf)

⁽⁴⁾ If dissolved metals data are available, they are used in the cumulative risk ratio. If only total metals data are available, they are used in the risk ratio

mg/kg - milligrams per Liter

µg/kg - micrograms per Liter

-- Not applicable

NA - Not analyzed

ND - Not detected

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

D - Definitive data

Table 5.53
Risk Ratio Calculations for Potential Exposure to Groundwater by a Resident
On-Post Well CS-MW6-BS
Camp Stanley Storage Activity, Bexar County, Texas

CAS No.	Compound	Exposure Point Concentration (EPC) ⁽¹⁾ (µg/L)		TCEQ TRRP Tier 1 Groundwater PCL - Residential Ingestion ⁽²⁾ (mg/L)	TCEQ TRRP Tier 1 Groundwater PCL - Residential Ingestion ⁽²⁾ (µg/L)	Carcino-genic?	USEPA Tapwater RSL ⁽³⁾ (µg/L)	Carcino-genic?	Non-Carc Risk Ratio (EPC/PCL-ing)	Carc Risk Ratio (EPC/PCL-ing)	Non-Carc Risk Ratio (EPC/RSL)	Carc Risk Ratio (EPC/RSL)
	Volatile Organic Compounds											
156-59-2	cis -1,2-Dichloroethene	ND	Max	7.0E-02	7.0E+01	no	2.8E+01	no	--	--	--	--
127-18-4	Tetrachloroethylene (PCE)	ND	Max	5.0E-03	5.0E+00	yes	9.7E+00	yes	--	--	--	--
79-01-6	Trichloroethylene (TCE)	ND	Max	5.0E-03	5.0E+00	yes	4.4E-01	yes	--	--	--	--
75-01-4	Vinyl Chloride	ND	Max	2.0E-03	2.0E+00	yes	1.5E-02	yes	--	--	--	--
	Metals ⁽⁴⁾											
7439-97-6	Mercury	ND	Max	2.0E-03	2.0E+00	no	6.3E-01	no	--	--	--	--
7439-97-6	Mercury - Dissolved	NA	Max	2.0E-03	2.0E+00	no	6.3E-01	no	--	--	--	--
	Lead (not included in cumulative risk estimate)											
7439-92-1	Lead	0.11	F D Max	1.5E-02	1.5E+01	no	1.5E+01 ⁽³⁾	no	0.0073	--	0.0073	--
7439-92-1	Lead - Dissolved	NA	Max	1.5E-02	1.5E+01	no	1.5E+01 ⁽³⁾	no	--	--	--	--

Cumulative Risk Ratio

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⁽¹⁾ Exposure point concentration is the maximum detected concentration from the ten most recent sampling events

⁽²⁾ Texas Commission on Environmental Quality (TCEQ) Texas Risk Reduction Program (TRRP) Tier 1 Groundwater Protective Concentration Levels (PCLs). Table 3. June 2012 (<http://www.tceq.state.tx.us/remediation/trrp/trrppcls.html>)

⁽³⁾ U.S. Environmental Protection Agency (USEPA) Regional Screening Levels (RSLs) for Tapwater (TR = 1E-6, HQ=1). November 2013. (http://www.epa.gov/reg3hwmd/risk/human/rb-concentration_table/Generic_Tables/docs/master_sl_table_run_NOV2013.pdf)

⁽⁴⁾ If dissolved metals data are available, they are used in the cumulative risk ratio. If only total metals data are available, they are used in the risk ratio

mg/kg - milligrams per Liter

µg/kg - micrograms per Liter

-- Not applicable

NA - Not analyzed

ND - Not detected

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

D - Definitive data

Table 5.54
Risk Ratio Calculations for Potential Exposure to Groundwater by a Resident
On-Post Well CS-MW6-CC
Camp Stanley Storage Activity, Bexar County, Texas

CAS No.	Compound	Exposure Point Concentration (EPC) ⁽¹⁾ (µg/L)		TCEQ TRRP Tier 1 Groundwater PCL - Residential Ingestion ⁽²⁾ (mg/L)	TCEQ TRRP Tier 1 Groundwater PCL - Residential Ingestion ⁽²⁾ (µg/L)	Carcino-genic?	USEPA Tapwater RSL ⁽³⁾ (µg/L)	Carcino-genic?	Non-Carc Risk Ratio (EPC/PCL-ing)	Carc Risk Ratio (EPC/PCL-ing)	Non-Carc Risk Ratio (EPC/RSL)	Carc Risk Ratio (EPC/RSL)
	Volatile Organic Compounds											
156-59-2	cis -1,2-Dichloroethene	ND	Max	7.0E-02	7.0E+01	no	2.8E+01	no	--	--	--	--
127-18-4	Tetrachloroethylene (PCE)	ND	Max	5.0E-03	5.0E+00	yes	9.7E+00	yes	--	--	--	--
79-01-6	Trichloroethylene (TCE)	ND	Max	5.0E-03	5.0E+00	yes	4.4E-01	yes	--	--	--	--
75-01-4	Vinyl Chloride	ND	Max	2.0E-03	2.0E+00	yes	1.5E-02	yes	--	--	--	--
	Metals ⁽⁴⁾											
7439-97-6	Mercury	ND	Max	2.0E-03	2.0E+00	no	6.3E-01	no	--	--	--	--
7439-97-6	Mercury - Dissolved	NA	Max	2.0E-03	2.0E+00	no	6.3E-01	no	--	--	--	--
	Lead (not included in cumulative risk estimate)											
7439-92-1	Lead	0.40	F D Max	1.5E-02	1.5E+01	no	1.5E+01 ⁽³⁾	no	0.027	--	0.027	--
7439-92-1	Lead - Dissolved	NA	Max	1.5E-02	1.5E+01	no	1.5E+01 ⁽³⁾	no	--	--	--	--

Cumulative Risk Ratio -- -- -- --

⁽¹⁾ Exposure point concentration is the maximum detected concentration from the ten most recent sampling events

⁽²⁾ Texas Commission on Environmental Quality (TCEQ) Texas Risk Reduction Program (TRRP) Tier 1 Groundwater Protective Concentration Levels (PCLs). Table 3. June 2012 (<http://www.tceq.state.tx.us/remediation/trrp/trrppcls.html>)

⁽³⁾ U.S. Environmental Protection Agency (USEPA) Regional Screening Levels (RSLs) for Tapwater (TR = 1E-6, HQ=1). November 2013. (http://www.epa.gov/reg3hwmd/risk/human/rb-concentration_table/Generic_Tables/docs/master_sl_table_run_NOV2013.pdf)

⁽⁴⁾ If dissolved metals data are available, they are used in the cumulative risk ratio. If only total metals data are available, they are used in the risk ratio

mg/kg - milligrams per Liter

µg/kg - micrograms per Liter

-- Not applicable

NA - Not analyzed

ND - Not detected

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

D - Definitive data

Table 5.55
Risk Ratio Calculations for Potential Exposure to Groundwater by a Resident
On-Post Well CS-MW6-LGR
Camp Stanley Storage Activity, Bexar County, Texas

CAS No.	Compound	Exposure Point Concentration (EPC) ⁽¹⁾ (µg/L)	TCEQ TRRP Tier 1 Groundwater PCL - Residential Ingestion ⁽²⁾ (mg/L)	TCEQ TRRP Tier 1 Groundwater PCL - Residential Ingestion ⁽²⁾ (µg/L)	Carcino- genic?	USEPA Tapwater RSL ⁽³⁾ (µg/L)	Carcino- genic?	Non-Carc Risk Ratio (EPC/PCL- ing)	Carc Risk Ratio (EPC/PCL- ing)	Non-Carc Risk Ratio (EPC/RSL)	Carc Risk Ratio (EPC/RSL)
	Volatile Organic Compounds										
156-59-2	cis-1,2-Dichloroethene	ND Max	7.0E-02	7.0E+01	no	2.8E+01	no	--	--	--	--
127-18-4	Tetrachloroethylene (PCE)	0.22 F S Max	5.0E-03	5.0E+00	yes	9.7E+00	yes	--	4.4E-08	--	2.3E-08
79-01-6	Trichloroethylene (TCE)	ND Max	5.0E-03	5.0E+00	yes	4.4E-01	yes	--	--	--	--
75-01-4	Vinyl Chloride	ND Max	2.0E-03	2.0E+00	yes	1.5E-02	yes	--	--	--	--
	Metals ⁽⁴⁾										
7439-97-6	Mercury	ND Max	2.0E-03	2.0E+00	no	6.3E-01	no	--	--	--	--
7439-97-6	Mercury - Dissolved	ND Max	2.0E-03	2.0E+00	no	6.3E-01	no	--	--	--	--
	Lead (not included in cumulative risk estimate)										
7439-92-1	Lead	ND Max	1.5E-02	1.5E+01	no	1.5E+01 ⁽³⁾	no	--	--	--	--
7439-92-1	Lead - Dissolved	2.9 F S Max	1.5E-02	1.5E+01	no	1.5E+01 ⁽³⁾	no	0.19	--	0.19	--
Cumulative Risk Ratio								--	4E-08	--	2E-08

⁽¹⁾ Exposure point concentration is the maximum detected concentration from the ten most recent sampling events

⁽²⁾ Texas Commission on Environmental Quality (TCEQ) Texas Risk Reduction Program (TRRP) Tier 1 Groundwater Protective Concentration Levels (PCLs). Table 3. June 2012 (<http://www.tceq.state.tx.us/remediation/trrp/trrppcls.html>)

⁽³⁾ U.S. Environmental Protection Agency (USEPA) Regional Screening Levels (RSLs) for Tapwater (TR = 1E-6, HQ=1). November 2013. (http://www.epa.gov/reg3hwmd/risk/human/rb-concentration_table/Generic_Tables/docs/master_sl_table_run_NOV2013.pdf)

⁽⁴⁾ If dissolved metals data are available, they are used in the cumulative risk ratio. If only total metals data are available, they are used in the risk ratio

mg/kg - milligrams per Liter

µg/kg - micrograms per Liter

-- Not applicable

ND - Not detected

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

S - Screening data

Table 5.56
Risk Ratio Calculations for Potential Exposure to Groundwater by a Resident
On-Post Well CS-MW7-CC
Camp Stanley Storage Activity, Bexar County, Texas

CAS No.	Compound	Exposure Point Concentration (EPC) ⁽¹⁾ (µg/L)		TCEQ TRRP Tier 1 Groundwater PCL - Residential Ingestion ⁽²⁾ (mg/L)	TCEQ TRRP Tier 1 Groundwater PCL - Residential Ingestion ⁽²⁾ (µg/L)	Carcino-genic?	USEPA Tapwater RSL ⁽³⁾ (µg/L)	Carcino-genic?	Non-Carc Risk Ratio (EPC/PCL-ing)	Carc Risk Ratio (EPC/PCL-ing)	Non-Carc Risk Ratio (EPC/RSL)	Carc Risk Ratio (EPC/RSL)
	Volatile Organic Compounds											
156-59-2	cis -1,2-Dichloroethene	ND	Max	7.0E-02	7.0E+01	no	2.8E+01	no	--	--	--	--
127-18-4	Tetrachloroethylene (PCE)	ND	Max	5.0E-03	5.0E+00	yes	9.7E+00	yes	--	--	--	--
79-01-6	Trichloroethylene (TCE)	ND	Max	5.0E-03	5.0E+00	yes	4.4E-01	yes	--	--	--	--
75-01-4	Vinyl Chloride	ND	Max	2.0E-03	2.0E+00	yes	1.5E-02	yes	--	--	--	--
	Metals ⁽⁴⁾											
7439-97-6	Mercury	0.052	F D Max	2.0E-03	2.0E+00	no	6.3E-01	no	0.026	--	0.083	--
7439-97-6	Mercury - Dissolved	NA	Max	2.0E-03	2.0E+00	no	6.3E-01	no	--	--	--	--
	Lead (not included in cumulative risk estimate)											
7439-92-1	Lead	0.72	F D Max	1.5E-02	1.5E+01	no	1.5E+01 ⁽³⁾	no	0.048	--	0.048	--
7439-92-1	Lead - Dissolved	NA	Max	1.5E-02	1.5E+01	no	1.5E+01 ⁽³⁾	no	--	--	--	--
Cumulative Risk Ratio									0.03	--	0.08	--

⁽¹⁾ Exposure point concentration is the maximum detected concentration from the ten most recent sampling events

⁽²⁾ Texas Commission on Environmental Quality (TCEQ) Texas Risk Reduction Program (TRRP) Tier 1 Groundwater Protective Concentration Levels (PCLs). Table 3. June 2012 (<http://www.tceq.state.tx.us/remediation/trrp/trrppcls.html>)

⁽³⁾ U.S. Environmental Protection Agency (USEPA) Regional Screening Levels (RSLs) for Tapwater (TR = 1E-6, HQ=1). November 2013. (http://www.epa.gov/reg3hwmd/risk/human/rb-concentration_table/Generic_Tables/docs/master_sl_table_run_NOV2013.pdf)

⁽⁴⁾ If dissolved metals data are available, they are used in the cumulative risk ratio. If only total metals data are available, they are used in the risk ratio

mg/kg - milligrams per Liter

µg/kg - micrograms per Liter

-- Not applicable

NA - Not analyzed

ND - Not detected

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

D - Definitive data

Table 5.57
Risk Ratio Calculations for Potential Exposure to Groundwater by a Resident
On-Post Well CS-MW7-LGR
Camp Stanley Storage Activity, Bexar County, Texas

CAS No.	Compound	Exposure Point Concentration (EPC) ⁽¹⁾ (µg/L)	TCEQ TRRP Tier 1 Groundwater PCL - Residential Ingestion ⁽²⁾ (mg/L)	TCEQ TRRP Tier 1 Groundwater PCL - Residential Ingestion ⁽²⁾ (µg/L)	Carcino- genic?	USEPA Tapwater RSL ⁽³⁾ (µg/L)	Carcino- genic?	Non-Carc Risk Ratio (EPC/PCL- ing)	Carc Risk Ratio (EPC/PCL- ing)	Non-Carc Risk Ratio (EPC/RSL)	Carc Risk Ratio (EPC/RSL)
	Volatile Organic Compounds										
156-59-2	cis-1,2-Dichloroethene	ND Max	7.0E-02	7.0E+01	no	2.8E+01	no	--	--	--	--
127-18-4	Tetrachloroethylene (PCE)	0.89 F S Max	5.0E-03	5.0E+00	yes	9.7E+00	yes	--	1.8E-07	--	9.2E-08
79-01-6	Trichloroethylene (TCE)	ND Max	5.0E-03	5.0E+00	yes	4.4E-01	yes	--	--	--	--
75-01-4	Vinyl Chloride	ND Max	2.0E-03	2.0E+00	yes	1.5E-02	yes	--	--	--	--
	Metals ⁽⁴⁾										
7439-97-6	Mercury	0.20 F D Max	2.0E-03	2.0E+00	no	6.3E-01	no	0.10	--	0.32	--
7439-97-6	Mercury - Dissolved	ND Max	2.0E-03	2.0E+00	no	6.3E-01	no	--	--	--	--
	Lead (not included in cumulative risk estimate)										
7439-92-1	Lead	ND Max	1.5E-02	1.5E+01	no	1.5E+01 ⁽³⁾	no	--	--	--	--
7439-92-1	Lead - Dissolved	ND Max	1.5E-02	1.5E+01	no	1.5E+01 ⁽³⁾	no	--	--	--	--

Cumulative Risk Ratio0.12E-070.39E-08

⁽¹⁾ Exposure point concentration is the maximum detected concentration from the ten most recent sampling events

⁽²⁾ Texas Commission on Environmental Quality (TCEQ) Texas Risk Reduction Program (TRRP) Tier 1 Groundwater Protective Concentration Levels (PCLs). Table 3. June 2012 (<http://www.tceq.state.tx.us/remediation/trrp/trrppcls.html>)

⁽³⁾ U.S. Environmental Protection Agency (USEPA) Regional Screening Levels (RSLs) for Tapwater (TR = 1E-6, HQ=1). November 2013. (http://www.epa.gov/reg3hwmd/risk/human/rb-concentration_table/Generic_Tables/docs/master_sl_table_run_NOV2013.pdf)

⁽⁴⁾ If dissolved metals data are available, they are used in the cumulative risk ratio. If only total metals data are available, they are used in the risk ratio

mg/kg - milligrams per Liter

µg/kg - micrograms per Liter

-- Not applicable

ND - Not detected

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

D - Definitive data

S - Screening data

Table 5.58
Risk Ratio Calculations for Potential Exposure to Groundwater by a Resident
On-Post Well CS-MW8-CC
Camp Stanley Storage Activity, Bexar County, Texas

CAS No.	Compound	Exposure Point Concentration (EPC) ⁽¹⁾ (µg/L)	TCEQ TRRP Tier 1 Groundwater PCL - Residential Ingestion ⁽²⁾ (mg/L)	TCEQ TRRP Tier 1 Groundwater PCL - Residential Ingestion ⁽²⁾ (µg/L)	Carcino- genic?	USEPA Tapwater RSL ⁽³⁾ (µg/L)	Carcino- genic?	Non-Carc Risk Ratio (EPC/PCL- ing)	Carc Risk Ratio (EPC/PCL- ing)	Non-Carc Risk Ratio (EPC/RSL)	Carc Risk Ratio (EPC/RSL)
	Volatile Organic Compounds										
156-59-2	cis-1,2-Dichloroethene	ND Max	7.0E-02	7.0E+01	no	2.8E+01	no	--	--	--	--
127-18-4	Tetrachloroethylene (PCE)	0.65 F D Max	5.0E-03	5.0E+00	yes	9.7E+00	yes	--	1.3E-07	--	6.7E-08
79-01-6	Trichloroethylene (TCE)	0.19 F D Max	5.0E-03	5.0E+00	yes	4.4E-01	yes	--	3.8E-08	--	4.3E-07
75-01-4	Vinyl Chloride	ND Max	2.0E-03	2.0E+00	yes	1.5E-02	yes	--	--	--	--
	Metals ⁽⁴⁾										
7439-97-6	Mercury	ND Max	2.0E-03	2.0E+00	no	6.3E-01	no	--	--	--	--
7439-97-6	Mercury - Dissolved	NA Max	2.0E-03	2.0E+00	no	6.3E-01	no	--	--	--	--
	Lead (not included in cumulative risk estimate)										
7439-92-1	Lead	0.15 F D Max	1.5E-02	1.5E+01	no	1.5E+01 ⁽³⁾	no	0.010	--	0.010	--
7439-92-1	Lead - Dissolved	NA Max	1.5E-02	1.5E+01	no	1.5E+01 ⁽³⁾	no	--	--	--	--
Cumulative Risk Ratio								--	2E-07	--	5E-07

⁽¹⁾ Exposure point concentration is the maximum detected concentration from the ten most recent sampling events

⁽²⁾ Texas Commission on Environmental Quality (TCEQ) Texas Risk Reduction Program (TRRP) Tier 1 Groundwater Protective Concentration Levels (PCLs). Table 3. June 2012 (<http://www.tceq.state.tx.us/remediation/trrp/trrppcls.html>)

⁽³⁾ U.S. Environmental Protection Agency (USEPA) Regional Screening Levels (RSLs) for Tapwater (TR = 1E-6, HQ=1). November 2013. (http://www.epa.gov/reg3hwmd/risk/human/rb-concentration_table/Generic_Tables/docs/master_sl_table_run_NOV2013.pdf)

⁽⁴⁾ If dissolved metals data are available, they are used in the cumulative risk ratio. If only total metals data are available, they are used in the risk ratio

mg/kg - milligrams per Liter

µg/kg - micrograms per Liter

-- Not applicable

NA - Not analyzed

ND - Not detected

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

D - Definitive data

Table 5.59
Risk Ratio Calculations for Potential Exposure to Groundwater by a Resident
On-Post Well CS-MW8-LGR
Camp Stanley Storage Activity, Bexar County, Texas

CAS No.	Compound	Exposure Point Concentration (EPC) ⁽¹⁾ (µg/L)	TCEQ TRRP Tier 1 Groundwater PCL - Residential Ingestion ⁽²⁾ (mg/L)	TCEQ TRRP Tier 1 Groundwater PCL - Residential Ingestion ⁽²⁾ (µg/L)	Carcino- genic?	USEPA Tapwater RSL ⁽³⁾ (µg/L)	Carcino- genic?	Non-Carc Risk Ratio (EPC/PCL- ing)	Carc Risk Ratio (EPC/PCL- ing)	Non-Carc Risk Ratio (EPC/RSL)	Carc Risk Ratio (EPC/RSL)
	Volatile Organic Compounds										
156-59-2	cis-1,2-Dichloroethene	ND Max	7.0E-02	7.0E+01	no	2.8E+01	no	--	--	--	--
127-18-4	Tetrachloroethylene (PCE)	3.0 S Max	5.0E-03	5.0E+00	yes	9.7E+00	yes	--	6.0E-07	--	3.1E-07
79-01-6	Trichloroethylene (TCE)	0.16 F S Max	5.0E-03	5.0E+00	yes	4.4E-01	yes	--	3.2E-08	--	3.6E-07
75-01-4	Vinyl Chloride	ND Max	2.0E-03	2.0E+00	yes	1.5E-02	yes	--	--	--	--
	Metals ⁽⁴⁾										
7439-97-6	Mercury	0.2 F D Max	2.0E-03	2.0E+00	no	6.3E-01	no	0.10	--	0.32	--
7439-97-6	Mercury - Dissolved	ND Max	2.0E-03	2.0E+00	no	6.3E-01	no	--	--	--	--
	Lead (not included in cumulative risk estimate)										
7439-92-1	Lead	2.1 F S Max	1.5E-02	1.5E+01	no	1.5E+01 ⁽³⁾	no	0.14	--	0.14	--
7439-92-1	Lead - Dissolved	ND Max	1.5E-02	1.5E+01	no	1.5E+01 ⁽³⁾	no	--	--	--	--

Cumulative Risk Ratio0.16E-070.37E-07

⁽¹⁾ Exposure point concentration is the maximum detected concentration from the ten most recent sampling events

⁽²⁾ Texas Commission on Environmental Quality (TCEQ) Texas Risk Reduction Program (TRRP) Tier 1 Groundwater Protective Concentration Levels (PCLs). Table 3. June 2012 (<http://www.tceq.state.tx.us/remediation/trrp/trrppcls.html>)

⁽³⁾ U.S. Environmental Protection Agency (USEPA) Regional Screening Levels (RSLs) for Tapwater (TR = 1E-6, HQ=1). November 2013. (http://www.epa.gov/reg3hwmd/risk/human/rb-concentration_table/Generic_Tables/docs/master_sl_table_run_NOV2013.pdf)

⁽⁴⁾ If dissolved metals data are available, they are used in the cumulative risk ratio. If only total metals data are available, they are used in the risk ratio

mg/kg - milligrams per Liter

µg/kg - micrograms per Liter

-- Not applicable

ND - Not detected

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

D - Definitive data

S - Screening data

Table 5.60
Risk Ratio Calculations for Potential Exposure to Groundwater by a Resident
On-Post Well CS-MW9-BS
Camp Stanley Storage Activity, Bexar County, Texas

CAS No.	Compound	Exposure Point Concentration (EPC) ⁽¹⁾ (µg/L)		TCEQ TRRP Tier 1 Groundwater PCL - Residential Ingestion ⁽²⁾ (mg/L)	TCEQ TRRP Tier 1 Groundwater PCL - Residential Ingestion ⁽²⁾ (µg/L)	Carcino-genic?	USEPA Tapwater RSL ⁽³⁾ (µg/L)	Carcino-genic?	Non-Carc Risk Ratio (EPC/PCL-ing)	Carc Risk Ratio (EPC/PCL-ing)	Non-Carc Risk Ratio (EPC/RSL)	Carc Risk Ratio (EPC/RSL)
	Volatile Organic Compounds											
156-59-2	cis -1,2-Dichloroethene	ND	Max	7.0E-02	7.0E+01	no	2.8E+01	no	--	--	--	--
127-18-4	Tetrachloroethylene (PCE)	ND	Max	5.0E-03	5.0E+00	yes	9.7E+00	yes	--	--	--	--
79-01-6	Trichloroethylene (TCE)	ND	Max	5.0E-03	5.0E+00	yes	4.4E-01	yes	--	--	--	--
75-01-4	Vinyl Chloride	ND	Max	2.0E-03	2.0E+00	yes	1.5E-02	yes	--	--	--	--
	Metals ⁽⁴⁾											
7439-97-6	Mercury	0.20	F D Max	2.0E-03	2.0E+00	no	6.3E-01	no	0.10	--	0.32	--
7439-97-6	Mercury - Dissolved	NA	Max	2.0E-03	2.0E+00	no	6.3E-01	no	--	--	--	--
	Lead (not included in cumulative risk estimate)											
7439-92-1	Lead	110	D Max	1.5E-02	1.5E+01	no	1.5E+01 ⁽³⁾	no	7.3	--	7.3	--
7439-92-1	Lead - Dissolved	NA	Max	1.5E-02	1.5E+01	no	1.5E+01 ⁽³⁾	no	--	--	--	--
Cumulative Risk Ratio									0.1	--	0.3	--

⁽¹⁾ Exposure point concentration is the maximum detected concentration from the ten most recent sampling events

⁽²⁾ Texas Commission on Environmental Quality (TCEQ) Texas Risk Reduction Program (TRRP) Tier 1 Groundwater Protective Concentration Levels (PCLs). Table 3. June 2012 (<http://www.tceq.state.tx.us/remediation/trrp/trrppcls.html>)

⁽³⁾ U.S. Environmental Protection Agency (USEPA) Regional Screening Levels (RSLs) for Tapwater (TR = 1E-6, HQ=1). November 2013. (http://www.epa.gov/reg3hwmd/risk/human/rb-concentration_table/Generic_Tables/docs/master_sl_table_run_NOV2013.pdf)

⁽⁴⁾ If dissolved metals data are available, they are used in the cumulative risk ratio. If only total metals data are available, they are used in the risk ratio

mg/kg - milligrams per Liter

µg/kg - micrograms per Liter

-- Not applicable

NA - Not analyzed

ND - Not detected

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

D - Definitive data

Table 5.61
Risk Ratio Calculations for Potential Exposure to Groundwater by a Resident
On-Post Well CS-MW9-CC
Camp Stanley Storage Activity, Bexar County, Texas

CAS No.	Compound	Exposure Point Concentration (EPC) ⁽¹⁾ (µg/L)		TCEQ TRRP Tier 1 Groundwater PCL - Residential Ingestion ⁽²⁾ (mg/L)	TCEQ TRRP Tier 1 Groundwater PCL - Residential Ingestion ⁽²⁾ (µg/L)	Carcino- genic?	USEPA Tapwater RSL ⁽³⁾ (µg/L)	Carcino- genic?	Non-Carc Risk Ratio (EPC/PCL- ing)	Carc Risk Ratio (EPC/PCL- ing)	Non-Carc Risk Ratio (EPC/RSL)	Carc Risk Ratio (EPC/RSL)
	Volatile Organic Compounds											
156-59-2	cis -1,2-Dichloroethene	ND	Max	7.0E-02	7.0E+01	no	2.8E+01	no	--	--	--	--
127-18-4	Tetrachloroethylene (PCE)	ND	Max	5.0E-03	5.0E+00	yes	9.7E+00	yes	--	--	--	--
79-01-6	Trichloroethylene (TCE)	ND	Max	5.0E-03	5.0E+00	yes	4.4E-01	yes	--	--	--	--
75-01-4	Vinyl Chloride	ND	Max	2.0E-03	2.0E+00	yes	1.5E-02	yes	--	--	--	--
	Metals ⁽⁴⁾											
7439-97-6	Mercury	0.080	F D Max	2.0E-03	2.0E+00	no	6.3E-01	no	0.040	--	0.13	--
7439-97-6	Mercury - Dissolved	NA	Max	2.0E-03	2.0E+00	no	6.3E-01	no	--	--	--	--
	Lead (not included in cumulative risk estimate)											
7439-92-1	Lead	0.20	F D Max	1.5E-02	1.5E+01	no	1.5E+01 ⁽³⁾	no	0.013	--	0.013	--
7439-92-1	Lead - Dissolved	NA	Max	1.5E-02	1.5E+01	no	1.5E+01 ⁽³⁾	no	--	--	--	--
Cumulative Risk Ratio									0.04	--	0.1	--

⁽¹⁾ Exposure point concentration is the maximum detected concentration from the ten most recent sampling events

⁽²⁾ Texas Commission on Environmental Quality (TCEQ) Texas Risk Reduction Program (TRRP) Tier 1 Groundwater Protective Concentration Levels (PCLs). Table 3. June 2012 (<http://www.tceq.state.tx.us/remediation/trrp/trrppcls.html>)

