



**In cooperation with the U.S. Air Force, Aeronautical Systems Center,
Environmental Management Directorate, Wright-Patterson Air Force Base, Ohio**

**Subsurface Occurrence and Potential
Source Areas of Chlorinated Ethenes
Identified Using Concentrations and
Concentration Ratios, Air Force Plant 4
and Naval Air Station-Joint Reserve Base
Carswell Field, Fort Worth, Texas**

Scientific Investigations Report 2005–5176

**U.S. Department of the Interior
U.S. Geological Survey**

Blank Page

Subsurface Occurrence and Potential Source Areas of Chlorinated Ethenes Identified Using Concentrations and Concentration Ratios, Air Force Plant 4 and Naval Air Station-Joint Reserve Base Carswell Field, Fort Worth, Texas

By C. Amanda Garcia

In cooperation with the U.S. Air Force, Aeronautical Systems Center,
Environmental Management Directorate, Wright-Patterson Air Force Base, Ohio

Scientific Investigations Report 2005–5176

U.S. Department of the Interior
U.S. Geological Survey

U.S. Department of the Interior
Gale A. Norton, Secretary

U.S. Geological Survey
P. Patrick Leahy, Acting Director

U.S. Geological Survey, Reston, Virginia: 2005

For sale by U.S. Geological Survey, Information Services
Box 25286, Denver Federal Center
Denver, CO 80225

For more information about the USGS and its products:

Telephone: 1-888-ASK-USGS

World Wide Web: <http://www.usgs.gov/>

Any use of trade, product, or firm names in this publication is for descriptive purposes only and does not imply endorsement by the U.S. Government.

Although this report is in the public domain, permission must be secured from the individual copyright owners to reproduce any copyrighted materials contained within this report.

Suggested citation:

Garcia, C.A., 2005, Subsurface occurrence and potential source areas of chlorinated ethenes identified using concentrations and concentration ratios, Air Force Plant 4 and Naval Air Station-Joint Reserve Base Carswell Field, Fort Worth, Texas: U.S. Geological Survey Scientific Investigations Report 2005-5176, 81 p.

Contents

Abstract	1
Introduction	2
Study Area Setting and Remediation of Chlorinated Ethenes	2
Indicators of Subsurface Occurrence and Potential Source Areas of Chlorinated Ethenes	2
Acknowledgments	4
Hydrogeology and Directions of Ground-Water Flow in the Alluvial Aquifer	4
Subsurface Occurrence of Chlorinated Ethenes	7
Concentrations	7
Ratios of Concentrations	7
Potential Source Areas of Chlorinated Ethenes	19
Summary	23
References	24
Appendix—Alluvial aquifer data pertinent to this report, Air Force Plant 4 and Naval Air Station-Joint Reserve Base Carswell Field, Fort Worth, Texas	27
Table A1. Maximum historical trichloroethene (TCE) concentrations in the alluvial aquifer, Air Force Plant 4 (AFP4) and Naval Air Station-Joint Reserve Base Carswell Field (NAS-JRB) study area, Fort Worth, Texas, 1984–2003	29
Table A2. Maximum historical tetrachloroethene (PCE) concentrations in the alluvial aquifer, Air Force Plant 4 (AFP4) and Naval Air Station-Joint Reserve Base Carswell Field (NAS-JRB) study area, Fort Worth, Texas, 1983–2003	38
Table A3. Maximum historical <i>cis</i> -1,2-dichloroethene (<i>cis</i> -DCE) concentrations in the alluvial aquifer, Air Force Plant 4 (AFP4) and Naval Air Station-Joint Reserve Base Carswell Field (NAS-JRB) study area, Fort Worth, Texas, 1991–2003	46
Table A4. Maximum historical <i>trans</i> -1,2-dichloroethene (<i>trans</i> -DCE) concentrations in the alluvial aquifer, Air Force Plant 4 (AFP4) and Naval Air Station-Joint Reserve Base Carswell Field (NAS-JRB) study area, Fort Worth, Texas, 1983–2003	55
Table A5. Maximum historical tetrachloroethene (PCE) and trichloroethene (TCE) concentrations in the alluvial aquifer, used to compute parent-compound to daughter-product concentration ratios, Air Force Plant 4 (AFP4) and Naval Air Station-Joint Reserve Base Carswell Field (NAS-JRB) study area, Fort Worth, Texas, 1983–2003	65
Table A6. Maximum historical trichloroethene (TCE) and total 1,2-dichloroethene (total DCE) concentrations in the alluvial aquifer, used to compute parent-compound to daughter-product concentration ratios, Air Force Plant 4 (AFP4) and Naval Air Station-Joint Reserve Base Carswell Field (NAS-JRB) study area, Fort Worth, Texas, 1991–2003	70
Table A7. Maximum historical <i>trans</i> -1,2-dichloroethene (<i>trans</i> -DCE) and <i>cis</i> -1,2-dichloroethene (<i>cis</i> -DCE) concentrations in the alluvial aquifer, used to compute concentration ratios, Air Force Plant 4 (AFP4) and Naval Air Station-Joint Reserve Base Carswell Field (NAS-JRB) study area, Fort Worth, Texas, 1991–2003	76

Figures

1–3. Maps showing:

1. Location of Air Force Plant 4 (AFP4) and Naval Air Station-Joint Reserve Base Carswell Field (NAS-JRB) study area, Fort Worth, Texas

3

2.	Altitude of the top of the Goodland-Walnut confining unit, Air Force Plant 4 (AFP4) and Naval Air Station-Joint Reserve Base Carswell Field (NAS-JRB) study area, Fort Worth, Texas	5
3.	Water table and direction of ground-water flow in the alluvial aquifer, Air Force Plant 4 (AFP4) and Naval Air Station-Joint Reserve Base Carswell Field (NAS-JRB) study area, Fort Worth, Texas, 1995	6
4-7.	Maps showing maximum historical:	
4.	Trichloroethene (TCE) concentrations in the alluvial aquifer, Air Force Plant 4 (AFP4) and Naval Air Station-Joint Reserve Base Carswell Field (NAS-JRB) study area, Fort Worth, Texas, 1984-2003	8
5.	Tetrachloroethene (PCE) concentrations in the alluvial aquifer, Air Force Plant 4 (AFP4) and Naval Air Station-Joint Reserve Base Carswell Field (NAS-JRB) study area, Fort Worth, Texas, 1983-2003	9
6.	<i>cis</i> -1,2-Dichloroethene (<i>cis</i> -DCE) concentrations in the alluvial aquifer, Air Force Plant 4 (AFP4) and Naval Air Station-Joint Reserve Base Carswell Field (NAS-JRB) study area, Fort Worth, Texas, 1991-2003	10
7.	<i>trans</i> -1,2-Dichloroethene (<i>trans</i> -DCE) concentrations in the alluvial aquifer, Air Force Plant 4 (AFP4) and Naval Air Station-Joint Reserve Base Carswell Field (NAS-JRB) study area, Fort Worth, Texas, 1983-2003	11
8-13.	Graphs showing molar concentrations of:	
8.	Trichloroethene (TCE), tetrachloroethene (PCE), and total 1,2-dichloroethene (total DCE) with distance downgradient along a generalized ground-water flow path beginning at well HM-64 (for simplicity, projected straight-line distance), Air Force Plant 4 (AFP4) and Naval Air Station-Joint Reserve Base Carswell Field (NAS-JRB) study area, Fort Worth, Texas, 1995	12
9.	Trichloroethene (TCE), tetrachloroethene (PCE), and total 1,2-dichloroethene (total DCE) with distance downgradient along a generalized ground-water flow path beginning at well HM-59 (for simplicity, projected straight-line distance), Air Force Plant 4 (AFP4) and Naval Air Station-Joint Reserve Base Carswell Field (NAS-JRB) study area, Fort Worth, Texas, 2003	13
10.	Trichloroethene (TCE), tetrachloroethene (PCE), and total 1,2-dichloroethene (total DCE) with distance downgradient along a generalized ground-water flow path beginning at well HM-123 (for simplicity, projected straight-line distance), Air Force Plant 4 (AFP4) and Naval Air Station-Joint Reserve Base Carswell Field (NAS-JRB) study area, Fort Worth, Texas, 2003	14
11.	Trichloroethene (TCE) with time for alluvial wells in the southern part of Air Force Plant 4 (AFP4) and Naval Air Station-Joint Reserve Base Carswell Field (NAS-JRB) study area, Fort Worth, Texas	15
12.	Tetrachloroethene (PCE) with time for alluvial wells in the southern part of Air Force Plant 4 (AFP4) and Naval Air Station-Joint Reserve Base Carswell Field (NAS-JRB) study area, Fort Worth, Texas	16
13.	Total 1,2-dichloroethene (total DCE) with time for alluvial wells in the southern part of Air Force Plant 4 (AFP4) and Naval Air Station-Joint Reserve Base Carswell Field (NAS-JRB) study area, Fort Worth, Texas	17
14-16.	Maps showing maximum historical concentration ratios of:	
14.	Tetrachloroethene (PCE) to trichloroethene (TCE) in the alluvial aquifer, Air Force Plant 4 (AFP4) and Naval Air Station-Joint Reserve Base Carswell Field (NAS-JRB) study area, Fort Worth, Texas, 1983-2003	18

15. Trichloroethene (TCE) to total 1,2-dichloroethene (total DCE) in the alluvial aquifer, Air Force Plant 4 (AFP4) and Naval Air Station-Joint Reserve Base Carswell Field (NAS-JRB) study area, Fort Worth, Texas, 1991–2003	20
16. <i>trans</i> -1,2-Dichloroethene (<i>trans</i> -DCE) to <i>cis</i> -1,2-dichloroethene (<i>cis</i> -DCE) in the alluvial aquifer, Air Force Plant 4 (AFP4) and Naval Air Station-Joint Reserve Base Carswell Field (NAS-JRB) study area, Fort Worth, Texas, 1991–2003	21
17. Map showing potential source areas of chlorinated ethenes, Air Force Plant 4 (AFP4) and Naval Air Station-Joint Reserve Base Carswell Field (NAS-JRB) study area, Fort Worth, Texas	22

Vertical and Horizontal Datums

Vertical coordinate information is referenced to the North American Vertical Datum of 1988 (NAVD 88).

Horizontal coordinate information is referenced to the North American Datum of 1983 (NAD 83).

Blank Page

Subsurface Occurrence and Potential Source Areas of Chlorinated Ethenes Identified Using Concentrations and Concentration Ratios, Air Force Plant 4 and Naval Air Station-Joint Reserve Base Carswell Field, Fort Worth, Texas

By C. Amanda Garcia

Abstract

The U.S. Geological Survey, in cooperation with the U.S. Air Force Aeronautical Systems Center, Environmental Management Directorate, conducted a study during 2003–05 to characterize the subsurface occurrence and identify potential source areas of the volatile organic compounds classified as chlorinated ethenes at U.S. Air Force Plant 4 (AFP4) and adjacent Naval Air Station-Joint Reserve Base Carswell Field (NAS–JRB) at Fort Worth, Texas. The solubilized chlorinated ethenes detected in the alluvial aquifer originated as either released solvents (trichloroethene [TCE], tetrachloroethene [PCE], and *trans*-1,2-dichloroethene [*trans*-DCE]) or degradation products of the released solvents (TCE, *cis*-1,2-dichloroethene [*cis*-DCE], and *trans*-DCE). The combined influences of topographic- and bedrock-surface configurations result in a water table that generally slopes away from a ground-water divide approximately coincident with bedrock highs and the 1-mile-long aircraft assembly building at AFP4.

Highest TCE concentrations (10,000 to 920,000 micrograms per liter) occur near Building 181, west of Building 12, and at landfill 3. Highest PCE concentrations (500 to 920 micrograms per liter) occur near Buildings 4 and 5. Highest *cis*-DCE concentrations (5,000 to 710,000 micrograms per liter) occur at landfill 3. Highest *trans*-DCE concentrations (1,000 to 1,700 micrograms per liter) occur just south of Building 181 and at landfill 3.

Ratios of parent-compound to daughter-product concentrations that increase in relatively short distances (10s to 100s of feet) along downgradient ground-water flow paths can indicate

a contributing source in the vicinity of the increase. Largest increases in ratio of PCE to TCE concentrations are three orders of magnitude from 0.01 to 2.7 and 7.1 between nearby wells in the northeastern part of NAS–JRB. In the northern part of NAS–JRB, the largest increases in TCE to total DCE concentration ratios relative to ratios at upgradient wells are from 17 to 240 or from 17 to 260. In the southern part of NAS–JRB, the largest ratio increases with respect to those at upgradient wells are from 22 and 24 to 130, and from 0 and 7.2 to 71. Numerous maximum historical ratios of *trans*-DCE to *cis*-DCE are greater than 1, which can indicate that *trans*-DCE likely was released as a solvent and does not occur only as a result of degradation of TCE.

High concentrations of TCE, PCE, *cis*-DCE, and *trans*-DCE, abrupt increases in ratios of PCE to TCE and TCE to total DCE, and ratios of *trans*-DCE to *cis*-DCE greater than 1 were used to identify 16 potential source areas of chlorinated ethenes at NAS–JRB. The evidence for some of the potential source areas is stronger than for others, but each area reflects one or more of the conditions indicative of chlorinated ethenes entering the aquifer. Potential source areas supported by the strongest evidence are Building 181, between Buildings 4 and 5, just west of Building 12, and landfills 1 and 3. The highest historical TCE concentration in the study area, 920,000 micrograms per liter, is near Building 181. The potential source area between Buildings 4 and 5 primarily is identified by notably high PCE concentrations (as much as 920 micrograms per liter). Primary evidence for the potential source area just west of Building 12 is the notably high TCE concentrations (for example, 160,000 micrograms per liter) that appear to originate in the area. Primary evidence for the potential source area at landfills 1 and

2 Subsurface Occurrence and Potential Source Areas of Chlorinated Ethenes, AFP4 and NAS–JRB, Fort Worth, Texas

(primarily) 3 is the magnitudes of TCE concentrations (for example, two in the 100,000-to-920,000-microgram-per-liter range), *cis*-DCE concentrations (several in the 5,000-to-710,000-microgram-per-liter range), and *trans*-DCE concentrations (several in the 500-to-1,700-microgram-per-liter range). The ratio of *trans*-DCE to *cis*-DCE at one well in landfill 3 (6.7) is appreciably above the threshold that can indicate likely solvent release as opposed to TCE degradation alone.

Introduction

Industrial facilities at U.S. Air Force (USAF) Plant 4 (AFP4) and adjacent Naval Air Station-Joint Reserve Base Carswell Field (NAS–JRB) at Fort Worth, Tex. (fig. 1), have been in operation since 1942. The facilities have manufactured aircraft, radar units, missile components, and spare parts. The manufacture of aircraft and related parts requires various solvents, paints, metals, oils, fuels, and other toxic chemicals. Some of these chemicals, primarily volatile organic compounds (VOCs), have been detected in high concentrations in the alluvial aquifer, the aquifer immediately beneath land surface, at AFP4 and NAS–JRB (U.S. Army Corps of Engineers, 1986; Jacobs Engineering Group Inc., 1993; Geo-Marine, Inc. 1995; RUST Geotech, 1995a, b, c, d; Kuniandy and others, 1996).

The U.S. Geological Survey (USGS), in cooperation with the USAF Aeronautical Systems Center, Environmental Management Directorate, conducted a study during 2003–05 to characterize the subsurface occurrence and identify potential source areas of the VOCs classified as chlorinated ethenes. The solubilized chlorinated ethenes detected in the alluvial aquifer originated as either released solvents (trichloroethene [TCE], tetrachloroethene [PCE], and *trans*-1,2-dichloroethene [*trans*-DCE]) or degradation products of the released solvents (TCE, *cis*-1,2-dichloroethene [*cis*-DCE], and *trans*-DCE). Concentrations of these compounds and selected ratios of compound concentrations, with regard to estimated flow directions in the alluvial aquifer, were investigated.

The purpose of this report is to describe the use of chlorinated ethene concentrations and concentration ratios to characterize subsurface occurrence and to identify potential source areas of chlorinated ethenes in the alluvial aquifer at AFP4 and NAS–JRB. The pertinent hydrogeology of the alluvial aquifer—structure, water levels, and preferential flow directions—are documented. The magnitude and extent of the subsurface occurrence of chlorinated ethenes are described. Geologic, hydrologic, and water-quality data were collected primarily by contractors for selected periods during 1983–2003 and were obtained from the USAF Environmental Resource Project Information Management System (ERPIMS), a comprehensive repository for Department of Defense Superfund sites (U.S. Air Force Center for Environmental Excellence, 1997). At the time of primary analysis, 2003 water-quality data were not available in ERPIMS and therefore were obtained from Earth Tech, Inc. (David Parse, written commun., 2003).

Study Area Setting and Remediation of Chlorinated Ethenes

The AFP4 and NAS–JRB study area (fig. 1) is in northwest Fort Worth in Tarrant County. AFP4 and NAS–JRB together encompass about 3,600 acres on the southeastern shore of Lake Worth. Land-surface altitudes range from about 680 feet above NAVD 88 along the southern boundary of AFP4 to about 550 feet above NAVD 88 along the West Fork Trinity River. The study area is drained primarily by the West Fork Trinity River. The main feature of AFP4 is a 1-mile-long aircraft assembly building built on a topographic high that overlies north-south-trending highs in the bedrock surface.