⁽³⁾ U.S. Environmental Protection Agency (USEPA) Regional Screening Levels (RSLs) for Tapwater (TR = 1E-6, HQ=1). November 2013. (http://www.epa.gov/reg3hwmd/risk/human/rb-concentration_table/Generic_Tables/docs/master_sl_table_run_NOV2013.pdf)

⁽⁴⁾ If dissolved metals data are available, they are used in the cumulative risk ratio. If only total metals data are available, they are used in the risk ratio

mg/kg - milligrams per Liter

µg/kg - micrograms per Liter

-- Not applicable

NA - Not analyzed

ND - Not detected

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

D - Definitive data

Table 5.62
Risk Ratio Calculations for Potential Exposure to Groundwater by a Resident
On-Post Well CS-MW9-LGR
Camp Stanley Storage Activity, Bexar County, Texas

CAS No.	Compound	Exposure Point Concentration (EPC) ⁽¹⁾ (µg/L)	TCEQ TRRP Tier 1 Groundwater PCL - Residential Ingestion ⁽²⁾ (mg/L)	TCEQ TRRP Tier 1 Groundwater PCL - Residential Ingestion ⁽²⁾ (µg/L)	Carcino- genic?	USEPA Tapwater RSL ⁽³⁾ (µg/L)	Carcino- genic?	Non-Carc Risk Ratio (EPC/PCL- ing)	Carc Risk Ratio (EPC/PCL- ing)	Non-Carc Risk Ratio (EPC/RSL)	Carc Risk Ratio (EPC/RSL)
	Volatile Organic Compounds										
156-59-2	cis -1,2-Dichloroethene	ND Max	7.0E-02	7.0E+01	no	2.8E+01	no	--	--	--	--
127-18-4	Tetrachloroethylene (PCE)	0.18 F D Max	5.0E-03	5.0E+00	yes	9.7E+00	yes	--	3.6E-08	--	1.9E-08
79-01-6	Trichloroethylene (TCE)	ND Max	5.0E-03	5.0E+00	yes	4.4E-01	yes	--	--	--	--
75-01-4	Vinyl Chloride	ND Max	2.0E-03	2.0E+00	yes	1.5E-02	yes	--	--	--	--
	Metals ⁽⁴⁾										
7439-97-6	Mercury	ND Max	2.0E-03	2.0E+00	no	6.3E-01	no	--	--	--	--
7439-97-6	Mercury - Dissolved	NA Max	2.0E-03	2.0E+00	no	6.3E-01	no	--	--	--	--
	Lead (not included in cumulative risk estimate)										
7439-92-1	Lead	3.8 F D Max	1.5E-02	1.5E+01	no	1.5E+01 ⁽³⁾	no	0.25	--	0.25	--
7439-92-1	Lead - Dissolved	NA Max	1.5E-02	1.5E+01	no	1.5E+01 ⁽³⁾	no	--	--	--	--
Cumulative Risk Ratio								--	4E-08	--	2E-08

⁽¹⁾ Exposure point concentration is the maximum detected concentration from the ten most recent sampling events

⁽²⁾ Texas Commission on Environmental Quality (TCEQ) Texas Risk Reduction Program (TRRP) Tier 1 Groundwater Protective Concentration Levels (PCLs). Table 3. June 2012 (<http://www.tceq.state.tx.us/remediation/trrp/trrppcls.html>)

⁽³⁾ U.S. Environmental Protection Agency (USEPA) Regional Screening Levels (RSLs) for Tapwater (TR = 1E-6, HQ=1). November 2013. (http://www.epa.gov/reg3hwmd/risk/human/rb-concentration_table/Generic_Tables/docs/master_sl_table_run_NOV2013.pdf)

⁽⁴⁾ If dissolved metals data are available, they are used in the cumulative risk ratio. If only total metals data are available, they are used in the risk ratio

mg/kg - milligrams per Liter

µg/kg - micrograms per Liter

-- Not applicable

NA - Not analyzed

ND - Not detected

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

D - Definitive data

Table 5.63
Risk Ratio Calculations for Potential Exposure to Groundwater by a Resident
On-Post Well CS-MW10-CC
Camp Stanley Storage Activity, Bexar County, Texas

CAS No.	Compound	Exposure Point Concentration (EPC) ⁽¹⁾ (µg/L)	TCEQ TRRP Tier 1 Groundwater PCL - Residential Ingestion ⁽²⁾ (mg/L)	TCEQ TRRP Tier 1 Groundwater PCL - Residential Ingestion ⁽²⁾ (µg/L)	Carcino- genic?	USEPA Tapwater RSL ⁽³⁾ (µg/L)	Carcino- genic?	Non-Carc Risk Ratio (EPC/PCL- ing)	Carc Risk Ratio (EPC/PCL- ing)	Non-Carc Risk Ratio (EPC/RSL)	Carc Risk Ratio (EPC/RSL)
	Volatile Organic Compounds										
156-59-2	cis-1,2-Dichloroethene	ND Max	7.0E-02	7.0E+01	no	2.8E+01	no	--	--	--	--
127-18-4	Tetrachloroethylene (PCE)	0.18 F D Max	5.0E-03	5.0E+00	yes	9.7E+00	yes	--	3.6E-08	--	1.9E-08
79-01-6	Trichloroethylene (TCE)	0.18 F D Max	5.0E-03	5.0E+00	yes	4.4E-01	yes	--	3.6E-08	--	4.1E-07
75-01-4	Vinyl Chloride	ND Max	2.0E-03	2.0E+00	yes	1.5E-02	yes	--	--	--	--
	Metals ⁽⁴⁾										
7439-97-6	Mercury	ND Max	2.0E-03	2.0E+00	no	6.3E-01	no	--	--	--	--
7439-97-6	Mercury - Dissolved	NA Max	2.0E-03	2.0E+00	no	6.3E-01	no	--	--	--	--
	Lead (not included in cumulative risk estimate)										
7439-92-1	Lead	0.40 F D Max	1.5E-02	1.5E+01	no	1.5E+01 ⁽³⁾	no	0.027	--	0.027	--
7439-92-1	Lead - Dissolved	NA Max	1.5E-02	1.5E+01	no	1.5E+01 ⁽³⁾	no	--	--	--	--
Cumulative Risk Ratio								--	7E-08	--	4E-07

⁽¹⁾ Exposure point concentration is the maximum detected concentration from the ten most recent sampling events

⁽²⁾ Texas Commission on Environmental Quality (TCEQ) Texas Risk Reduction Program (TRRP) Tier 1 Groundwater Protective Concentration Levels (PCLs). Table 3. June 2012 (<http://www.tceq.state.tx.us/remediation/trrp/trrppcls.html>)

⁽³⁾ U.S. Environmental Protection Agency (USEPA) Regional Screening Levels (RSLs) for Tapwater (TR = 1E-6, HQ=1). November 2013. (http://www.epa.gov/reg3hwmd/risk/human/rb-concentration_table/Generic_Tables/docs/master_sl_table_run_NOV2013.pdf)

⁽⁴⁾ If dissolved metals data are available, they are used in the cumulative risk ratio. If only total metals data are available, they are used in the risk ratio

mg/kg - milligrams per Liter

µg/kg - micrograms per Liter

-- Not applicable

NA - Not analyzed

ND - Not detected

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

D - Definitive data

Table 5.64
Risk Ratio Calculations for Potential Exposure to Groundwater by a Resident
On-Post Well CS-MW10-LGR
Camp Stanley Storage Activity, Bexar County, Texas

CAS No.	Compound	Exposure Point Concentration (EPC) ⁽¹⁾ (µg/L)	TCEQ TRRP Tier 1 Groundwater PCL - Residential Ingestion ⁽²⁾ (mg/L)	TCEQ TRRP Tier 1 Groundwater PCL - Residential Ingestion ⁽²⁾ (µg/L)	Carcino- genic?	USEPA Tapwater RSL ⁽³⁾ (µg/L)	Carcino- genic?	Non-Carc Risk Ratio (EPC/PCL- ing)	Carc Risk Ratio (EPC/PCL- ing)	Non-Carc Risk Ratio (EPC/RSL)	Carc Risk Ratio (EPC/RSL)
	Volatile Organic Compounds										
156-59-2	cis-1,2-Dichloroethene	ND Max	7.0E-02	7.0E+01	no	2.8E+01	no	--	--	--	--
127-18-4	Tetrachloroethylene (PCE)	2.3 D Max	5.0E-03	5.0E+00	yes	9.7E+00	yes	--	4.6E-07	--	2.4E-07
79-01-6	Trichloroethylene (TCE)	0.70 F D Max	5.0E-03	5.0E+00	yes	4.4E-01	yes	--	1.4E-07	--	1.6E-06
75-01-4	Vinyl Chloride	ND Max	2.0E-03	2.0E+00	yes	1.5E-02	yes	--	--	--	--
	Metals ⁽⁴⁾										
7439-97-6	Mercury	0.20 F D Max	2.0E-03	2.0E+00	no	6.3E-01	no	0.10	--	0.32	--
7439-97-6	Mercury - Dissolved	NA Max	2.0E-03	2.0E+00	no	6.3E-01	no	--	--	--	--
	Lead (not included in cumulative risk estimate)										
7439-92-1	Lead	9.6 F D Max	1.5E-02	1.5E+01	no	1.5E+01 ⁽³⁾	no	0.64	--	0.64	--
7439-92-1	Lead - Dissolved	NA Max	1.5E-02	1.5E+01	no	1.5E+01 ⁽³⁾	no	--	--	--	--
Cumulative Risk Ratio								0.1	6E-07	0.3	2E-06

⁽¹⁾ Exposure point concentration is the maximum detected concentration from the ten most recent sampling events

⁽²⁾ Texas Commission on Environmental Quality (TCEQ) Texas Risk Reduction Program (TRRP) Tier 1 Groundwater Protective Concentration Levels (PCLs). Table 3. June 2012 (<http://www.tceq.state.tx.us/remediation/trrp/trrppcls.html>)

⁽³⁾ U.S. Environmental Protection Agency (USEPA) Regional Screening Levels (RSLs) for Tapwater (TR = 1E-6, HQ=1). November 2013. (http://www.epa.gov/reg3hwmd/risk/human/rb-concentration_table/Generic_Tables/docs/master_sl_table_run_NOV2013.pdf)

⁽⁴⁾ If dissolved metals data are available, they are used in the cumulative risk ratio. If only total metals data are available, they are used in the risk ratio

mg/kg - milligrams per Liter

µg/kg - micrograms per Liter

-- Not applicable

NA - Not analyzed

ND - Not detected

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

D - Definitive data

Table 5.65
Risk Ratio Calculations for Potential Exposure to Groundwater by a Resident
On-Post Well CS-MW11A-LGR
Camp Stanley Storage Activity, Bexar County, Texas

CAS No.	Compound	Exposure Point Concentration (EPC) ⁽¹⁾ (µg/L)	TCEQ TRRP Tier 1 Groundwater PCL - Residential Ingestion ⁽²⁾ (mg/L)	TCEQ TRRP Tier 1 Groundwater PCL - Residential Ingestion ⁽²⁾ (µg/L)	Carcino- genic?	USEPA Tapwater RSL ⁽³⁾ (µg/L)	Carcino- genic?	Non-Carc Risk Ratio (EPC/PCL- ing)	Carc Risk Ratio (EPC/PCL- ing)	Non-Carc Risk Ratio (EPC/RSL)	Carc Risk Ratio (EPC/RSL)
	Volatile Organic Compounds										
156-59-2	cis-1,2-Dichloroethene	ND Max	7.0E-02	7.0E+01	no	2.8E+01	no	--	--	--	--
127-18-4	Tetrachloroethylene (PCE)	1.3 F D Max	5.0E-03	5.0E+00	yes	9.7E+00	yes	--	2.6E-07	--	1.3E-07
79-01-6	Trichloroethylene (TCE)	ND Max	5.0E-03	5.0E+00	yes	4.4E-01	yes	--	--	--	--
75-01-4	Vinyl Chloride	ND Max	2.0E-03	2.0E+00	yes	1.5E-02	yes	--	--	--	--
	Metals ⁽⁴⁾										
7439-97-6	Mercury	0.20 F D Max	2.0E-03	2.0E+00	no	6.3E-01	no	0.10	--	0.32	--
7439-97-6	Mercury - Dissolved	NA Max	2.0E-03	2.0E+00	no	6.3E-01	no	--	--	--	--
	Lead (not included in cumulative risk estimate)										
7439-92-1	Lead	8.2 F D Max	1.5E-02	1.5E+01	no	1.5E+01 ⁽³⁾	no	0.55	--	0.55	--
7439-92-1	Lead - Dissolved	NA Max	1.5E-02	1.5E+01	no	1.5E+01 ⁽³⁾	no	--	--	--	--

Cumulative Risk Ratio

0.1

3E-07

0.3

1E-07

⁽¹⁾ Exposure point concentration is the maximum detected concentration from the ten most recent sampling events

⁽²⁾ Texas Commission on Environmental Quality (TCEQ) Texas Risk Reduction Program (TRRP) Tier 1 Groundwater Protective Concentration Levels (PCLs). Table 3. June 2012 (<http://www.tceq.state.tx.us/remediation/trrp/trrppcls.html>)

⁽³⁾ U.S. Environmental Protection Agency (USEPA) Regional Screening Levels (RSLs) for Tapwater (TR = 1E-6, HQ=1). November 2013. (http://www.epa.gov/reg3hwmd/risk/human/rb-concentration_table/Generic_Tables/docs/master_sl_table_run_NOV2013.pdf)

⁽⁴⁾ If dissolved metals data are available, they are used in the cumulative risk ratio. If only total metals data are available, they are used in the risk ratio

mg/kg - milligrams per Liter

µg/kg - micrograms per Liter

-- Not applicable

NA - Not analyzed

ND - Not detected

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

D - Definitive data

Table 5.66
Risk Ratio Calculations for Potential Exposure to Groundwater by a Resident
On-Post Well CS-MW11B-LGR
Camp Stanley Storage Activity, Bexar County, Texas

CAS No.	Compound	Exposure Point Concentration (EPC) ⁽¹⁾ (µg/L)	TCEQ TRRP Tier 1 Groundwater PCL - Residential Ingestion ⁽²⁾ (mg/L)	TCEQ TRRP Tier 1 Groundwater PCL - Residential Ingestion ⁽²⁾ (µg/L)	Carcino- genic?	USEPA Tapwater RSL ⁽³⁾ (µg/L)	Carcino- genic?	Non-Carc Risk Ratio (EPC/PCL- ing)	Carc Risk Ratio (EPC/PCL- ing)	Non-Carc Risk Ratio (EPC/RSL)	Carc Risk Ratio (EPC/RSL)
	Volatile Organic Compounds										
156-59-2	cis -1,2-Dichloroethene	ND Max	7.0E-02	7.0E+01	no	2.8E+01	no	--	--	--	--
127-18-4	Tetrachloroethylene (PCE)	1.5 D Max	5.0E-03	5.0E+00	yes	9.7E+00	yes	--	3.0E-07	--	1.5E-07
79-01-6	Trichloroethylene (TCE)	ND Max	5.0E-03	5.0E+00	yes	4.4E-01	yes	--	--	--	--
75-01-4	Vinyl Chloride	ND Max	2.0E-03	2.0E+00	yes	1.5E-02	yes	--	--	--	--
	Metals ⁽⁴⁾										
7439-97-6	Mercury	0.060 F D Max	2.0E-03	2.0E+00	no	6.3E-01	no	0.030	--	0.10	--
7439-97-6	Mercury - Dissolved	NA Max	2.0E-03	2.0E+00	no	6.3E-01	no	--	--	--	--
	Lead (not included in cumulative risk estimate)										
7439-92-1	Lead	2.1 F D Max	1.5E-02	1.5E+01	no	1.5E+01 ⁽³⁾	no	0.14	--	0.14	--
7439-92-1	Lead - Dissolved	NA Max	1.5E-02	1.5E+01	no	1.5E+01 ⁽³⁾	no	--	--	--	--
Cumulative Risk Ratio								0.03	3E-07	0.1	2E-07

⁽¹⁾ Exposure point concentration is the maximum detected concentration from the ten most recent sampling events

⁽²⁾ Texas Commission on Environmental Quality (TCEQ) Texas Risk Reduction Program (TRRP) Tier 1 Groundwater Protective Concentration Levels (PCLs). Table 3. June 2012 (<http://www.tceq.state.tx.us/remediation/trrp/trrppcls.html>)

⁽³⁾ U.S. Environmental Protection Agency (USEPA) Regional Screening Levels (RSLs) for Tapwater (TR = 1E-6, HQ=1). November 2013. (http://www.epa.gov/reg3hwmd/risk/human/rb-concentration_table/Generic_Tables/docs/master_sl_table_run_NOV2013.pdf)

⁽⁴⁾ If dissolved metals data are available, they are used in the cumulative risk ratio. If only total metals data are available, they are used in the risk ratio

mg/kg - milligrams per Liter

µg/kg - micrograms per Liter

-- Not applicable

NA - Not analyzed

ND - Not detected

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

D - Definitive data

Table 5.67
Risk Ratio Calculations for Potential Exposure to Groundwater by a Resident
On-Post Well CS-MW12-BS
Camp Stanley Storage Activity, Bexar County, Texas

CAS No.	Compound	Exposure Point Concentration (EPC) ⁽¹⁾ (µg/L)		TCEQ TRRP Tier 1 Groundwater PCL - Residential Ingestion ⁽²⁾ (mg/L)	TCEQ TRRP Tier 1 Groundwater PCL - Residential Ingestion ⁽²⁾ (µg/L)	Carcino- genic?	USEPA Tapwater RSL ⁽³⁾ (µg/L)	Carcino- genic?	Non-Carc Risk Ratio (EPC/PCL- ing)	Carc Risk Ratio (EPC/PCL- ing)	Non-Carc Risk Ratio (EPC/RSL)	Carc Risk Ratio (EPC/RSL)
	Volatile Organic Compounds											
156-59-2	cis -1,2-Dichloroethene	ND	Max	7.0E-02	7.0E+01	no	2.8E+01	no	--	--	--	--
127-18-4	Tetrachloroethylene (PCE)	ND	Max	5.0E-03	5.0E+00	yes	9.7E+00	yes	--	--	--	--
79-01-6	Trichloroethylene (TCE)	ND	Max	5.0E-03	5.0E+00	yes	4.4E-01	yes	--	--	--	--
75-01-4	Vinyl Chloride	0.32	F D Max	2.0E-03	2.0E+00	yes	1.5E-02	yes	--	1.6E-07	--	2.1E-05
	Metals ⁽⁴⁾											
7439-97-6	Mercury	0.049	F D Max	2.0E-03	2.0E+00	no	6.3E-01	no	0.025	--	0.078	--
7439-97-6	Mercury - Dissolved	NA	Max	2.0E-03	2.0E+00	no	6.3E-01	no	--	--	--	--
	Lead (not included in cumulative risk estimate)											
7439-92-1	Lead	2.0	F D Max	1.5E-02	1.5E+01	no	1.5E+01 ⁽³⁾	no	0.13	--	0.13	--
7439-92-1	Lead - Dissolved	NA	Max	1.5E-02	1.5E+01	no	1.5E+01 ⁽³⁾	no	--	--	--	--
Cumulative Risk Ratio									0.02	2E-07	0.08	2E-05

⁽¹⁾ Exposure point concentration is the maximum detected concentration from the ten most recent sampling events

⁽²⁾ Texas Commission on Environmental Quality (TCEQ) Texas Risk Reduction Program (TRRP) Tier 1 Groundwater Protective Concentration Levels (PCLs). Table 3. June 2012 (<http://www.tceq.state.tx.us/remediation/trrp/trrppcls.html>)

⁽³⁾ U.S. Environmental Protection Agency (USEPA) Regional Screening Levels (RSLs) for Tapwater (TR = 1E-6, HQ=1). November 2013. (http://www.epa.gov/reg3hwmd/risk/human/rb-concentration_table/Generic_Tables/docs/master_sl_table_run_NOV2013.pdf)

⁽⁴⁾ If dissolved metals data are available, they are used in the cumulative risk ratio. If only total metals data are available, they are used in the risk ratio

mg/kg - milligrams per Liter

µg/kg - micrograms per Liter

-- Not applicable

NA - Not analyzed

ND - Not detected

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

D - Definitive data

Table 5.68
Risk Ratio Calculations for Potential Exposure to Groundwater by a Resident
On-Post Well CS-MW12-CC
Camp Stanley Storage Activity, Bexar County, Texas

CAS No.	Compound	Exposure Point Concentration (EPC) ⁽¹⁾ (µg/L)		TCEQ TRRP Tier 1 Groundwater PCL - Residential Ingestion ⁽²⁾ (mg/L)	TCEQ TRRP Tier 1 Groundwater PCL - Residential Ingestion ⁽²⁾ (µg/L)	Carcino-genic?	USEPA Tapwater RSL ⁽³⁾ (µg/L)	Carcino-genic?	Non-Carc Risk Ratio (EPC/PCL-ing)	Carc Risk Ratio (EPC/PCL-ing)	Non-Carc Risk Ratio (EPC/RSL)	Carc Risk Ratio (EPC/RSL)
	Volatile Organic Compounds											
156-59-2	cis -1,2-Dichloroethene	ND	Max	7.0E-02	7.0E+01	no	2.8E+01	no	--	--	--	--
127-18-4	Tetrachloroethylene (PCE)	ND	Max	5.0E-03	5.0E+00	yes	9.7E+00	yes	--	--	--	--
79-01-6	Trichloroethylene (TCE)	ND	Max	5.0E-03	5.0E+00	yes	4.4E-01	yes	--	--	--	--
75-01-4	Vinyl Chloride	ND	Max	2.0E-03	2.0E+00	yes	1.5E-02	yes	--	--	--	--
	Metals ⁽⁴⁾											
7439-97-6	Mercury	ND	Max	2.0E-03	2.0E+00	no	6.3E-01	no	--	--	--	--
7439-97-6	Mercury - Dissolved	NA	Max	2.0E-03	2.0E+00	no	6.3E-01	no	--	--	--	--
	Lead (not included in cumulative risk estimate)											
7439-92-1	Lead	0.55	F D Max	1.5E-02	1.5E+01	no	1.5E+01 ⁽³⁾	no	0.037	--	0.037	--
7439-92-1	Lead - Dissolved	NA	Max	1.5E-02	1.5E+01	no	1.5E+01 ⁽³⁾	no	--	--	--	--

Cumulative Risk Ratio -- -- -- --

⁽¹⁾ Exposure point concentration is the maximum detected concentration from the ten most recent sampling events

⁽²⁾ Texas Commission on Environmental Quality (TCEQ) Texas Risk Reduction Program (TRRP) Tier 1 Groundwater Protective Concentration Levels (PCLs). Table 3. June 2012 (<http://www.tceq.state.tx.us/remediation/trrp/trrppcls.html>)

⁽³⁾ U.S. Environmental Protection Agency (USEPA) Regional Screening Levels (RSLs) for Tapwater (TR = 1E-6, HQ=1). November 2013. (http://www.epa.gov/reg3hwmd/risk/human/rb-concentration_table/Generic_Tables/docs/master_sl_table_run_NOV2013.pdf)

⁽⁴⁾ If dissolved metals data are available, they are used in the cumulative risk ratio. If only total metals data are available, they are used in the risk ratio

mg/kg - milligrams per Liter

µg/kg - micrograms per Liter

-- Not applicable

NA - Not analyzed

ND - Not detected

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

D - Definitive data

Table 5.69
Risk Ratio Calculations for Potential Exposure to Groundwater by a Resident
On-Post Well CS-MW12-LGR
Camp Stanley Storage Activity, Bexar County, Texas

CAS No.	Compound	Exposure Point Concentration (EPC) ⁽¹⁾ (µg/L)		TCEQ TRRP Tier 1 Groundwater PCL - Residential Ingestion ⁽²⁾ (mg/L)	TCEQ TRRP Tier 1 Groundwater PCL - Residential Ingestion ⁽²⁾ (µg/L)	Carcino-genic?	USEPA Tapwater RSL ⁽³⁾ (µg/L)	Carcino-genic?	Non-Carc Risk Ratio (EPC/PCL-ing)	Carc Risk Ratio (EPC/PCL-ing)	Non-Carc Risk Ratio (EPC/RSL)	Carc Risk Ratio (EPC/RSL)
	Volatile Organic Compounds											
156-59-2	cis -1,2-Dichloroethene	ND	Max	7.0E-02	7.0E+01	no	2.8E+01	no	--	--	--	--
127-18-4	Tetrachloroethylene (PCE)	ND	Max	5.0E-03	5.0E+00	yes	9.7E+00	yes	--	--	--	--
79-01-6	Trichloroethylene (TCE)	ND	Max	5.0E-03	5.0E+00	yes	4.4E-01	yes	--	--	--	--
75-01-4	Vinyl Chloride	ND	Max	2.0E-03	2.0E+00	yes	1.5E-02	yes	--	--	--	--
	Metals ⁽⁴⁾											
7439-97-6	Mercury	ND	Max	2.0E-03	2.0E+00	no	6.3E-01	no	--	--	--	--
7439-97-6	Mercury - Dissolved	NA	Max	2.0E-03	2.0E+00	no	6.3E-01	no	--	--	--	--
	Lead (not included in cumulative risk estimate)											
7439-92-1	Lead	2.7	F D Max	1.5E-02	1.5E+01	no	1.5E+01 ⁽³⁾	no	0.18	--	0.18	--
7439-92-1	Lead - Dissolved	NA	Max	1.5E-02	1.5E+01	no	1.5E+01 ⁽³⁾	no	--	--	--	--

Cumulative Risk Ratio

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⁽¹⁾ Exposure point concentration is the maximum detected concentration from the ten most recent sampling events

⁽²⁾ Texas Commission on Environmental Quality (TCEQ) Texas Risk Reduction Program (TRRP) Tier 1 Groundwater Protective Concentration Levels (PCLs). Table 3. June 2012 (<http://www.tceq.state.tx.us/remediation/trrp/trrppcls.html>)

⁽³⁾ U.S. Environmental Protection Agency (USEPA) Regional Screening Levels (RSLs) for Tapwater (TR = 1E-6, HQ=1). November 2013. (http://www.epa.gov/reg3hwmd/risk/human/rb-concentration_table/Generic_Tables/docs/master_sl_table_run_NOV2013.pdf)

⁽⁴⁾ If dissolved metals data are available, they are used in the cumulative risk ratio. If only total metals data are available, they are used in the risk ratio

mg/kg - milligrams per Liter

µg/kg - micrograms per Liter

-- Not applicable

ND - Not detected

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

D - Definitive data

S - Screening data

Table 5.70
Risk Ratio Calculations for Potential Exposure to Groundwater by a Resident
On-Post Well CS-MW16-CC
Camp Stanley Storage Activity, Bexar County, Texas

CAS No.	Compound	Exposure Point Concentration (EPC) ⁽¹⁾ (µg/L)	TCEQ TRRP Tier 1 Groundwater PCL - Residential Ingestion ⁽²⁾ (mg/L)	TCEQ TRRP Tier 1 Groundwater PCL - Residential Ingestion ⁽²⁾ (µg/L)	Carcino- genic?	USEPA Tapwater RSL ⁽³⁾ (µg/L)	Carcino- genic?	Non-Carc Risk Ratio (EPC/PCL- ing)	Carc Risk Ratio (EPC/PCL- ing)	Non-Carc Risk Ratio (EPC/RSL)	Carc Risk Ratio (EPC/RSL)
	Volatile Organic Compounds										
156-59-2	cis-1,2-Dichloroethene	25 S Max	7.0E-02	7.0E+01	no	2.8E+01	no	0.36	--	0.89	--
127-18-4	Tetrachloroethylene (PCE)	1.5 D Max	5.0E-03	5.0E+00	yes	9.7E+00	yes	--	3.0E-07	--	1.5E-07
79-01-6	Trichloroethylene (TCE)	25 D Max	5.0E-03	5.0E+00	yes	4.4E-01	yes	--	5.0E-06	--	5.7E-05
75-01-4	Vinyl Chloride	ND Max	2.0E-03	2.0E+00	yes	1.5E-02	yes	--	--	--	--
	Metals ⁽⁴⁾										
7439-97-6	Mercury	ND Max	2.0E-03	2.0E+00	no	6.3E-01	no	--	--	--	--
7439-97-6	Mercury - Dissolved	NA Max	2.0E-03	2.0E+00	no	6.3E-01	no	--	--	--	--
	Lead (not included in cumulative risk estimate)										
7439-92-1	Lead	ND Max	1.5E-02	1.5E+01	no	1.5E+01 ⁽³⁾	no	--	--	--	--
7439-92-1	Lead - Dissolved	NA Max	1.5E-02	1.5E+01	no	1.5E+01 ⁽³⁾	no	--	--	--	--