Several chlorinated ethene spills and source areas have been identified in the AFP4 and NAS–JRB study area and documented by Environmental Science and Engineering, Inc. (1994), RUST Geotech (1996), HydroGeoLogic, Inc. (2000, 2002), and Earth Tech, Inc. (2004). Several remediation techniques have been implemented in the AFP4 and NAS–JRB study area, two of which locally affected the concentrations of chlorinated ethene degradation products. A phytoremediation research site north of Farmers Branch Creek at NAS–JRB (fig. 1), initiated by USAF in 1996, partially remediates chlorinated ethene at and immediately downgradient from the site (Eberts and others, 2003). A permeable reactive barrier, composed of 50-percent zero-valent iron and 50-percent sand, was installed along the southeastern border of NAS–JRB during April–May 2002 to remediate and prevent migration of the southern lobe of a chlorinated ethene plume (HydroGeoLogic, Inc., 2002).

Indicators of Subsurface Occurrence and Potential Source Areas of Chlorinated Ethenes

A water-level-altitude map indicating directions of ground-water flow in the alluvial aquifer was developed using data from 1995. To identify the subsurface occurrence and potential source areas of chlorinated ethenes in the study area, concentrations and concentration ratios were assessed with regard to magnitude and location within generalized flow paths.

Chlorinated ethenes in the aqueous phase generally migrate downgradient from source areas in the direction of ground-water flow. Source areas of chlorinated ethenes typically are areas where dense nonaqueous-phase liquids (DNAPL) were disposed. By mapping areal extent (plumes) using lines of equal chlorinated ethene concentration, source areas can be identified from increasing concentrations in the plume along downgradient ground-water flow paths, in the opposite direction of flow (Ram and others, 1999).

Concentrations of solubilized TCE, PCE, *cis*-DCE, and *trans*-DCE detected in water from alluvial-aquifer wells were available for selected periods during 1983–2003. Because water-quality samples were not routinely collected in alluvial wells throughout the AFP4 and NAS–JRB study area over the 21-year period, analyzing the variability in chlorinated ethene

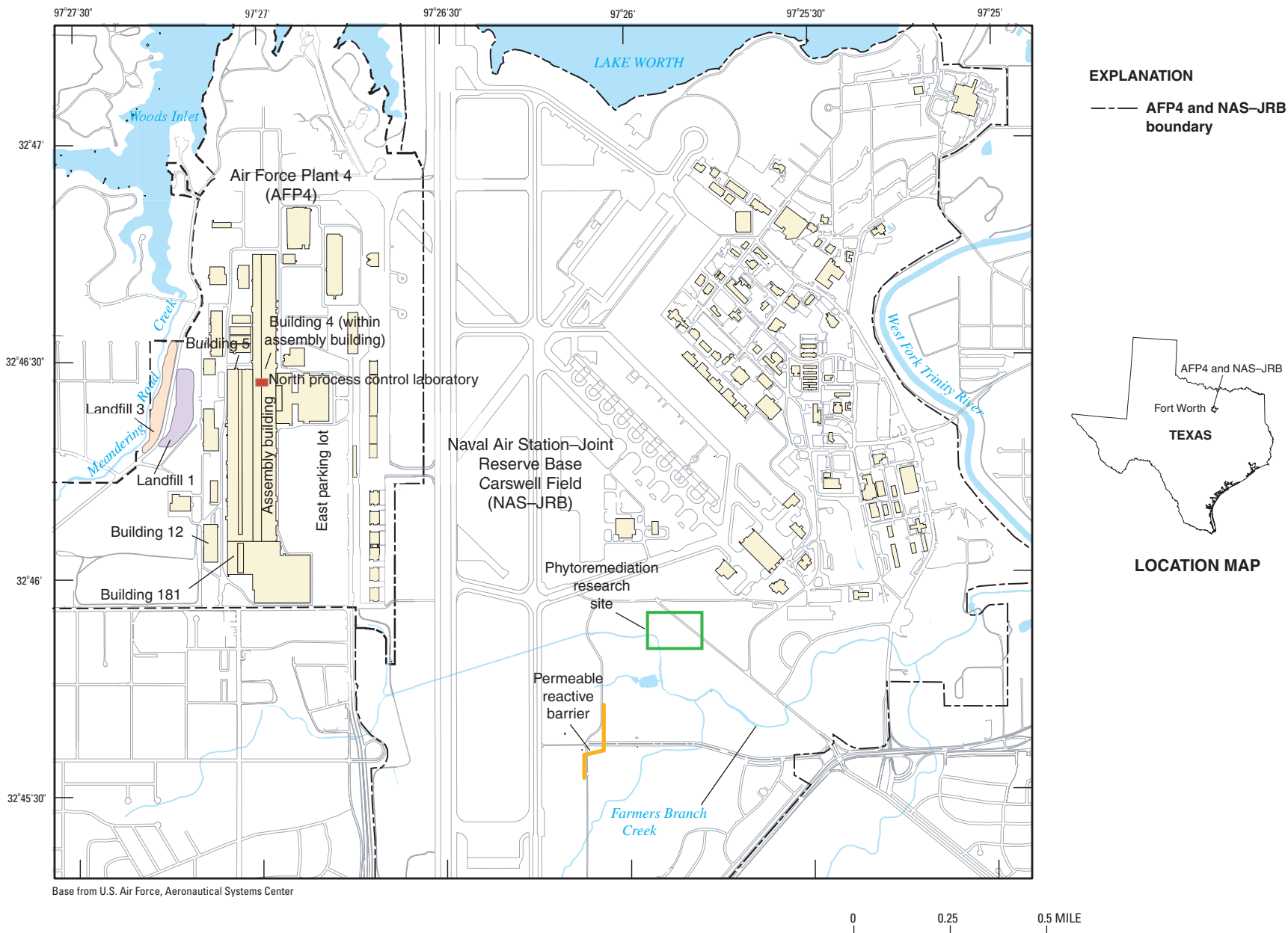


Figure 1. Location of Air Force Plant 4 (AFP4) and Naval Air Station-Joint Reserve Base Carswell Field (NAS-JRB) study area, Fort Worth, Texas (modified from Shah, 2004, fig. 1).

4 Subsurface Occurrence and Potential Source Areas of Chlorinated Ethenes, AFP4 and NAS–JRB, Fort Worth, Texas

data over consecutive years was difficult. Therefore, maximum historical concentrations of TCE, PCE, *cis*-DCE, and *trans*-DCE were used to manually create plume maps to indicate the areal distribution of maximum concentrations of solubilized chlorinated ethenes in the alluvial aquifer.

Chlorinated ethenes degrade through physical and chemical reactions, which include hydrolysis, sorption, and biodegradation (Ram and others, 1999). Anaerobic conditions (the absence of oxygen in the ground water) are necessary for the biodegradation of chlorinated ethenes (Mercer and Waddell, 1993). Although data collected during 1993–99 by Jacobs Engineering Group, Inc. (1993) and HydroGeoLogic, Inc. (2002) indicate that the alluvial aquifer primarily is aerobic (a presence of oxygen, which limits degradation), there are localized anaerobic environments at AFP4 and NAS–JRB where reductive dechlorination occurs and yields degradation products.

The primary degradation product of PCE is TCE; however, definitive evidence indicates the use of TCE in degreasing tanks and the disposal of TCE in underground storage tanks and drums throughout the AFP4 and NAS–JRB study area (RUST Geotech, 1996; HydroGeoLogic, Inc., 2000). The most common degradation products of TCE are *cis*-DCE and *trans*-DCE; *cis*-DCE typically is the dominate product by a 30-to-1 ratio (Murphy and Morrison, 2002). If the *cis*-DCE concentration is at least 80 percent of the total 1,2-dichloroethene (total DCE) (sum of *cis*-DCE and *trans*-DCE) concentration, reductive dechlorination is likely. When the *trans*-DCE concentration is 50 percent or more of the total DCE concentration, Byl and Williams (2000) conclude that there is considerable likelihood that *trans*-DCE was released directly into the environment. However, Griffin and others (2004) conclude on the basis of laboratory experiments that, in the presence of some types of dechlorinating anaerobic bacteria, *trans*-DCE can be the major degradation product of PCE and TCE, and thus a large fraction of *trans*-DCE at a site might not indicate a direct source.

Murphy and Morrison (2002, p. 292) conclude, “The presence or absence of parent compounds and their breakdown products frequently provide straightforward evidence for source area identification.” Parent-compound to daughter-product concentration ratios of chlorinated ethenes frequently are stable or temporally decrease as a result of natural attenuation in aerobic environments. Abrupt increases in parent-compound to daughter-product concentration ratios indicate a contribution from additional sources of chlorinated ethenes, which affects the concentration of a particular parent compound. By mapping parent-compound to daughter-product concentration ratios of the chlorinated ethenes in the study area, abrupt increases in ratios along generalized ground-water flow paths were identified. The ratios of parent-compound to daughter-product concentrations mapped were PCE to TCE and TCE to total DCE.

Also mapped was the ratio of concentrations of the two daughter products, *trans*-DCE and *cis*-DCE, to identify sites where ratios of *trans*-DCE to *cis*-DCE are 1 or more. Ratios were computed using molar concentration data for 1991–2003.

Acknowledgments

The author acknowledges the assistance of staff at Earth Tech; HydroGeoLogic, Inc.; Shaw Environmental & Infrastructure, Inc.; and Ellis Environmental Group, L.C.

Hydrogeology and Directions of Ground-Water Flow in the Alluvial Aquifer

The alluvial aquifer, the uppermost aquifer at AFP4 and NAS–JRB, consists primarily of clay and silt with sand and gravel channel deposits that might be interconnected or interfingered with buried remnants of streams (paleochannels) that existed during the time of deposition (Kuniansky and others, 1996). The heterogeneous nature of the aquifer results in preferred flow paths in the more permeable sand and gravel deposits along what are interpreted to be paleochannels. The channel-like low in the bedrock surface that begins east of the assembly building and extends southeastward beneath NAS–JRB (fig. 2) might mark a path where the ancient West Fork Trinity River flowed prior to migrating to its current location. Another likely paleochannel that extends from the southern end of the assembly building northeastward beneath the east parking lot might be the result of erosion of a tributary stream that flowed into the ancient West Fork Trinity River.

In the study area the alluvial aquifer ranges in thickness from 0 to about 65 feet. West of the assembly building, the aquifer is 5 to 30 feet thick; immediately east of the assembly building, the aquifer thickens to 60 feet (Shah, 2004, fig. 8) along the identified paleochannel (Kuniansky and others, 1996, p. 14) that extends southeastward beneath NAS–JRB (fig. 2).

The alluvial aquifer is recharged locally by precipitation where no buildings or pavement overlie the land surface. Additionally, water has leaked to the alluvial aquifer from sewers and pipelines at AFP4. In 1992, this leakage was estimated to be 300,000 gallons per day (Chem-Nuclear Geotech, Inc., 1992).

Because the alluvial aquifer is a thin, unconfined aquifer composed of deposits that blanket an irregular bedrock surface, ground-water-flow directions largely are controlled by topography and the configuration of the top of bedrock. A map of the altitude of the top of the alluvial aquifer (Shah, 2004, fig. 7) shows that land-surface altitude ranges from a high of about 680 feet above NAVD 88 in the southwestern part of the study area to a low of about 550 feet above NAVD 88 in the bed of the West Fork Trinity River in the eastern part of the study area. The top of bedrock is the top of the Goodland-Walnut confining unit. A map of the altitude of the top of the Goodland-Walnut confining unit (fig. 2) shows bedrock highs beneath the AFP4 assembly building.

The combined influences of topographic- and bedrock-surface configurations result in a water table that generally slopes away from a ground-water divide approximately coincident with the bedrock highs and the assembly building (fig. 3).

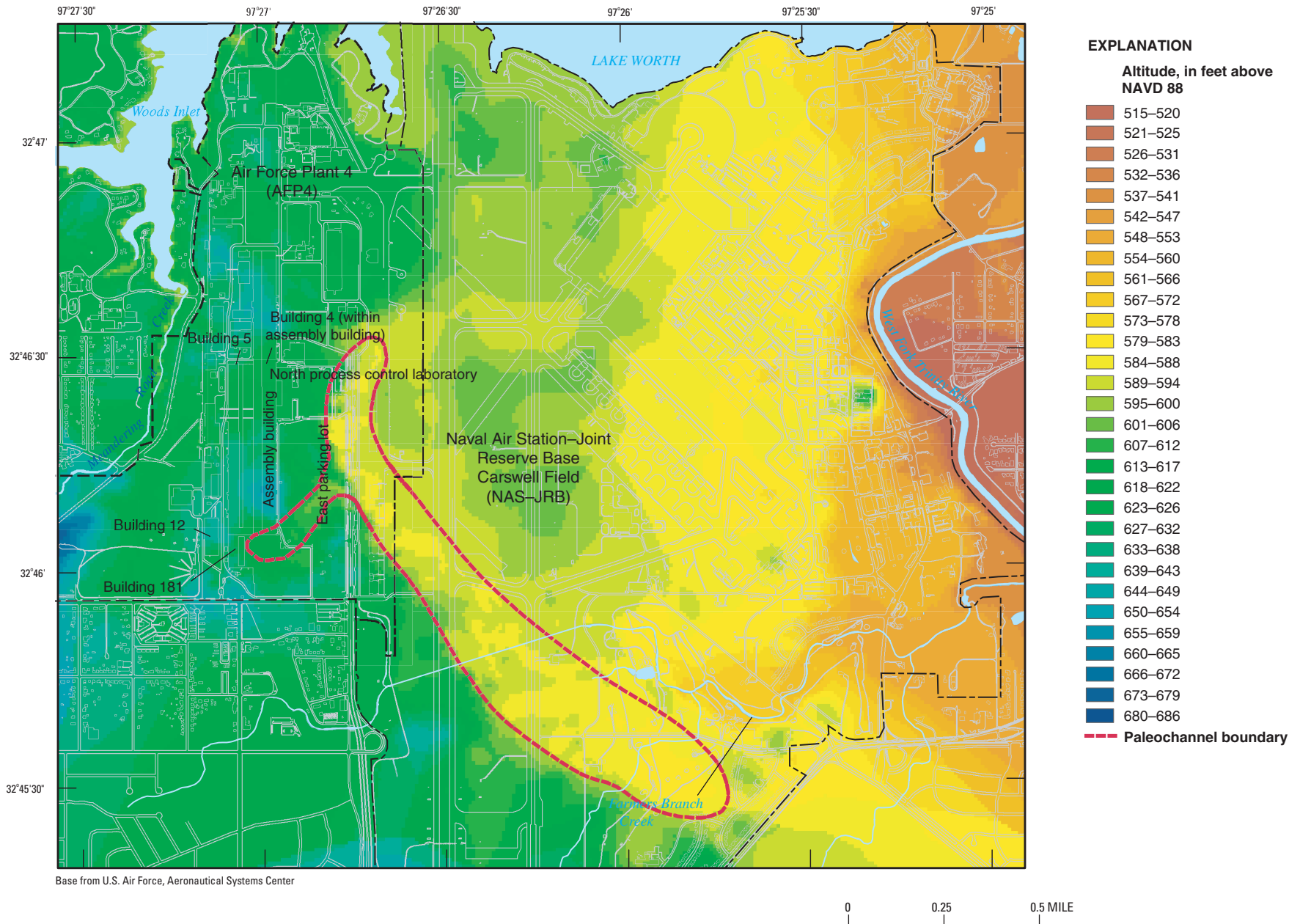


Figure 2. Altitude of the top of the Goodland-Walnut confining unit, Air Force Plant 4 (AFP4) and Naval Air Station-Joint Reserve Base Carswell Field (NAS-JRB) study area, Fort Worth, Texas (modified from Shah, 2004, fig. 10).

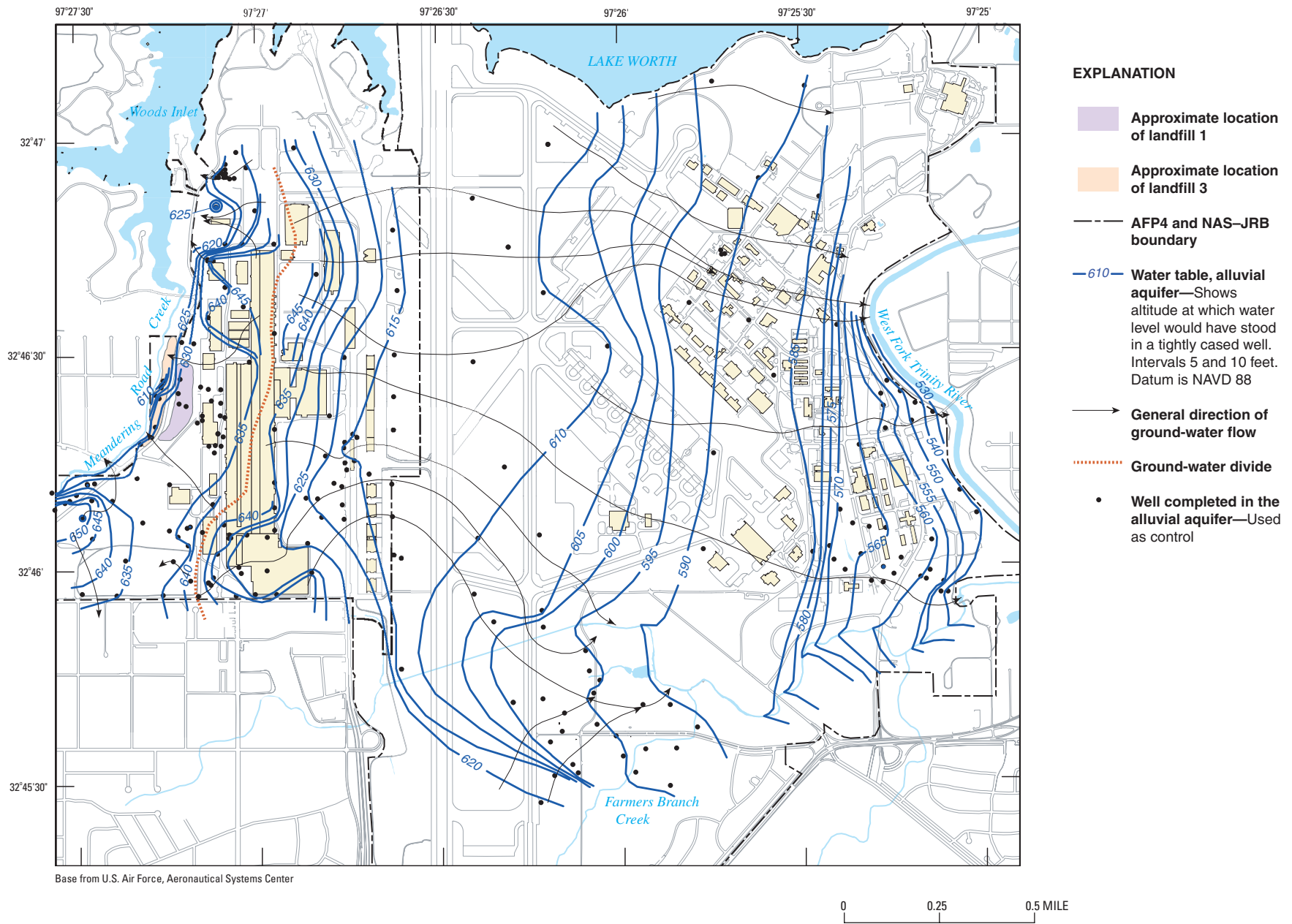


Figure 3. Water table and direction of ground-water flow in the alluvial aquifer, Air Force Plant 4 (AFP4) and Naval Air Station-Joint Reserve Base Carswell Field (NAS-JRB) study area, Fort Worth, Texas, 1995.

Thus east of the assembly building, ground water generally flows west to east toward the West Fork Trinity River or Farmers Branch Creek; west of the assembly building, ground water flows east to west toward Meandering Road Creek and Woods Inlet. The general directions of ground-water flow in fall 1995 are similar to those in May 1993 (Kuniansky and others, 1996, fig. 7).

Subsurface Occurrence of Chlorinated Ethenes

Data obtained from ground-water-quality sampling at AFP4 and NAS–JRB for selected periods during 1983–2003 (appendix), primarily by consultants to USAF, were used to map the maximum historical concentrations of chlorinated ethene compounds and to compute ratios of maximum historical concentrations in the alluvial aquifer. The maps then were used to identify potential source areas of chlorinated ethenes at AFP4 and NAS–JRB.

Concentrations

Ground-water concentrations of the solubilized chlorinated ethenes decrease over time primarily because of migration (dispersion) and natural attenuation at AFP4 and NAS–JRB. The greater part of the plume of maximum historical TCE concentrations in the alluvial aquifer (fig. 4) extends eastward from the assembly building at AFP4 to eastern NAS–JRB near the West Fork Trinity River. That part of the TCE plume contains three principal lobes (northern, central, and southern) that extend west to east in the general directions of ground-water flow. A smaller part of the TCE plume extends west of the assembly building. Several points of high concentration (10,000 to 920,000 micrograms per liter [$\mu\text{g/L}$]) can be identified in the TCE plume. One is near Building 181, another is just west of Building 12, and several others are at landfill 3. A major part of the southern lobe of the TCE plume follows the identified paleochannel that extends southeastward beneath NAS–JRB. TCE concentrations of 500 to 10,000 $\mu\text{g/L}$ are in parts of the southern lobe of the plume. According to RUST Geotech (1996), bed-rock gradients might have facilitated DNAPL migration along the paleochannel by density-driven flow.

The map of maximum historical PCE concentrations (fig. 5) shows highest concentrations (500 to 920 $\mu\text{g/L}$) near Buildings 4 and 5. Concentrations decrease with eastward migration, and the areal extent of the PCE plume is considerably less than that of the TCE plume.

The map of maximum historical *cis*-DCE concentrations (fig. 6) shows highest concentrations (5,000 to 710,000 $\mu\text{g/L}$) at landfill 3. Concentrations of 1,000 to 5,000 $\mu\text{g/L}$ occur along the southeastern part of the assembly building, the northern corner of the east parking lot, and in an area coincident with the southern lobe of the TCE plume (fig. 4) and the southeastern part of the identified paleochannel beneath NAS–JRB (fig. 2).

The map of maximum historical *trans*-DCE concentrations (fig. 7) shows highest concentrations (1,000 to 1,700 $\mu\text{g/L}$) just south of Building 181 and at landfill 3. The *trans*-DCE map also shows concentrations of 5 to 500 $\mu\text{g/L}$ in areas coincident with downgradient parts of the northern and southern lobes of the TCE plume. The *trans*-DCE plume beneath Building 181 and the east parking lot, as is the case with the TCE and *cis*-DCE plumes, appears to have migrated from near Building 181 toward the east parking lot along the identified paleochannel.

Figures 8 and 9 are graphs (1995 and 2003, respectively) of molar concentrations of TCE, PCE, and total DCE with downgradient distance along a generalized ground-water flow path in the area coincident with the northern lobe of the TCE plume. The graphs show TCE concentrations generally increasing and then decreasing downgradient, PCE concentrations generally decreasing downgradient (excluding the concentration at well HM–59, fig. 9), and total DCE concentrations increasing downgradient (excluding the concentration at well HM–64, fig. 8).

Figure 10 is a graph (2003) of molar concentrations of TCE, PCE, and total DCE with downgradient distance along a generalized ground-water flow path (shorter than those of figs. 8 and 9) in the area coincident with the southern lobe of the TCE plume. The graph shows TCE concentrations varying over a wide range with no downgradient trend, PCE concentrations all low, and total DCE concentrations varying over a relatively narrow range with no downgradient trend.

Figures 11–13 are graphs that show molar concentrations of TCE, PCE, and total DCE, respectively, during 1995–2003 at selected alluvial aquifer wells in the area coincident with the southern lobe of the TCE plume. TCE concentrations (fig. 11) generally attenuated over the 9-year period, although concentrations at two of the five wells were highest during the mid-part of the period. PCE concentrations (fig. 12) generally were low and stable during the period, except for those at one well (WP07–10B) that were essentially the same at the beginning and end of the period and highest during the mid-part of the period. Although the concentrations of total DCE (fig. 13) were less than those of TCE during the period, the patterns of change in concentration of both compounds over time at the respective wells were similar.

Ratios of Concentrations

As a constituent attenuates downgradient from its source, parent-compound to daughter-product concentration ratios typically decrease. Ratios that increase abruptly along downgradient ground-water flow paths can indicate a contributing source in the vicinity of the increase.

Maximum historical ratios of PCE to TCE (fig. 14) increase appreciably over relatively short distances (10s to 100s of feet) downgradient in places. In the north-central part of NAS–JRB, PCE to TCE ratios increase downgradient along a generalized ground-water flow path from 0 (upgradient well W–155) to 0.10 and 0.03 at wells HM–119 and HM–118,

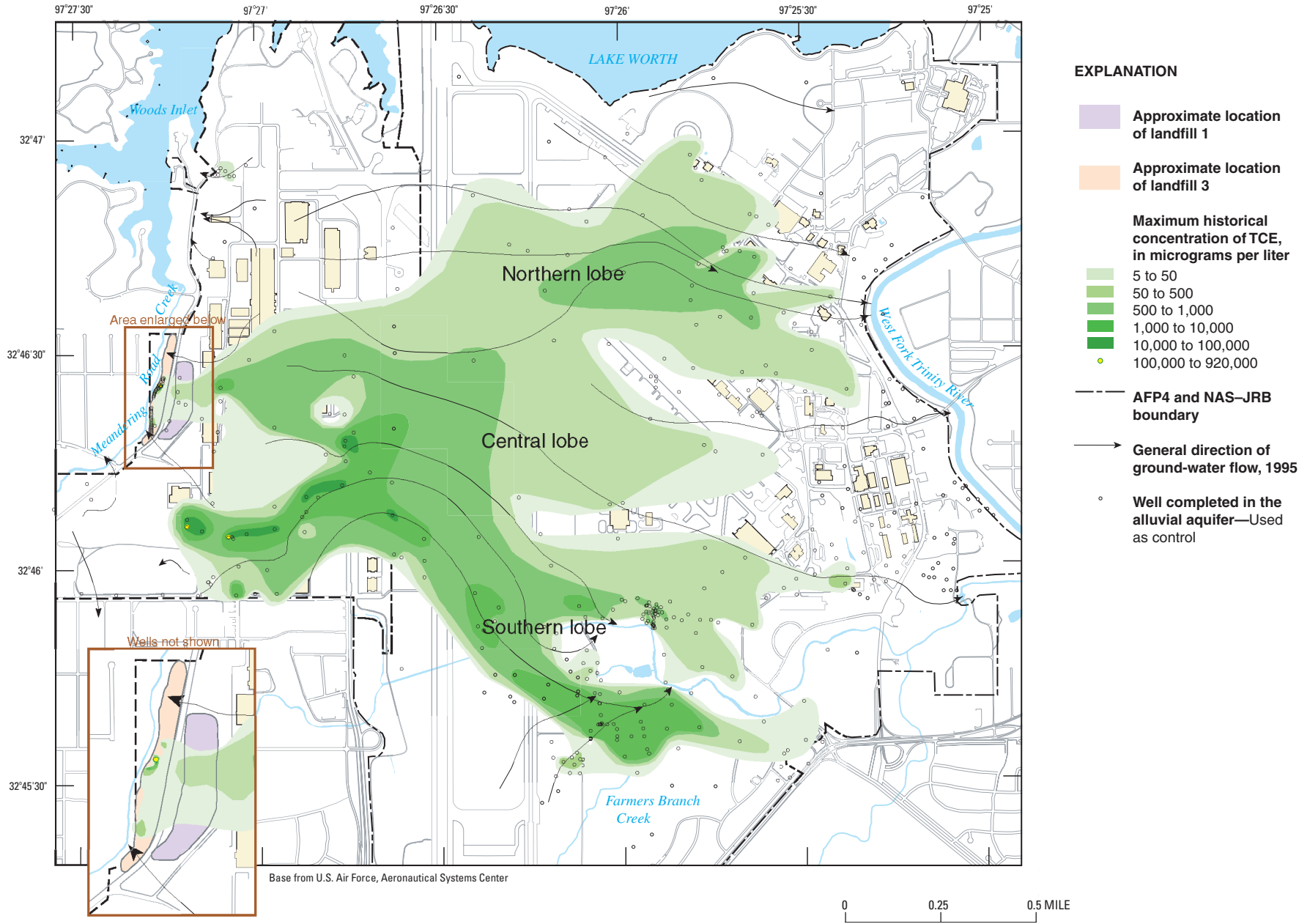


Figure 4. Maximum historical trichloroethene (TCE) concentrations in the alluvial aquifer, Air Force Plant 4 (AFP4) and Naval Air Station-Joint Reserve Base Carswell Field (NAS-JRB) study area, Fort Worth, Texas, 1984–2003.

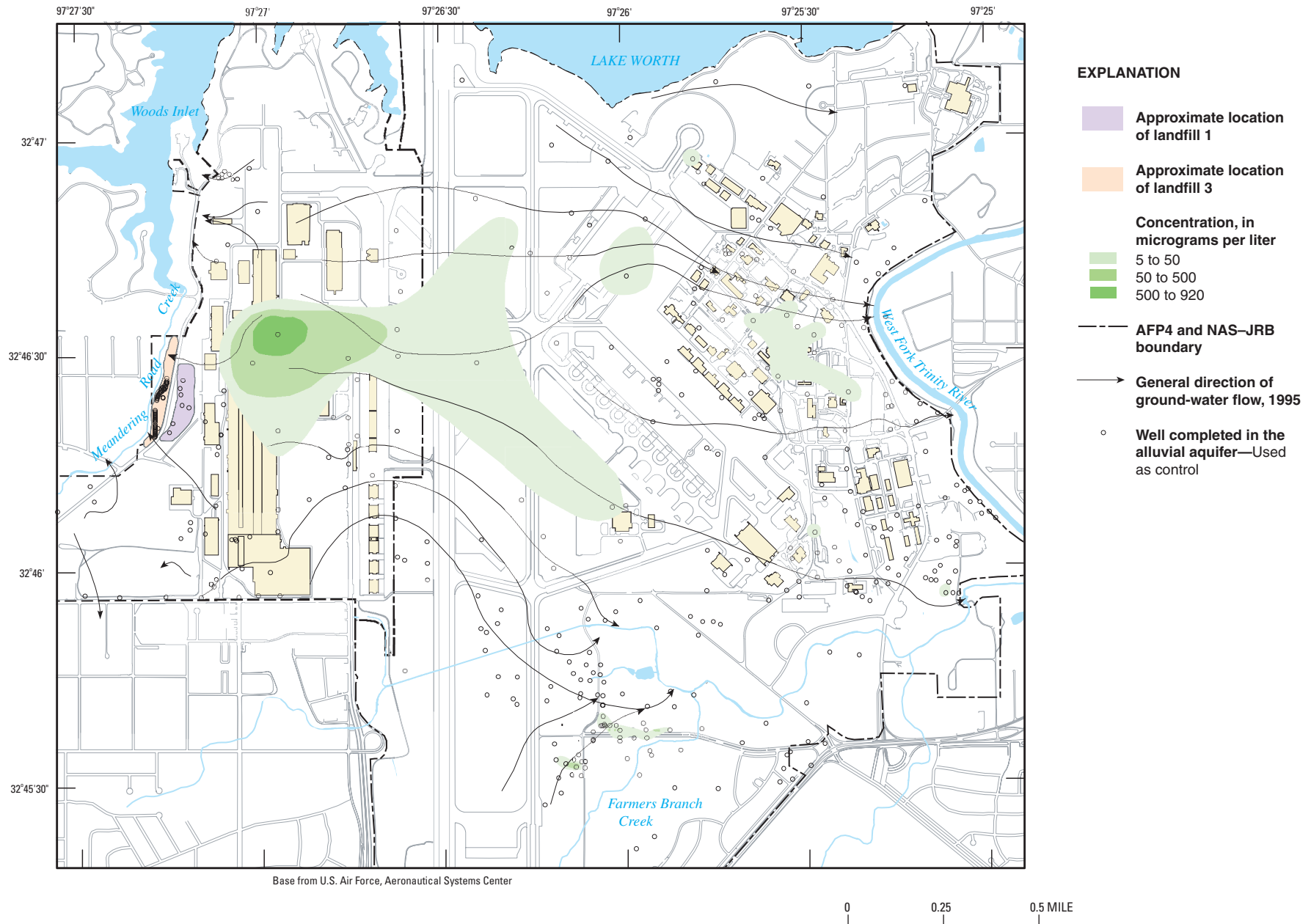


Figure 5. Maximum historical tetrachloroethene (PCE) concentrations in the alluvial aquifer, Air Force Plant 4 (AFP4) and Naval Air Station-Joint Reserve Base Carswell Field (NAS-JRB) study area, Fort Worth, Texas, 1983–2003.