Cumulative Risk Ratio0.45E-060.96E-05

⁽¹⁾ Exposure point concentration is the maximum detected concentration from the ten most recent sampling events

⁽²⁾ Texas Commission on Environmental Quality (TCEQ) Texas Risk Reduction Program (TRRP) Tier 1 Groundwater Protective Concentration Levels (PCLs). Table 3. June 2012 (<http://www.tceq.state.tx.us/remediation/trrp/trrppcls.html>)

⁽³⁾ U.S. Environmental Protection Agency (USEPA) Regional Screening Levels (RSLs) for Tapwater (TR = 1E-6, HQ=1). November 2013. (http://www.epa.gov/reg3hwmd/risk/human/rb-concentration_table/Generic_Tables/docs/master_sl_table_run_NOV2013.pdf)

⁽⁴⁾ If dissolved metals data are available, they are used in the cumulative risk ratio. If only total metals data are available, they are used in the risk ratio

mg/kg - milligrams per Liter

µg/kg - micrograms per Liter

-- Not applicable

NA - Not analyzed

ND - Not detected

D - Definitive data

S - Screening data

Table 5.71
Risk Ratio Calculations for Potential Exposure to Groundwater by a Resident
On-Post Well CS-MW16-LGR
Camp Stanley Storage Activity, Bexar County, Texas

CAS No.	Compound	Exposure Point Concentration (EPC) ⁽¹⁾ (µg/L)		TCEQ TRRP Tier 1 Groundwater PCL - Residential Ingestion ⁽²⁾ (mg/L)	TCEQ TRRP Tier 1 Groundwater PCL - Residential Ingestion ⁽²⁾ (µg/L)	Carcino-genic?	USEPA Tapwater RSL ⁽³⁾ (µg/L)	Carcino-genic?	Non-Carc Risk Ratio (EPC/PCL-ing)	Carc Risk Ratio (EPC/PCL-ing)	Non-Carc Risk Ratio (EPC/RSL)	Carc Risk Ratio (EPC/RSL)
	Volatile Organic Compounds											
156-59-2	cis -1,2-Dichloroethene	310	S Max	7.0E-02	7.0E+01	no	2.8E+01	no	4.4	--	11	--
127-18-4	Tetrachloroethylene (PCE)	240	S Max	5.0E-03	5.0E+00	yes	9.7E+00	yes	--	4.8E-05	--	2.5E-05
79-01-6	Trichloroethylene (TCE)	280	S Max	5.0E-03	5.0E+00	yes	4.4E-01	yes	--	5.6E-05	--	6.4E-04
75-01-4	Vinyl Chloride	0.40	F S Max	2.0E-03	2.0E+00	yes	1.5E-02	yes	--	2.0E-07	--	2.7E-05
	Metals ⁽⁴⁾											
7439-97-6	Mercury	ND	Max	2.0E-03	2.0E+00	no	6.3E-01	no	--	--	--	--
7439-97-6	Mercury - Dissolved	NA	Max	2.0E-03	2.0E+00	no	6.3E-01	no	--	--	--	--
	Lead (not included in cumulative risk estimate)											
7439-92-1	Lead	4.2	F D Max	1.5E-02	1.5E+01	no	1.5E+01 ⁽³⁾	no	0.28	--	0.28	--
7439-92-1	Lead - Dissolved	NA	Max	1.5E-02	1.5E+01	no	1.5E+01 ⁽³⁾	no	--	--	--	--
Cumulative Risk Ratio									4	1E-04	11	7E-04

⁽¹⁾ Exposure point concentration is the maximum detected concentration from the ten most recent sampling events

⁽²⁾ Texas Commission on Environmental Quality (TCEQ) Texas Risk Reduction Program (TRRP) Tier 1 Groundwater Protective Concentration Levels (PCLs). Table 3. June 2012 (<http://www.tceq.state.tx.us/remediation/trrp/trrppcls.html>)

⁽³⁾ U.S. Environmental Protection Agency (USEPA) Regional Screening Levels (RSLs) for Tapwater (TR = 1E-6, HQ=1). November 2013. (http://www.epa.gov/reg3hwmd/risk/human/rb-concentration_table/Generic_Tables/docs/master_sl_table_run_NOV2013.pdf)

⁽⁴⁾ If dissolved metals data are available, they are used in the cumulative risk ratio. If only total metals data are available, they are used in the risk ratio

mg/kg - milligrams per Liter

µg/kg - micrograms per Liter

-- Not applicable

NA - Not analyzed

ND - Not detected

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

D - Definitive data

S - Screening data

Table 5.72
Risk Ratio Calculations for Potential Exposure to Groundwater by a Resident
On-Post Well CS-MW17-LGR
Camp Stanley Storage Activity, Bexar County, Texas

CAS No.	Compound	Exposure Point Concentration (EPC) ⁽¹⁾ (µg/L)	TCEQ TRRP Tier 1 Groundwater PCL - Residential Ingestion ⁽²⁾ (mg/L)	TCEQ TRRP Tier 1 Groundwater PCL - Residential Ingestion ⁽²⁾ (µg/L)	Carcino- genic?	USEPA Tapwater RSL ⁽³⁾ (µg/L)	Carcino- genic?	Non-Carc Risk Ratio (EPC/PCL- ing)	Carc Risk Ratio (EPC/PCL- ing)	Non-Carc Risk Ratio (EPC/RSL)	Carc Risk Ratio (EPC/RSL)
	Volatile Organic Compounds										
156-59-2	cis-1,2-Dichloroethene	ND Max	7.0E-02	7.0E+01	no	2.8E+01	no	--	--	--	--
127-18-4	Tetrachloroethylene (PCE)	0.50 F D Max	5.0E-03	5.0E+00	yes	9.7E+00	yes	--	1.0E-07	--	5.2E-08
79-01-6	Trichloroethylene (TCE)	ND Max	5.0E-03	5.0E+00	yes	4.4E-01	yes	--	--	--	--
75-01-4	Vinyl Chloride	ND Max	2.0E-03	2.0E+00	yes	1.5E-02	yes	--	--	--	--
	Metals ⁽⁴⁾										
7439-97-6	Mercury	ND Max	2.0E-03	2.0E+00	no	6.3E-01	no	--	--	--	--
7439-97-6	Mercury - Dissolved	NA Max	2.0E-03	2.0E+00	no	6.3E-01	no	--	--	--	--
	Lead (not included in cumulative risk estimate)										
7439-92-1	Lead	0.092 F D Max	1.5E-02	1.5E+01	no	1.5E+01 ⁽³⁾	no	0.0061	--	0.0061	--
7439-92-1	Lead - Dissolved	NA Max	1.5E-02	1.5E+01	no	1.5E+01 ⁽³⁾	no	--	--	--	--
Cumulative Risk Ratio								--	1E-07	--	5E-08

⁽¹⁾ Exposure point concentration is the maximum detected concentration from the ten most recent sampling events

⁽²⁾ Texas Commission on Environmental Quality (TCEQ) Texas Risk Reduction Program (TRRP) Tier 1 Groundwater Protective Concentration Levels (PCLs). Table 3. June 2012 (<http://www.tceq.state.tx.us/remediation/trrp/trrppcls.html>)

⁽³⁾ U.S. Environmental Protection Agency (USEPA) Regional Screening Levels (RSLs) for Tapwater (TR = 1E-6, HQ=1). November 2013. (http://www.epa.gov/reg3hwmd/risk/human/rb-concentration_table/Generic_Tables/docs/master_sl_table_run_NOV2013.pdf)

⁽⁴⁾ If dissolved metals data are available, they are used in the cumulative risk ratio. If only total metals data are available, they are used in the risk ratio

mg/kg - milligrams per Liter

µg/kg - micrograms per Liter

-- Not applicable

NA - Not analyzed

ND - Not detected

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

D - Definitive data

Table 5.73
Risk Ratio Calculations for Potential Exposure to Groundwater by a Resident
On-Post Well CS-MW18-LGR
Camp Stanley Storage Activity, Bexar County, Texas

CAS No.	Compound	Exposure Point Concentration (EPC) ⁽¹⁾ (µg/L)		TCEQ TRRP Tier 1 Groundwater PCL - Residential Ingestion ⁽²⁾ (mg/L)	TCEQ TRRP Tier 1 Groundwater PCL - Residential Ingestion ⁽²⁾ (µg/L)	Carcino-genic?	USEPA Tapwater RSL ⁽³⁾ (µg/L)	Carcino-genic?	Non-Carc Risk Ratio (EPC/PCL-ing)	Carc Risk Ratio (EPC/PCL-ing)	Non-Carc Risk Ratio (EPC/RSL)	Carc Risk Ratio (EPC/RSL)
	Volatile Organic Compounds											
156-59-2	cis -1,2-Dichloroethene	ND	Max	7.0E-02	7.0E+01	no	2.8E+01	no	--	--	--	--
127-18-4	Tetrachloroethylene (PCE)	0.21	F D Max	5.0E-03	5.0E+00	yes	9.7E+00	yes	--	4.2E-08	--	2.2E-08
79-01-6	Trichloroethylene (TCE)	ND	Max	5.0E-03	5.0E+00	yes	4.4E-01	yes	--	--	--	--
75-01-4	Vinyl Chloride	ND	Max	2.0E-03	2.0E+00	yes	1.5E-02	yes	--	--	--	--
	Metals ⁽⁴⁾											
7439-97-6	Mercury	ND	Max	2.0E-03	2.0E+00	no	6.3E-01	no	--	--	--	--
7439-97-6	Mercury - Dissolved	NA	Max	2.0E-03	2.0E+00	no	6.3E-01	no	--	--	--	--
	Lead (not included in cumulative risk estimate)											
7439-92-1	Lead	2.2	F D Max	1.5E-02	1.5E+01	no	1.5E+01 ⁽³⁾	no	0.15	--	0.15	--
7439-92-1	Lead - Dissolved	NA	Max	1.5E-02	1.5E+01	no	1.5E+01 ⁽³⁾	no	--	--	--	--
Cumulative Risk Ratio									--	4E-08	--	2E-08

⁽¹⁾ Exposure point concentration is the maximum detected concentration from the ten most recent sampling events

⁽²⁾ Texas Commission on Environmental Quality (TCEQ) Texas Risk Reduction Program (TRRP) Tier 1 Groundwater Protective Concentration Levels (PCLs). Table 3. June 2012 (<http://www.tceq.state.tx.us/remediation/trrp/trrppcls.html>)

⁽³⁾ U.S. Environmental Protection Agency (USEPA) Regional Screening Levels (RSLs) for Tapwater (TR = 1E-6, HQ=1). November 2013. (http://www.epa.gov/reg3hwmd/risk/human/rb-concentration_table/Generic_Tables/docs/master_sl_table_run_NOV2013.pdf)

⁽⁴⁾ If dissolved metals data are available, they are used in the cumulative risk ratio. If only total metals data are available, they are used in the risk ratio

mg/kg - milligrams per Liter

µg/kg - micrograms per Liter

-- Not applicable

NA - Not analyzed

ND - Not detected

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

D - Definitive data

Table 5.74
Risk Ratio Calculations for Potential Exposure to Groundwater by a Resident
On-Post Well CS-MW19-LGR
Camp Stanley Storage Activity, Bexar County, Texas

CAS No.	Compound	Exposure Point Concentration (EPC) ⁽¹⁾ (µg/L)	TCEQ TRRP Tier 1 Groundwater PCL - Residential Ingestion ⁽²⁾ (mg/L)	TCEQ TRRP Tier 1 Groundwater PCL - Residential Ingestion ⁽²⁾ (µg/L)	Carcino- genic?	USEPA Tapwater RSL ⁽³⁾ (µg/L)	Carcino- genic?	Non-Carc Risk Ratio (EPC/PCL- ing)	Carc Risk Ratio (EPC/PCL- ing)	Non-Carc Risk Ratio (EPC/RSL)	Carc Risk Ratio (EPC/RSL)
	Volatile Organic Compounds										
156-59-2	cis-1,2-Dichloroethene	ND Max	7.0E-02	7.0E+01	no	2.8E+01	no	--	--	--	--
127-18-4	Tetrachloroethylene (PCE)	0.69 F D Max	5.0E-03	5.0E+00	yes	9.7E+00	yes	--	1.4E-07	--	7.1E-08
79-01-6	Trichloroethylene (TCE)	ND Max	5.0E-03	5.0E+00	yes	4.4E-01	yes	--	--	--	--
75-01-4	Vinyl Chloride	ND Max	2.0E-03	2.0E+00	yes	1.5E-02	yes	--	--	--	--
	Metals ⁽⁴⁾										
7439-97-6	Mercury	0.20 F D Max	2.0E-03	2.0E+00	no	6.3E-01	no	0.10	--	0.32	--
7439-97-6	Mercury - Dissolved	NA Max	2.0E-03	2.0E+00	no	6.3E-01	no	--	--	--	--
	Lead (not included in cumulative risk estimate)										
7439-92-1	Lead	ND Max	1.5E-02	1.5E+01	no	1.5E+01 ⁽³⁾	no	--	--	--	--
7439-92-1	Lead - Dissolved	NA Max	1.5E-02	1.5E+01	no	1.5E+01 ⁽³⁾	no	--	--	--	--

Cumulative Risk Ratio

0.1

1E-07

0.3

7E-08

⁽¹⁾ Exposure point concentration is the maximum detected concentration from the ten most recent sampling events

⁽²⁾ Texas Commission on Environmental Quality (TCEQ) Texas Risk Reduction Program (TRRP) Tier 1 Groundwater Protective Concentration Levels (PCLs). Table 3. June 2012 (<http://www.tceq.state.tx.us/remediation/trrp/trrppcls.html>)

⁽³⁾ U.S. Environmental Protection Agency (USEPA) Regional Screening Levels (RSLs) for Tapwater (TR = 1E-6, HQ=1). November 2013. (http://www.epa.gov/reg3hwmd/risk/human/rb-concentration_table/Generic_Tables/docs/master_sl_table_run_NOV2013.pdf)

⁽⁴⁾ If dissolved metals data are available, they are used in the cumulative risk ratio. If only total metals data are available, they are used in the risk ratio

mg/kg - milligrams per Liter

µg/kg - micrograms per Liter

-- Not applicable

NA - Not analyzed

ND - Not detected

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

D - Definitive data

Table 5.75
Risk Ratio Calculations for Potential Exposure to Groundwater by a Resident
On-Post Well CS-MW20-LGR
Camp Stanley Storage Activity, Bexar County, Texas

CAS No.	Compound	Exposure Point Concentration (EPC) ⁽¹⁾ (µg/L)	TCEQ TRRP Tier 1 Groundwater PCL - Residential Ingestion ⁽²⁾ (mg/L)	TCEQ TRRP Tier 1 Groundwater PCL - Residential Ingestion ⁽²⁾ (µg/L)	Carcino- genic?	USEPA Tapwater RSL ⁽³⁾ (µg/L)	Carcino- genic?	Non-Carc Risk Ratio (EPC/PCL- ing)	Carc Risk Ratio (EPC/PCL- ing)	Non-Carc Risk Ratio (EPC/RSL)	Carc Risk Ratio (EPC/RSL)
	Volatile Organic Compounds										
156-59-2	cis-1,2-Dichloroethene	ND Max	7.0E-02	7.0E+01	no	2.8E+01	no	--	--	--	--
127-18-4	Tetrachloroethylene (PCE)	2.3 D Max	5.0E-03	5.0E+00	yes	9.7E+00	yes	--	4.6E-07	--	2.4E-07
79-01-6	Trichloroethylene (TCE)	0.17 F D Max	5.0E-03	5.0E+00	yes	4.4E-01	yes	--	3.4E-08	--	3.9E-07
75-01-4	Vinyl Chloride	ND Max	2.0E-03	2.0E+00	yes	1.5E-02	yes	--	--	--	--
	Metals ⁽⁴⁾										
7439-97-6	Mercury	ND Max	2.0E-03	2.0E+00	no	6.3E-01	no	--	--	--	--
7439-97-6	Mercury - Dissolved	NA Max	2.0E-03	2.0E+00	no	6.3E-01	no	--	--	--	--
	Lead (not included in cumulative risk estimate)										
7439-92-1	Lead	2.1 F D Max	1.5E-02	1.5E+01	no	1.5E+01 ⁽³⁾	no	0.14	--	0.14	--
7439-92-1	Lead - Dissolved	NA Max	1.5E-02	1.5E+01	no	1.5E+01 ⁽³⁾	no	--	--	--	--
Cumulative Risk Ratio								--	5E-07	--	6E-07

⁽¹⁾ Exposure point concentration is the maximum detected concentration from the ten most recent sampling events

⁽²⁾ Texas Commission on Environmental Quality (TCEQ) Texas Risk Reduction Program (TRRP) Tier 1 Groundwater Protective Concentration Levels (PCLs). Table 3. June 2012 (<http://www.tceq.state.tx.us/remediation/trrp/trrppcls.html>)

⁽³⁾ U.S. Environmental Protection Agency (USEPA) Regional Screening Levels (RSLs) for Tapwater (TR = 1E-6, HQ=1). November 2013. (http://www.epa.gov/reg3hwmd/risk/human/rb-concentration_table/Generic_Tables/docs/master_sl_table_run_NOV2013.pdf)

⁽⁴⁾ If dissolved metals data are available, they are used in the cumulative risk ratio. If only total metals data are available, they are used in the risk ratio

mg/kg - milligrams per Liter

µg/kg - micrograms per Liter

-- Not applicable

NA - Not analyzed

ND - Not detected

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

D - Definitive data

Table 5.76
Risk Ratio Calculations for Potential Exposure to Groundwater by a Resident
On-Post Well CS-MW21-LGR
Camp Stanley Storage Activity, Bexar County, Texas

CAS No.	Compound	Exposure Point Concentration (EPC) ⁽¹⁾ (µg/L)		TCEQ TRRP Tier 1 Groundwater PCL - Residential Ingestion ⁽²⁾ (mg/L)	TCEQ TRRP Tier 1 Groundwater PCL - Residential Ingestion ⁽²⁾ (µg/L)	Carcino-genic?	USEPA Tapwater RSL ⁽³⁾ (µg/L)	Carcino-genic?	Non-Carc Risk Ratio (EPC/PCL-ing)	Carc Risk Ratio (EPC/PCL-ing)	Non-Carc Risk Ratio (EPC/RSL)	Carc Risk Ratio (EPC/RSL)
	Volatile Organic Compounds											
156-59-2	cis -1,2-Dichloroethene	ND	Max	7.0E-02	7.0E+01	no	2.8E+01	no	--	--	--	--
127-18-4	Tetrachloroethylene (PCE)	ND	Max	5.0E-03	5.0E+00	yes	9.7E+00	yes	--	--	--	--
79-01-6	Trichloroethylene (TCE)	ND	Max	5.0E-03	5.0E+00	yes	4.4E-01	yes	--	--	--	--
75-01-4	Vinyl Chloride	ND	Max	2.0E-03	2.0E+00	yes	1.5E-02	yes	--	--	--	--
	Metals ⁽⁴⁾											
7439-97-6	Mercury	ND	Max	2.0E-03	2.0E+00	no	6.3E-01	no	--	--	--	--
7439-97-6	Mercury - Dissolved	NA	Max	2.0E-03	2.0E+00	no	6.3E-01	no	--	--	--	--
	Lead (not included in cumulative risk estimate)											
7439-92-1	Lead	2.6	F D Max	1.5E-02	1.5E+01	no	1.5E+01 ⁽³⁾	no	0.17	--	0.17	--
7439-92-1	Lead - Dissolved	NA	Max	1.5E-02	1.5E+01	no	1.5E+01 ⁽³⁾	no	--	--	--	--

Cumulative Risk Ratio

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⁽¹⁾ Exposure point concentration is the maximum detected concentration from the ten most recent sampling events

⁽²⁾ Texas Commission on Environmental Quality (TCEQ) Texas Risk Reduction Program (TRRP) Tier 1 Groundwater Protective Concentration Levels (PCLs). Table 3. June 2012 (<http://www.tceq.state.tx.us/remediation/trrp/trrppcls.html>)

⁽³⁾ U.S. Environmental Protection Agency (USEPA) Regional Screening Levels (RSLs) for Tapwater (TR = 1E-6, HQ=1). November 2013. (http://www.epa.gov/reg3hwmd/risk/human/rb-concentration_table/Generic_Tables/docs/master_sl_table_run_NOV2013.pdf)

⁽⁴⁾ If dissolved metals data are available, they are used in the cumulative risk ratio. If only total metals data are available, they are used in the risk ratio

mg/kg - milligrams per Liter

µg/kg - micrograms per Liter

-- Not applicable

NA - Not analyzed

ND - Not detected

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

D - Definitive data

Table 5.77
Risk Ratio Calculations for Potential Exposure to Groundwater by a Resident
On-Post Well CS-MW22-LGR
Camp Stanley Storage Activity, Bexar County, Texas

CAS No.	Compound	Exposure Point Concentration (EPC) ⁽¹⁾ (µg/L)		TCEQ TRRP Tier 1 Groundwater PCL - Residential Ingestion ⁽²⁾ (mg/L)	TCEQ TRRP Tier 1 Groundwater PCL - Residential Ingestion ⁽²⁾ (µg/L)	Carcino- genic?	USEPA Tapwater RSL ⁽³⁾ (µg/L)	Carcino- genic?	Non-Carc Risk Ratio (EPC/PCL- ing)	Carc Risk Ratio (EPC/PCL- ing)	Non-Carc Risk Ratio (EPC/RSL)	Carc Risk Ratio (EPC/RSL)
	Volatile Organic Compounds											
156-59-2	cis -1,2-Dichloroethene	ND	Max	7.0E-02	7.0E+01	no	2.8E+01	no	--	--	--	--
127-18-4	Tetrachloroethylene (PCE)	ND	Max	5.0E-03	5.0E+00	yes	9.7E+00	yes	--	--	--	--
79-01-6	Trichloroethylene (TCE)	0.28	F D Max	5.0E-03	5.0E+00	yes	4.4E-01	yes	--	5.6E-08	--	6.4E-07
75-01-4	Vinyl Chloride	ND	Max	2.0E-03	2.0E+00	yes	1.5E-02	yes	--	--	--	--
	Metals ⁽⁴⁾											
7439-97-6	Mercury	ND	Max	2.0E-03	2.0E+00	no	6.3E-01	no	--	--	--	--
7439-97-6	Mercury - Dissolved	NA	Max	2.0E-03	2.0E+00	no	6.3E-01	no	--	--	--	--
	Lead (not included in cumulative risk estimate)											
7439-92-1	Lead	3.3	F D Max	1.5E-02	1.5E+01	no	1.5E+01 ⁽³⁾	no	0.22	--	0.22	--
7439-92-1	Lead - Dissolved	NA	Max	1.5E-02	1.5E+01	no	1.5E+01 ⁽³⁾	no	--	--	--	--
Cumulative Risk Ratio									--	6E-08	--	6E-07

⁽¹⁾ Exposure point concentration is the maximum detected concentration from the ten most recent sampling events

⁽²⁾ Texas Commission on Environmental Quality (TCEQ) Texas Risk Reduction Program (TRRP) Tier 1 Groundwater Protective Concentration Levels (PCLs). Table 3. June 2012 (<http://www.tceq.state.tx.us/remediation/trrp/trrppcls.html>)

⁽³⁾ U.S. Environmental Protection Agency (USEPA) Regional Screening Levels (RSLs) for Tapwater (TR = 1E-6, HQ=1). November 2013. (http://www.epa.gov/reg3hwmd/risk/human/rb-concentration_table/Generic_Tables/docs/master_sl_table_run_NOV2013.pdf)

⁽⁴⁾ If dissolved metals data are available, they are used in the cumulative risk ratio. If only total metals data are available, they are used in the risk ratio

mg/kg - milligrams per Liter

µg/kg - micrograms per Liter

-- Not applicable

NA - Not analyzed

ND - Not detected

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

D - Definitive data

Table 5.78
Risk Ratio Calculations for Potential Exposure to Groundwater by a Resident
On-Post Well CS-MW23-LGR
Camp Stanley Storage Activity, Bexar County, Texas

CAS No.	Compound	Exposure Point Concentration (EPC) ⁽¹⁾ (µg/L)		TCEQ TRRP Tier 1 Groundwater PCL - Residential Ingestion ⁽²⁾ (mg/L)	TCEQ TRRP Tier 1 Groundwater PCL - Residential Ingestion ⁽²⁾ (µg/L)	Carcino-genic?	USEPA Tapwater RSL ⁽³⁾ (µg/L)	Carcino-genic?	Non-Carc Risk Ratio (EPC/PCL-ing)	Carc Risk Ratio (EPC/PCL-ing)	Non-Carc Risk Ratio (EPC/RSL)	Carc Risk Ratio (EPC/RSL)
	Volatile Organic Compounds											
156-59-2	cis -1,2-Dichloroethene	ND	Max	7.0E-02	7.0E+01	no	2.8E+01	no	--	--	--	--
127-18-4	Tetrachloroethylene (PCE)	ND	Max	5.0E-03	5.0E+00	yes	9.7E+00	yes	--	--	--	--
79-01-6	Trichloroethylene (TCE)	ND	Max	5.0E-03	5.0E+00	yes	4.4E-01	yes	--	--	--	--
75-01-4	Vinyl Chloride	ND	Max	2.0E-03	2.0E+00	yes	1.5E-02	yes	--	--	--	--
	Metals ⁽⁴⁾											
7439-97-6	Mercury	0.20	F D Max	2.0E-03	2.0E+00	no	6.3E-01	no	0.10	--	0.32	--
7439-97-6	Mercury - Dissolved	NA	Max	2.0E-03	2.0E+00	no	6.3E-01	no	--	--	--	--
	Lead (not included in cumulative risk estimate)											
7439-92-1	Lead	ND	Max	1.5E-02	1.5E+01	no	1.5E+01 ⁽³⁾	no	--	--	--	--
7439-92-1	Lead - Dissolved	NA	Max	1.5E-02	1.5E+01	no	1.5E+01 ⁽³⁾	no	--	--	--	--
Cumulative Risk Ratio									0.1	--	0.3	--

⁽¹⁾ Exposure point concentration is the maximum detected concentration from the ten most recent sampling events

⁽²⁾ Texas Commission on Environmental Quality (TCEQ) Texas Risk Reduction Program (TRRP) Tier 1 Groundwater Protective Concentration Levels (PCLs). Table 3. June 2012 (<http://www.tceq.state.tx.us/remediation/trrp/trrppcls.html>)

⁽³⁾ U.S. Environmental Protection Agency (USEPA) Regional Screening Levels (RSLs) for Tapwater (TR = 1E-6, HQ=1). November 2013. (http://www.epa.gov/reg3hwmd/risk/human/rb-concentration_table/Generic_Tables/docs/master_sl_table_run_NOV2013.pdf)

⁽⁴⁾ If dissolved metals data are available, they are used in the cumulative risk ratio. If only total metals data are available, they are used in the risk ratio

mg/kg - milligrams per Liter

µg/kg - micrograms per Liter

-- Not applicable

NA - Not analyzed

ND - Not detected

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

D - Definitive data

Table 5.79
Risk Ratio Calculations for Potential Exposure to Groundwater by a Resident
On-Post Well CS-MW24-LGR
Camp Stanley Storage Activity, Bexar County, Texas

CAS No.	Compound	Exposure Point Concentration (EPC) ⁽¹⁾ (µg/L)		TCEQ TRRP Tier 1 Groundwater PCL - Residential Ingestion ⁽²⁾ (mg/L)	TCEQ TRRP Tier 1 Groundwater PCL - Residential Ingestion ⁽²⁾ (µg/L)	Carcino- genic?	USEPA Tapwater RSL ⁽³⁾ (µg/L)	Carcino- genic?	Non-Carc Risk Ratio (EPC/PCL- ing)	Carc Risk Ratio (EPC/PCL- ing)	Non-Carc Risk Ratio (EPC/RSL)	Carc Risk Ratio (EPC/RSL)
	Volatile Organic Compounds											
156-59-2	cis -1,2-Dichloroethene	ND	Max	7.0E-02	7.0E+01	no	2.8E+01	no	--	--	--	--
127-18-4	Tetrachloroethylene (PCE)	ND	Max	5.0E-03	5.0E+00	yes	9.7E+00	yes	--	--	--	--
79-01-6	Trichloroethylene (TCE)	ND	Max	5.0E-03	5.0E+00	yes	4.4E-01	yes	--	--	--	--
75-01-4	Vinyl Chloride	ND	Max	2.0E-03	2.0E+00	yes	1.5E-02	yes	--	--	--	--
	Metals ⁽⁴⁾											
7439-97-6	Mercury	0.20	F D Max	2.0E-03	2.0E+00	no	6.3E-01	no	0.10	--	0.32	--
7439-97-6	Mercury - Dissolved	NA	Max	2.0E-03	2.0E+00	no	6.3E-01	no	--	--	--	--
	Lead (not included in cumulative risk estimate)											
7439-92-1	Lead	9.6	F D Max	1.5E-02	1.5E+01	no	1.5E+01 ⁽³⁾	no	0.64	--	0.64	--
7439-92-1	Lead - Dissolved	NA	Max	1.5E-02	1.5E+01	no	1.5E+01 ⁽³⁾	no	--	--	--	--
Cumulative Risk Ratio									0.1	--	0.3	--