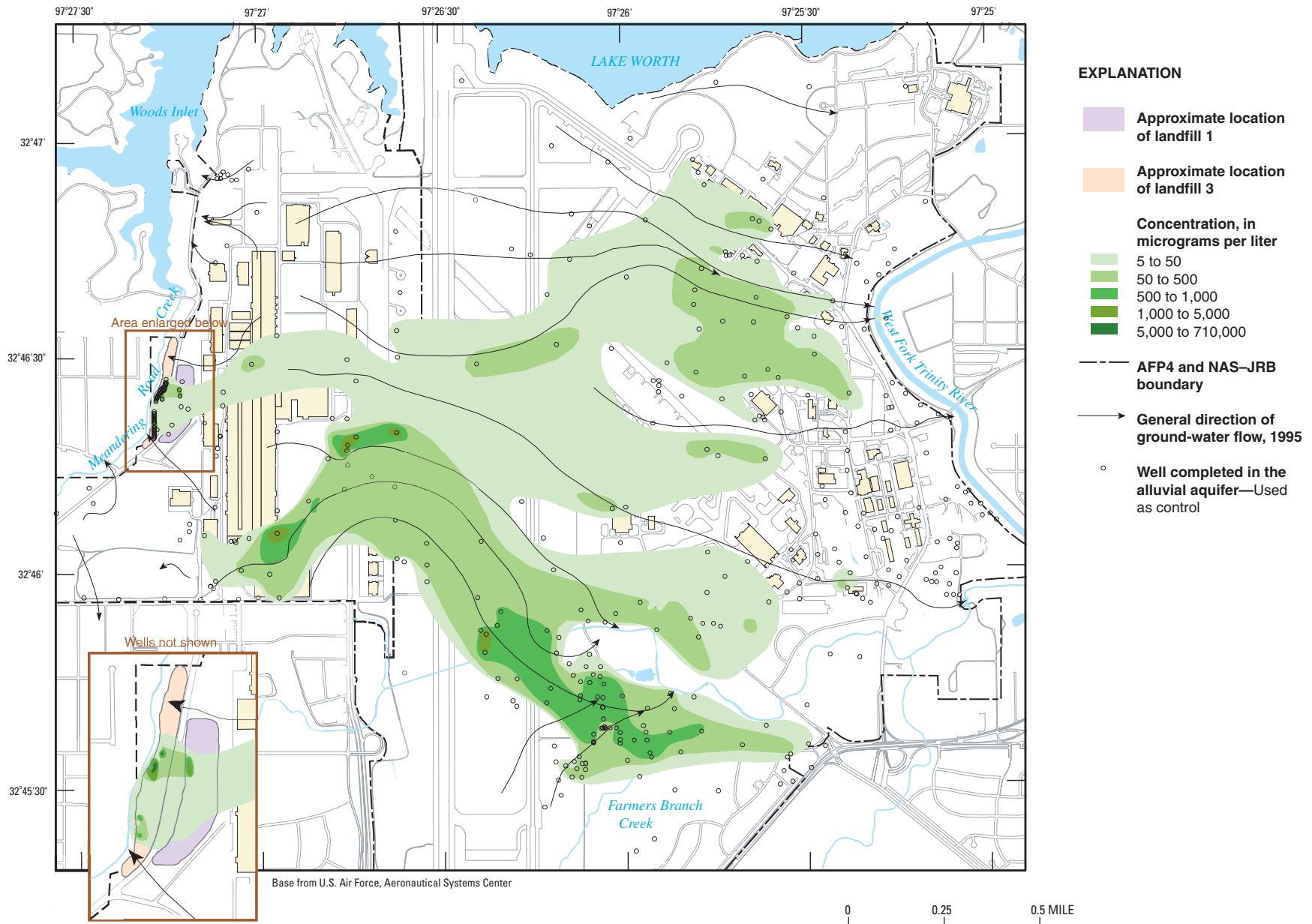


Figure 6. Maximum historical *cis*-1,2-dichloroethene (*cis*-DCE) concentrations in the alluvial aquifer, Air Force Plant 4 (AFP4) and Naval Air Station-Joint Reserve Base Carswell Field (NAS-JRB) study area, Fort Worth, Texas, 1991–2003.

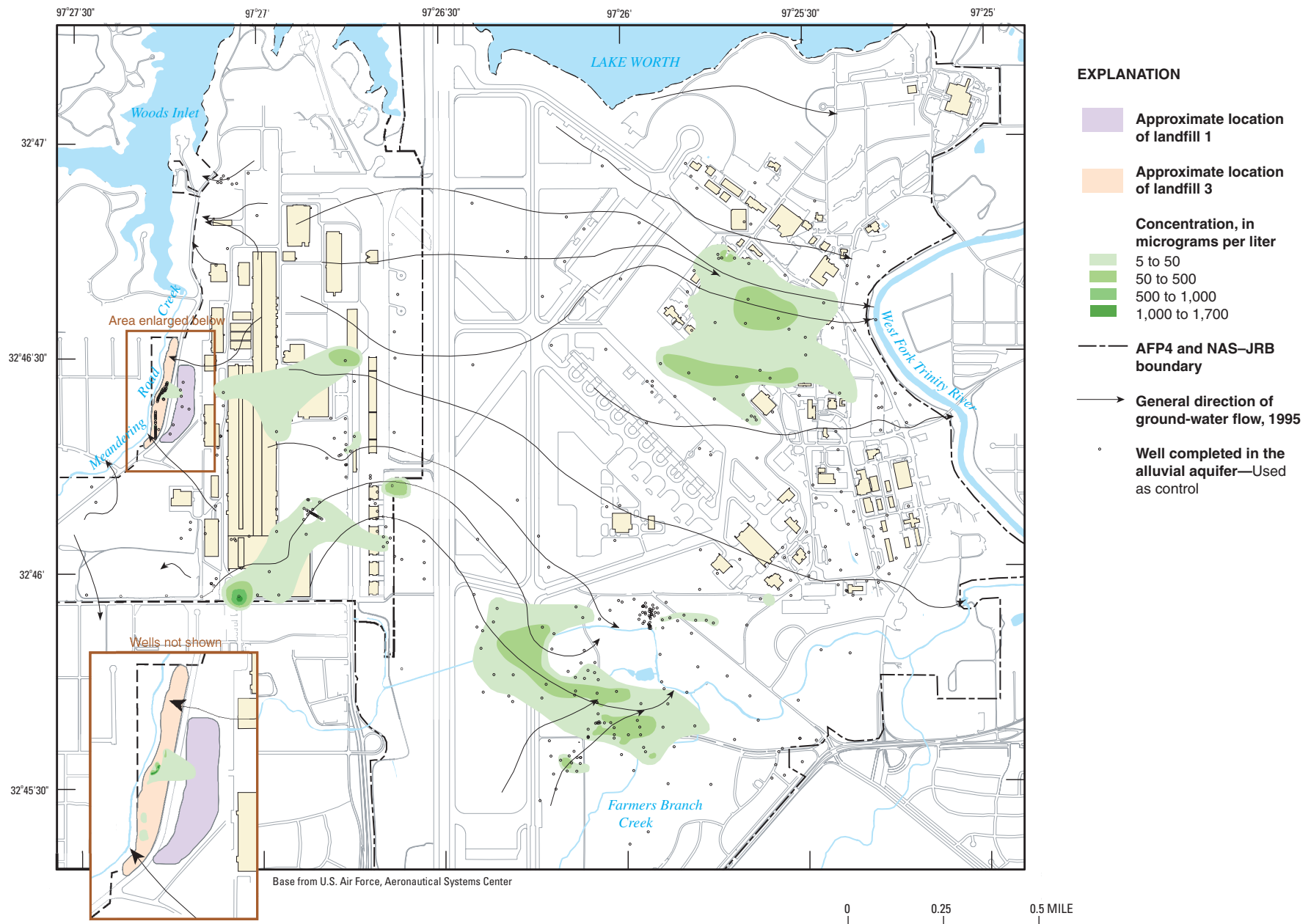


Figure 7. Maximum historical *trans*-1,2-dichloroethene (*trans*-DCE) concentrations in the alluvial aquifer, Air Force Plant 4 (AFP4) and Naval Air Station-Joint Reserve Base Carswell Field (NAS-JRB) study area, Fort Worth, Texas, 1983–2003.

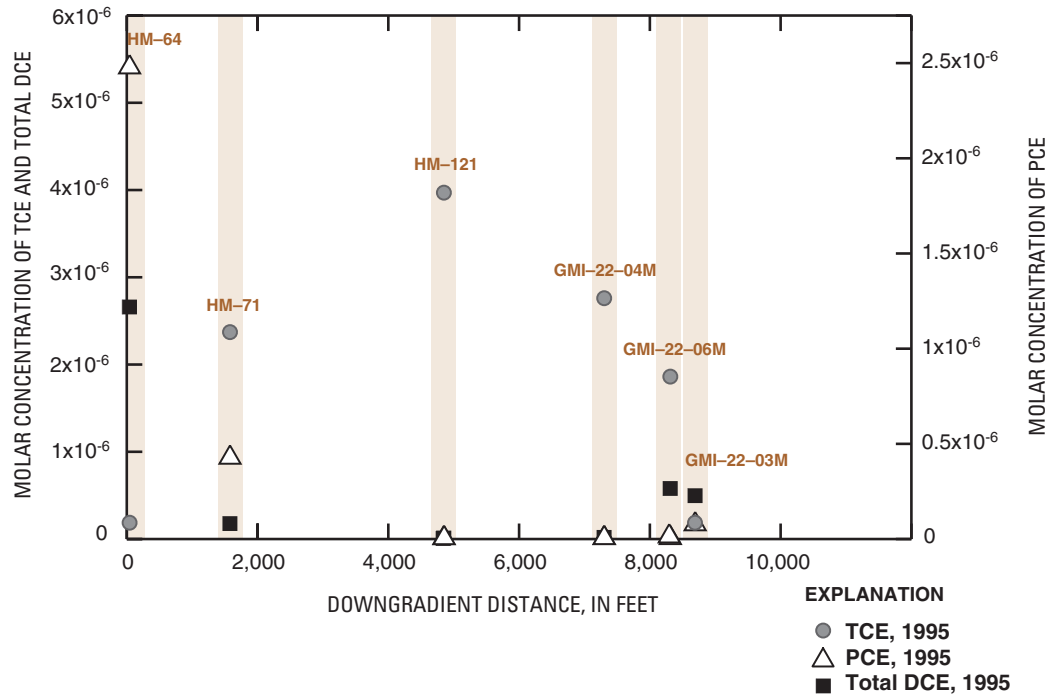
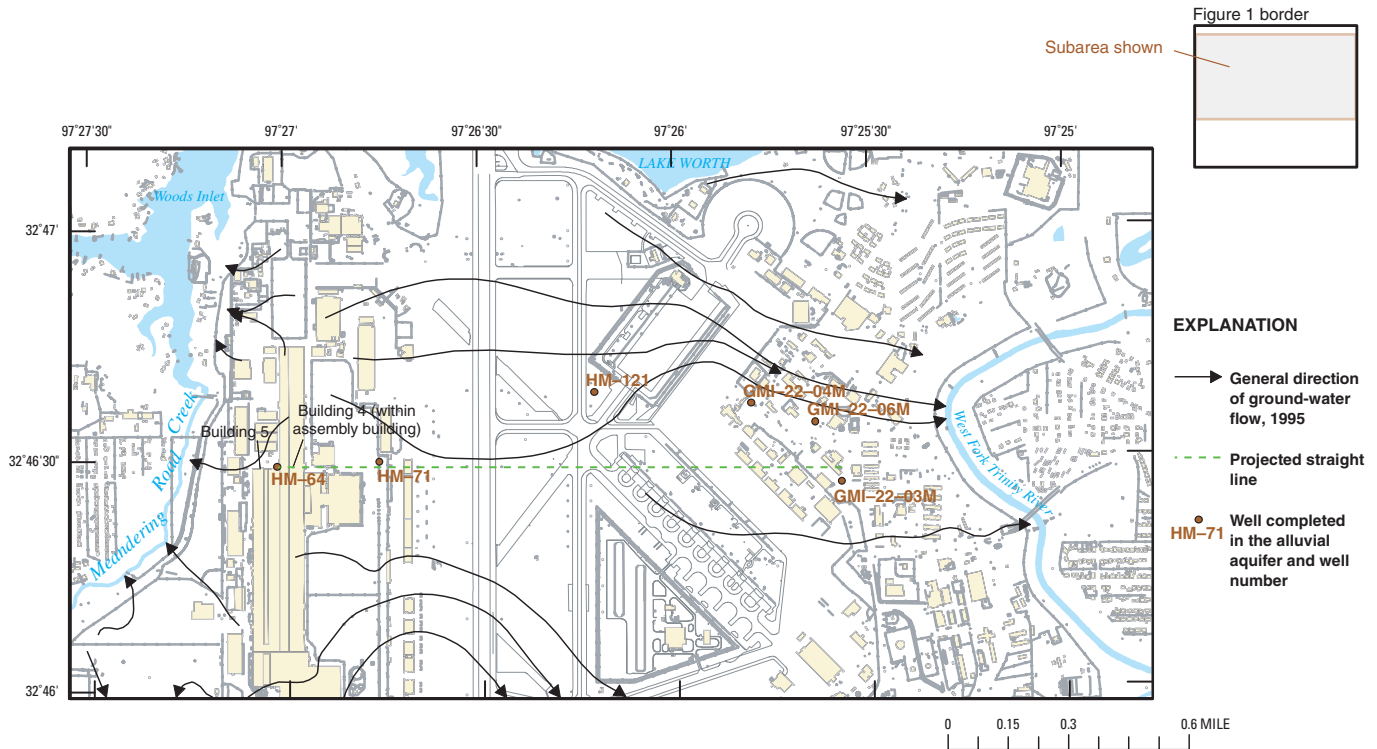


Figure 8. Molar concentrations of trichloroethene (TCE), tetrachloroethene (PCE), and total 1,2-dichloroethene (total DCE) with distance downgradient along a generalized ground-water flow path beginning at well HM-64 (for simplicity, projected straight-line distance), Air Force Plant 4 (AFP4) and Naval Air Station-Joint Reserve Base Carswell Field (NAS-JRB) study area, Fort Worth, Texas, 1995.



Subarea location of alluvial aquifer wells from which graphed constituent data obtained.

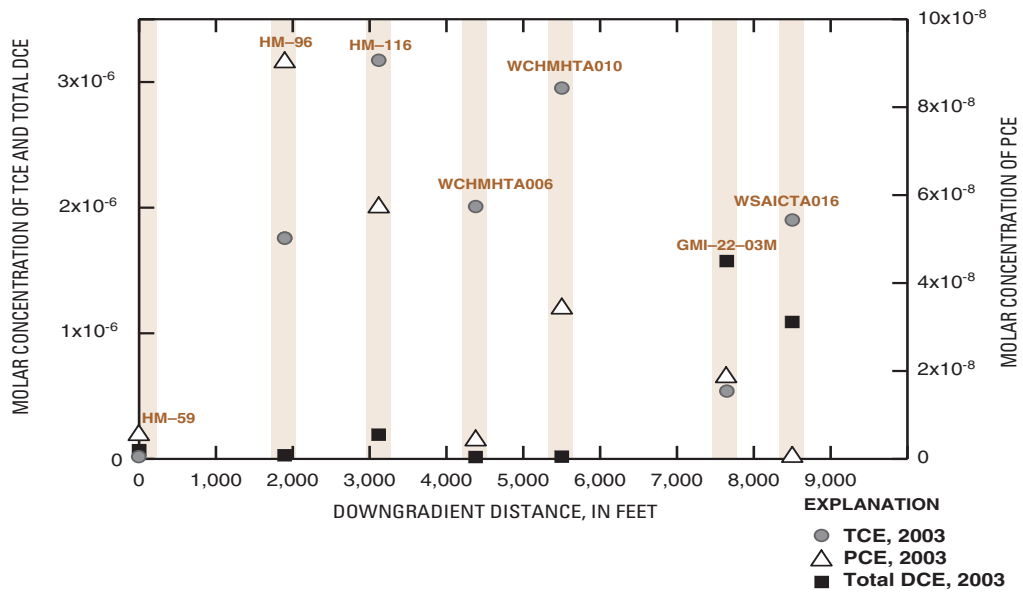
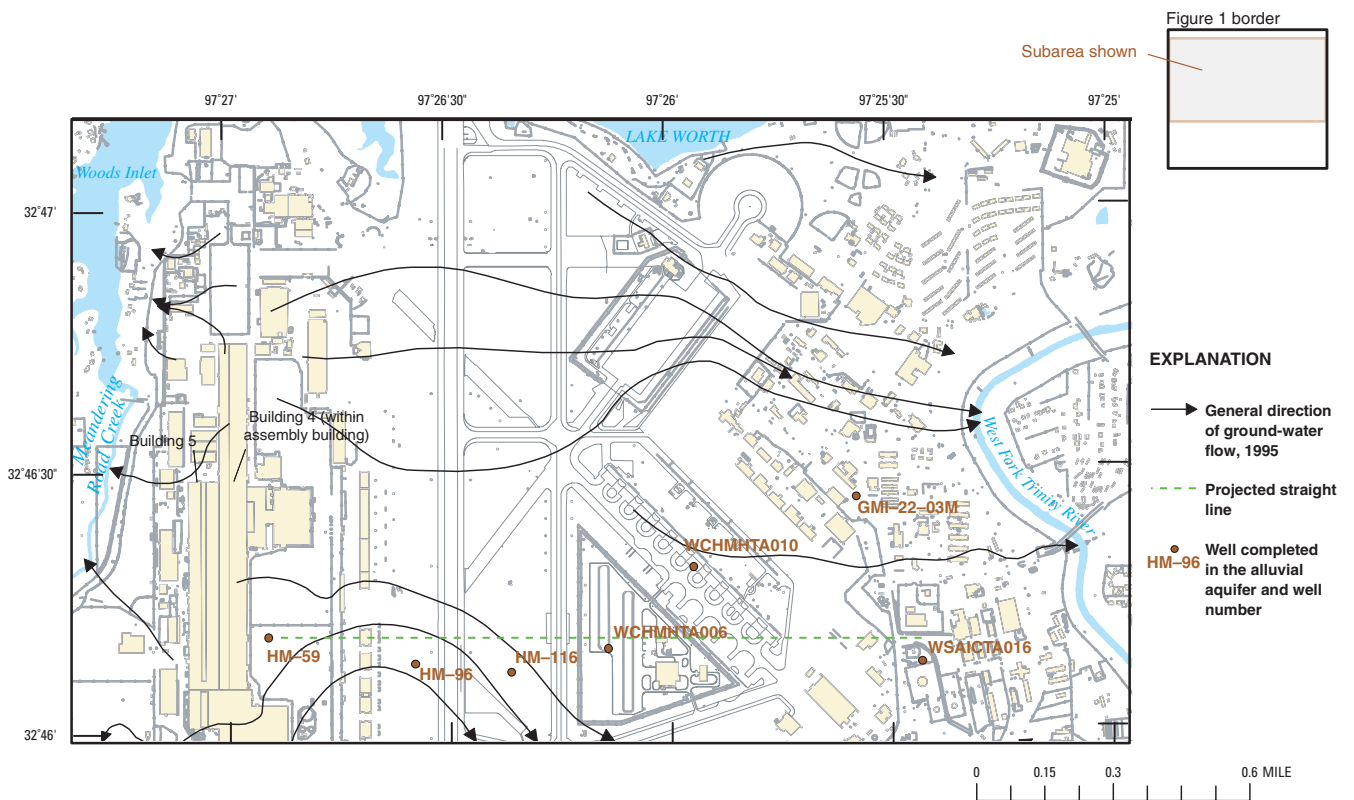


Figure 9. Molar concentrations of trichloroethene (TCE), tetrachloroethene (PCE), and total 1,2-dichloroethene (total DCE) with distance downgradient along a generalized ground-water flow path beginning at well HM-59 (for simplicity, projected straight-line distance), Air Force Plant 4 (AFP4) and Naval Air Station-Joint Reserve Base Carswell Field (NAS-JRB) study area, Fort Worth, Texas, 2003.



Subarea location of alluvial aquifer wells from which graphed constituent data obtained.

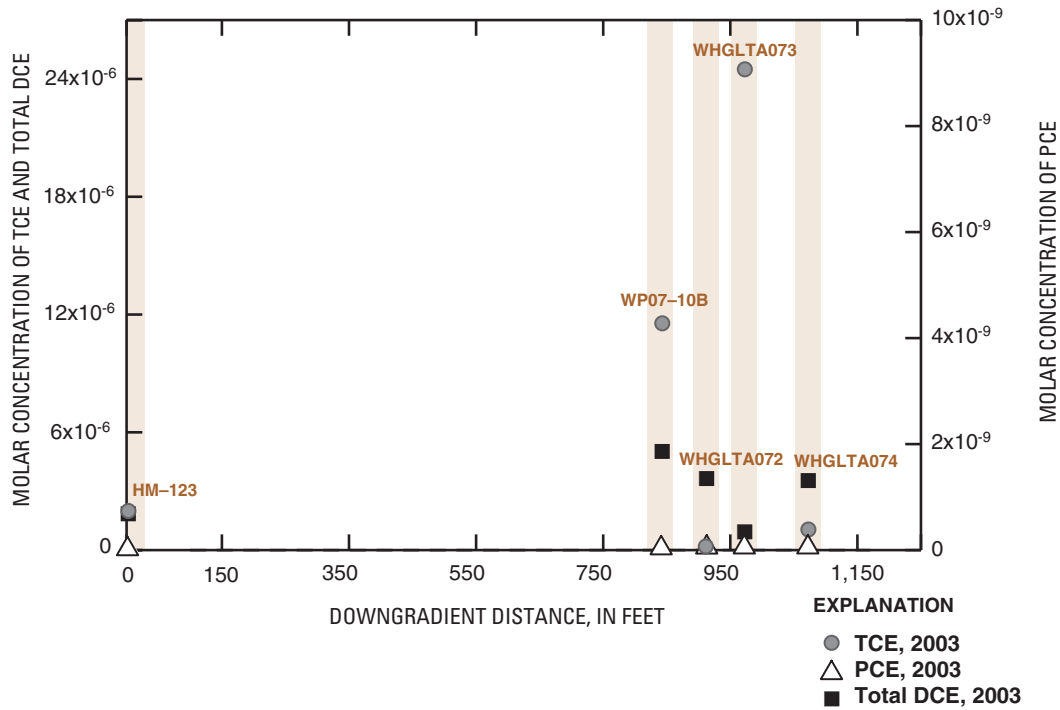
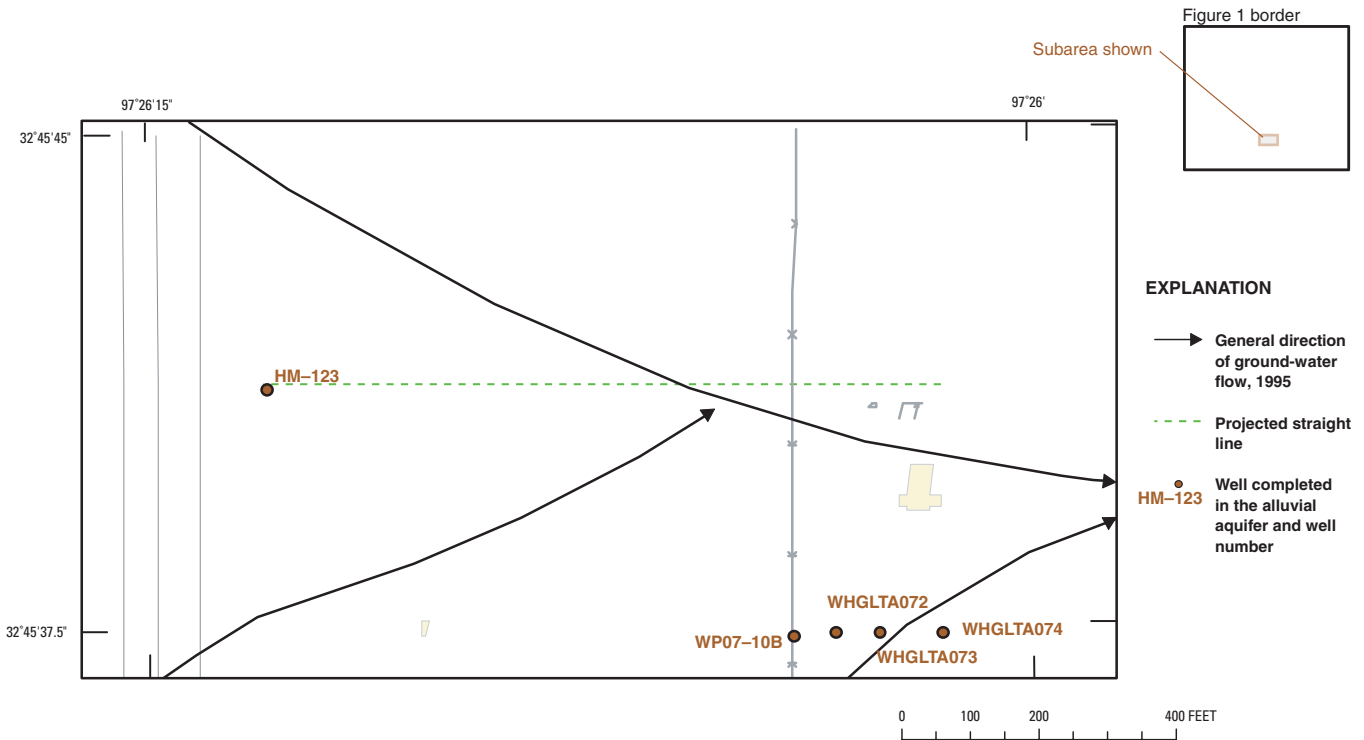


Figure 10. Molar concentrations of trichloroethene (TCE), tetrachloroethene (PCE), and total 1,2-dichloroethene (total DCE) with distance downgradient along a generalized ground-water flow path beginning at well HM-123 (for simplicity, projected straight-line distance), Air Force Plant 4 (AFP4) and Naval Air Station-Joint Reserve Base Carswell Field (NAS-JRB) study area, Fort Worth, Texas, 2003.



Subarea location of alluvial aquifer wells from which graphed constituent data obtained.

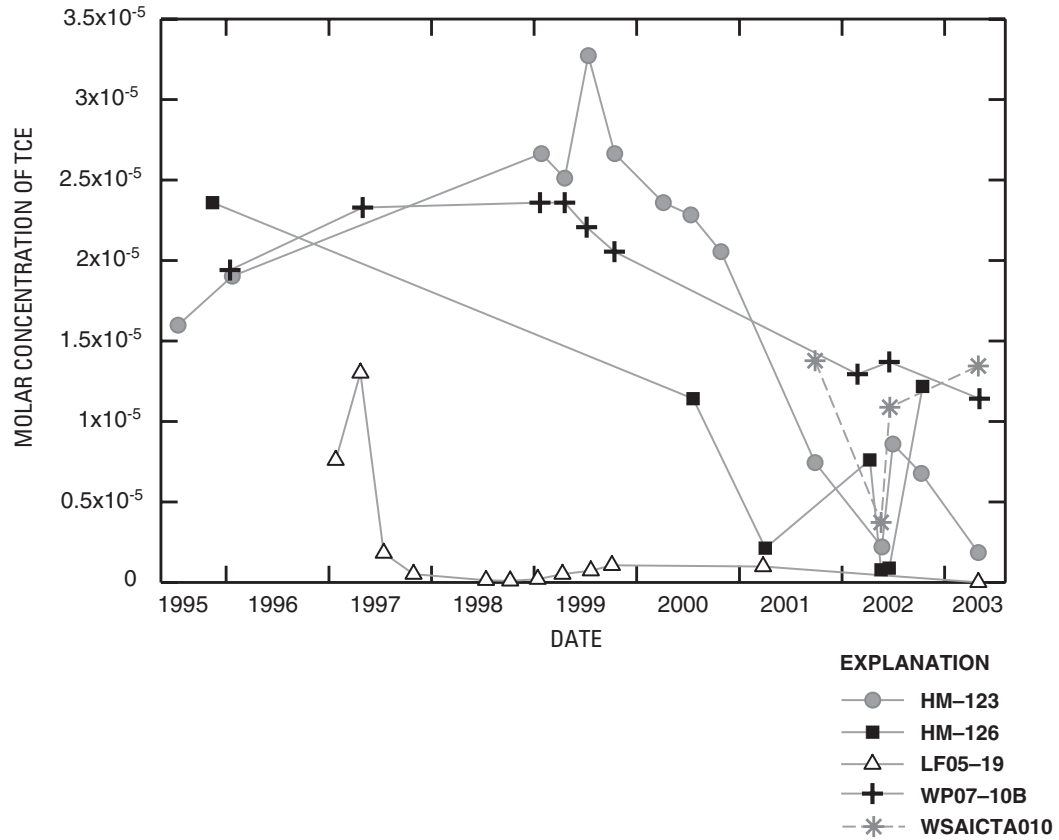
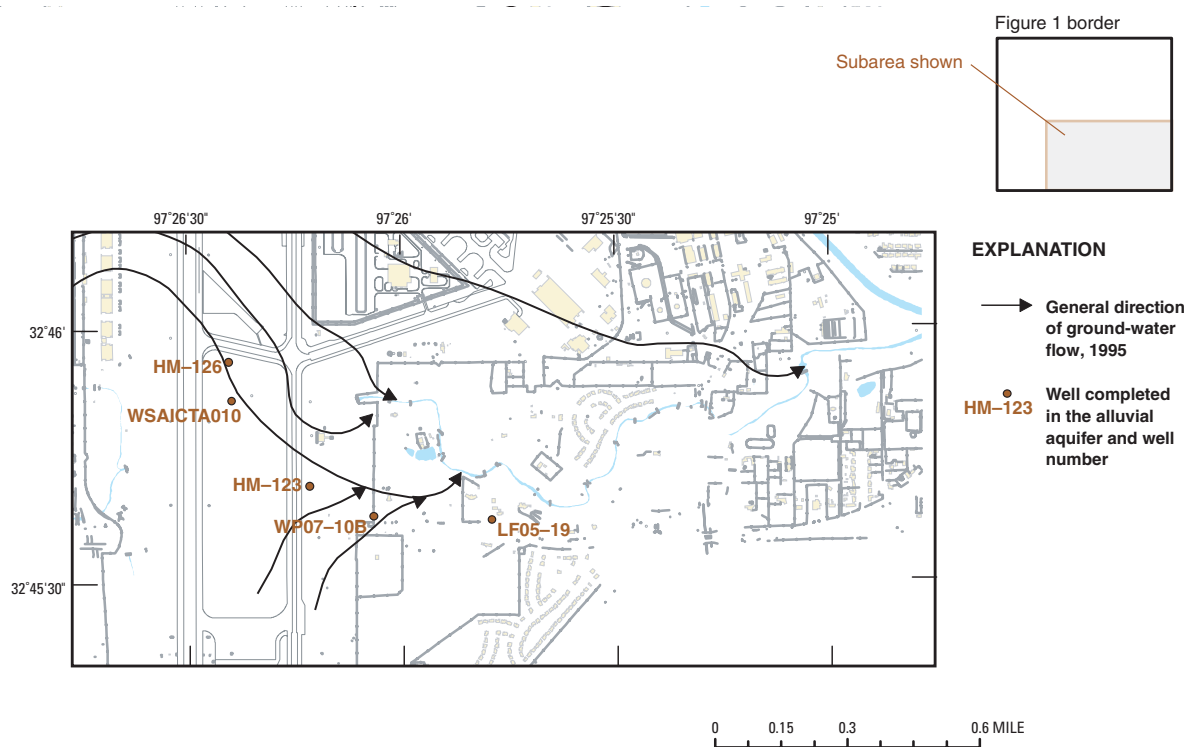


Figure 11. Molar concentrations of trichloroethene (TCE) with time for alluvial wells in the southern part of Air Force Plant 4 (AFP4) and Naval Air Station-Joint Reserve Base Carswell Field (NAS-JRB) study area, Fort Worth, Texas.



Subarea location of alluvial aquifer wells from which graphed constituent data obtained.

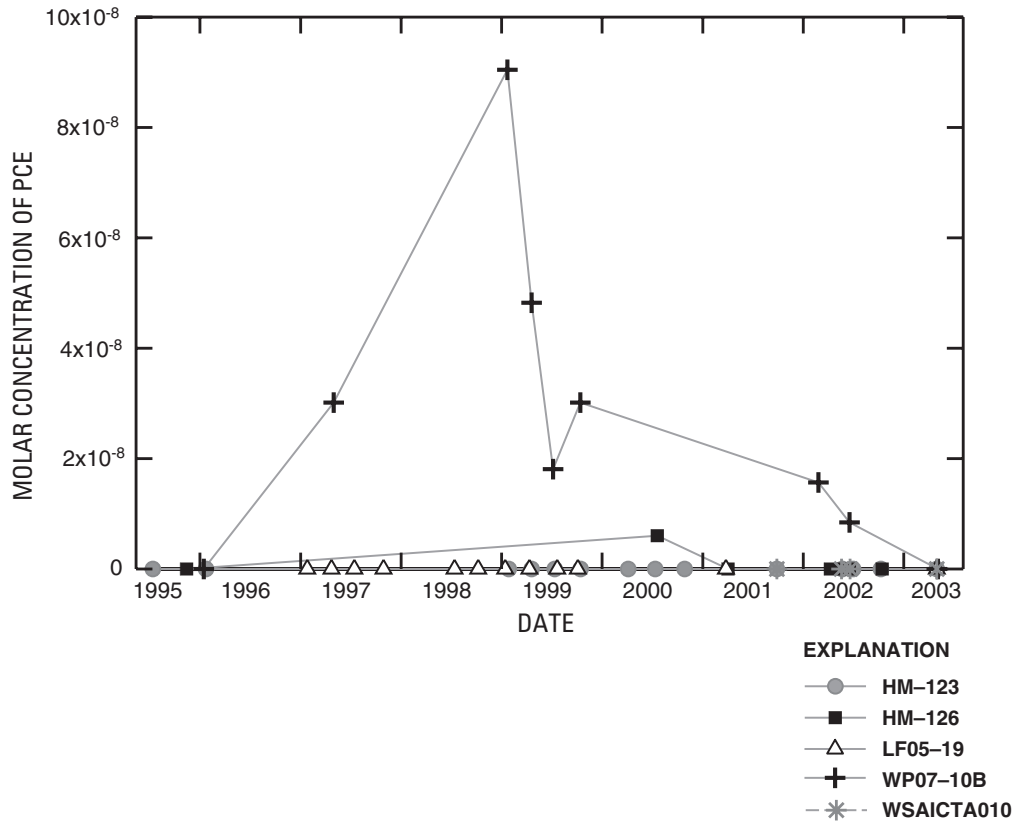
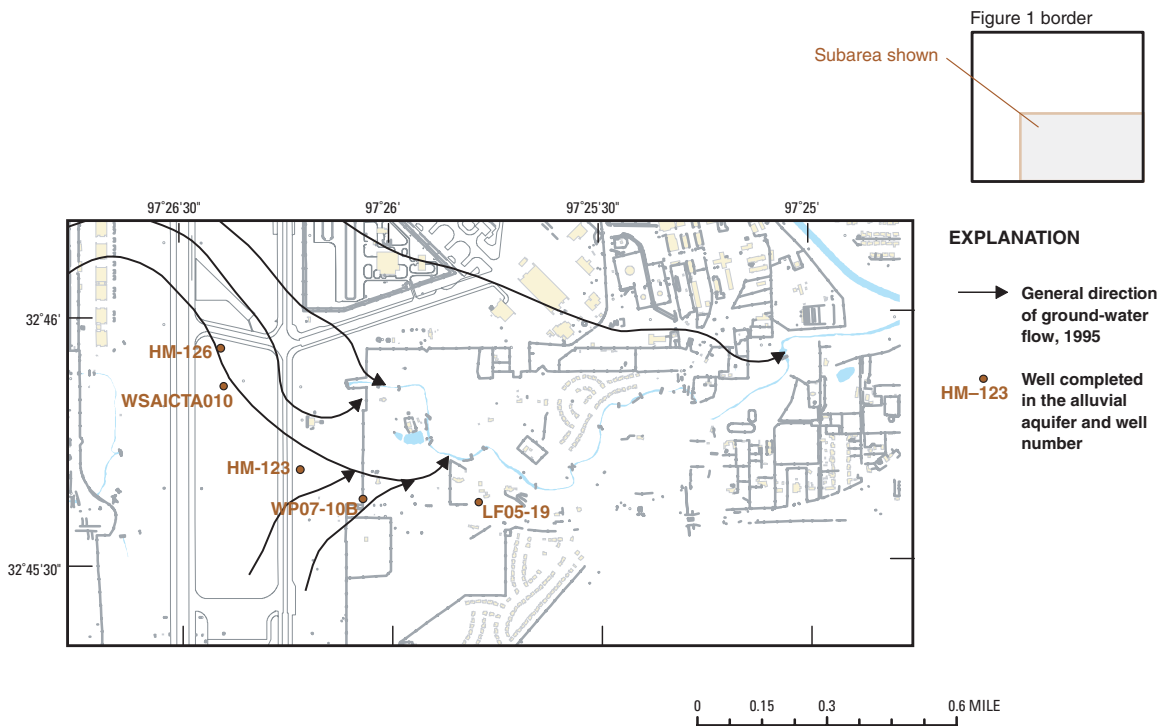


Figure 12. Molar concentrations of tetrachloroethene (PCE) with time for alluvial wells in the southern part of Air Force Plant 4 (AFP4) and Naval Air Station-Joint Reserve Base Carswell Field (NAS-JRB) study area, Fort Worth, Texas.