⁽¹⁾ Exposure point concentration is the maximum detected concentration from the ten most recent sampling events

⁽²⁾ Texas Commission on Environmental Quality (TCEQ) Texas Risk Reduction Program (TRRP) Tier 1 Groundwater Protective Concentration Levels (PCLs). Table 3. June 2012 (<http://www.tceq.state.tx.us/remediation/trrp/trrppcls.html>)

⁽³⁾ U.S. Environmental Protection Agency (USEPA) Regional Screening Levels (RSLs) for Tapwater (TR = 1E-6, HQ=1). November 2013. (http://www.epa.gov/reg3hwmd/risk/human/rb-concentration_table/Generic_Tables/docs/master_sl_table_run_NOV2013.pdf)

⁽⁴⁾ If dissolved metals data are available, they are used in the cumulative risk ratio. If only total metals data are available, they are used in the risk ratio

mg/kg - milligrams per Liter

µg/kg - micrograms per Liter

-- Not applicable

NA - Not analyzed

ND - Not detected

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

D - Definitive data

Table 5.80
Risk Ratio Calculations for Potential Exposure to Groundwater by a Resident
On-Post Well CS-MW25-LGR
Camp Stanley Storage Activity, Bexar County, Texas

CAS No.	Compound	Exposure Point Concentration (EPC) ⁽¹⁾ (µg/L)		TCEQ TRRP Tier 1 Groundwater PCL - Residential Ingestion ⁽²⁾ (mg/L)	TCEQ TRRP Tier 1 Groundwater PCL - Residential Ingestion ⁽²⁾ (µg/L)	Carcino-genic?	USEPA Tapwater RSL ⁽³⁾ (µg/L)	Carcino-genic?	Non-Carc Risk Ratio (EPC/PCL-ing)	Carc Risk Ratio (EPC/PCL-ing)	Non-Carc Risk Ratio (EPC/RSL)	Carc Risk Ratio (EPC/RSL)
	Volatile Organic Compounds											
156-59-2	cis -1,2-Dichloroethene	ND	Max	7.0E-02	7.0E+01	no	2.8E+01	no	--	--	--	--
127-18-4	Tetrachloroethylene (PCE)	ND	Max	5.0E-03	5.0E+00	yes	9.7E+00	yes	--	--	--	--
79-01-6	Trichloroethylene (TCE)	ND	Max	5.0E-03	5.0E+00	yes	4.4E-01	yes	--	--	--	--
75-01-4	Vinyl Chloride	ND	Max	2.0E-03	2.0E+00	yes	1.5E-02	yes	--	--	--	--
	Metals ⁽⁴⁾											
7439-97-6	Mercury	0.20	F D Max	2.0E-03	2.0E+00	no	6.3E-01	no	0.10	--	0.32	--
7439-97-6	Mercury - Dissolved	NA	Max	2.0E-03	2.0E+00	no	6.3E-01	no	--	--	--	--
	Lead (not included in cumulative risk estimate)											
7439-92-1	Lead	20	F D Max	1.5E-02	1.5E+01	no	1.5E+01 ⁽³⁾	no	1.3	--	1.3	--
7439-92-1	Lead - Dissolved	NA	Max	1.5E-02	1.5E+01	no	1.5E+01 ⁽³⁾	no	--	--	--	--
Cumulative Risk Ratio									0.1	--	0.3	--

⁽¹⁾ Exposure point concentration is the maximum detected concentration from the ten most recent sampling events

⁽²⁾ Texas Commission on Environmental Quality (TCEQ) Texas Risk Reduction Program (TRRP) Tier 1 Groundwater Protective Concentration Levels (PCLs). Table 3. June 2012 (<http://www.tceq.state.tx.us/remediation/trrp/trrppcls.html>)

⁽³⁾ U.S. Environmental Protection Agency (USEPA) Regional Screening Levels (RSLs) for Tapwater (TR = 1E-6, HQ=1). November 2013. (http://www.epa.gov/reg3hwmd/risk/human/rb-concentration_table/Generic_Tables/docs/master_sl_table_run_NOV2013.pdf)

⁽⁴⁾ If dissolved metals data are available, they are used in the cumulative risk ratio. If only total metals data are available, they are used in the risk ratio

mg/kg - milligrams per Liter

µg/kg - micrograms per Liter

-- Not applicable

NA - Not analyzed

ND - Not detected

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

D - Definitive data

Table 5.81
Risk Ratio Calculations for Potential Exposure to Groundwater by a Resident
On-Post Well CS-MW35-LGR
Camp Stanley Storage Activity, Bexar County, Texas

CAS No.	Compound	Exposure Point Concentration (EPC) ⁽¹⁾ (µg/L)		TCEQ TRRP Tier 1 Groundwater PCL - Residential Ingestion ⁽²⁾ (mg/L)	TCEQ TRRP Tier 1 Groundwater PCL - Residential Ingestion ⁽²⁾ (µg/L)	Carcino-genic?	USEPA Tapwater RSL ⁽³⁾ (µg/L)	Carcino-genic?	Non-Carc Risk Ratio (EPC/PCL-ing)	Carc Risk Ratio (EPC/PCL-ing)	Non-Carc Risk Ratio (EPC/RSL)	Carc Risk Ratio (EPC/RSL)
	Volatile Organic Compounds											
156-59-2	cis -1,2-Dichloroethene	ND	Max	7.0E-02	7.0E+01	no	2.8E+01	no	--	--	--	--
127-18-4	Tetrachloroethylene (PCE)	2.8	D Max	5.0E-03	5.0E+00	yes	9.7E+00	yes	--	5.6E-07	--	2.9E-07
79-01-6	Trichloroethylene (TCE)	ND	Max	5.0E-03	5.0E+00	yes	4.4E-01	yes	--	--	--	--
75-01-4	Vinyl Chloride	ND	Max	2.0E-03	2.0E+00	yes	1.5E-02	yes	--	--	--	--
	Metals ⁽⁴⁾											
7439-97-6	Mercury	ND	Max	2.0E-03	2.0E+00	no	6.3E-01	no	--	--	--	--
7439-97-6	Mercury - Dissolved	NA	Max	2.0E-03	2.0E+00	no	6.3E-01	no	--	--	--	--
	Lead (not included in cumulative risk estimate)											
7439-92-1	Lead	8.4	F D Max	1.5E-02	1.5E+01	no	1.5E+01 ⁽³⁾	no	0.56	--	0.56	--
7439-92-1	Lead - Dissolved	NA	Max	1.5E-02	1.5E+01	no	1.5E+01 ⁽³⁾	no	--	--	--	--
Cumulative Risk Ratio									--	6E-07	--	3E-07

⁽¹⁾ Exposure point concentration is the maximum detected concentration from the ten most recent sampling events

⁽²⁾ Texas Commission on Environmental Quality (TCEQ) Texas Risk Reduction Program (TRRP) Tier 1 Groundwater Protective Concentration Levels (PCLs). Table 3. June 2012 (<http://www.tceq.state.tx.us/remediation/trrp/trrppcls.html>)

⁽³⁾ U.S. Environmental Protection Agency (USEPA) Regional Screening Levels (RSLs) for Tapwater (TR = 1E-6, HQ=1). November 2013. (http://www.epa.gov/reg3hwmd/risk/human/rb-concentration_table/Generic_Tables/docs/master_sl_table_run_NOV2013.pdf)

⁽⁴⁾ If dissolved metals data are available, they are used in the cumulative risk ratio. If only total metals data are available, they are used in the risk ratio

mg/kg - milligrams per Liter

µg/kg - micrograms per Liter

-- Not applicable

NA - Not analyzed

ND - Not detected

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

D - Definitive data

Table 5.82
Risk Ratio Calculations for Potential Exposure to Groundwater by a Resident
On-Post Well CS-MW36-LGR
Camp Stanley Storage Activity, Bexar County, Texas

CAS No.	Compound	Exposure Point Concentration (EPC) ⁽¹⁾ (µg/L)		TCEQ TRRP Tier 1 Groundwater PCL - Residential Ingestion ⁽²⁾ (mg/L)	TCEQ TRRP Tier 1 Groundwater PCL - Residential Ingestion ⁽²⁾ (µg/L)	Carcino-genic?	USEPA Tapwater RSL ⁽³⁾ (µg/L)	Carcino-genic?	Non-Carc Risk Ratio (EPC/PCL-ing)	Carc Risk Ratio (EPC/PCL-ing)	Non-Carc Risk Ratio (EPC/RSL)	Carc Risk Ratio (EPC/RSL)
	Volatile Organic Compounds											
156-59-2	cis-1,2-Dichloroethene	2.2	S Max	7.0E-02	7.0E+01	no	2.8E+01	no	0.031	--	0.079	--
127-18-4	Tetrachloroethylene (PCE)	31	S Max	5.0E-03	5.0E+00	yes	9.7E+00	yes	--	6.2E-06	--	3.2E-06
79-01-6	Trichloroethylene (TCE)	69	S Max	5.0E-03	5.0E+00	yes	4.4E-01	yes	--	1.4E-05	--	1.6E-04
75-01-4	Vinyl Chloride	ND	Max	2.0E-03	2.0E+00	yes	1.5E-02	yes	--	--	--	--
	Metals ⁽⁴⁾											
7439-97-6	Mercury	ND	Max	2.0E-03	2.0E+00	no	6.3E-01	no	--	--	--	--
7439-97-6	Mercury - Dissolved	ND	Max	2.0E-03	2.0E+00	no	6.3E-01	no	--	--	--	--
	Lead (not included in cumulative risk estimate)											
7439-92-1	Lead	ND	Max	1.5E-02	1.5E+01	no	1.5E+01 ⁽³⁾	no	--	--	--	--
7439-92-1	Lead - Dissolved	ND	Max	1.5E-02	1.5E+01	no	1.5E+01 ⁽³⁾	no	--	--	--	--
Cumulative Risk Ratio									0.03	2E-05	0.08	2E-04

⁽¹⁾ Exposure point concentration is the maximum detected concentration from the ten most recent sampling events

⁽²⁾ Texas Commission on Environmental Quality (TCEQ) Texas Risk Reduction Program (TRRP) Tier 1 Groundwater Protective Concentration Levels (PCLs). Table 3. June 2012 (<http://www.tceq.state.tx.us/remediation/trrp/trrppcls.html>)

⁽³⁾ U.S. Environmental Protection Agency (USEPA) Regional Screening Levels (RSLs) for Tapwater (TR = 1E-6, HQ=1). November 2013. (http://www.epa.gov/reg3hwmd/risk/human/rb-concentration_table/Generic_Tables/docs/master_sl_table_run_NOV2013.pdf)

⁽⁴⁾ If dissolved metals data are available, they are used in the cumulative risk ratio. If only total metals data are available, they are used in the risk ratio

mg/kg - milligrams per Liter

µg/kg - micrograms per Liter

-- Not applicable

ND - Not detected

S - Screening data

Table 5.83
Risk Ratio Calculations for Potential Exposure to Groundwater by a Resident
On-Post Well CS-MWG-LGR
Camp Stanley Storage Activity, Bexar County, Texas

CAS No.	Compound	Exposure Point Concentration (EPC) ⁽¹⁾ (µg/L)		TCEQ TRRP Tier 1 Groundwater PCL - Residential Ingestion ⁽²⁾ (mg/L)	TCEQ TRRP Tier 1 Groundwater PCL - Residential Ingestion ⁽²⁾ (µg/L)	Carcino-genic?	USEPA Tapwater RSL ⁽³⁾ (µg/L)	Carcino-genic?	Non-Carc Risk Ratio (EPC/PCL-ing)	Carc Risk Ratio (EPC/PCL-ing)	Non-Carc Risk Ratio (EPC/RSL)	Carc Risk Ratio (EPC/RSL)
	Volatile Organic Compounds											
156-59-2	cis -1,2-Dichloroethene	ND	Max	7.0E-02	7.0E+01	no	2.8E+01	no	--	--	--	--
127-18-4	Tetrachloroethylene (PCE)	ND	Max	5.0E-03	5.0E+00	yes	9.7E+00	yes	--	--	--	--
79-01-6	Trichloroethylene (TCE)	ND	Max	5.0E-03	5.0E+00	yes	4.4E-01	yes	--	--	--	--
75-01-4	Vinyl Chloride	ND	Max	2.0E-03	2.0E+00	yes	1.5E-02	yes	--	--	--	--
	Metals ⁽⁴⁾											
7439-97-6	Mercury	ND	Max	2.0E-03	2.0E+00	no	6.3E-01	no	--	--	--	--
7439-97-6	Mercury - Dissolved	NA	Max	2.0E-03	2.0E+00	no	6.3E-01	no	--	--	--	--
	Lead (not included in cumulative risk estimate)											
7439-92-1	Lead	10	F D Max	1.5E-02	1.5E+01	no	1.5E+01 ⁽³⁾	no	0.67	--	0.67	--
7439-92-1	Lead - Dissolved	NA	Max	1.5E-02	1.5E+01	no	1.5E+01 ⁽³⁾	no	--	--	--	--

Cumulative Risk Ratio -- -- -- --

⁽¹⁾ Exposure point concentration is the maximum detected concentration from the ten most recent sampling events

⁽²⁾ Texas Commission on Environmental Quality (TCEQ) Texas Risk Reduction Program (TRRP) Tier 1 Groundwater Protective Concentration Levels (PCLs). Table 3. June 2012 (<http://www.tceq.state.tx.us/remediation/trrp/trrppcls.html>)

⁽³⁾ U.S. Environmental Protection Agency (USEPA) Regional Screening Levels (RSLs) for Tapwater (TR = 1E-6, HQ=1). November 2013. (http://www.epa.gov/reg3hwmd/risk/human/rb-concentration_table/Generic_Tables/docs/master_sl_table_run_NOV2013.pdf)

⁽⁴⁾ If dissolved metals data are available, they are used in the cumulative risk ratio. If only total metals data are available, they are used in the risk ratio

mg/kg - milligrams per Liter

µg/kg - micrograms per Liter

-- Not applicable

NA - Not analyzed

ND - Not detected

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

D - Definitive data

Table 5.84
Risk Ratio Calculations for Potential Exposure to Groundwater by a Resident
On-Post Well CS-MWH-LGR
Camp Stanley Storage Activity, Bexar County, Texas

CAS No.	Compound	Exposure Point Concentration (EPC) ⁽¹⁾ (µg/L)		TCEQ TRRP Tier 1 Groundwater PCL - Residential Ingestion ⁽²⁾ (mg/L)	TCEQ TRRP Tier 1 Groundwater PCL - Residential Ingestion ⁽²⁾ (µg/L)	Carcino-genic?	USEPA Tapwater RSL ⁽³⁾ (µg/L)	Carcino-genic?	Non-Carc Risk Ratio (EPC/PCL-ing)	Carc Risk Ratio (EPC/PCL-ing)	Non-Carc Risk Ratio (EPC/RSL)	Carc Risk Ratio (EPC/RSL)
	Volatile Organic Compounds											
156-59-2	cis -1,2-Dichloroethene	ND	Max	7.0E-02	7.0E+01	no	2.8E+01	no	--	--	--	--
127-18-4	Tetrachloroethylene (PCE)	ND	Max	5.0E-03	5.0E+00	yes	9.7E+00	yes	--	--	--	--
79-01-6	Trichloroethylene (TCE)	ND	Max	5.0E-03	5.0E+00	yes	4.4E-01	yes	--	--	--	--
75-01-4	Vinyl Chloride	ND	Max	2.0E-03	2.0E+00	yes	1.5E-02	yes	--	--	--	--
	Metals ⁽⁴⁾											
7439-97-6	Mercury	ND	Max	2.0E-03	2.0E+00	no	6.3E-01	no	--	--	--	--
7439-97-6	Mercury - Dissolved	NA	Max	2.0E-03	2.0E+00	no	6.3E-01	no	--	--	--	--
	Lead (not included in cumulative risk estimate)											
7439-92-1	Lead	8.2	F D Max	1.5E-02	1.5E+01	no	1.5E+01 ⁽³⁾	no	0.55	--	0.55	--
7439-92-1	Lead - Dissolved	NA	Max	1.5E-02	1.5E+01	no	1.5E+01 ⁽³⁾	no	--	--	--	--

Cumulative Risk Ratio -- -- -- --

⁽¹⁾ Exposure point concentration is the maximum detected concentration from the ten most recent sampling events

⁽²⁾ Texas Commission on Environmental Quality (TCEQ) Texas Risk Reduction Program (TRRP) Tier 1 Groundwater Protective Concentration Levels (PCLs). Table 3. June 2012 (<http://www.tceq.state.tx.us/remediation/trrp/trrppcls.html>)

⁽³⁾ U.S. Environmental Protection Agency (USEPA) Regional Screening Levels (RSLs) for Tapwater (TR = 1E-6, HQ=1). November 2013. (http://www.epa.gov/reg3hwmd/risk/human/rb-concentration_table/Generic_Tables/docs/master_sl_table_run_NOV2013.pdf)

⁽⁴⁾ If dissolved metals data are available, they are used in the cumulative risk ratio. If only total metals data are available, they are used in the risk ratio

mg/kg - milligrams per Liter

µg/kg - micrograms per Liter

-- Not applicable

NA - Not analyzed

ND - Not detected

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

D - Definitive data

Table 5.85
Risk Ratio Calculations for Potential Exposure to Groundwater by a Resident
On-Post Westbay Well On-Post Westbay Well CS-WB01-LGR
Camp Stanley Storage Activity, Bexar County, Texas

CAS No.	Compound	Exposure Point Concentration (EPC) ⁽¹⁾ (µg/L)	TCEQ TRRP Tier 1 Groundwater PCL - Residential Ingestion ⁽²⁾ (mg/L)	TCEQ TRRP Tier 1 Groundwater PCL - Residential Ingestion ⁽²⁾ (µg/L)	Carcino- genic?	USEPA Tapwater RSL ⁽³⁾ (µg/L)	Carcino- genic?	Non-Carc Risk Ratio (EPC/PCL- ing)	Carc Risk Ratio (EPC/PCL- ing)	Non-Carc Risk Ratio (EPC/RSL)	Carc Risk Ratio (EPC/RSL)
	Volatile Organic Compounds										
156-59-2	cis-1,2-Dichloroethene	1.6 S Max	7.0E-02	7.0E+01	no	2.8E+01	no	0.023	--	0.057	--
127-18-4	Tetrachloroethylene (PCE)	22 S Max	5.0E-03	5.0E+00	yes	9.7E+00	yes	--	4.4E-06	--	2.3E-06
79-01-6	Trichloroethylene (TCE)	25 S Max	5.0E-03	5.0E+00	yes	4.4E-01	yes	--	5.0E-06	--	5.7E-05
75-01-4	Vinyl Chloride	ND Max	2.0E-03	2.0E+00	yes	1.5E-02	yes	--	--	--	--
	Metals ⁽⁴⁾										
7439-97-6	Mercury	ND Max	2.0E-03	2.0E+00	no	6.3E-01	no	--	--	--	--
7439-97-6	Mercury - Dissolved	ND Max	2.0E-03	2.0E+00	no	6.3E-01	no	--	--	--	--
	Lead (not included in cumulative risk estimate)										
7439-92-1	Lead	ND Max	1.5E-02	1.5E+01	no	1.5E+01 ⁽³⁾	no	--	--	--	--
7439-92-1	Lead - Dissolved	2.5 F S Max	1.5E-02	1.5E+01	no	1.5E+01 ⁽³⁾	no	0.17	--	0.17	--
Cumulative Risk Ratio								0.02	9E-06	0.06	6E-05

⁽¹⁾ Exposure point concentration is the maximum detected concentration from the ten most recent sampling events from intervals -04 through -09

⁽²⁾ Texas Commission on Environmental Quality (TCEQ) Texas Risk Reduction Program (TRRP) Tier 1 Groundwater Protective Concentration Levels (PCLs). Table 3. June 2012 (<http://www.tceq.state.tx.us/remediation/trrp/trrppcls.html>)

⁽³⁾ U.S. Environmental Protection Agency (USEPA) Regional Screening Levels (RSLs) for Tapwater (TR = 1E-6, HQ=1). November 2013. (http://www.epa.gov/reg3hwmd/risk/human/rb-concentration_table/Generic_Tables/docs/master_sl_table_run_NOV2013.pdf)

⁽⁴⁾ If dissolved metals data are available, they are used in the cumulative risk ratio. If only total metals data are available, they are used in the risk ratio

mg/kg - milligrams per Liter

µg/kg - micrograms per Liter

-- Not applicable

ND - Not detected

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

S - Screening data

Table 5.86
Risk Ratio Calculations for Potential Exposure to Groundwater by a Resident
On-Post Westbay Well On-Post Westbay Well CS-WB02-LGR
Camp Stanley Storage Activity, Bexar County, Texas

CAS No.	Compound	Exposure Point Concentration (EPC) ⁽¹⁾ (µg/L)	TCEQ TRRP Tier 1 Groundwater PCL - Residential Ingestion ⁽²⁾ (mg/L)	TCEQ TRRP Tier 1 Groundwater PCL - Residential Ingestion ⁽²⁾ (µg/L)	Carcino- genic?	USEPA Tapwater RSL ⁽³⁾ (µg/L)	Carcino- genic?	Non-Carc Risk Ratio (EPC/PCL- ing)	Carc Risk Ratio (EPC/PCL- ing)	Non-Carc Risk Ratio (EPC/RSL)	Carc Risk Ratio (EPC/RSL)
	Volatile Organic Compounds										
156-59-2	cis-1,2-Dichloroethene	3.7 S Max	7.0E-02	7.0E+01	no	2.8E+01	no	0.053	--	0.13	--
127-18-4	Tetrachloroethylene (PCE)	260 S Max	5.0E-03	5.0E+00	yes	9.7E+00	yes	--	5.2E-05	--	2.7E-05
79-01-6	Trichloroethylene (TCE)	17 S Max	5.0E-03	5.0E+00	yes	4.4E-01	yes	--	3.4E-06	--	3.9E-05
75-01-4	Vinyl Chloride	ND Max	2.0E-03	2.0E+00	yes	1.5E-02	yes	--	--	--	--
	Metals ⁽⁴⁾										
7439-97-6	Mercury	0.2 S Max	2.0E-03	2.0E+00	no	6.3E-01	no	0.10	--	0.32	--
7439-97-6	Mercury - Dissolved	ND Max	2.0E-03	2.0E+00	no	6.3E-01	no	--	--	--	--
	Lead (not included in cumulative risk estimate)										
7439-92-1	Lead	ND Max	1.5E-02	1.5E+01	no	1.5E+01 ⁽³⁾	no	--	--	--	--
7439-92-1	Lead - Dissolved	ND Max	1.5E-02	1.5E+01	no	1.5E+01 ⁽³⁾	no	--	--	--	--

Cumulative Risk Ratio0.26E-050.47E-05

⁽¹⁾ Exposure point concentration is the maximum detected concentration from the ten most recent sampling events from intervals -04 through -09

⁽²⁾ Texas Commission on Environmental Quality (TCEQ) Texas Risk Reduction Program (TRRP) Tier 1 Groundwater Protective Concentration Levels (PCLs). Table 3. June 2012 (<http://www.tceq.state.tx.us/remediation/trrp/trrppcls.html>)

⁽³⁾ U.S. Environmental Protection Agency (USEPA) Regional Screening Levels (RSLs) for Tapwater (TR = 1E-6, HQ=1). November 2013. (http://www.epa.gov/reg3hwmd/risk/human/rb-concentration_table/Generic_Tables/docs/master_sl_table_run_NOV2013.pdf)

⁽⁴⁾ If dissolved metals data are available, they are used in the cumulative risk ratio. If only total metals data are available, they are used in the risk ratio

mg/kg - milligrams per Liter

µg/kg - micrograms per Liter

-- Not applicable

ND - Not detected

S - Screening data

Table 5.87
Risk Ratio Calculations for Potential Exposure to Groundwater by a Resident
On-Post Westbay Well On-Post Westbay Well CS-WB03-LGR
Camp Stanley Storage Activity, Bexar County, Texas

CAS No.	Compound	Exposure Point Concentration (EPC) ⁽¹⁾ (µg/L)	TCEQ TRRP Tier 1 Groundwater PCL - Residential Ingestion ⁽²⁾ (mg/L)	TCEQ TRRP Tier 1 Groundwater PCL - Residential Ingestion ⁽²⁾ (µg/L)	Carcino- genic?	USEPA Tapwater RSL ⁽³⁾ (µg/L)	Carcino- genic?	Non-Carc Risk Ratio (EPC/PCL- ing)	Carc Risk Ratio (EPC/PCL- ing)	Non-Carc Risk Ratio (EPC/RSL)	Carc Risk Ratio (EPC/RSL)
	Volatile Organic Compounds										
156-59-2	cis-1,2-Dichloroethene	20 S Max	7.0E-02	7.0E+01	no	2.8E+01	no	0.29	--	0.71	--
127-18-4	Tetrachloroethylene (PCE)	30 S Max	5.0E-03	5.0E+00	yes	9.7E+00	yes	--	6.0E-06	--	3.1E-06
79-01-6	Trichloroethylene (TCE)	20 S Max	5.0E-03	5.0E+00	yes	4.4E-01	yes	--	4.0E-06	--	4.5E-05
75-01-4	Vinyl Chloride	0.42 F S Max	2.0E-03	2.0E+00	yes	1.5E-02	yes	--	2.1E-07	--	2.8E-05
	Metals ⁽⁴⁾										
7439-97-6	Mercury	ND Max	2.0E-03	2.0E+00	no	6.3E-01	no	--	--	--	--
7439-97-6	Mercury - Dissolved	0.20 S Max	2.0E-03	2.0E+00	no	6.3E-01	no	0.10	--	0.32	--
	Lead (not included in cumulative risk estimate)										
7439-92-1	Lead	ND Max	1.5E-02	1.5E+01	no	1.5E+01 ⁽³⁾	no	--	--	--	--
7439-92-1	Lead - Dissolved	2.5 F S Max	1.5E-02	1.5E+01	no	1.5E+01 ⁽³⁾	no	0.17	--	0.17	--
Cumulative Risk Ratio								0.4	1E-05	1	8E-05

⁽¹⁾ Exposure point concentration is the maximum detected concentration from the ten most recent sampling events from intervals -04 through -09

⁽²⁾ Texas Commission on Environmental Quality (TCEQ) Texas Risk Reduction Program (TRRP) Tier 1 Groundwater Protective Concentration Levels (PCLs). Table 3. June 2012 (<http://www.tceq.state.tx.us/remediation/trrp/trrppcls.html>)

⁽³⁾ U.S. Environmental Protection Agency (USEPA) Regional Screening Levels (RSLs) for Tapwater (TR = 1E-6, HQ=1). November 2013. (http://www.epa.gov/reg3hwmd/risk/human/rb-concentration_table/Generic_Tables/docs/master_sl_table_run_NOV2013.pdf)

⁽⁴⁾ If dissolved metals data are available, they are used in the cumulative risk ratio. If only total metals data are available, they are used in the risk ratio

mg/kg - milligrams per Liter

µg/kg - micrograms per Liter

-- Not applicable

ND - Not detected

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

S - Screening data

Table 5.88
Risk Ratio Calculations for Potential Exposure to Groundwater by a Resident
On-Post Westbay Well On-Post Westbay Well CS-WB04-BS
Camp Stanley Storage Activity, Bexar County, Texas