Subarea location of alluvial aquifer wells from which graphed constituent data obtained.

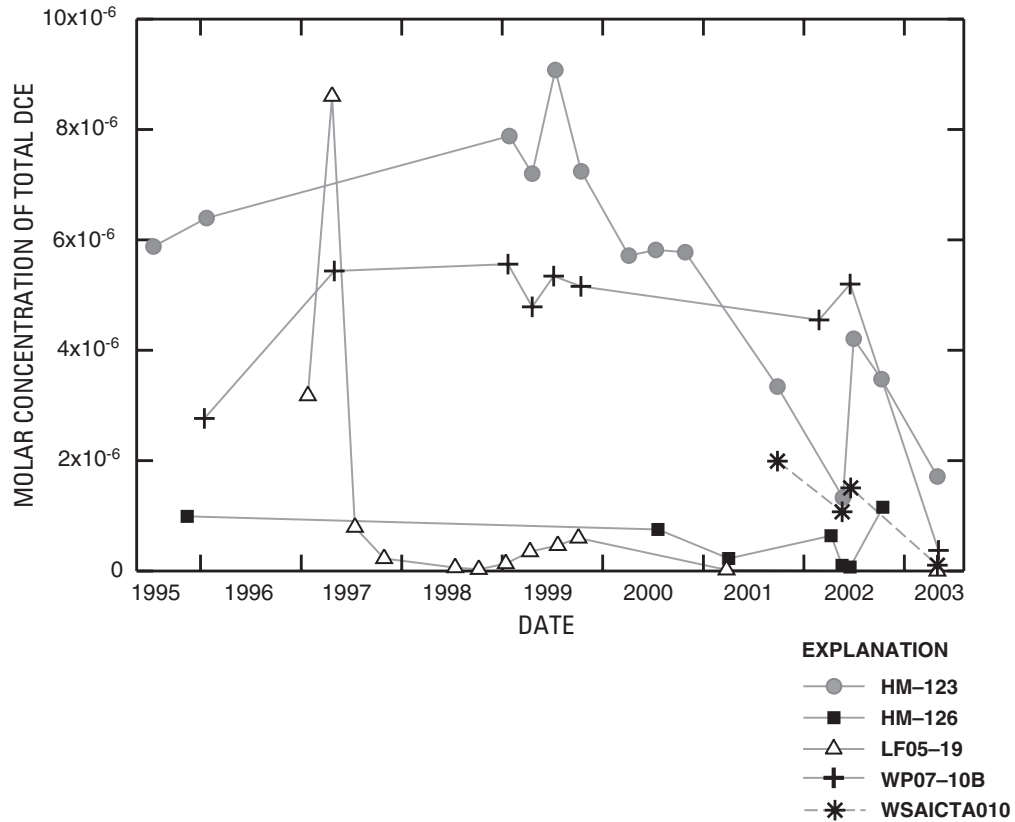
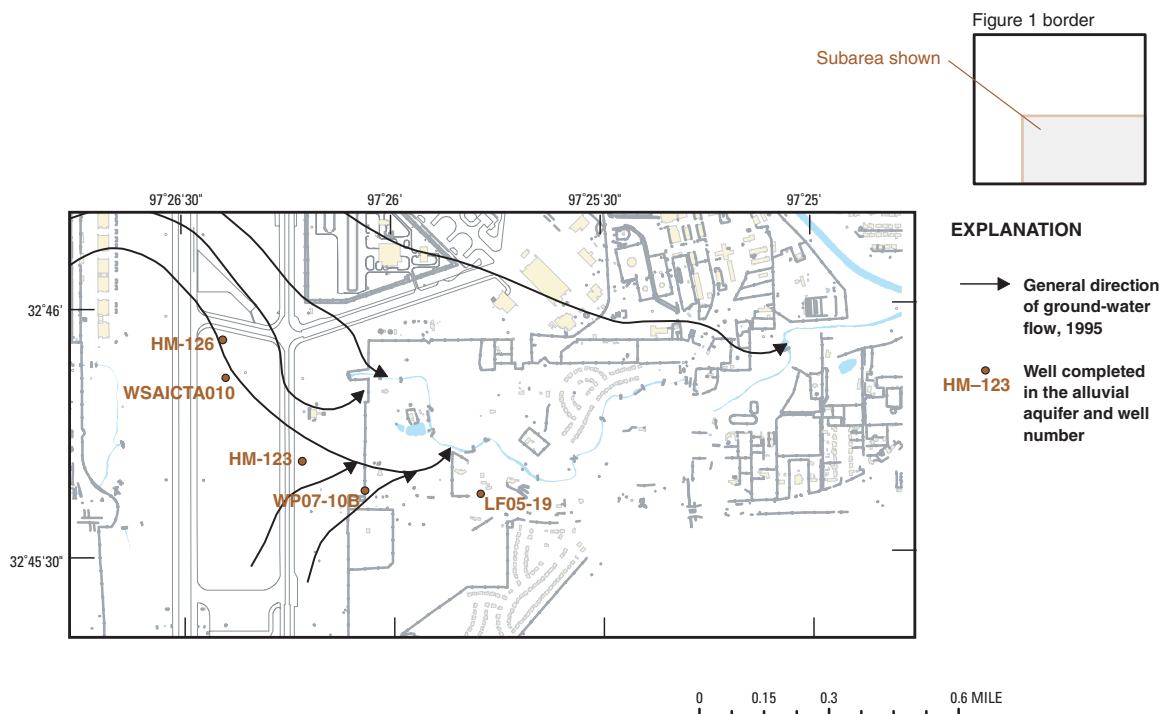


Figure 13. Molar concentrations of total 1,2-dichloroethene (total DCE) with time for alluvial wells in the southern part of Air Force Plant 4 (AFP4) and Naval Air Station-Joint Reserve Base Carswell Field (NAS-JRB) study area, Fort Worth, Texas.



Subarea location of alluvial aquifer wells from which graphed constituent data obtained.

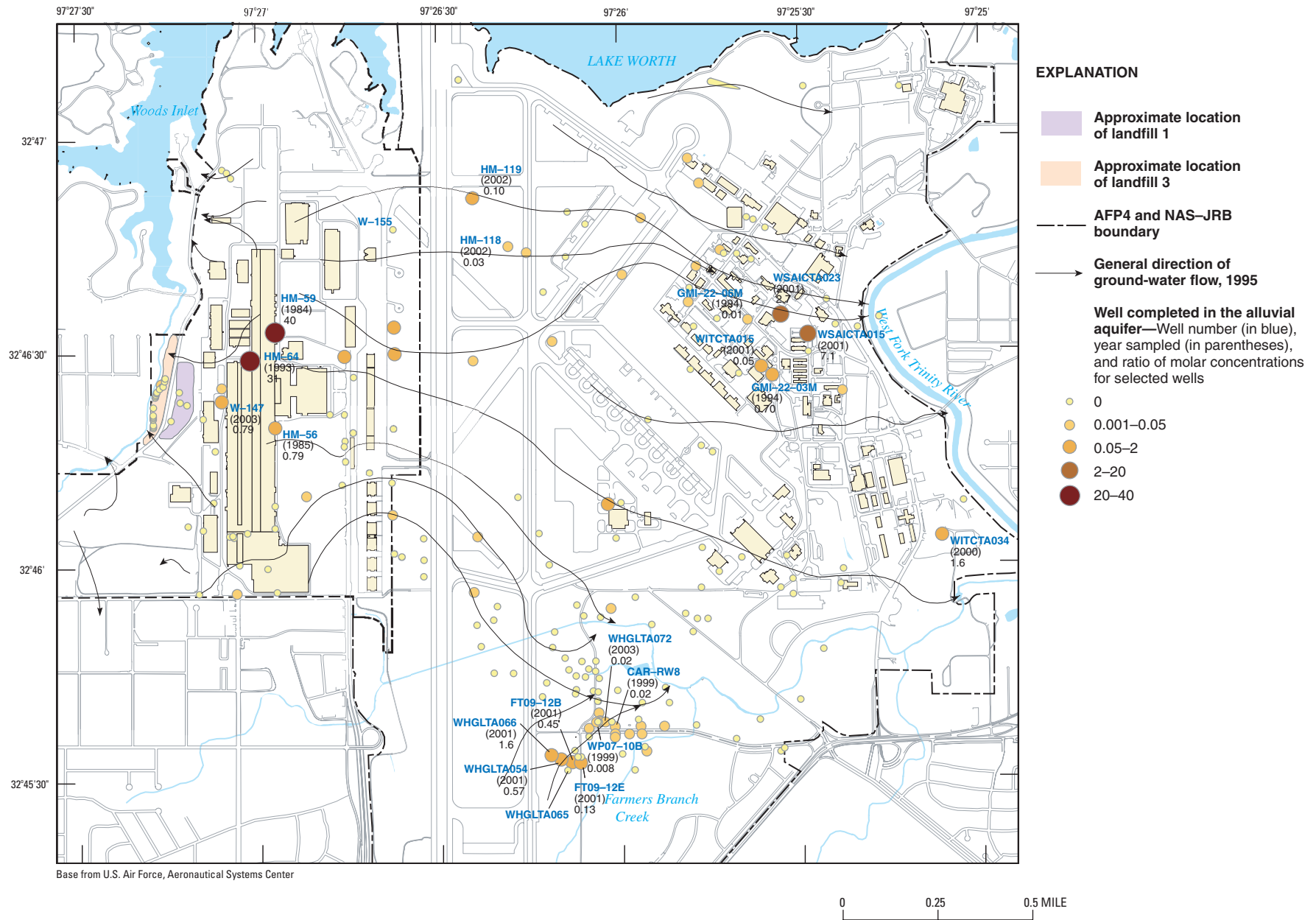


Figure 14. Maximum historical concentration ratios of tetrachloroethene (PCE) to trichloroethene (TCE) in the alluvial aquifer, Air Force Plant 4 (AFP4) and Naval Air Station-Joint Reserve Base Carswell Field (NAS-JRB) study area, Fort Worth, Texas, 1983–2003.

respectively. In the northeastern part of NAS–JRB, ratios increase by an order of magnitude from 0.05 (upgradient well WITCTA015) to 0.70 at well GMI–22–03M and by three orders of magnitude from 0.01 (upgradient well GMI–22–06M) to 2.7 and 7.1 at wells WSAICTA023 and WSAICTA015, respectively. In the south-central part of NAS–JRB, ratios of PCE to TCE in wells appear less clearly related to potential downgradient flow paths than those in some other locations; however, a series of four closely spaced wells (WHGLTA066, WHGLTA054, FT09–12B, and FT09–12E) show ratios of 0.13 to 1.6 immediately downgradient from well WHGLTA065, which shows a ratio of zero.

Maximum historical ratios of TCE to total DCE (fig. 15) show a wide range in ratios in the areas coincident with the northern and southern lobes of the TCE plume. In the area of the northern lobe, the largest increases in TCE to total DCE ratios relative to ratios at upgradient wells occur at wells WCHMHTA006 and WCHMHTA010, with increases from 17 to 240 or from 17 to 260, respectively. In the area of the southern lobe, the largest ratio increases with respect to those at upgradient wells occur at wells WSAICTA010 and LF05–19. Ratios increased from 22 and 24 to 130 at well WSAICTA010 and from 0 and 7.2 to 71 at well LF05–19. A notable increase with respect to ratios at upgradient wells occurs at well WP07–10B, where the ratio increases from less than 8.0 at several upgradient wells to 31. West of the ground-water divide, large TCE to total DCE ratios are evident at well HM–17 near Building 12 and at well HM–29 near Buildings 4 and 5, although no ratio data are available upgradient from well HM–17.

The map of maximum historical ratios of *trans*-DCE to *cis*-DCE (fig. 16) shows ratios of 1 or more, which according to Byl and Williams (2000), can indicate that *trans*-DCE likely was released as a solvent and does not occur only as a result of degradation of TCE. The largest ratios occur in the area coincident with the southern lobe of the TCE plume at one well just east of the east parking lot (4.0 at well HM–113) and two wells farther downgradient (9.8 at well WHGLTA069 and 15 at well WP07–10B). In the area coincident with the northern lobe of the TCE plume, the largest *trans*-DCE to *cis*-DCE ratios were at wells WITCTA012 (6.1) and WHGLTA063 (2.0).

Potential Source Areas of Chlorinated Ethenes

Potential source areas of chlorinated ethenes were identified by assessing concentrations of TCE, PCE, *cis*-DCE, and *trans*-DCE, and ratios of concentrations—PCE to TCE, TCE to total DCE, and *trans*-DCE to *cis*-DCE. High concentrations of these compounds, abrupt increases in ratios of PCE to TCE and TCE to total DCE relative to ratios at upgradient wells, and ratios of *trans*-DCE to *cis*-DCE greater than 1 were used to identify 16 potential source areas (fig. 17). The evidence for some of the potential source areas is stronger than for others, but

each area reflects one or more of the conditions indicative of chlorinated ethenes entering the aquifer.

Potential source area 1, Building 181, is evident from the zone of high concentrations of TCE there (fig. 4). The highest historical TCE concentration in the study area, 920,000 µg/L, is in the area. Concentrations of *trans*-DCE in that area also are among the highest in the study area (fig. 7). Because the Building 181 potential source area is on the ground-water divide marking the origination of ground-water flow away from the area, that potential source area likely is contributing the bulk of the chlorinated ethenes that flow downgradient to the east parking lot.

Potential source area 2, between Buildings 4 and 5, primarily is identified by notably high PCE concentrations (as much as 920 µg/L) near and downgradient (both east and west) from its site on the ground-water divide (fig. 5). Although no immediately upgradient wells are available to provide comparison data, large ratios of PCE to TCE (40 at well HM–59 and 31 at well HM–64) (fig. 14) indicate a potential source of PCE. It is a potential source also for TCE on the basis of the presence of relatively high TCE concentrations (1,000 to 10,000 µg/L) at the apparent point of origin of the northern and central lobes of the TCE plume (fig. 4). An environmental baseline survey conducted by Earth Tech, Inc. (1997) indicates that two TCE spills occurred at the north process control laboratory (fig. 1), and soil samples collected by Earth Tech, Inc. (2003) indicate a historical source area at the ground-water divide.

Potential source area 3 is between the ground-water divide and well HM–118, based on TCE concentrations in the 50-to-500-µg/L range (fig. 4) and a ratio of TCE to total DCE concentrations of 44 at well HM–118, relative to a zero ratio upgradient (fig. 15). This potential source area is tenuous, as the evidence for its specific location is not strong. Data upgradient from well HM–118 are available from only one alluvial aquifer well sampled along the generalized ground-water flow path between well HM–118 and the ground-water divide.

Potential source area 4 is downgradient from potential source area 3 in the area coincident with the northern lobe of the TCE plume immediately upgradient from well WCHMHTA010. The potential source area is identified from one of the highest TCE concentrations in the northern lobe (500-to-1,000-µg/L range) (fig. 4).