CAS No.	Compound	Exposure Point Concentration (EPC) ⁽¹⁾ (µg/L)	TCEQ TRRP Tier 1 Groundwater PCL - Residential Ingestion ⁽²⁾ (mg/L)	TCEQ TRRP Tier 1 Groundwater PCL - Residential Ingestion ⁽²⁾ (µg/L)	Carcino- genic?	USEPA Tapwater RSL ⁽³⁾ (µg/L)	Carcino- genic?	Non-Carc Risk Ratio (EPC/PCL- ing)	Carc Risk Ratio (EPC/PCL- ing)	Non-Carc Risk Ratio (EPC/RSL)	Carc Risk Ratio (EPC/RSL)
	Volatile Organic Compounds										
156-59-2	cis-1,2-Dichloroethene	0.25 F S Max	7.0E-02	7.0E+01	no	2.8E+01	no	0.0036	--	0.0089	--
127-18-4	Tetrachloroethylene (PCE)	0.33 F S Max	5.0E-03	5.0E+00	yes	9.7E+00	yes	--	6.6E-08	--	3.4E-08
79-01-6	Trichloroethylene (TCE)	0.18 F S Max	5.0E-03	5.0E+00	yes	4.4E-01	yes	--	3.6E-08	--	4.1E-07
75-01-4	Vinyl Chloride	ND Max	2.0E-03	2.0E+00	yes	1.5E-02	yes	--	--	--	--
	Metals ⁽⁴⁾										
7439-97-6	Mercury	NA Max	2.0E-03	2.0E+00	no	6.3E-01	no	--	--	--	--
7439-97-6	Mercury - Dissolved	NA Max	2.0E-03	2.0E+00	no	6.3E-01	no	--	--	--	--
	Lead (not included in cumulative risk estimate)										
7439-92-1	Lead	NA Max	1.5E-02	1.5E+01	no	1.5E+01 ⁽³⁾	no	--	--	--	--
7439-92-1	Lead - Dissolved	NA Max	1.5E-02	1.5E+01	no	1.5E+01 ⁽³⁾	no	--	--	--	--
Cumulative Risk Ratio								0.004	1E-07	0.009	4E-07

⁽¹⁾ Exposure point concentration is the maximum detected concentration from the ten most recent sampling events from intervals -01 and -02

⁽²⁾ Texas Commission on Environmental Quality (TCEQ) Texas Risk Reduction Program (TRRP) Tier 1 Groundwater Protective Concentration Levels (PCLs). Table 3. June 2012 (<http://www.tceq.state.tx.us/remediation/trrp/trrppcls.html>)

⁽³⁾ U.S. Environmental Protection Agency (USEPA) Regional Screening Levels (RSLs) for Tapwater (TR = 1E-6, HQ=1). November 2013. (http://www.epa.gov/reg3hwmd/risk/human/rb-concentration_table/Generic_Tables/docs/master_sl_table_run_NOV2013.pdf)

⁽⁴⁾ If dissolved metals data are available, they are used in the cumulative risk ratio. If only total metals data are available, they are used in the risk ratio

mg/kg - milligrams per Liter

µg/kg - micrograms per Liter

-- Not applicable

NA - Not analyzed

ND - Not detected

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

S - Screening data

Table 5.89
Risk Ratio Calculations for Potential Exposure to Groundwater by a Resident
On-Post Westbay Well On-Post Westbay Well CS-WB04-CC
Camp Stanley Storage Activity, Bexar County, Texas

CAS No.	Compound	Exposure Point Concentration (EPC) ⁽¹⁾ (µg/L)	TCEQ TRRP Tier 1 Groundwater PCL - Residential Ingestion ⁽²⁾ (mg/L)	TCEQ TRRP Tier 1 Groundwater PCL - Residential Ingestion ⁽²⁾ (µg/L)	Carcino- genic?	USEPA Tapwater RSL ⁽³⁾ (µg/L)	Carcino- genic?	Non-Carc Risk Ratio (EPC/PCL- ing)	Carc Risk Ratio (EPC/PCL- ing)	Non-Carc Risk Ratio (EPC/RSL)	Carc Risk Ratio (EPC/RSL)
	Volatile Organic Compounds										
156-59-2	<i>cis</i> -1,2-Dichloroethene	0.60 F S Max	7.0E-02	7.0E+01	no	2.8E+01	no	0.0086	--	0.021	--
127-18-4	Tetrachloroethylene (PCE)	2.7 S Max	5.0E-03	5.0E+00	yes	9.7E+00	yes	--	5.4E-07	--	2.8E-07
79-01-6	Trichloroethylene (TCE)	0.22 F S Max	5.0E-03	5.0E+00	yes	4.4E-01	yes	--	4.4E-08	--	5.0E-07
75-01-4	Vinyl Chloride	ND Max	2.0E-03	2.0E+00	yes	1.5E-02	yes	--	--	--	--
	Metals ⁽⁴⁾										
7439-97-6	Mercury	NA Max	2.0E-03	2.0E+00	no	6.3E-01	no	--	--	--	--
7439-97-6	Mercury - Dissolved	NA Max	2.0E-03	2.0E+00	no	6.3E-01	no	--	--	--	--
	Lead (not included in cumulative risk estimate)										
7439-92-1	Lead	NA Max	1.5E-02	1.5E+01	no	1.5E+01 ⁽³⁾	no	--	--	--	--
7439-92-1	Lead - Dissolved	NA Max	1.5E-02	1.5E+01	no	1.5E+01 ⁽³⁾	no	--	--	--	--
Cumulative Risk Ratio								0.009	6E-07	0.02	8E-07

⁽¹⁾ Exposure point concentration is the maximum detected concentration from the ten most recent sampling events from intervals -01 through -03

⁽²⁾ Texas Commission on Environmental Quality (TCEQ) Texas Risk Reduction Program (TRRP) Tier 1 Groundwater Protective Concentration Levels (PCLs). Table 3. June 2012 (<http://www.tceq.state.tx.us/remediation/trrp/trrppcls.html>)

⁽³⁾ U.S. Environmental Protection Agency (USEPA) Regional Screening Levels (RSLs) for Tapwater (TR = 1E-6, HQ=1). November 2013. (http://www.epa.gov/reg3hwmd/risk/human/rb-concentration_table/Generic_Tables/docs/master_sl_table_run_NOV2013.pdf)

⁽⁴⁾ If dissolved metals data are available, they are used in the cumulative risk ratio. If only total metals data are available, they are used in the risk ratio

mg/kg - milligrams per Liter

µg/kg - micrograms per Liter

-- Not applicable

NA - Not analyzed

ND - Not detected

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

S - Screening data

Table 5.90
Risk Ratio Calculations for Potential Exposure to Groundwater by a Resident
On-Post Westbay Well On-Post Westbay Well CS-WB04-LGR
Camp Stanley Storage Activity, Bexar County, Texas

CAS No.	Compound	Exposure Point Concentration (EPC) ⁽¹⁾ (µg/L)	TCEQ TRRP Tier 1 Groundwater PCL - Residential Ingestion ⁽²⁾ (mg/L)	TCEQ TRRP Tier 1 Groundwater PCL - Residential Ingestion ⁽²⁾ (µg/L)	Carcino- genic?	USEPA Tapwater RSL ⁽³⁾ (µg/L)	Carcino- genic?	Non-Carc Risk Ratio (EPC/PCL- ing)	Carc Risk Ratio (EPC/PCL- ing)	Non-Carc Risk Ratio (EPC/RSL)	Carc Risk Ratio (EPC/RSL)
	Volatile Organic Compounds										
156-59-2	cis-1,2-Dichloroethene	3.8 S Max	7.0E-02	7.0E+01	no	2.8E+01	no	0.054	--	0.14	--
127-18-4	Tetrachloroethylene (PCE)	39 S Max	5.0E-03	5.0E+00	yes	9.7E+00	yes	--	7.8E-06	--	4.0E-06
79-01-6	Trichloroethylene (TCE)	19 S Max	5.0E-03	5.0E+00	yes	4.4E-01	yes	--	3.8E-06	--	4.3E-05
75-01-4	Vinyl Chloride	ND Max	2.0E-03	2.0E+00	yes	1.5E-02	yes	--	--	--	--
	Metals ⁽⁴⁾										
7439-97-6	Mercury	0.20 S Max	2.0E-03	2.0E+00	no	6.3E-01	no	0.10	--	0.32	--
7439-97-6	Mercury - Dissolved	0.20 S Max	2.0E-03	2.0E+00	no	6.3E-01	no	0.10	--	0.32	--
	Lead (not included in cumulative risk estimate)										
7439-92-1	Lead	ND Max	1.5E-02	1.5E+01	no	1.5E+01 ⁽³⁾	no	--	--	--	--
7439-92-1	Lead - Dissolved	2.6 F S Max	1.5E-02	1.5E+01	no	1.5E+01 ⁽³⁾	no	0.17	--	0.17	--

Cumulative Risk Ratio0.21E-050.55E-05

⁽¹⁾ Exposure point concentration is the maximum detected concentration from the ten most recent sampling events from intervals -04 through -09

⁽²⁾ Texas Commission on Environmental Quality (TCEQ) Texas Risk Reduction Program (TRRP) Tier 1 Groundwater Protective Concentration Levels (PCLs). Table 3. June 2012 (<http://www.tceq.state.tx.us/remediation/trrp/trrppcls.html>)

⁽³⁾ U.S. Environmental Protection Agency (USEPA) Regional Screening Levels (RSLs) for Tapwater (TR = 1E-6, HQ=1). November 2013. (http://www.epa.gov/reg3hwmd/risk/human/rb-concentration_table/Generic_Tables/docs/master_sl_table_run_NOV2013.pdf)

⁽⁴⁾ If dissolved metals data are available, they are used in the cumulative risk ratio. If only total metals data are available, they are used in the risk ratio

mg/kg - milligrams per Liter

µg/kg - micrograms per Liter

-- Not applicable

ND - Not detected

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

S - Screening data

Table 5.91
Risk Ratio Calculations for Potential Exposure to Groundwater by a Resident
On-Post Westbay Well CS-WB05-BS-01
Camp Stanley Storage Activity, Bexar County, Texas

CAS No.	Compound	Exposure Point Concentration (EPC) ⁽¹⁾ (µg/L)		TCEQ TRRP Tier 1 Groundwater PCL - Residential Ingestion ⁽²⁾ (mg/L)	TCEQ TRRP Tier 1 Groundwater PCL - Residential Ingestion ⁽²⁾ (µg/L)	Carcino-genic?	USEPA Tapwater RSL ⁽³⁾ (µg/L)	Carcino-genic?	Non-Carc Risk Ratio (EPC/PCL-ing)	Carc Risk Ratio (EPC/PCL-ing)	Non-Carc Risk Ratio (EPC/RSL)	Carc Risk Ratio (EPC/RSL)
	Volatile Organic Compounds											
156-59-2	cis -1,2-Dichloroethene	60	S Max	7.0E-02	7.0E+01	no	2.8E+01	no	0.86	--	2.1	--
127-18-4	Tetrachloroethylene (PCE)	ND	Max	5.0E-03	5.0E+00	yes	9.7E+00	yes	--	--	--	--
79-01-6	Trichloroethylene (TCE)	1.5	S Max	5.0E-03	5.0E+00	yes	4.4E-01	yes	--	3.0E-07	--	3.4E-06
75-01-4	Vinyl Chloride	12	S Max	2.0E-03	2.0E+00	yes	1.5E-02	yes	--	6.0E-06	--	8.0E-04
	Metals ⁽⁴⁾											
7439-97-6	Mercury	0.070	F S Max	2.0E-03	2.0E+00	no	6.3E-01	no	0.035	--	0.11	--
7439-97-6	Mercury - Dissolved	NA	Max	2.0E-03	2.0E+00	no	6.3E-01	no	--	--	--	--
	Lead (not included in cumulative risk estimate)											
7439-92-1	Lead	ND	Max	1.5E-02	1.5E+01	no	1.5E+01 ⁽³⁾	no	--	--	--	--
7439-92-1	Lead - Dissolved	NA	Max	1.5E-02	1.5E+01	no	1.5E+01 ⁽³⁾	no	--	--	--	--
Cumulative Risk Ratio									0.9	6E-06	2	8E-04

⁽¹⁾ Exposure point concentration is the maximum detected concentration from the ten most recent sampling events

⁽²⁾ Texas Commission on Environmental Quality (TCEQ) Texas Risk Reduction Program (TRRP) Tier 1 Groundwater Protective Concentration Levels (PCLs). Table 3. June 2012 (<http://www.tceq.state.tx.us/remediation/trrp/trrppcls.html>)

⁽³⁾ U.S. Environmental Protection Agency (USEPA) Regional Screening Levels (RSLs) for Tapwater (TR = 1E-6, HQ=1). November 2013. (http://www.epa.gov/reg3hwmd/risk/human/rb-concentration_table/Generic_Tables/docs/master_sl_table_run_NOV2013.pdf)

⁽⁴⁾ If dissolved metals data are available, they are used in the cumulative risk ratio. If only total metals data are available, they are used in the risk ratio

mg/kg - milligrams per Liter

µg/kg - micrograms per Liter

-- Not applicable

NA - Not analyzed

ND - Not detected

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

S - Screening data

Table 5.92
Risk Ratio Calculations for Potential Exposure to Groundwater by a Resident
On-Post Westbay Well CS-WB05-CC
Camp Stanley Storage Activity, Bexar County, Texas

CAS No.	Compound	Exposure Point Concentration (EPC) ⁽¹⁾ (µg/L)		TCEQ TRRP Tier 1 Groundwater PCL - Residential Ingestion ⁽²⁾ (mg/L)	TCEQ TRRP Tier 1 Groundwater PCL - Residential Ingestion ⁽²⁾ (µg/L)	Carcino-genic?	USEPA Tapwater RSL ⁽³⁾ (µg/L)	Carcino-genic?	Non-Carc Risk Ratio (EPC/PCL-ing)	Carc Risk Ratio (EPC/PCL-ing)	Non-Carc Risk Ratio (EPC/RSL)	Carc Risk Ratio (EPC/RSL)
	Volatile Organic Compounds											
156-59-2	cis -1,2-Dichloroethene	63	S Max	7.0E-02	7.0E+01	no	2.8E+01	no	0.90	--	2.3	--
127-18-4	Tetrachloroethylene (PCE)	1.8	S Max	5.0E-03	5.0E+00	yes	9.7E+00	yes	--	3.6E-07	--	1.9E-07
79-01-6	Trichloroethylene (TCE)	56	S Max	5.0E-03	5.0E+00	yes	4.4E-01	yes	--	1.1E-05	--	1.3E-04
75-01-4	Vinyl Chloride	4.8	S Max	2.0E-03	2.0E+00	yes	1.5E-02	yes	--	2.4E-06	--	3.2E-04
	Metals ⁽⁴⁾											
7439-97-6	Mercury	0.10	F S Max	2.0E-03	2.0E+00	no	6.3E-01	no	0.050	--	0.16	--
7439-97-6	Mercury - Dissolved	NA	Max	2.0E-03	2.0E+00	no	6.3E-01	no	--	--	--	--
	Lead (not included in cumulative risk estimate)											
7439-92-1	Lead	ND	Max	1.5E-02	1.5E+01	no	1.5E+01 ⁽³⁾	no	--	--	--	--
7439-92-1	Lead - Dissolved	NA	Max	1.5E-02	1.5E+01	no	1.5E+01 ⁽³⁾	no	--	--	--	--

Cumulative Risk Ratio 1 1E-05 2 4E-04

⁽¹⁾ Exposure point concentration is the maximum detected concentration from the ten most recent sampling events from intervals -01 and -02

⁽²⁾ Texas Commission on Environmental Quality (TCEQ) Texas Risk Reduction Program (TRRP) Tier 1 Groundwater Protective Concentration Levels (PCLs). Table 3. June 2012 (<http://www.tceq.state.tx.us/remediation/trrp/trrppcls.html>)

⁽³⁾ U.S. Environmental Protection Agency (USEPA) Regional Screening Levels (RSLs) for Tapwater (TR = 1E-6, HQ=1). November 2013. (http://www.epa.gov/reg3hwmd/risk/human/rb-concentration_table/Generic_Tables/docs/master_sl_table_run_NOV2013.pdf)

⁽⁴⁾ If dissolved metals data are available, they are used in the cumulative risk ratio. If only total metals data are available, they are used in the risk ratio

mg/kg - milligrams per Liter

µg/kg - micrograms per Liter

-- Not applicable

NA - Not analyzed

ND - Not detected

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

S - Screening data

Table 5.93
Risk Ratio Calculations for Potential Exposure to Groundwater by a Resident
On-Post Westbay Well CS-WB05-LGR
Camp Stanley Storage Activity, Bexar County, Texas

CAS No.	Compound	Exposure Point Concentration (EPC) ⁽¹⁾ (µg/L)		TCEQ TRRP Tier 1 Groundwater PCL - Residential Ingestion ⁽²⁾ (mg/L)	TCEQ TRRP Tier 1 Groundwater PCL - Residential Ingestion ⁽²⁾ (µg/L)	Carcino-genic?	USEPA Tapwater RSL ⁽³⁾ (µg/L)	Carcino-genic?	Non-Carc Risk Ratio (EPC/PCL-ing)	Carc Risk Ratio (EPC/PCL-ing)	Non-Carc Risk Ratio (EPC/RSL)	Carc Risk Ratio (EPC/RSL)
	Volatile Organic Compounds											
156-59-2	cis -1,2-Dichloroethene	820	S Max	7.0E-02	7.0E+01	no	2.8E+01	no	12	--	29	--
127-18-4	Tetrachloroethylene (PCE)	90	S Max	5.0E-03	5.0E+00	yes	9.7E+00	yes	--	1.8E-05	--	9.3E-06
79-01-6	Trichloroethylene (TCE)	250	S Max	5.0E-03	5.0E+00	yes	4.4E-01	yes	--	5.0E-05	--	5.7E-04
75-01-4	Vinyl Chloride	300	S Max	2.0E-03	2.0E+00	yes	1.5E-02	yes	--	1.5E-04	--	2.0E-02
	Metals ⁽⁴⁾											
7439-97-6	Mercury	0.15	F S Max	2.0E-03	2.0E+00	no	6.3E-01	no	0.075	--	0.24	--
7439-97-6	Mercury - Dissolved	NA	Max	2.0E-03	2.0E+00	no	6.3E-01	no	--	--	--	--
	Lead (not included in cumulative risk estimate)											
7439-92-1	Lead	ND	Max	1.5E-02	1.5E+01	no	1.5E+01 ⁽³⁾	no	--	--	--	--
7439-92-1	Lead - Dissolved	NA	Max	1.5E-02	1.5E+01	no	1.5E+01 ⁽³⁾	no	--	--	--	--
Cumulative Risk Ratio									12	2E-04	30	2E-02

⁽¹⁾ Exposure point concentration is the maximum detected concentration from the ten most recent sampling events from intervals -01, -02, -03A, -03B, -04A, and -04B

⁽²⁾ Texas Commission on Environmental Quality (TCEQ) Texas Risk Reduction Program (TRRP) Tier 1 Groundwater Protective Concentration Levels (PCLs). Table 3. June 2012 (<http://www.tceq.state.tx.us/remediation/trrp/trrppcls.html>)

⁽³⁾ U.S. Environmental Protection Agency (USEPA) Regional Screening Levels (RSLs) for Tapwater (TR = 1E-6, HQ=1). November 2013. (http://www.epa.gov/reg3hwmd/risk/human/rb-concentration_table/Generic_Tables/docs/master_sl_table_run_NOV2013.pdf)

⁽⁴⁾ If dissolved metals data are available, they are used in the cumulative risk ratio. If only total metals data are available, they are used in the risk ratio

mg/kg - milligrams per Liter

µg/kg - micrograms per Liter

-- Not applicable

NA - Not analyzed

ND - Not detected

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

S - Screening data

Table 5.94
Risk Ratio Calculations for Potential Exposure to Groundwater by a Resident
On-Post Westbay Well CS-WB06-LGR
Camp Stanley Storage Activity, Bexar County, Texas

CAS No.	Compound	Exposure Point Concentration (EPC) ⁽¹⁾ (µg/L)	TCEQ TRRP Tier 1 Groundwater PCL - Residential Ingestion ⁽²⁾ (mg/L)	TCEQ TRRP Tier 1 Groundwater PCL - Residential Ingestion ⁽²⁾ (µg/L)	Carcino- genic?	USEPA Tapwater RSL ⁽³⁾ (µg/L)	Carcino- genic?	Non-Carc Risk Ratio (EPC/PCL- ing)	Carc Risk Ratio (EPC/PCL- ing)	Non-Carc Risk Ratio (EPC/RSL)	Carc Risk Ratio (EPC/RSL)
	Volatile Organic Compounds										
156-59-2	cis-1,2-Dichloroethene	340 S Max	7.0E-02	7.0E+01	no	2.8E+01	no	4.9	--	12	--
127-18-4	Tetrachloroethylene (PCE)	210 S Max	5.0E-03	5.0E+00	yes	9.7E+00	yes	--	4.2E-05	--	2.2E-05
79-01-6	Trichloroethylene (TCE)	220 S Max	5.0E-03	5.0E+00	yes	4.4E-01	yes	--	4.4E-05	--	5.0E-04
75-01-4	Vinyl Chloride	1.4 S Max	2.0E-03	2.0E+00	yes	1.5E-02	yes	--	7.0E-07	--	9.3E-05
	Metals ⁽⁴⁾										
7439-97-6	Mercury	0.060 S Max	2.0E-03	2.0E+00	no	6.3E-01	no	0.030	--	0.10	--
7439-97-6	Mercury - Dissolved	NA Max	2.0E-03	2.0E+00	no	6.3E-01	no	--	--	--	--
	Lead (not included in cumulative risk estimate)										
7439-92-1	Lead	ND Max	1.5E-02	1.5E+01	no	1.5E+01 ⁽³⁾	no	--	--	--	--
7439-92-1	Lead - Dissolved	NA Max	1.5E-02	1.5E+01	no	1.5E+01 ⁽³⁾	no	--	--	--	--

Cumulative Risk Ratio59E-05126E-04

⁽¹⁾ Exposure point concentration is the maximum detected concentration from the ten most recent sampling events from intervals -01, -02, -03A, -03B, and -04

⁽²⁾ Texas Commission on Environmental Quality (TCEQ) Texas Risk Reduction Program (TRRP) Tier 1 Groundwater Protective Concentration Levels (PCLs). Table 3. June 2012 (<http://www.tceq.state.tx.us/remediation/trrp/trrppcls.html>)

⁽³⁾ U.S. Environmental Protection Agency (USEPA) Regional Screening Levels (RSLs) for Tapwater (TR = 1E-6, HQ=1). November 2013. (http://www.epa.gov/reg3hwmd/risk/human/rb-concentration_table/Generic_Tables/docs/master_sl_table_run_NOV2013.pdf)

⁽⁴⁾ If dissolved metals data are available, they are used in the cumulative risk ratio. If only total metals data are available, they are used in the risk ratio

mg/kg - milligrams per Liter

µg/kg - micrograms per Liter

-- Not applicable

NA - Not analyzed

ND - Not detected

S - Screening data

Table 5.95
Risk Ratio Calculations for Potential Exposure to Groundwater by a Resident
On-Post Westbay Well CS-WB07-LGR
Camp Stanley Storage Activity, Bexar County, Texas

CAS No.	Compound	Exposure Point Concentration (EPC) ⁽¹⁾ (µg/L)	TCEQ TRRP Tier 1 Groundwater PCL - Residential Ingestion ⁽²⁾ (mg/L)	TCEQ TRRP Tier 1 Groundwater PCL - Residential Ingestion ⁽²⁾ (µg/L)	Carcino- genic?	USEPA Tapwater RSL ⁽³⁾ (µg/L)	Carcino- genic?	Non-Carc Risk Ratio (EPC/PCL- ing)	Carc Risk Ratio (EPC/PCL- ing)	Non-Carc Risk Ratio (EPC/RSL)	Carc Risk Ratio (EPC/RSL)
	Volatile Organic Compounds										
156-59-2	cis-1,2-Dichloroethene	570 S Max	7.0E-02	7.0E+01	no	2.8E+01	no	8.1	--	20	--
127-18-4	Tetrachloroethylene (PCE)	440 S Max	5.0E-03	5.0E+00	yes	9.7E+00	yes	--	8.8E-05	--	4.5E-05
79-01-6	Trichloroethylene (TCE)	450 S Max	5.0E-03	5.0E+00	yes	4.4E-01	yes	--	9.0E-05	--	1.0E-03
75-01-4	Vinyl Chloride	48 S Max	2.0E-03	2.0E+00	yes	1.5E-02	yes	--	2.4E-05	--	3.2E-03
	Metals ⁽⁴⁾										
7439-97-6	Mercury	0.16 F S Max	2.0E-03	2.0E+00	no	6.3E-01	no	0.080	--	0.25	--
7439-97-6	Mercury - Dissolved	NA Max	2.0E-03	2.0E+00	no	6.3E-01	no	--	--	--	--
	Lead (not included in cumulative risk estimate)										
7439-92-1	Lead	3.0 F S Max	1.5E-02	1.5E+01	no	1.5E+01 ⁽³⁾	no	0.20	--	0.20	--
7439-92-1	Lead - Dissolved	NA Max	1.5E-02	1.5E+01	no	1.5E+01 ⁽³⁾	no	--	--	--	--

Cumulative Risk Ratio 8 2E-04 21 4E-03

⁽¹⁾ Exposure point concentration is the maximum detected concentration from the ten most recent sampling events from intervals -01, -02, -03A, -03B, and -04

⁽²⁾ Texas Commission on Environmental Quality (TCEQ) Texas Risk Reduction Program (TRRP) Tier 1 Groundwater Protective Concentration Levels (PCLs). Table 3. June 2012 (<http://www.tceq.state.tx.us/remediation/trrp/trrppcls.html>)

⁽³⁾ U.S. Environmental Protection Agency (USEPA) Regional Screening Levels (RSLs) for Tapwater (TR = 1E-6, HQ=1). November 2013. (http://www.epa.gov/reg3hwmd/risk/human/rb-concentration_table/Generic_Tables/docs/master_sl_table_run_NOV2013.pdf)

⁽⁴⁾ If dissolved metals data are available, they are used in the cumulative risk ratio. If only total metals data are available, they are used in the risk ratio

mg/kg - milligrams per Liter

µg/kg - micrograms per Liter

-- Not applicable

NA - Not analyzed

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

S - Screening data

Table 5.96
Risk Ratio Calculations for Potential Exposure to Groundwater by a Resident
On-Post Westbay Well CS-WB08-LGR
Camp Stanley Storage Activity, Bexar County, Texas

CAS No.	Compound	Exposure Point Concentration (EPC) ⁽¹⁾ (µg/L)	TCEQ TRRP Tier 1 Groundwater PCL - Residential Ingestion ⁽²⁾ (mg/L)	TCEQ TRRP Tier 1 Groundwater PCL - Residential Ingestion ⁽²⁾ (µg/L)	Carcino- genic?	USEPA Tapwater RSL ⁽³⁾ (µg/L)	Carcino- genic?	Non-Carc Risk Ratio (EPC/PCL- ing)	Carc Risk Ratio (EPC/PCL- ing)	Non-Carc Risk Ratio (EPC/RSL)	Carc Risk Ratio (EPC/RSL)
	Volatile Organic Compounds										
156-59-2	cis-1,2-Dichloroethene	350 S Max	7.0E-02	7.0E+01	no	2.8E+01	no	5.0	--	13	--
127-18-4	Tetrachloroethylene (PCE)	260 S Max	5.0E-03	5.0E+00	yes	9.7E+00	yes	--	5.2E-05	--	2.7E-05
79-01-6	Trichloroethylene (TCE)	310 S Max	5.0E-03	5.0E+00	yes	4.4E-01	yes	--	6.2E-05	--	7.0E-04
75-01-4	Vinyl Chloride	0.44 F S Max	2.0E-03	2.0E+00	yes	1.5E-02	yes	--	2.2E-07	--	2.9E-05
	Metals ⁽⁴⁾										
7439-97-6	Mercury	0.076 F S Max	2.0E-03	2.0E+00	no	6.3E-01	no	0.038	--	0.12	--
7439-97-6	Mercury - Dissolved	NA Max	2.0E-03	2.0E+00	no	6.3E-01	no	--	--	--	--
	Lead (not included in cumulative risk estimate)										
7439-92-1	Lead	5.9 S Max	1.5E-02	1.5E+01	no	1.5E+01 ⁽³⁾	no	0.39	--	0.39	--
7439-92-1	Lead - Dissolved	NA Max	1.5E-02	1.5E+01	no	1.5E+01 ⁽³⁾	no	--	--	--	--

Cumulative Risk Ratio51E-04138E-04

⁽¹⁾ Exposure point concentration is the maximum detected concentration from the ten most recent sampling events from intervals -01, -02, -03A, -03B, and -04

⁽²⁾ Texas Commission on Environmental Quality (TCEQ) Texas Risk Reduction Program (TRRP) Tier 1 Groundwater Protective Concentration Levels (PCLs). Table 3. June 2012 (<http://www.tceq.state.tx.us/remediation/trrp/trrppcls.html>)

⁽³⁾ U.S. Environmental Protection Agency (USEPA) Regional Screening Levels (RSLs) for Tapwater (TR = 1E-6, HQ=1). November 2013. (http://www.epa.gov/reg3hwmd/risk/human/rb-concentration_table/Generic_Tables/docs/master_sl_table_run_NOV2013.pdf)

⁽⁴⁾ If dissolved metals data are available, they are used in the cumulative risk ratio. If only total metals data are available, they are used in the risk ratio

mg/kg - milligrams per Liter

µg/kg - micrograms per Liter

-- Not applicable

NA - Not analyzed

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

S - Screening data

Table 5.97
Human Health Cumulative Risk Ratio Summary for Residential Receptors
Camp Stanley Storage Activity, Bexar County, Texas

Well ID	Cumulative Non-Carc Risk Ratio (EPC/PCL-ing) ⁽¹⁾	Cumulative Carc Risk Ratio (EPC/PCL-ing) ⁽¹⁾	Lead Hazard (PCL-ing) ^(1,2)	Cumulative Non-Carc Risk Ratio (EPC/RSL) ⁽³⁾	Cumulative Carc Risk Ratio (EPC/RSL) ⁽³⁾	Lead Hazard (EPA/RSL) ^(2,3)
Off-Post Wells						
FO-J1	--	1E-07	--	--	6E-08	--
HS-1	--	5E-08	--	--	2E-08	--
HS-2	--	5E-08	--	--	2E-08	--
I10-2	--	1E-07	--	--	1E-06	--
I10-4	--	2E-06	0.5	--	6E-06	0.5
I10-7	--	3E-08	--	--	4E-07	--
I10-9	--	3E-07	--	--	3E-06	--
JW-5	--	2E-08	--	--	1E-08	--
JW-7	--	9E-08	--	--	5E-08	--
JW-8	--	7E-08	--	--	4E-08	--
JW-12	--	4E-08	--	--	2E-08	--
JW-30	0.003	3E-08	--	0.008	2E-08	--
LS-1	0.04	4E-07	--	0.09	2E-06	--
LS-4	--	3E-08	--	--	2E-08	--
LS-5	--	2E-06	0.3	--	2E-04	0.3
LS-6	--	8E-07	0.1	--	7E-06	0.1
LS-7	--	7E-07	0.2	--	2E-06	0.2
OFR-1	--	7E-08	--	--	4E-08	--
OFR-2	--	7E-08	--	--	4E-08	--
OFR-3	0.004	4E-06	--	0.009	2E-05	--
RFR-9	--	4E-08	--	--	2E-08	--
RFR-10	0.004	5E-06	0.3	0.01	2E-05	0.3
RFR-11	--	7E-07	0.2	--	7E-06	0.2
RFR-12	--	2E-07	--	--	1E-06	--
RFR-14	--	4E-08	--	--	2E-08	--
SLD-01	--	5E-08	--	--	2E-08	--
On-Post Wells						
AOC65-VEW28A	--	7E-06	1	--	3E-05	1
AOC65-VEW28B	--	1E-05	--	--	1E-05	--
B3-EXW01	5	1E-04	2	13	8E-04	2
B3-EXW02	2	6E-05	0.1	5	4E-04	0.1

Table 5.97
Human Health Cumulative Risk Ratio Summary for Residential Receptors
Camp Stanley Storage Activity, Bexar County, Texas

Well ID	Cumulative Non-Carc Risk Ratio (EPC/PCL-ing) ⁽¹⁾	Cumulative Carc Risk Ratio (EPC/PCL-ing) ⁽¹⁾	Lead Hazard (PCL-ing) ^(1,2)	Cumulative Non-Carc Risk Ratio (EPC/RSL) ⁽³⁾	Cumulative Carc Risk Ratio (EPC/RSL) ⁽³⁾	Lead Hazard (EPA/RSL) ^(2,3)
B3-EXW03	2	4E-05	--	4	2E-04	--
B3-EXW04	3	8E-05	--	8	6E-04	--
B3-EXW05	0.4	1E-05	--	1	1E-04	--
CS-B3-MW01	5	1E-04	0.4	13	1E-02	0.4
CS-1	--	1E-07	2	--	1E-06	2
CS-2	--	2E-07	0.2	--	5E-07	0.2
CS-4	0.1	3E-06	--	0.3	2E-05	--
CS-9	29	--	1	92	--	1
CS-10	--	--	0.1	--	--	0.1
CS-11	0.1	--	13	0.3	--	13
CS-12	0.1	--	0.4	0.3	--	0.4
CS-13	--	--	0.7	--	--	0.7
CS-D	2	7E-05	0.2	5	4E-04	0.2
CS-I	--	--	0.2	--	--	0.2
Supply Wells Combined ⁽⁴⁾	0.1	1E-07	0.8	0.3	1E-06	0.8
CS-MW1-BS	0.06	3E-08	0.02	0.2	4E-07	0.02
CS-MW1-CC	0.03	--	0.02	0.09	--	0.02
CS-MW1-LGR	0.3	1E-05	0.6	0.7	8E-05	0.6
CS-MW2-CC	--	--	0.2	--	--	0.2
CS-MW2-LGR	0.1	7E-08	0.7	0.4	5E-07	0.7
CS-MW4-LGR	0.002	1E-07	0.07	0.005	4E-07	0.07
CS-MW5-LGR	0.04	1E-06	0.1	0.1	8E-06	0.1
CS-MW6-BS	--	--	0.007	--	--	0.007
CS-MW6-CC	--	--	0.03	--	--	0.03
CS-MW6-LGR	--	4E-08	--	--	2E-08	--
CS-MW7-CC	0.03	--	0.05	0.08	--	0.05
CS-MW7-LGR	0.1	2E-07	--	0.3	9E-08	--
CS-MW8-CC	--	2E-07	0.01	--	5E-07	0.01
CS-MW8-LGR	0.1	6E-07	0.1	0.3	7E-07	0.1
CS-MW9-BS	0.1	--	7	0.3	--	7
CS-MW9-CC	0.04	--	0.01	0.1	--	0.01
CS-MW9-LGR	--	4E-08	0.3	--	2E-08	0.3

Table 5.97
Human Health Cumulative Risk Ratio Summary for Residential Receptors
Camp Stanley Storage Activity, Bexar County, Texas

Well ID	Cumulative Non-Carc Risk Ratio (EPC/PCL-ing) ⁽¹⁾	Cumulative Carc Risk Ratio (EPC/PCL-ing) ⁽¹⁾	Lead Hazard (PCL-ing) ^(1,2)	Cumulative Non-Carc Risk Ratio (EPC/RSL) ⁽³⁾	Cumulative Carc Risk Ratio (EPC/RSL) ⁽³⁾	Lead Hazard (EPA/RSL) ^(2,3)
CS-MW10-CC	--	7E-08	0.03	--	4E-07	0.03
CS-MW10-LGR	0.1	6E-07	0.6	0.3	2E-06	0.6
CS-MW11A-LGR	0.1	3E-07	0.5	0.3	1E-07	0.5
CS-MW11B-LGR	0.03	3E-07	0.1	0.1	2E-07	0.1
CS-MW12-BS	0.02	2E-07	0.1	0.08	2E-05	0.1
CS-MW12-CC	--	--	0.04	--	--	0.04
CS-MW12-LGR	--	--	0.2	--	--	0.2
CS-MW16-CC	0.4	5E-06	--	0.9	6E-05	--
CS-MW16-LGR	4	1E-04	0.3	11	7E-04	0.3
CS-MW17-LGR	--	1E-07	0.006	--	5E-08	0.006
CS-MW18-LGR	--	4E-08	0.1	--	2E-08	0.1
CS-MW19-LGR	0.1	1E-07	--	0.3	7E-08	--
CS-MW20-LGR	--	5E-07	0.1	--	6E-07	0.1
CS-MW21-LGR	--	--	0.2	--	--	0.2
CS-MW22-LGR	--	6E-08	0.2	--	6E-07	0.2
CS-MW23-LGR	0.1	--	--	0.3	--	--
CS-MW24-LGR	0.1	--	0.6	0.3	--	0.6
CS-MW25-LGR	0.1	--	1	0.3	--	1
CS-MW35-LGR	--	6E-07	0.6	--	3E-07	0.6
CS-MW36-LGR	0.03	2E-05	--	0.08	2E-04	--
CS-MWG-LGR	--	--	0.7	--	--	0.7
CS-MWH-LGR	--	--	0.5	--	--	0.5
On-Post Westbay Wells						
CS-WB01-LGR	0.02	9E-06	0.2	0.06	6E-05	0.2
CS-WB02-LGR	0.2	6E-05	--	0.4	7E-05	--
CS-WB03-LGR	0.4	1E-05	0.2	1	8E-05	0.2
CS-WB04-BS	0.004	1E-07	--	0.009	4E-07	--
CS-WB04-CC	0.009	6E-07	--	0.02	8E-07	--
CS-WB04-LGR	0.2	1E-05	0.2	0.5	5E-05	0.2
CS-WB05-BS-01	0.9	6E-06	--	2	8E-04	--
CS-WB05-CC	1	1E-05	--	2	4E-04	--
CS-WB05-LGR	12	2E-04	--	30	2E-02	--

Table 5.97
Human Health Cumulative Risk Ratio Summary for Residential Receptors
Camp Stanley Storage Activity, Bexar County, Texas

Well ID	Cumulative Non-Carc Risk Ratio (EPC/PCL-ing) ⁽¹⁾	Cumulative Carc Risk Ratio (EPC/PCL-ing) ⁽¹⁾	Lead Hazard (PCL-ing) ^(1,2)	Cumulative Non-Carc Risk Ratio (EPC/RSL) ⁽³⁾	Cumulative Carc Risk Ratio (EPC/RSL) ⁽³⁾	Lead Hazard (EPA/RSL) ^(2,3)
CS-WB06-LGR	5	9E-05	--	12	6E-04	--
CS-WB07-LGR	8	2E-04	0.2	21	4E-03	0.2
CS-WB08-LGR	5	1E-04	0.4	13	8E-04	0.4

Notes:

(1) Based on Texas Commission on Environmental Quality (TCEQ) Texas Risk Reduction Program (TRRP) Tier 1 Groundwater Protective Concentration Levels (PCLs). Table 3. June 2012.

(2) Lead hazard based on dissolved data, if available.

(3) Based on U.S. Environmental Protection Agency (USEPA) Regional Screening Levels (RSLs) for Tapwater. May 2013.

-- indicates no risk/hazard calculated.

	indicates cumulative hazard ratios greater than 1, cumulative risk ratios between 1E-06 and 1E-05
	indicates cumulative hazard ratios greater than 1, cumulative risk ratios between 1E-05 and 1E-04, or lead hazard greater than 1
	indicates cumulative risk ratios greater than 1E-04

Table 5.98
Summary of Unacceptable Human Health Risks in
Groundwater to Residents
Camp Stanley Storage Activity, Bexar County, Texas

	Carcinogenic Risk > 1×10^{-6}		Noncarcinogenic Hazard Quotient > 1		Lead Hazard > 1
	Based on TCEQ TRRP PCLs	Based on USEPA RSLs	Based on TCEQ TRRP PCLs	Based on USEPA RSLs	Based on TRRP/ RSL
Off-Post					
Number of wells with exceedance	4	11	0	0	0
Maximum risk or hazard / well	5×10^{-6} / RFR-10	2×10^{-4} / LS-5	N/A	N/A	N/A
Primary contributors in well with maximum risk/hazard	PCE, TCE	TCE, vinyl chloride	N/A	N/A	N/A
On-Post					
Number of wells with exceedance	22	25	12	13	4
Maximum risk or hazard / well	2×10^{-4} / CS-WB05- LGR and CS- WB07-LGR	2×10^{-2} / CS-WB05- LGR	29 / CS-9	92 / CS-9	13 / CS-11
Primary contributors in well with maximum risk/hazard	PCE, TCE, vinyl chloride	PCE, TCE, vinyl chloride	Mercury	Mercury	Lead

N/A - Not applicable

Figures

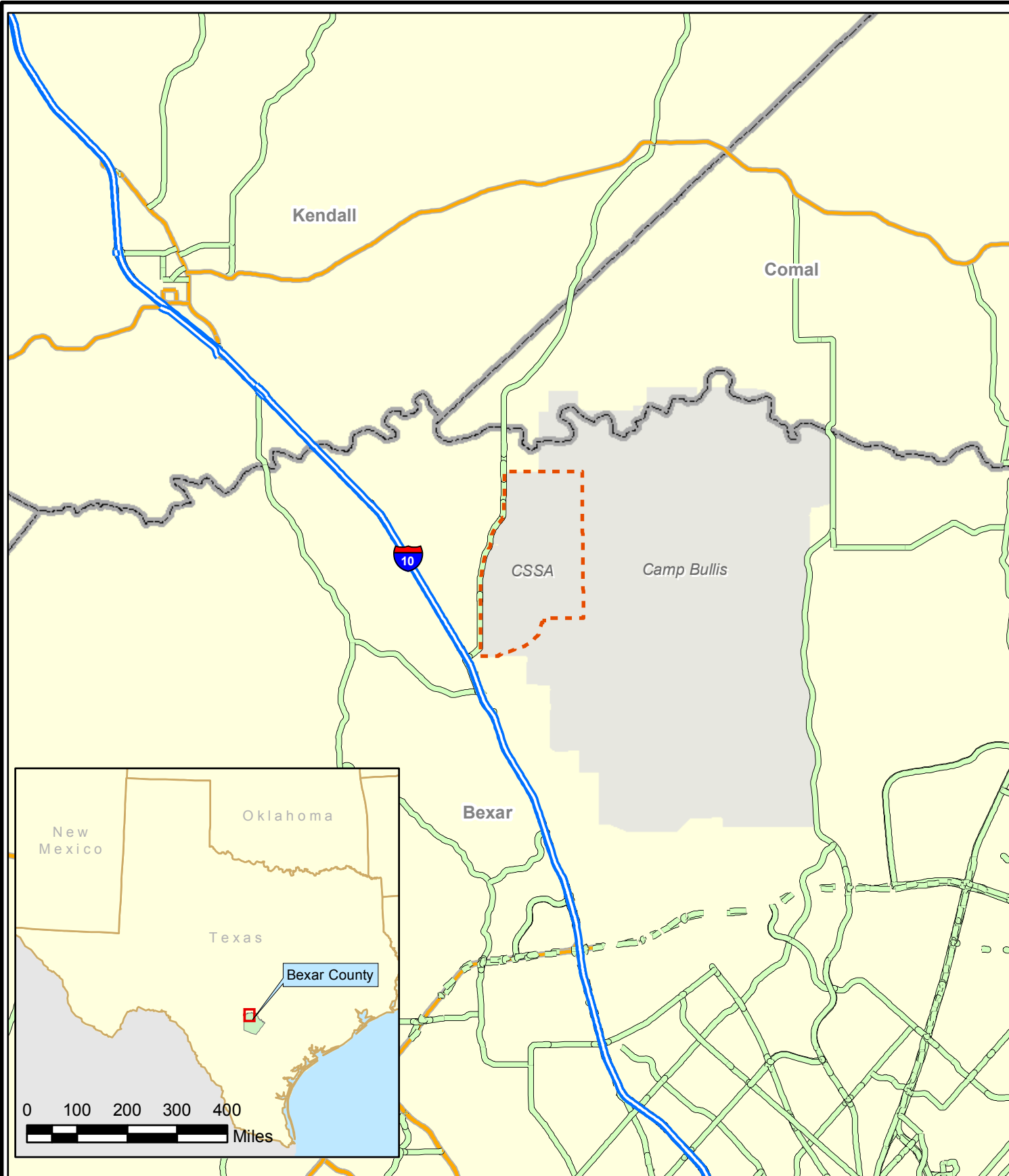
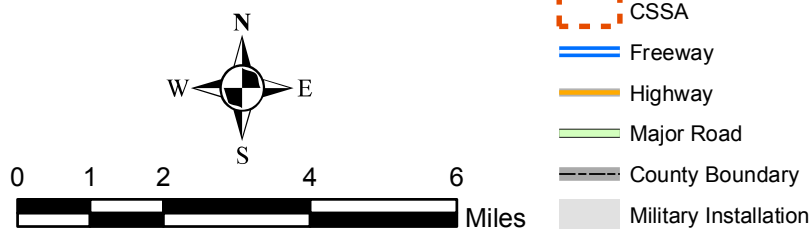
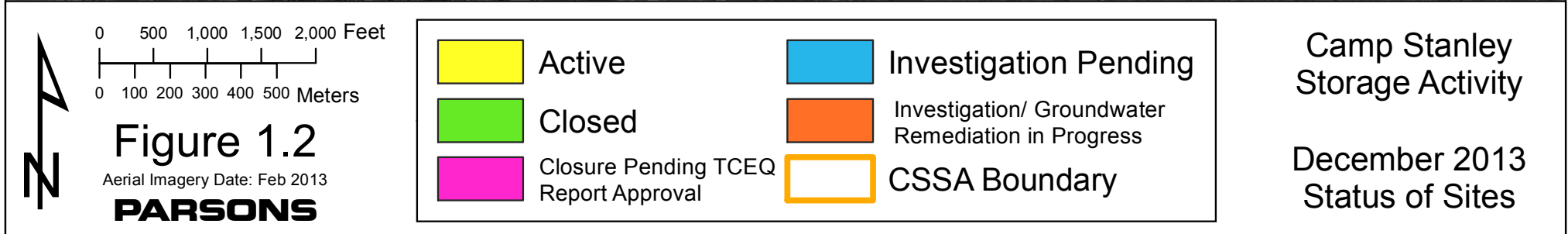


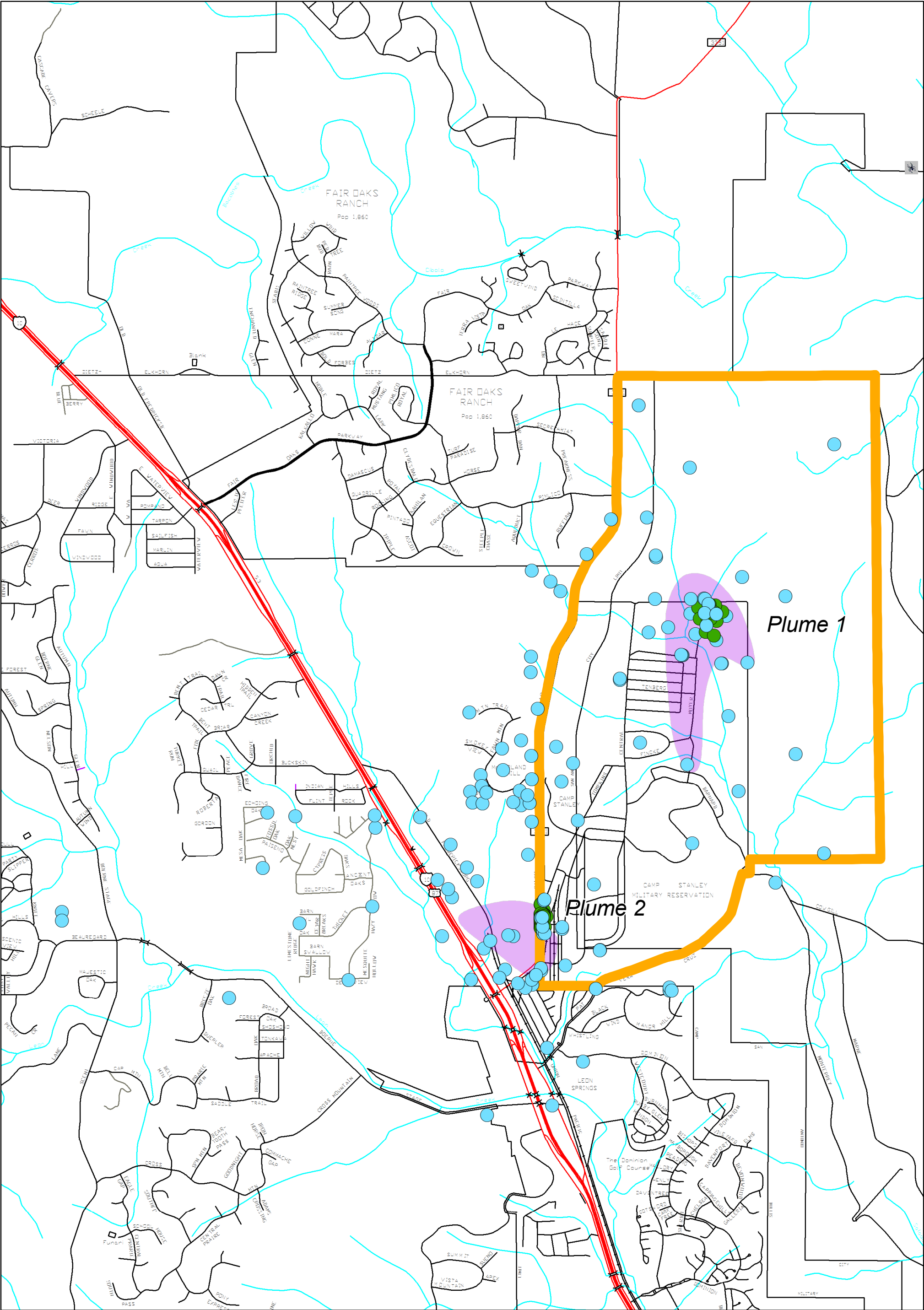
Figure 1.1


CSSA Location
Camp Stanley Storage Activity

PARSONS









00.250.50.751 Miles

00.40.81.21.62 Kilometers

● Excluded Well

● Included Well

□ CSSA Boundary

■ Historical Plume Extent *

Figure 1.3

PARSONS

* Plume margin based on December 2012 monitoring

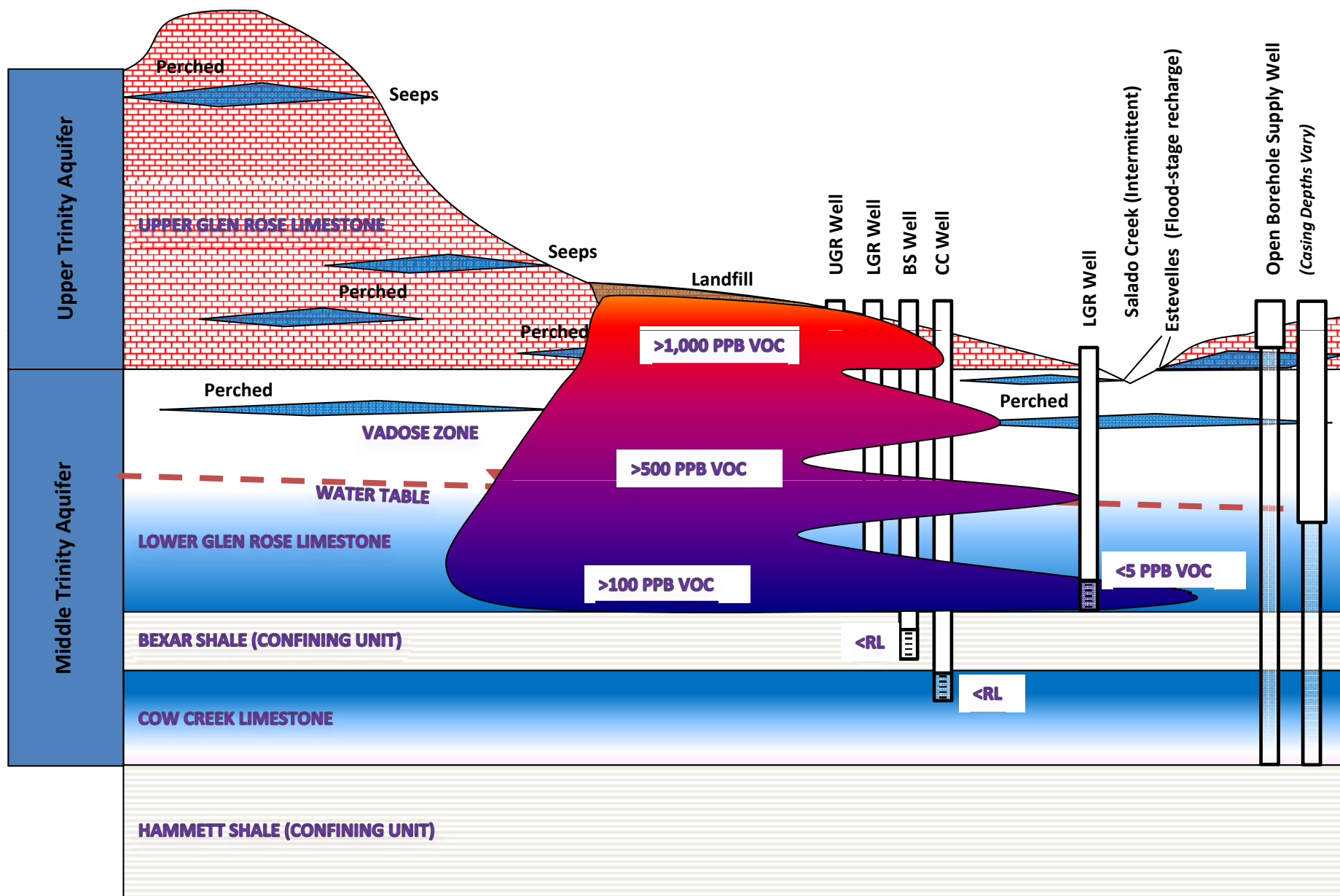
Historical Plume Extent

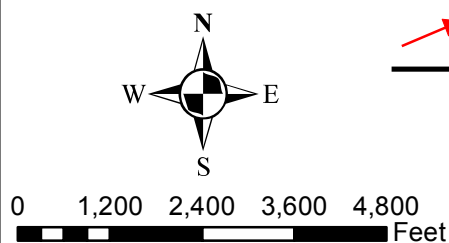
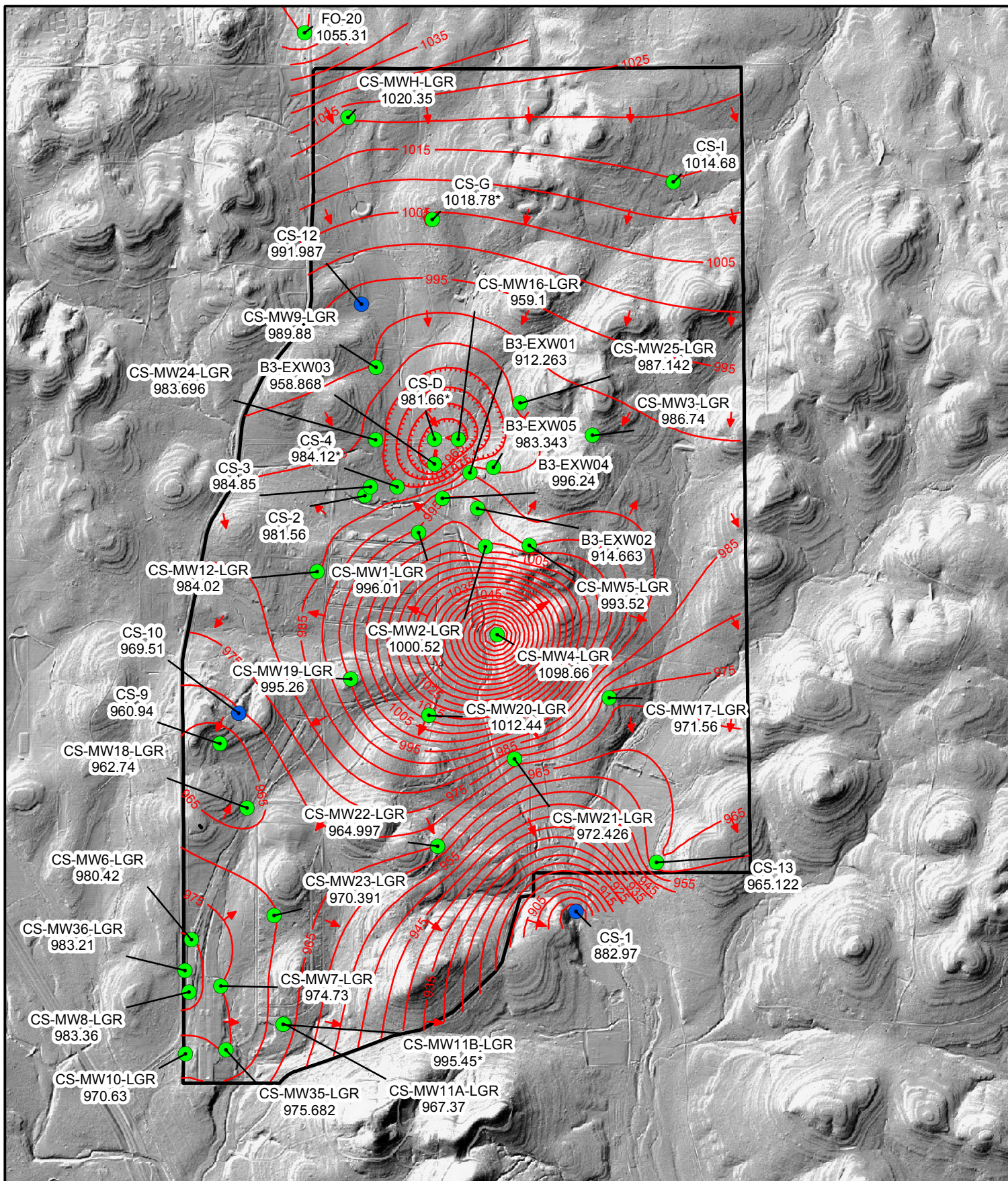
Camp Stanley Storage Activity