Potential source area 5 is in the area coincident with the northern lobe of the TCE plume immediately upgradient from wells WCHMHTA009, WCHMHTA011, and WITCTA004. The evidence for this area is TCE concentrations in the 50-to-500-µg/L range (fig. 4) and abrupt increases in ratios of TCE to total DCE concentrations from zero at upgradient wells to 53 at well WCHMHTA009, 41 at well WCHMHTA011, and 21 at well WITCTA004 (fig. 15).

Potential source area 6 is just upgradient from well WITCTA012. The largest ratio of *trans*-DCE to *cis*-DCE in the northeastern part of the study area (6.1) is at well WITCTA012 (fig. 16), indicating the presence of *trans*-DCE likely could have resulted from the release of the compound rather than degradation of TCE.

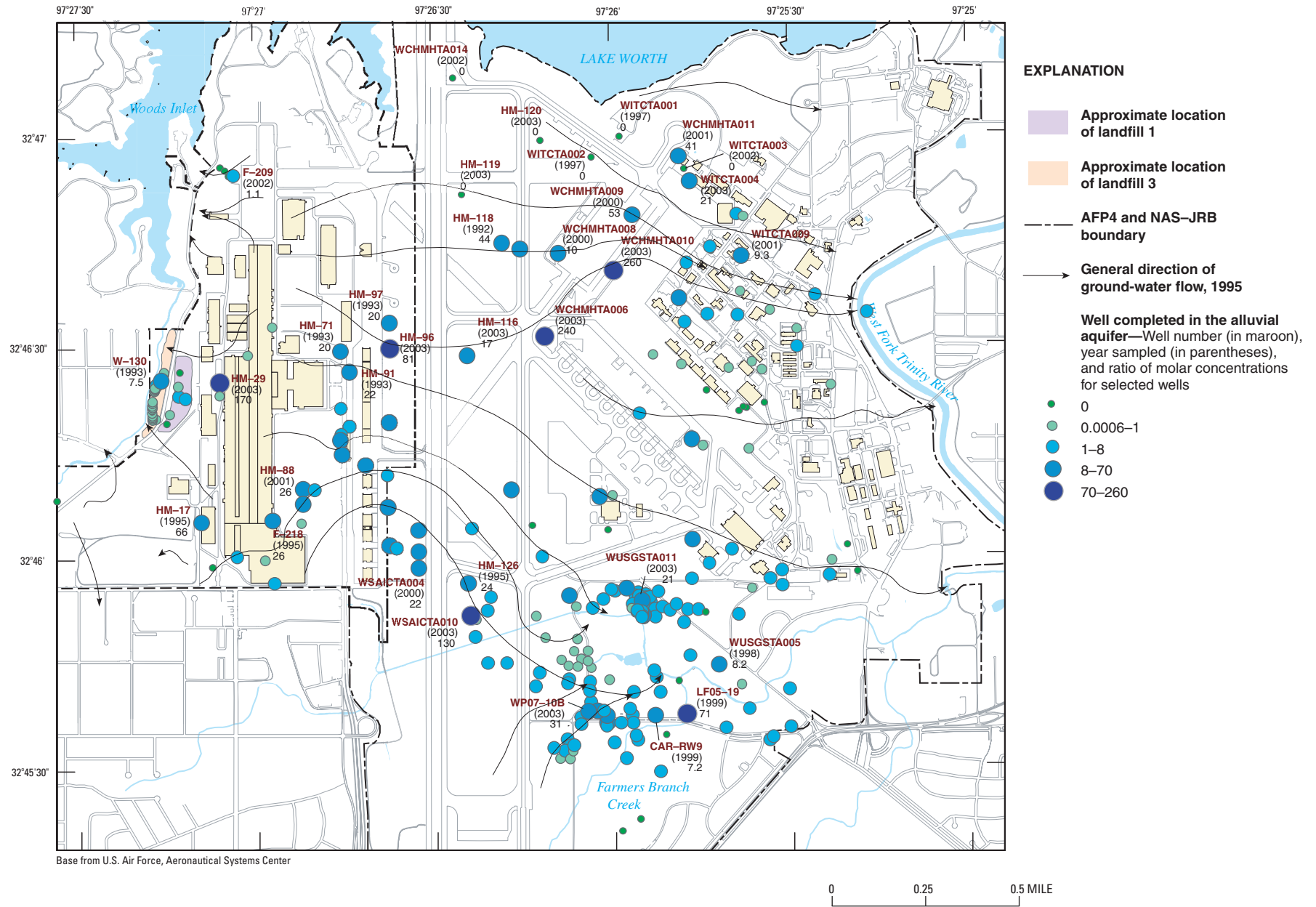


Figure 15. Maximum historical concentration ratios of trichloroethene (TCE) to total 1,2-dichloroethene (total DCE) in the alluvial aquifer, Air Force Plant 4 (AFP4) and Naval Air Station-Joint Reserve Base Carswell Field (NAS-JRB) study area, Fort Worth, Texas, 1991–2003.

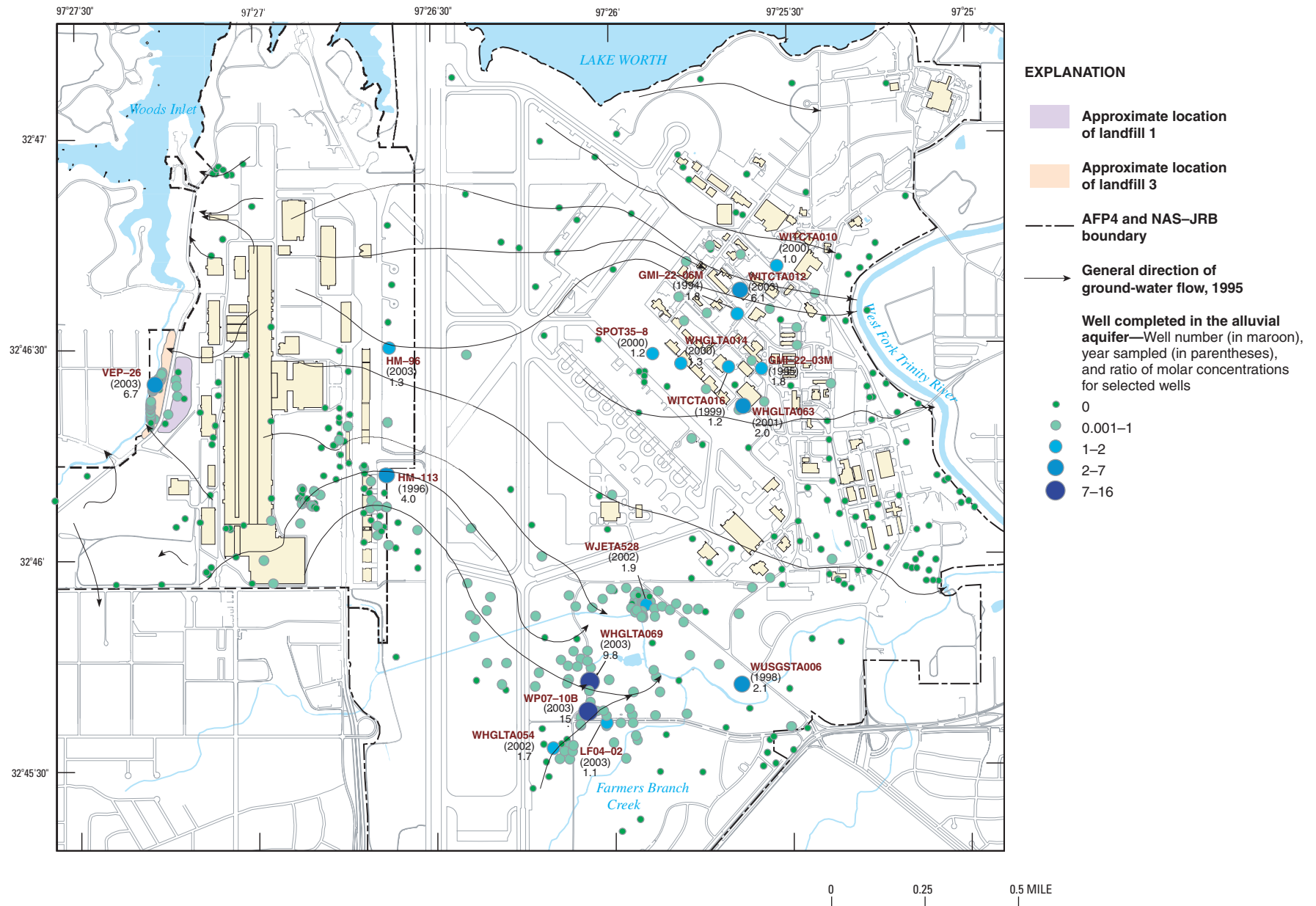


Figure 16. Maximum historical concentration ratios of *trans*-1,2-dichloroethene (*trans*-DCE) to *cis*-1,2-dichloroethene (*cis*-DCE) in the alluvial aquifer, Air Force Plant 4 (AFP4) and Naval Air Station-Joint Reserve Base Carswell Field (NAS-JRB) study area, Fort Worth, Texas, 1991–2003.

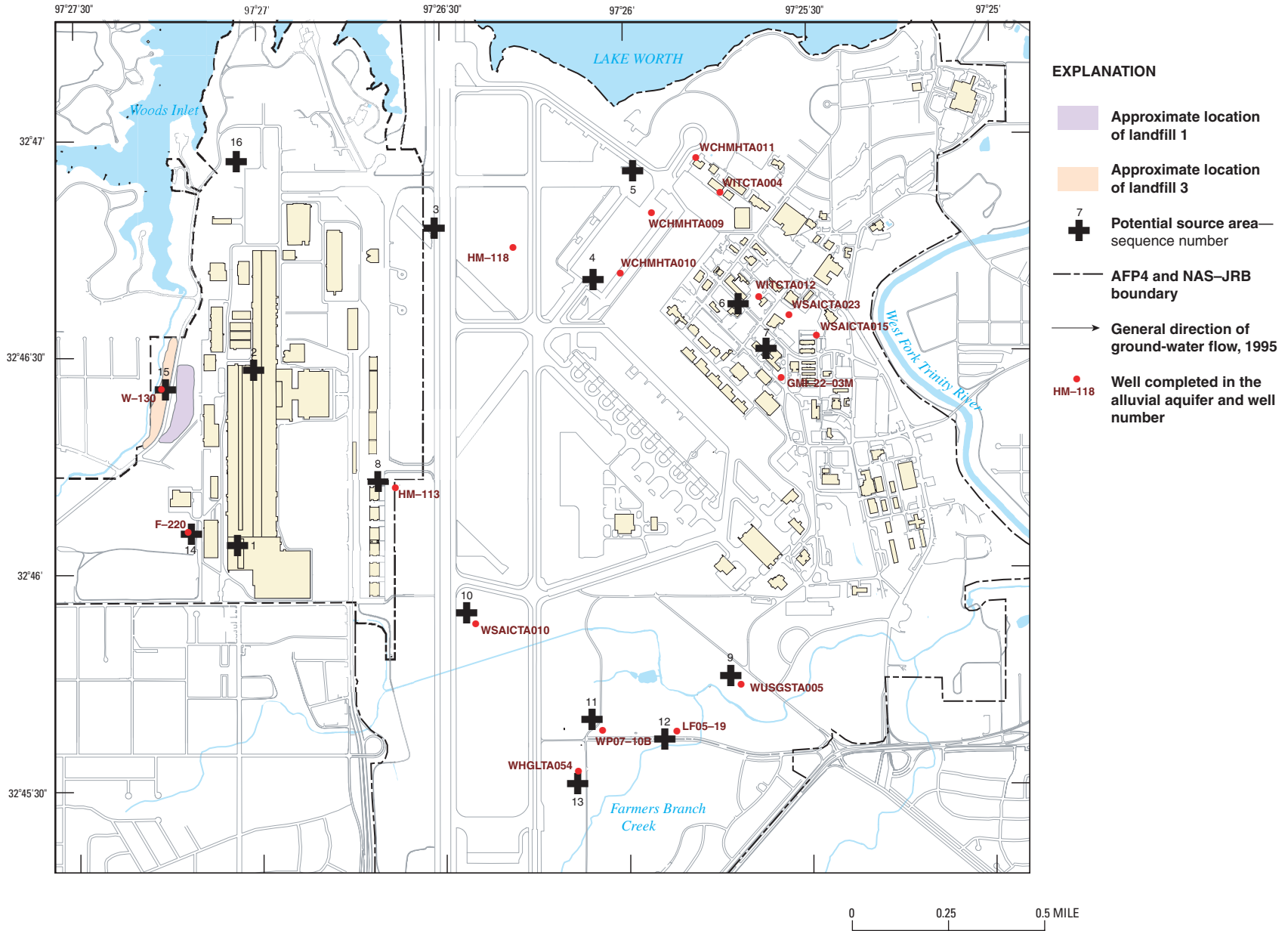


Figure 17. Potential source areas of chlorinated ethenes, Air Force Plant 4 (AFP4) and Naval Air Station-Joint Reserve Base Carswell Field (NAS-JRB) study area, Fort Worth, Texas.

Potential source area 7 is southeast of potential source area 6 and upgradient from wells WSAICTA023, WSAICTA015, and GMI-22-03M. There are abrupt increases in ratios of PCE to TCE concentrations from negligible at nearby upgradient wells to 2.7 at well WSAICTA023 and 7.1 at well WSAICTA015, and from 0.05 immediately upgradient from well GMI-22-03M to 0.70 at the well (fig. 14).

Potential source area 8 is just east of the east parking lot. It is identified by a relatively large concentration of *trans*-DCE (in the 50-to-500- $\mu\text{g/L}$ range) (fig. 7) and a large ratio of *trans*-DCE to *cis*-DCE (4.0) in well HM-113 (fig. 16).

Potential source area 9 is upgradient from well WUSGSTA005. It is identified by an increased TCE to total DCE ratio at well WUSGSTA005 (8.2) compared with those at nearby upgradient wells (less than 8) (fig. 15) and a *trans*-DCE to *cis*-DCE ratio greater than 1 (2.1) at well WUSGSTA006 (fig. 16).

Potential source area 10 is immediately upgradient from well WSAICTA010 in the south-central part of the area coincident with the southern lobe of the TCE plume. Primary evidence for this potential source area is the large increase in ratio of TCE to total DCE concentrations at well WSAICTA010 to 130 from ratios in the 22-to-24 range at nearby upgradient wells (fig. 15). Also, TCE concentrations increase about an order of magnitude (from the 500-1,000- to the 1,000-10,000- $\mu\text{g/L}$ range) at several wells in a downgradient direction (fig. 4), beginning at well WSAICTA010.

Potential source area 11 is in the south-central part of the study area immediately upgradient from well WP07-10B. Primary evidence for this potential source is the presence of PCE at well WP07-10B, which is uncommon in the general area (fig. 5), and the relatively large increase in PCE concentrations at the well in 1997 and 1999 (fig. 12). Also, the ratio of *trans*-DCE to *cis*-DCE concentrations at the well is 15 (fig. 16), well above the threshold of 1 for likely solvent release.

Potential source area 12 is east-southeast of potential source area 11 just upgradient from well LF05-19. Primary evidence for this area is an order-of-magnitude or more increase in the ratio of TCE to total DCE at well LF05-19 from ratios at nearby upgradient wells (7.2 or less to 71) (fig. 15). The ratio data are from 1999; graphs of TCE and total DCE concentrations over time (figs. 11, 13, respectively) show sharp increases in concentration of both compounds in 1997.

Potential source area 13 is south-southwest of potential source areas 11 and 12, upgradient from well WHGLTA054. It is identified by the presence of PCE at that well in a part of the study area where PCE detections are uncommon (fig. 5). Additionally, there are abrupt increases in ratios of PCE to TCE concentrations (from less than 0.05 to 0.5-2) at well WHGLTA054 and several other wells very close to that well compared with ratios at wells immediately upgradient (fig. 14).

Potential source area 14 is immediately west of Building 12 and appears to be on or very close to the ground-water divide. Evidence for this area primarily is the notably high TCE concentrations (for example, 160,000 $\mu\text{g/L}$ at well F-220) that appear to originate in the area. The area encompasses the most

upgradient part of the southern lobe of the TCE plume (fig. 4). Not surprisingly, slightly downgradient from well F-220 at well HM-17 (fig. 15), the ratio of TCE to total DCE concentrations is large (66).

The remaining two potential source areas are west of the ground-water divide. Potential source area 15 is at landfills 1 and (primarily) 3. Primary evidence is the magnitudes of TCE concentrations (for example, two in the 100,000-to-920,000- $\mu\text{g/L}$ range) (fig. 4), *cis*-DCE concentrations (several in the 5,000-to-710,000- $\mu\text{g/L}$ range) (fig. 6), and *trans*-DCE concentrations (several in the 500-to-1,700- $\mu\text{g/L}$ range) (fig. 7). The ratio of *trans*-DCE to *cis*-DCE at well VEP-26 in landfill 3 (6.7) (fig. 16) is well above the threshold that indicates likely solvent release as opposed to TCE degradation alone. A ground-water study by Earth Tech, Inc. (2004), indicates that DNAPL is present near the base of the alluvial aquifer between landfills 1 and 3.