Bexar County, Texas

C:\CSSA\GIS\MXD\cssa_on_off_post_wells_fig1.3.mxd 12/16/2013 6:59:07 PM wayne.simoneau@parsons.com

Figure 1.4 CSSA Hydrogeologic Conceptual Site Model





- Flow direction
 - LGR Groundwater Contours
 - Outer fence
 - LGR Wells and groundwater elevation (ft above msl)
 - Drinking water wells (may be completed in LGR, BS, and/or CC)
- * Not a fully penetrating well into LGR. Groundwater elevation not used in contouring

Figure 1.5

June 2013 Potentiometric
Surface Map, LGR Wells
Camp Stanley Storage Activity

PARSONS



Figure 2.1

PARSONS

Air Sample Locations
Camp Stanley Storage Activity
Bexar County, Texas

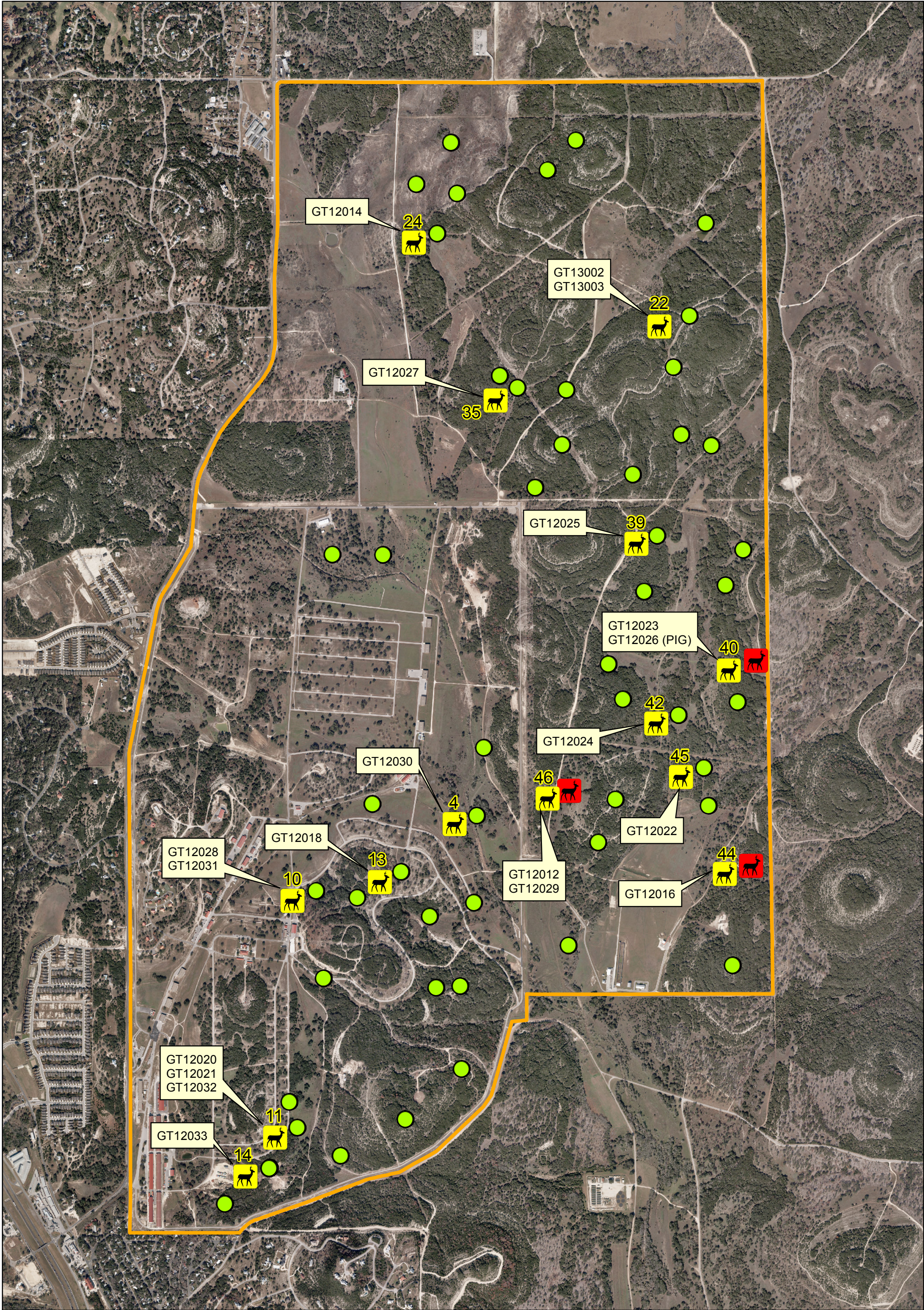
0 250 500 750 1,000 Feet
0 50 100 150 200 250 Meters

Commercial
Military
New Home
Old Home
CSSA Boundary

7.0 mile

Map Area

C:\CSSA\GIS\MXD\cssa_2013_RA_air_sample_locs_fig2.1.mxd 12/18/2013 11:16:09 AM wayne.simoneau@parsons.com



0

1,000

2,000

3,000

4,000

0

200

400

600

800

1,000

Figure 2.2

PARSONS

14

Blind number

GT12020 - Tissue Sample ID

Blind

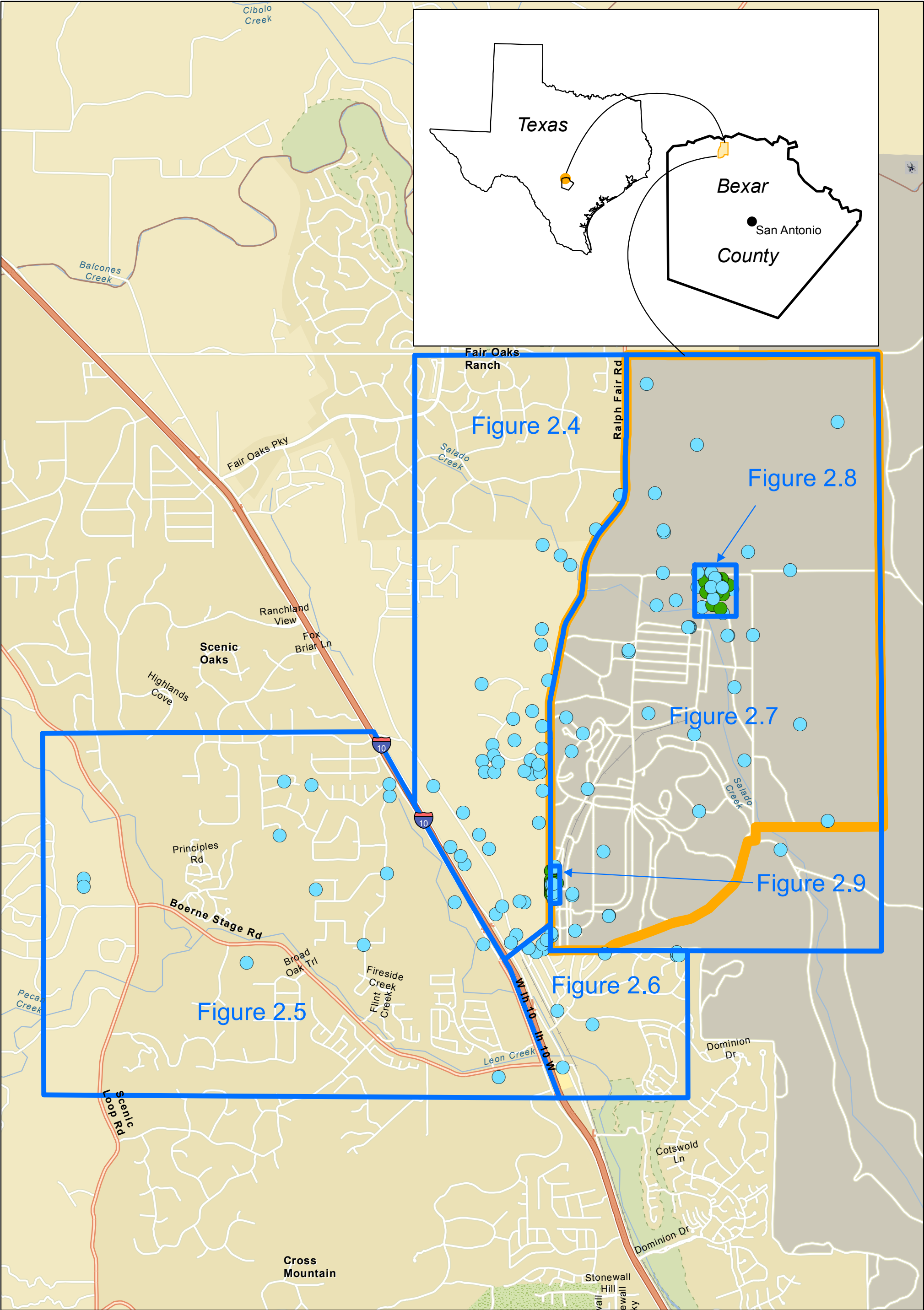
Harvest Location *


Bone Lead Detected

CSSA Boundary

Harvest Locations for
Tissue Samples
Camp Stanley Storage Activity
Bexar County, Texas

C:\CSSA\GISMXD\cssa_2013_RA_deer_tissue_harvest_locs.mxd12/20/2013 1:25:40 PM wayne.simoneau@parsons.com





00.250.50.751 Miles

00.40.81.21.62 Kilometers

Figure 2.3

PARSONS

Excluded Well

Included Well

CSSA Boundary

Map Areas

On-Post and Off-Post Wells Evaluated for the Risk Assessment

Camp Stanley Storage Activity

Bexar County, Texas

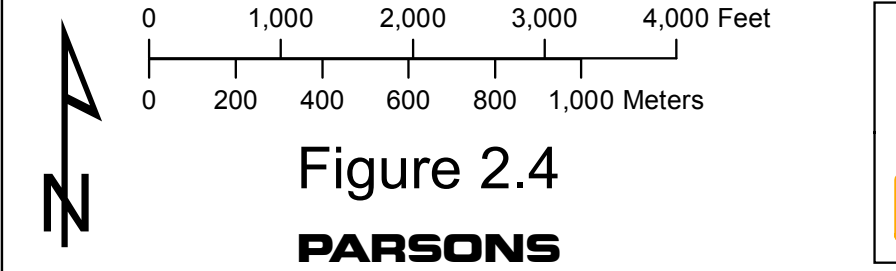
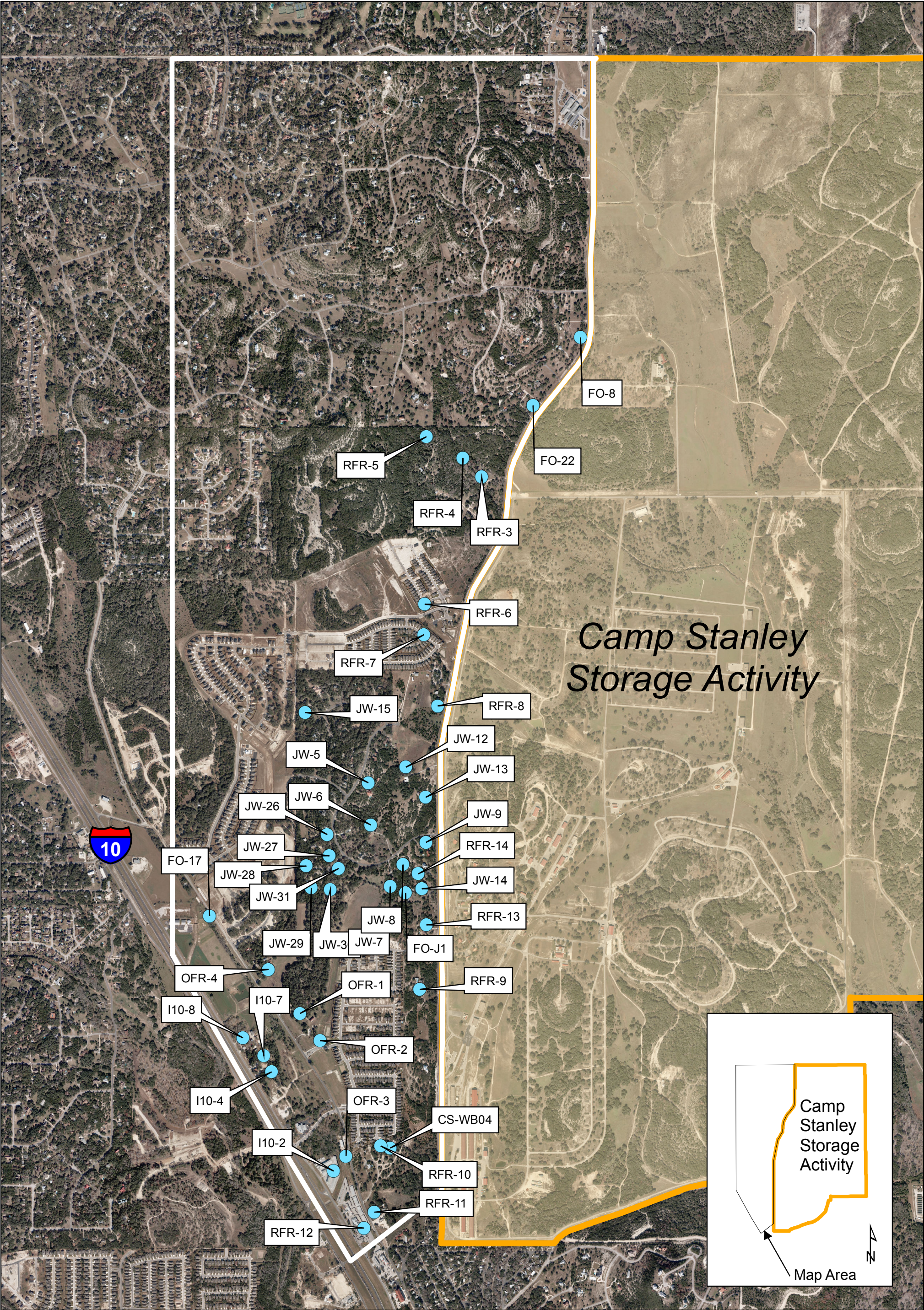
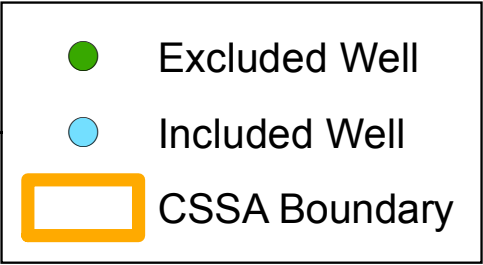


Figure 2.4
PARSONS



Off-Post Well Locations
(Ralph Fair Road Vicinity)
Evaluated for the
Risk Assessment
Camp Stanley Storage Activity
Bexxar County, Texas





C:\CSSA\GIS\MXD\cssa_on_off_post_wells_map_area6_fig2.6.mxd 12/17/2013 3:43:38 PM wayne.simoneau@parsons.com

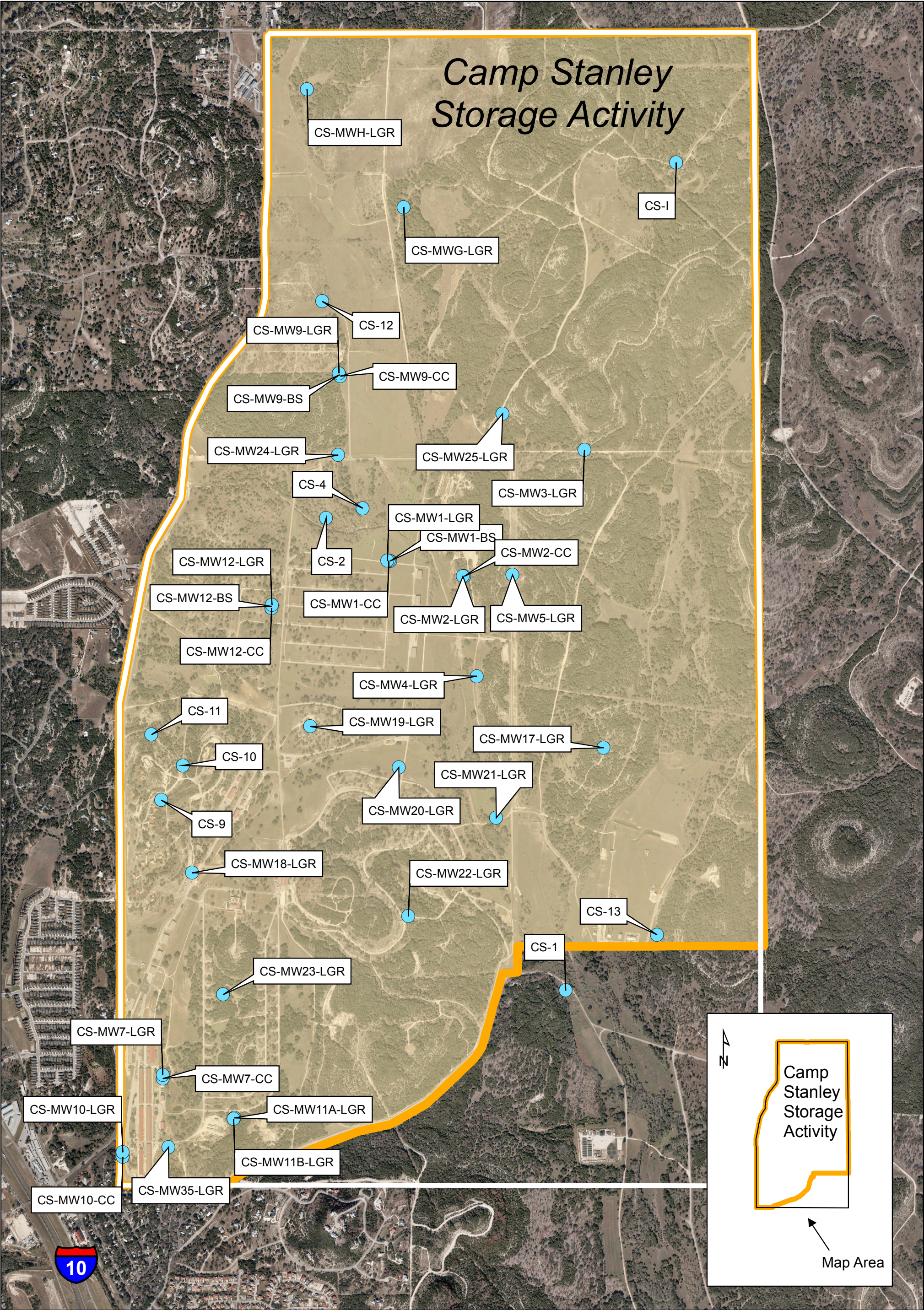


Figure 2.7

PARSONS

0 1,000 2,000 3,000 4,000 Feet
0 200 400 600 800 1,000 Meters

● Excluded Well
● Included Well
CSSA Boundary

**On-Post Well Locations
Evaluated for the
Risk Assessment**

Camp Stanley Storage Activity
Bexar County, Texas

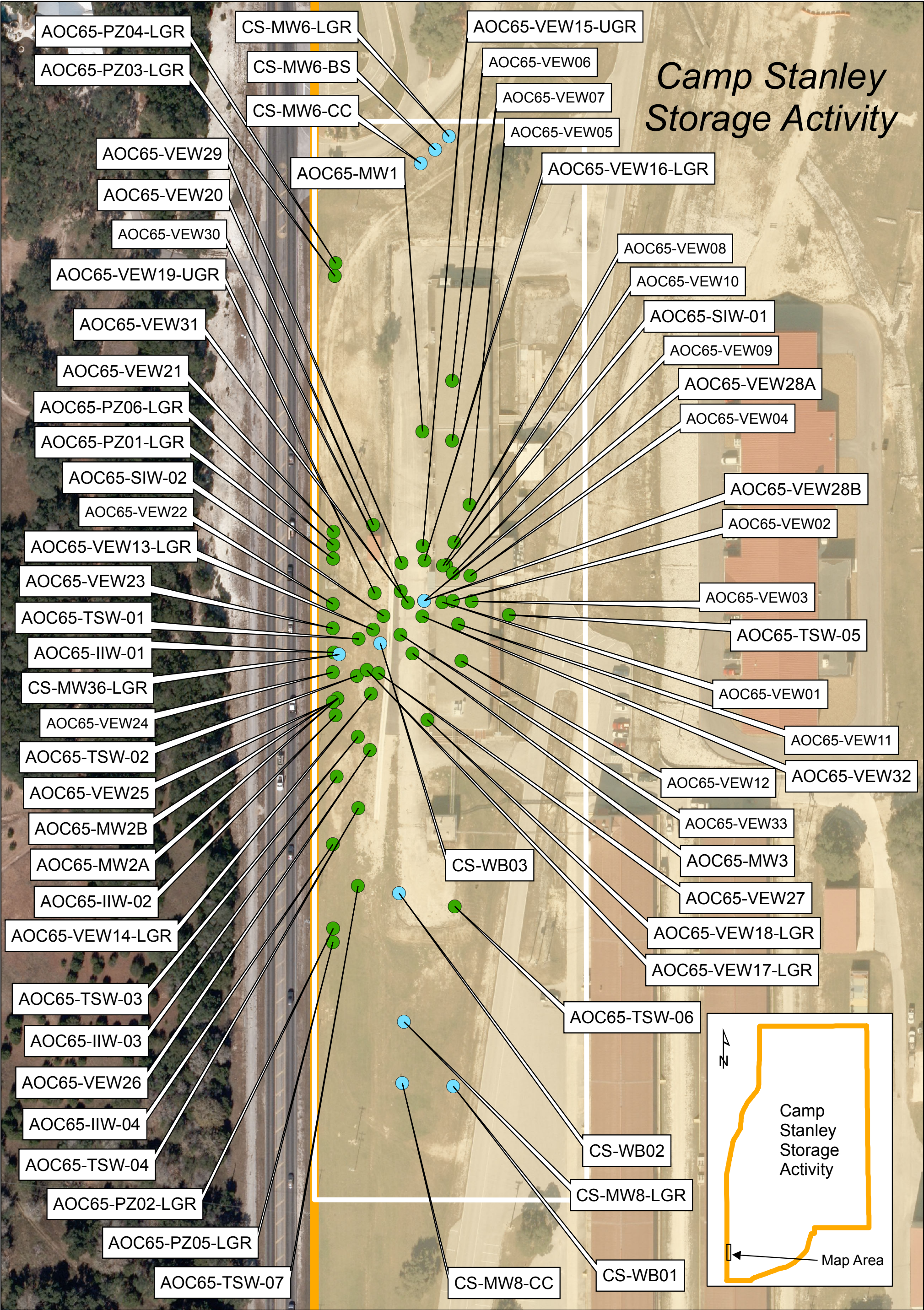
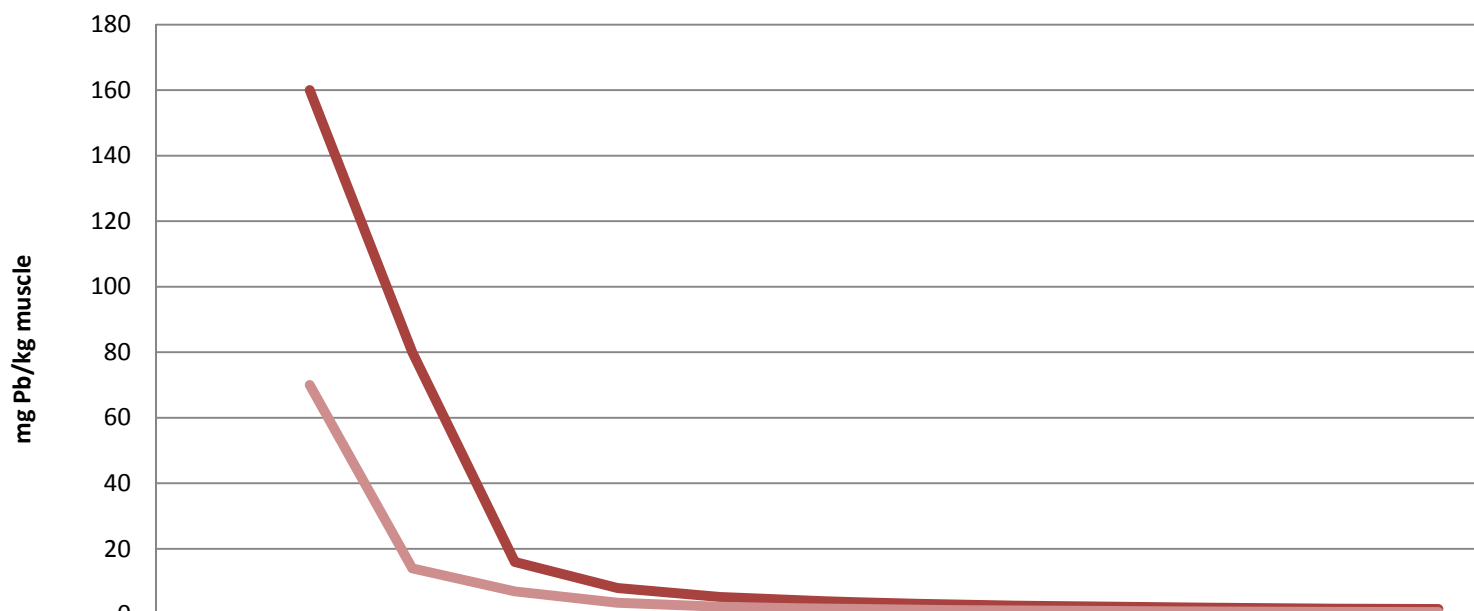


Figure 2.10
IEUBK Model (USEPA, 2010) Estimates of Acceptable Lead Levels in Muscle Tissue
Camp Stanley Storage Activity, Bexar County, Texas



	% of Diet	1	5	10	20	30	40	50	60	70	80	90	100
10 ug/dL PbB		160	80	16	8.0	5.3	4.0	3.2	2.6	2.2	2.0	1.7	1.6
5 ug/dL PbB		70	14	7.0	3.5	2.3	1.7	1.4	1.1	1.0	0.85	0.75	0.70

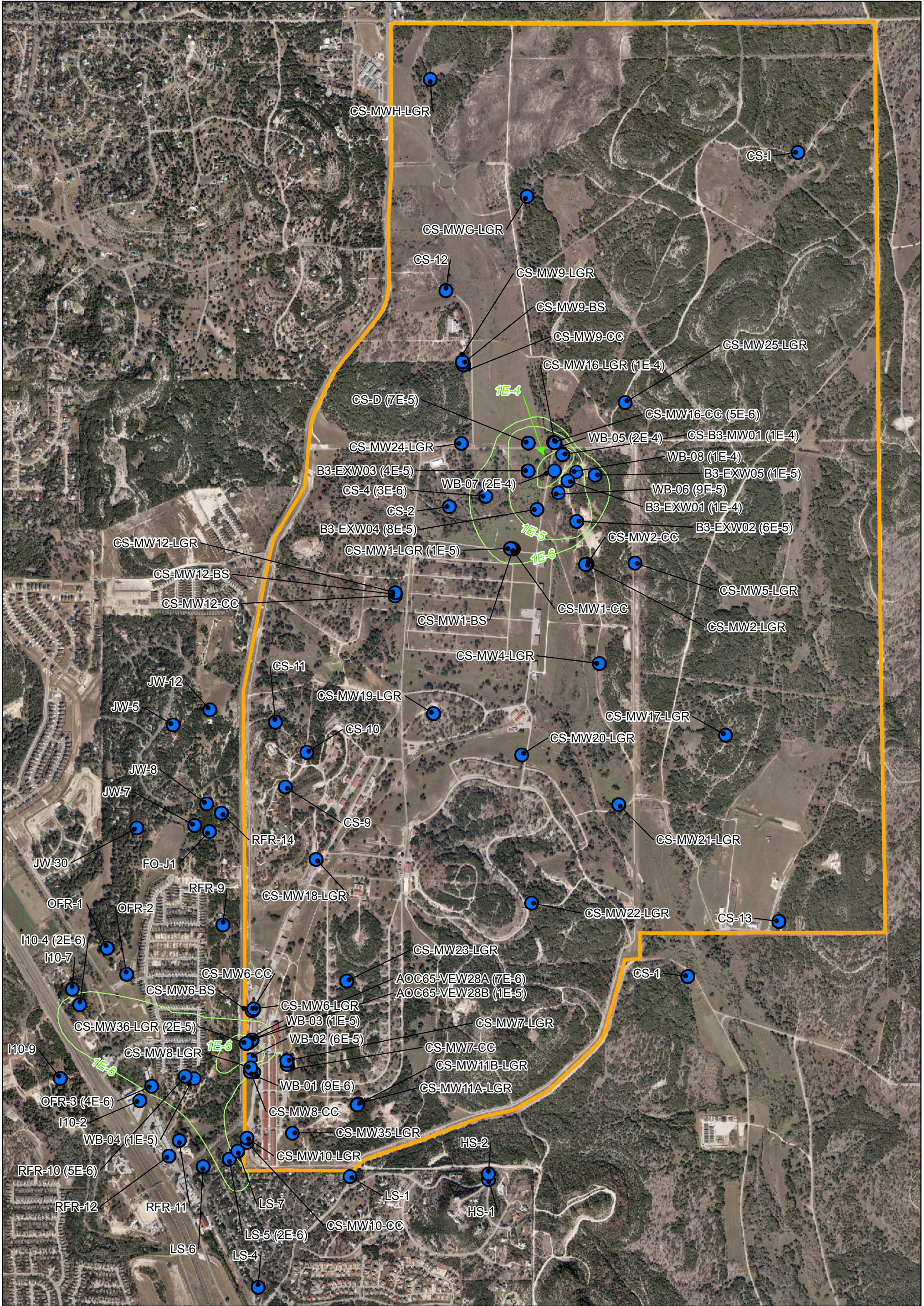





Figure 5.1

PARSONS

* If cumulative risk is greater than 1E-6, cumulative risk is shown in parentheses.
Note: The most conservative cumulative risk from the multiple geologic units sampled is shown for the Westbay wells.

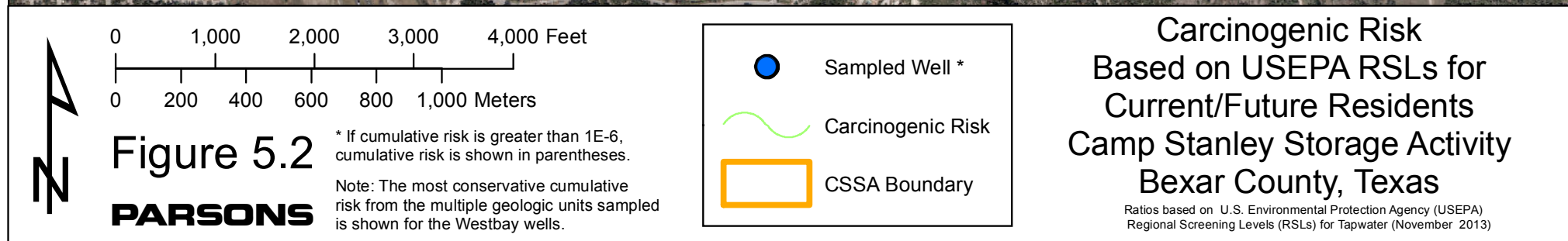
 Sampled Well *

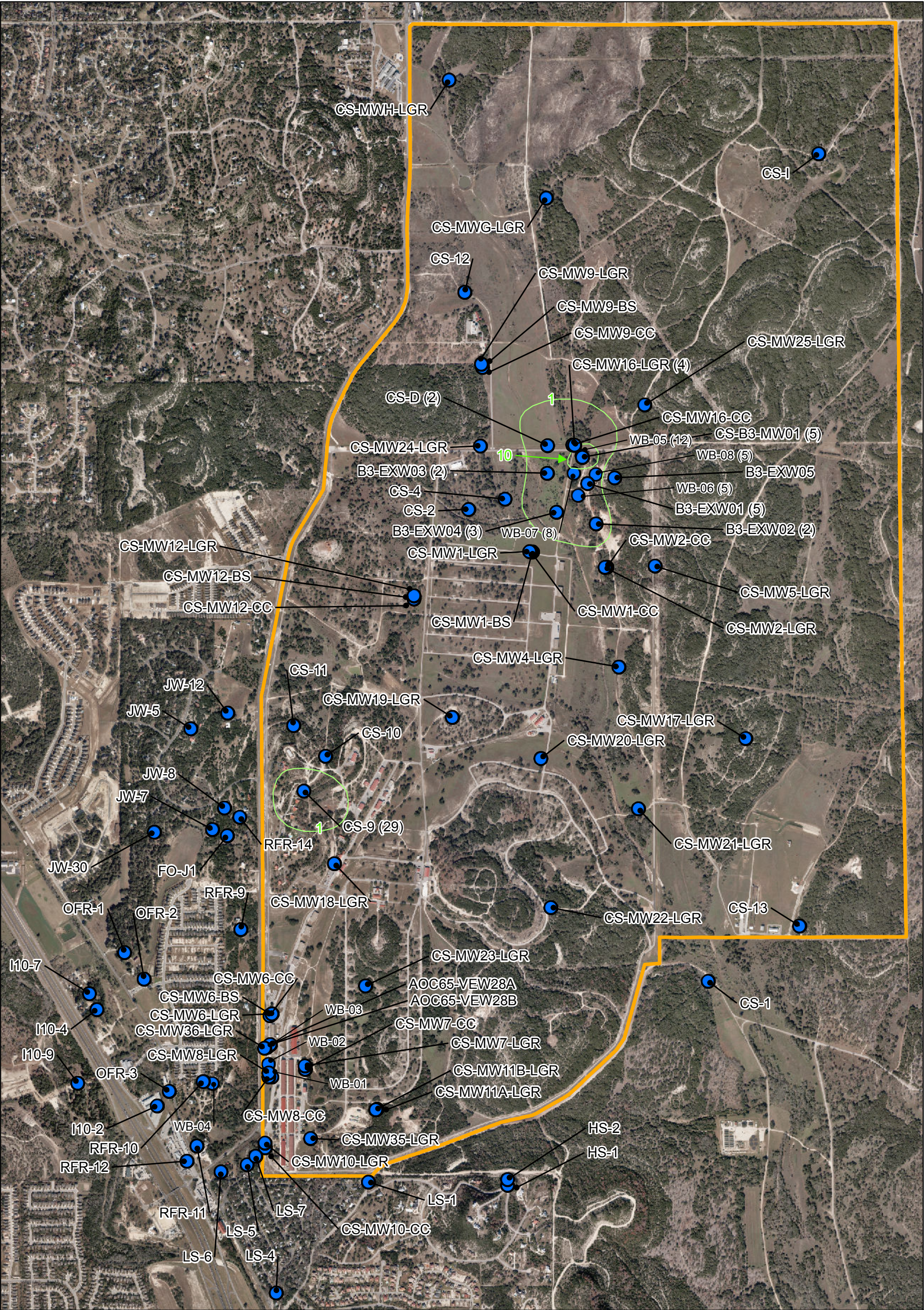
 Carcinogenic Risk


 CSSA Boundary

Carcinogenic Risk
Based on TRRP PCLs for
Current/Future Residents
Camp Stanley Storage Activity
Bexar County, Texas

Ratios based on Texas Commission on Environmental Quality (TCEQ)
Texas Risk Reduction Program (TRRP) Tier 1 Groundwater Protective
Concentration Levels (PCLs) (Table 3, June 2012)










0 1,000 2,000 3,000 4,000 Feet
0 200 400 600 800 1,000 Meters

Figure 5.3

PARSONS

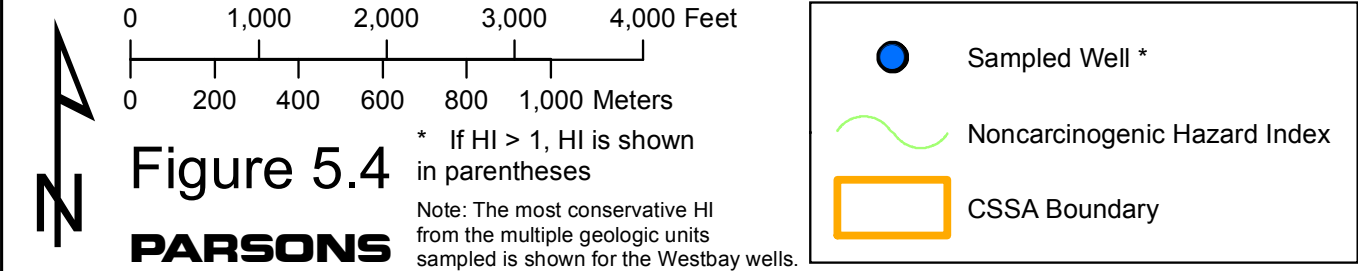
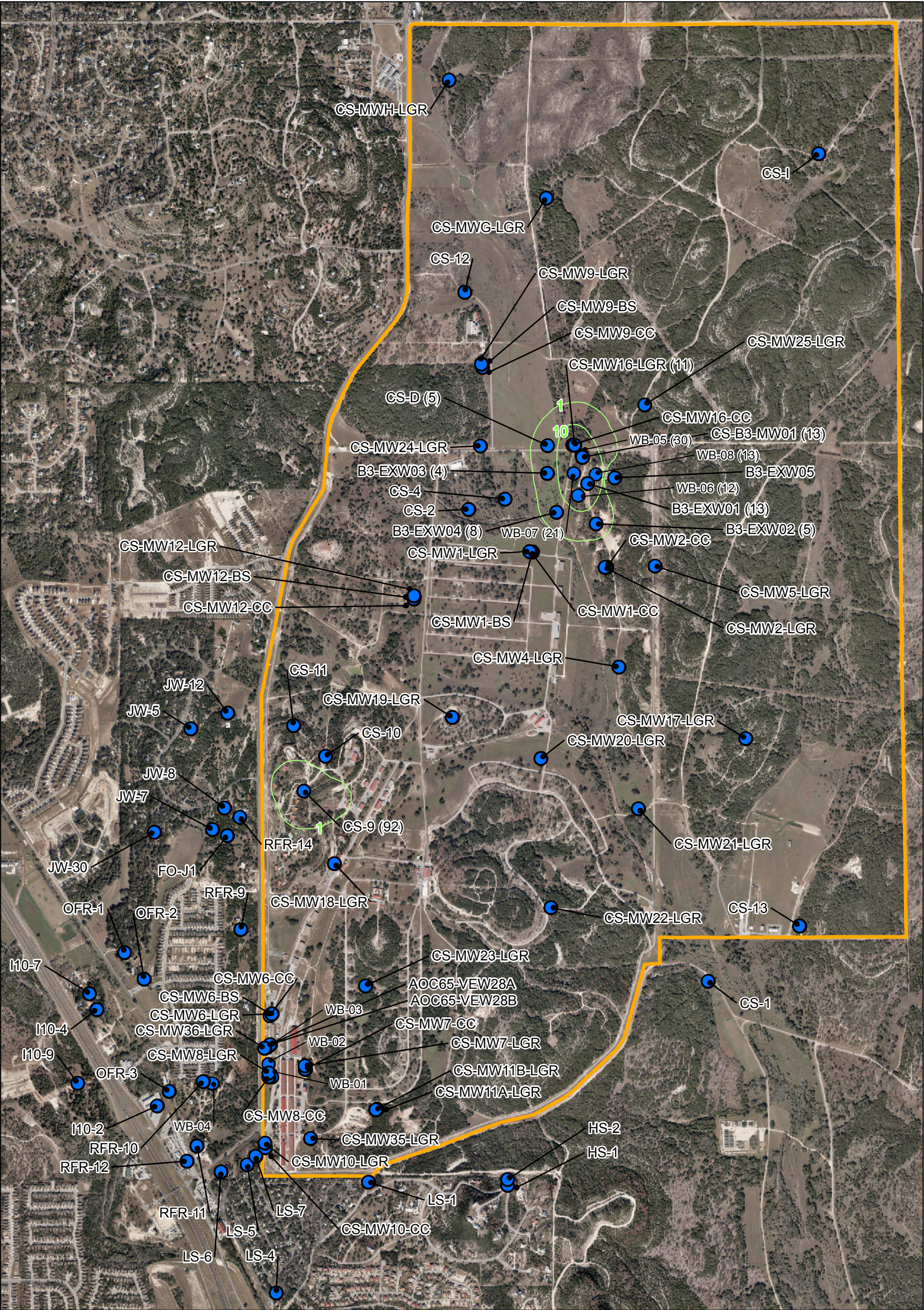
* If HI > 1, HI is shown in parentheses

Note: The most conservative HI from the multiple geologic units sampled is shown for the Westbay wells.

-  Sampled Well *
-  Noncarcinogenic Hazard Index
-  CSSA Boundary

Noncarcinogenic Hazard Based on TRRP PCLs for Current/Future Residents Camp Stanley Storage Activity Bexar County, Texas

Ratios based on Texas Commission on Environmental Quality (TCEQ) Texas Risk Reduction Program (TRRP) Tier 1 Groundwater Protective Concentration Levels (PCLs) (Table 3, June 2012)



Noncarcinogenic Hazard
Based on USEPA RSLs for
Current/Future Residents
Camp Stanley Storage Activity
Bexar County, Texas

Ratios based on U.S. Environmental Protection Agency (USEPA)
Regional Screening Levels (RSLs) for Tapwater (November 2013)

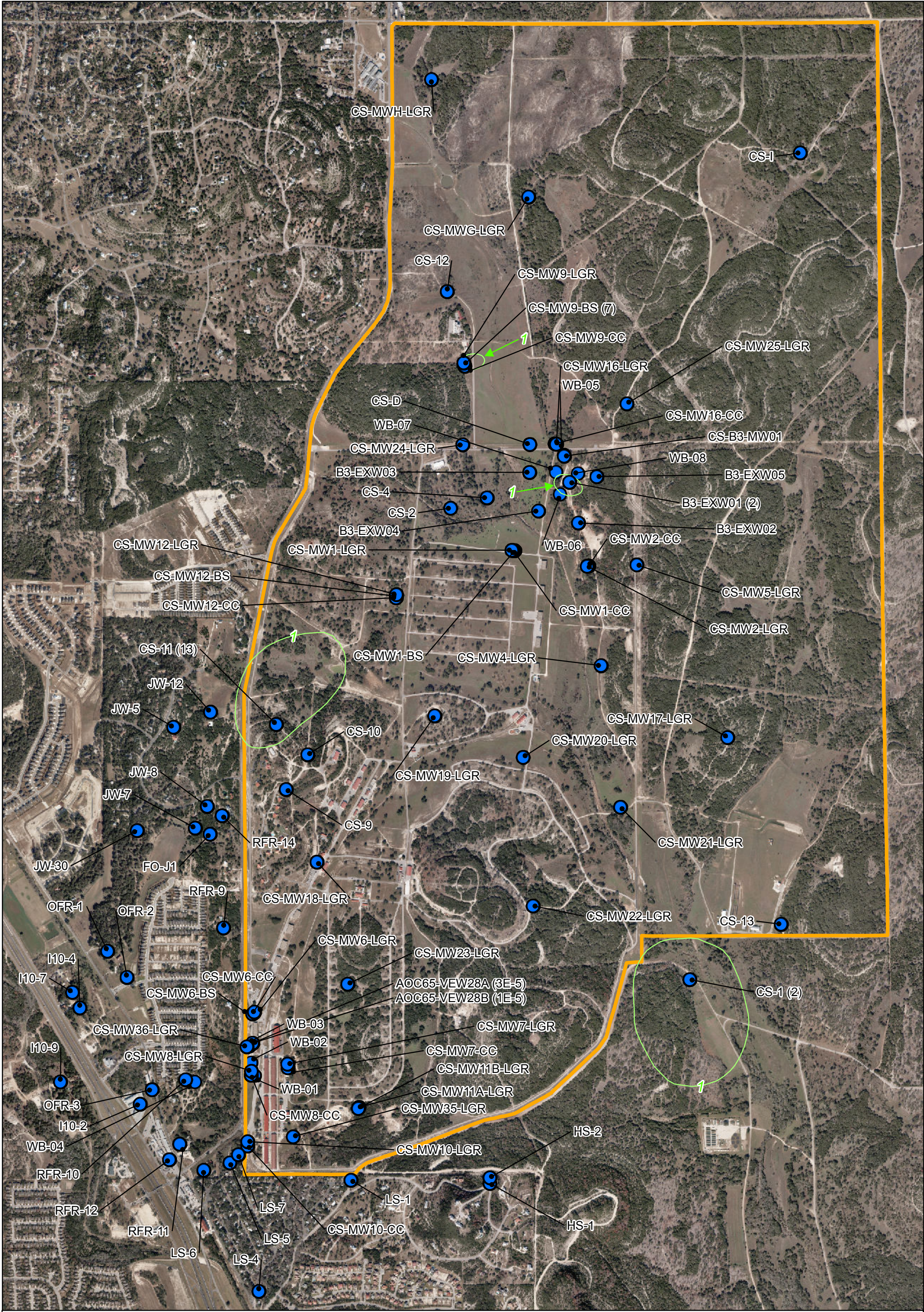


Figure 5.5

PARSONS

* If lead HQ > 1, HQ is shown in parentheses.

Ratios based on Texas Commission on Environmental Quality (TCEQ) Texas Risk Reduction Program (TRRP) Tier 1 Groundwater Protective Concentration Levels (PCLs) (Table 3, June 2012) and U.S. Environmental Protection Agency (USEPA) Regional Screening Levels (RSLs) for Tapwater (November 2013)

- Sampled Well *
- Lead Hazard
- CSSA Boundary

Lead Hazard for
Current/Future Residents
Camp Stanley Storage Activity
Bexar County, Texas

Appendix A
Tissue Sample Data
(Included on CD)

Appendix A Contents

Tissue Sample Laboratory Reports

Data Package ID	Samples
69229	GT12016M
	GT12018M
	GT12012M
	GT12014M
	GT12020M
69230	GT12016B
	GT12016L
	GT12018B
	GT12018L
	GT12012B
	GT12012L
	GT12014B
	GT12014L
	GT12020B
	GT12020L
69254	GT12021B
	GT12021L
69255	GT12021M
69287	GT12022M
	GT12023M
	GT12024M
69288	GT12022B
	GT12022L
	GT12023B
	GT12023L
	GT12024B
	GT12024L
69306	GT12025M
	GT12026M
69307	GT12025B
	GT12025L
	GT12026B
	GT12026L

Appendix A Contents (*continued*)

Tissue Sample Laboratory Reports

Data Package ID	Samples
69340	GT12027B
	GT12027L
	GT12028B
	GT12028L
	GT12029B
	GT12029L
69341	GT12027M
	GT12028M
	GT12029M
69366	GT12030B
	GT12030L
	GT12031B
	GT12031L
69367	GT12030M
	GT12031M
69412	GT12032B
	GT12032L
69413	GT12032M
69526	GT12033B
	GT12033L
69530	GT12033M
69677	GT13002M
	GT13003M
69676	GT13002B
	GT13002L
	GT13003B
	GT13003L

Appendix B
Groundwater Data
(Included on CD)

Appendix B Contents

Off-Post Well Data, Ten Most Recent Samples Collected

Table Number	Well ID
B.1	BSR-03
B.2	BSR-04
B.3	DOM-2
B.4	FO-8
B.5	FO-17
B.6	FO-22
B.7	FO-J1
B.8	HS-1
B.9	HS-2
B.10	HS-3
B.11	I10-2
B.12	I10-4
B.13	I10-5
B.14	I10-7
B.15	I10-8
B.16	I10-9
B.17	I10-10
B.18	JW-5
B.19	JW-6
B.20	JW-7
B.21	JW-8
B.22	JW-9
B.23	JW-12
B.24	JW-13
B.25	JW-14
B.26	JW-15
B.27	JW-26
B.28	JW-27
B.29	JW-28
B.30	JW-29
B.31	JW-30
B.32	JW-31
B.33	LS-1
B.34	LS-2
B.35	LS-3
B.36	LS-4
B.37	LS-5
B.38	LS-5A

Appendix B Contents (*continued*)**Off-Post Well Data, Ten Most Recent Samples Collected**

Table Number	Well ID
B.39	LS-6
B.40	LS-6A
B.41	LS-7
B.42	LS-7A
B.43	OFR-1
B.44	OFR-2
B.45	OFR-3
B.46	OFR-3-A2
B.47	OFR-4
B.48	OW- BARNOWL
B.49	OW-CE1
B.50	OW-CE2
B.51	OW- DAIRYWELL
B.52	OW-HH1
B.53	OW-HH2
B.54	OW-HH3
B.55	OW-MT2
B.56	RFR-3
B.57	RFR-4
B.58	RFR-5
B.59	RFR-6
B.60	RFR-7
B.61	RFR-8
B.62	RFR-9
B.63	RFR-10
B.64	RFR-10-A2
B.65	RFR-10-B2
B.66	RFR-11
B.67	RFR-11-A2
B.68	RFR-12
B.69	RFR-13
B.70	RFR-14
B.71	SLD-01
B.72	SLD-02

Appendix B Contents (*continued*)
On-Post Well Data, Ten Most Recent Samples Collected

Table Number	Well ID
B.73	AOC65-IIW-01
B.74	AOC65-IIW-02
B.75	AOC65-IIW-03
B.76	AOC65-IIW-04
B.77	AOC65-MW1
B.78	AOC65-MW2A
B.79	AOC65-MW2B
B.80	AOC-PZ01-LGR
B.81	AOC-PZ02-LGR
B.82	AOC-PZ03-LGR
B.83	AOC-PZ04-LGR
B.84	AOC-PZ05-LGR
B.85	AOC-PZ06-LGR
B.86	AOC65-SIW-01
B.87	AOC65-SIW-02
B.88	AOC65-TSW-01
B.89	AOC65-TSW-02
B.90	AOC65-TSW-03
B.91	AOC65-TSW-04
B.92	AOC65-TSW-05
B.93	AOC65-TSW-06
B.94	AOC65-TSW-07
B.95	AOC-VEW13-LGR
B.96	AOC-VEW14-LGR
B.97	AOC-VEW15-UGR
B.98	AOC-VEW16-LGR
B.99	AOC-VEW17-LGR
B.100	AOC-VEW18-LGR
B.101	AOC-VEW19-UGR
B.102	AOC-VEW20
B.103	AOC-VEW21
B.104	AOC-VEW23
B.105	AOC-VEW25
B.106	AOC-VEW26
B.107	AOC-VEW27
B.108	AOC-VEW28A

Appendix B Contents (*continued*)
On-Post Well Data, Ten Most Recent Samples Collected

Table Number	Well ID
B.109	AOC-VEW28B
B.110	AOC-VEW29
B.111	AOC-VEW31
B.112	AOC-VEW32
B.113	B3-EW-A2
B.114	B3-EXW01
B.115	B3-EXW02
B.116	B3-EXW03
B.117	B3-EXW04
B.118	B3-EXW05
B.119	B3-MW26-UGR
B.120	B3-MW27-UGR
B.121	B3-MW29-UGR
B.122	B3-MW30-UGR
B.123	B3-MW31-UGR
B.124	B3-MW32-UGR
B.125	B3-MW33-UGR
B.126	B3-MW34-UGR
B.127	B3-T1-1
B.128	B3-T1-2
B.129	B3-T1-3
B.130	B3-T2-1
B.131	B3-T2-2
B.132	B3-T3-1
B.133	B3-T3-2
B.134	B3-T4-1
B.135	B3-T5-1
B.136	B3-T5-2
B.137	B3-T6-1
B.138	B3-T6-2
B.139	CS-B3-MW01
B.140	CS-1
B.141	CS-2
B.142	CS-4
B.143	CS-9
B.144	CS-10

Appendix B Contents (*continued*)
On-Post Well Data, Ten Most Recent Samples Collected

Table Number	Well ID
B.145	CS-11
B.146	CS-12
B.147	CS-13
B.148	CS-D
B.149	CS-I
B.150	CS-MW1-BS
B.151	CS-MW1-CC
B.152	CS-MW1-LGR
B.153	CS-MW2-CC
B.154	CS-MW2-LGR
B.155	CS-MW3-LGR
B.156	CS-MW4-LGR
B.157	CS-MW5-LGR
B.158	CS-MW6-BS
B.159	CS-MW6-CC
B.160	CS-MW6-LGR
B.161	CS-MW7-CC
B.162	CS-MW7-LGR
B.163	CS-MW8-CC
B.164	CS-MW8-LGR
B.165	CS-MW9-BS
B.166	CS-MW9-CC
B.167	CS-MW9-LGR
B.168	CS-MW10-CC
B.169	CS-MW10-LGR
B.170	CS-MW11A-LGR
B.171	CS-MW11B-LGR
B.172	CS-MW12-BS
B.173	CS-MW12-CC
B.174	CS-MW12-LGR
B.175	CS-MW16-CC
B.176	CS-MW16-LGR
B.177	CS-MW17-LGR
B.178	CS-MW18-LGR
B.179	CS-MW19-LGR
B.180	CS-MW20-LGR

Appendix B Contents (*continued*)
On-Post Well Data, Ten Most Recent Samples Collected

Table Number	Well ID
B.181	CS-MW21-LGR
B.182	CS-MW22-LGR
B.183	CS-MW23-LGR
B.184	CS-MW24-LGR
B.185	CS-MW25-LGR
B.186	CS-MW35-LGR
B.187	CS-MW36-LGR
B.188	CS-MWG-LGR
B.189	CS-MWH-LGR
B.190	CS-WB01-LGR-01
B.191	CS-WB01-LGR-02
B.192	CS-WB01-LGR-03
B.193	CS-WB01-LGR-04
B.194	CS-WB01-LGR-05
B.195	CS-WB01-LGR-06
B.196	CS-WB01-LGR-07
B.197	CS-WB01-LGR-08
B.198	CS-WB01-LGR-09
B.199	CS-WB01-UGR-01
B.200	CS-WB02-LGR-01
B.201	CS-WB02-LGR-02
B.202	CS-WB02-LGR-03
B.203	CS-WB02-LGR-04
B.204	CS-WB02-LGR-05
B.205	CS-WB02-LGR-06
B.206	CS-WB02-LGR-07
B.207	CS-WB02-LGR-08
B.208	CS-WB02-LGR-09
B.209	CS-WB02-UGR-01
B.210	CS-WB03-LGR-01
B.211	CS-WB03-LGR-02
B.212	CS-WB03-LGR-03
B.213	CS-WB03-LGR-04
B.214	CS-WB03-LGR-05
B.215	CS-WB03-LGR-06
B.216	CS-WB03-LGR-07

Appendix B Contents (*continued*)
On-Post Well Data, Ten Most Recent Samples Collected

Table Number	Well ID
B.217	CS-WB03-LGR-08
B.218	CS-WB03-LGR-09
B.219	CS-WB03-UGR-01
B.220	CS-WB04-BS-01
B.221	CS-WB04-BS-02
B.222	CS-WB04-CC-01
B.223	CS-WB04-CC-02
B.224	CS-WB04-CC-03
B.225	CS-WB04-LGR-01
B.226	CS-WB04-LGR-02
B.227	CS-WB04-LGR-03
B.228	CS-WB04-LGR-04
B.229	CS-WB04-LGR-06
B.230	CS-WB04-LGR-07
B.231	CS-WB04-LGR-08
B.232	CS-WB04-LGR-09
B.233	CS-WB04-LGR-10
B.234	CS-WB04-LGR-11
B.235	CS-WB04-UGR-01
B.236	CS-WB05-BS-01
B.237	CS-WB05-CC-01
B.238	CS-WB05-CC-02
B.239	CS-WB05-LGR-01
B.240	CS-WB05-LGR-02
B.241	CS-WB05-LGR-03A
B.242	CS-WB05-LGR-03B
B.243	CS-WB05-LGR-04A
B.244	CS-WB05-LGR-04B
B.245	CS-WB06-LGR-01
B.246	CS-WB06-LGR-02
B.247	CS-WB06-LGR-03A
B.248	CS-WB06-LGR-03B
B.249	CS-WB06-LGR-04
B.250	CS-WB06-UGR-01
B.251	CS-WB07-LGR-01
B.252	CS-WB07-LGR-02

Appendix B Contents (*continued*)
On-Post Well Data, Ten Most Recent Samples Collected

Table Number	Well ID
B.253	CS-WB07-LGR-03A
B.254	CS-WB07-LGR-03B
B.255	CS-WB07-LGR-04
B.256	CS-WB07-UGR-01
B.257	CS-WB08-LGR-01
B.258	CS-WB08-LGR-02
B.259	CS-WB08-LGR-03A
B.260	CS-WB08-LGR-03B
B.261	CS-WB08-LGR-04
B.262	CS-WB08-UGR-01