Potential source area 16 is in the northwestern part of the study area near Woods Inlet. The map of TCE concentrations (fig. 4) shows the presence of TCE in several wells in this isolated area. Although at relatively low concentrations (5 to 50 $\mu\text{g/L}$), the presence of TCE away from the main plume indicates a local source.

Summary

The manufacture of aircraft and related parts at U.S. Air Force Plant 4 (AFP4) and adjacent Naval Air Station-Joint Reserve Base Carswell Field (NAS-JRB) at Fort Worth, Tex., since 1942 has involved the use of various toxic chemicals. Some of these chemicals, primarily volatile organic compounds, have been detected in high concentrations in the alluvial aquifer, the aquifer immediately beneath land surface at the 3,600-acre site (study area). The USGS, in cooperation with the U.S. Air Force Aeronautical Systems Center, Environmental Management Directorate, conducted a study during 2003-05 to characterize the subsurface occurrence and identify potential source areas of the volatile organic compounds classified as chlorinated ethenes. The solubilized chlorinated ethenes detected in the alluvial aquifer originated as either released solvents (trichloroethene [TCE], tetrachloroethene [PCE], and *trans*-1,2-dichloroethene [*trans*-DCE]) or degradation products of the released solvents (TCE, *cis*-1,2-dichloroethene [*cis*-DCE], and *trans*-DCE). Concentrations of these compounds and selected ratios of compound concentrations were assessed with regard to magnitude and location within generalized flow paths to identify the subsurface occurrence and potential source areas of chlorinated ethenes in the study area.

A water-level-altitude map developed from 1995 data was used to indicate directions of ground-water flow in the alluvial aquifer. The combined influences of topographic- and bedrock-surface configurations result in a water table that generally slopes away from a ground-water divide approximately coincident with bedrock highs and the 1-mile-long aircraft assembly

24 Subsurface Occurrence and Potential Source Areas of Chlorinated Ethenes, AFP4 and NAS–JRB, Fort Worth, Texas

building at AFP4. Thus, east of the assembly building, ground water generally flows west to east toward the West Fork Trinity River or Farmers Branch Creek; west of the assembly building, ground water flows east to west toward Meandering Road Creek and Woods Inlet.

Data obtained from more than a decade of ground-water-quality sampling at AFP4 and NAS–JRB, primarily by consultants to the Air Force, were used to map the maximum historical concentrations of chlorinated ethene compounds and ratios of maximum historical concentrations in the alluvial aquifer. The greater part of the plume of maximum historical TCE concentrations extends eastward from the assembly building to near the West Fork Trinity River. That part of the TCE plume contains three principal lobes (northern, central, and southern) that extend west to east in the general directions of ground-water flow. A smaller part of the TCE plume extends westward from the assembly building. Highest TCE concentrations (10,000 to 920,000 µg/L) occur near Building 181, west of Building 12, and at landfill 3. Highest PCE concentrations (500 to 920 µg/L) occur near Buildings 4 and 5. Concentrations decrease with eastward migration, and the areal extent of the PCE plume is considerably less than that of the TCE plume. Highest *cis*-DCE concentrations (5,000 to 710,000 µg/L) occur at landfill 3. Concentrations of 1,000 to 5,000 µg/L occur along the southeastern part of the assembly building, the northern corner of the east parking lot, and in an area coincident with the southern lobe of the TCE plume. Highest *trans*-DCE concentrations (1,000 to 1,700 µg/L) occur just south of Building 181 and at landfill 3.

Ratios of parent-compound to daughter-product concentrations that increase in relatively short distances (10s to 100s of feet) along downgradient ground-water flow paths can indicate a contributing source in the vicinity of the increase. In places in the north-central, northeastern, and south-central parts of NAS–JRB, PCE to TCE ratios increase in relatively short distances along generalized flow paths. Largest increases are three orders of magnitude from 0.01 to 2.7 and 7.1 between wells in the northeastern part. Maximum historical ratios of TCE to total DCE show a wide range in ratios in the areas coincident with the northern and southern lobes of the TCE plume. In the area of the northern lobe, the largest increases in TCE to total DCE concentration ratios relative to ratios at upgradient wells are from 17 to 240 or from 17 to 260. In the area of the southern lobe, the largest ratio increases with respect to those at upgradient wells are from 22 and 24 to 130, and from 0 and 7.2 to 71. The map of maximum historical ratios of *trans*-DCE to *cis*-DCE shows ratios greater than 1, which can indicate that *trans*-DCE likely was released as a solvent and does not occur only as a result of degradation of TCE.

High concentrations of TCE, PCE, *cis*-DCE, and *trans*-DCE; abrupt increases in ratios of PCE to TCE and TCE to total DCE; and ratios of *trans*-DCE to *cis*-DCE greater than 1 were used to identify 16 potential source areas of chlorinated ethenes at NAS–JRB. The evidence for some of the potential source areas is stronger than for others, but each area reflects one or more of the conditions indicative of chlorinated ethenes enter-

ing the aquifer. Potential source areas supported by the strongest evidence are Building 181, between Buildings 4 and 5, just west of Building 12, and landfills 1 and 3.

The highest historical TCE concentration in the study area, 920,000 µg/L, is at Building 181. Concentrations of *trans*-DCE in that area also are among the highest in the study area. Because the Building 181 potential source area is on the ground-water divide marking the origination of ground-water flow away from the area, that potential source area likely is contributing the bulk of the chlorinated ethenes that flow downgradient to the east parking lot.

The potential source area between Buildings 4 and 5 primarily is identified by notably high PCE concentrations (as much as 920 µg/L) near and downgradient (both east and west) from its site on the ground-water divide. Although no immediately upgradient wells are available to provide comparison data, large ratios of PCE to TCE, 40 and 31, indicate a potential source of PCE. It is a potential source also for TCE on the basis of the presence of relatively high TCE concentrations (1,000 to 10,000 µg/L) at the apparent point of origin of the northern and central lobes of the TCE plume.

Primary evidence for the potential source area just west of Building 12 is the notably high TCE concentrations (for example, 160,000 µg/L) that appear to originate in the area. The area encompasses the most upgradient part of the southern lobe of the TCE plume.

Primary evidence for the potential source area at landfills 1 and (primarily) 3 is the magnitudes of TCE concentrations (for example, two in the 100,000-to-920,000-µg/L range), *cis*-DCE concentrations (several in the 5,000-to-710,000-µg/L range), and *trans*-DCE concentrations (several in the 500-to-1,700-µg/L range). The ratio of *trans*-DCE to *cis*-DCE at a well in landfill 3 (6.7) is well above the threshold that indicates likely solvent release as opposed to TCE degradation alone.

References

- Byl, T.D., and Williams, S.D., 2000, Biodegradation of chlorinated ethenes at a karst site in Middle Tennessee: U.S. Geological Survey Water-Resources Investigations Report 99–4285, 58 p.
- Chem-Nuclear Geotech, Inc., 1992, Preliminary assessment/site inspection and remedial investigation report: Prepared for U.S. Air Force, Air Force Plant 4, Fort Worth, v. 1, 150 p.
- Earth Tech, Inc., 1997, Environmental baseline survey for Air Force Plant 4, Fort Worth, Texas: Prepared for U.S. Air Force, Aeronautical Systems Center, Environmental Management Directorate, Wright-Patterson Air Force Base, Ohio [variously paged].
- Earth Tech, Inc., 2003, Northeast parking lot source area investigation at Air Force Plant 4, Fort Worth, Texas: Prepared for U.S. Air Force, Center for Environmental Excellence and Aeronautical Systems Center, San Antonio, Contract No. F41624–00–D–8023, 454 p.

- Earth Tech, Inc., 2004, Long-term monitoring report for the April 2004 sampling event at Air Force Plant 4: Prepared for U.S. Air Force, Aeronautical Systems Center, Environmental Management Directorate, Wright-Patterson Air Force Base, Ohio [variously pagged].
- Eberts, S.M., Harvey, G.J., Jones, S.A., and Beckman, S.W., 2003, Multiple process assessment for a chlorinated-solvent plume, *in* McCutcheon, S.C., and Schnoor, J.L., eds., *Phytoremediation—Transformation and control of contaminants*: Hoboken, N.J., Wiley, p. 589–633.
- Environmental Science and Engineering, Inc., 1994, Characterization of trichloroethene plume, Air Force Plant 4 and Carswell Air Force Base, Fort Worth, Texas: Prepared for U.S. Army Corps of Engineers, Fort Worth District.
- Geo-Marine, Inc., 1995, Ground-water survey and subsurface soil delineation hydrant fueling system Carswell Air Force Base, SE, Fort Worth, Texas—Phase I and II: Prepared for U.S. Army Corps of Engineers, Fort Worth District, Contract No. DACA63–93–D–0014, Modification to Delivery Order No. 055, 93 p.
- Griffin, B.M., Tiedje, J.M., and Löffler, F.E., 2004, Anaerobic microbial reductive dechlorination of tetrachloroethene to predominantly *trans*-1,2-dichloroethene: *Environmental Science and Technology*, v. 38, no. 16, p. 4,300–4,303.
- HydroGeoLogic, Inc., 2000, Final summary report, southern lobe trichloroethene ground-water plume delineation, NAS Fort Worth JRB, Texas: Prepared for Air Systems Command, Air Force Plant 4, Brooks AFB, Texas, Contract No. F41624–95–D–8005, 67 p.
- HydroGeoLogic, Inc., 2002, focused feasibility study of the southern lobe trichloroethene ground-water plume at former Carswell Air Force Base, Texas: Prepared for Air Force Center for Environmental Excellence, Brooks AFB, Tex., Aeronautical Systems Center, Wright Patterson Air Force Base, Ohio, and Air Force Base Closure Agency, Arlington, Va., Contract No. F41624–95–D–8005, 21 p.
- Jacobs Engineering Group, Inc., 1993, Installation Restoration Program (IRP) quarterly ground-water monitoring comprehensive sampling round letter report: Dallas, Tex., 91 p.
- Kuniansky, E.L., Jones, S.A., Brock, R.D., and Williams, M.D., 1996, Hydrogeology at Air Force Plant 4 and vicinity and water-quality of the Paluxy aquifer, Fort Worth, Texas: U.S. Geological Survey Water-Resources Investigations Report 96–4091, 41 p.
- Mercer, J.W., and Waddell, R.K., 1993, Contaminant transport in groundwater *in* Maidment, D.R., ed., *Handbook of hydrology*: New York, McGraw-Hill, chap. 16, p. 16.1–16.41.
- Murphy, B.L., and Morrison, R.D., eds., 2002, *Introduction to environmental forensics*: San Diego, Academic Press, 560 p.
- Ram, N., Leahy, M., Carey, E., and Cawley, J., 1999, *Environmental sleuth at work: Environmental Science and Technology*, v. 33, no. 21, p. 464–469.
- RUST Geotech, 1995a, Air Force Plant 4, remedial investigation and preliminary assessment/site inspection report, V. I: Prepared for U.S. Air Force, Headquarters Aeronautical Systems Center, Wright-Patterson Air Force Base, Ohio, Department of Energy Contract No. DE–AC04–861D12584, GJPO–WMP–75, 545 p.
- RUST Geotech, 1995b, Air Force Plant 4, remedial investigation and preliminary assessment/site inspection report, V. II: Prepared for U.S. Air Force, Headquarters Aeronautical Systems Center, Wright-Patterson Air Force Base, Ohio, Department of Energy Contract No. DE–AC04–861D12584, GJPO–WMP–76, 34 pls.
- RUST Geotech, 1995c, Air Force Plant 4, feasibility study, sections 1–5, V. I: Prepared for U.S. Air Force, Headquarters Aeronautical Systems Center, Wright-Patterson Air Force Base, Ohio, Department of Energy Contract No. DE–AC04–861D12584, GJPO–WMP–86, 413 p.
- RUST Geotech, 1995d, Air Force Plant 4, feasibility study, appendix A–D, V. II: Prepared for U.S. Air Force, Headquarters Aeronautical Systems Center, Wright-Patterson Air Force Base, Ohio, Department of Energy Contract No. DE–AC04–861D12584, GJPO–WMP–86, 145 p., 5 pls.
- RUST Geotech, 1996, Final Record Of Decision, Air Force Plant 4, Tarrant County, Texas: Prepared for U.S. Air Force, Headquarters Aeronautical Systems Center, Wright-Patterson Air Force Base, Ohio, Department of Energy Contract No. DE–AC04–94AL96907, GJPO–TP–11, 182 p.
- Shah, S.D., 2004, Development of a geodatabase and conceptual model of the hydrogeologic units beneath Air Force Plant 4 and Naval Air Station-Joint Reserve Base Carswell Field, Fort Worth, Texas: U.S. Geological Survey Scientific Investigations Report 2004–5062, 77 p.
- U.S. Air Force, Center for Environmental Excellence, 1997, Technical report for the ERPIMS 2.0 database model of the Environmental Resources Program Information Management System (ERPIMS): U.S. Air Force, Brooks Air Force Base, San Antonio, 112 p.
- U.S. Army Corps of Engineers, 1986, Investigation of ground-water pollution at Air Force Plant 4, Fort Worth, Texas, October 1986: Fort Worth, 28 p., 8 pls.

Blank Page

**Appendix—Alluvial Aquifer Data Pertinent to
This Report, Air Force Plant 4 and Naval Air
Station-Joint Reserve Base Carswell Field,
Fort Worth, Texas**

Blank Page

Table A1. Maximum historical trichloroethene (TCE) concentrations in the alluvial aquifer, Air Force Plant 4 (AFP4) and Naval Air Station-Joint Reserve Base Carswell Field (NAS-JRB) study area, Fort Worth, Texas, 1984–2003.

[Northing, north state plane coordinate of north-south distance, in feet, from reference location (N6561666.67); Easting, east state plane coordinate of east-west distance, in feet, from reference location (E1968500.00)]

Well number	Northing	Easting	Date collected	Maximum historical concentration (micrograms per liter)	Source
1-A	6964505.00	2300900.00	02/06/85	1	Radian Corporation
1-B	6964685.00	2301062.00	10/15/97	0	HydroGeoLogic, Inc.
1-C	6964450.00	2301255.00	03/05/85	1	Radian Corporation
5-B	6962558.83	2295444.82	03/05/85	39	Radian Corporation
BGSMW01	6964916.00	2299511.00	04/09/97	0	International Technology Corp.
BSS-A	6965476.60	2300120.78	01/10/96	0	Law Environmental
BSS-B	6965797.63	2300091.88	01/15/96	0	Law Environmental
CAR-RW1	6960869.00	2296755.00	11/05/99	3,100	HydroGeoLogic, Inc.
CAR-RW10	6961279.06	2296078.88	11/05/99	3,200	HydroGeoLogic, Inc.
CAR-RW11	6961412.39	2296075.74	11/05/99	3,000	HydroGeoLogic, Inc.
CAR-RW12	6961192.46	2295933.72	11/05/99	3,500	HydroGeoLogic, Inc.
CAR-RW2	6961223.00	2296673.00	11/05/99	3,000	HydroGeoLogic, Inc.
CAR-RW4	6961112.00	2296685.00	11/05/99	3,400	HydroGeoLogic, Inc.
CAR-RW5	6961318.00	2296638.00	11/05/99	1,500	HydroGeoLogic, Inc.
CAR-RW6	6961112.00	2296510.00	11/05/99	3,400	HydroGeoLogic, Inc.
CAR-RW8	6961214.00	2296306.00	11/05/99	4,600	HydroGeoLogic, Inc.
CAR-RW9	6961221.00	2297006.00	11/05/99	3,300	HydroGeoLogic, Inc.
F-204	6965223.00	2290634.70	11/10/95	0	Jacobs Engineering Group
F-209	6969007.27	2290901.72	05/05/02	2.3	Earth Tech Corporation
F-214	6966040.04	2289864.00	10/24/02	210,000	Earth Tech Corporation
F-216	6965776.18	2290219.93	10/08/95	20	Jacobs Engineering Group
F-217	6965959.98	2290109.05	01/27/00	170	U.S. Air Force, Center for Environmental Excellence
F-218	6964024.29	2291474.21	11/02/94	77,000	Jacobs Engineering Group
F-219	6964343.31	2291472.82	10/30/95	56	Jacobs Engineering Group
F-220	6964050.32	2290236.60	11/13/95	160,000	Jacobs Engineering Group
F-221	6963244.60	2290575.22	10/27/95	0	Jacobs Engineering Group
FSA-3-03	6969021.17	2290678.81	11/10/95	0	Jacobs Engineering Group
FSA-3-04	6969021.23	2290632.44	11/10/95	0	Jacobs Engineering Group
FSA-3-06	6969077.00	2290679.76	11/16/95	0	Jacobs Engineering Group
FSA-3-08	6969116.51	2290712.86	11/14/95	9.8	Jacobs Engineering Group
FSA-3-10	6969075.75	2290779.47	11/14/95	21	Jacobs Engineering Group
FSA-3-12	6968999.05	2290836.80	11/13/95	17	Jacobs Engineering Group
FT08-11A	6962321.00	2295878.00	10/19/95	6	Law Environmental
FT08-11B	6962034.00	2295931.00	04/12/95	150	Law Environmental
FT09-12A	6960549.82	2295439.22	12/05/01	0	HydroGeoLogic, Inc.
FT09-12B	6960709.31	2295697.41	02/21/01	100	HydroGeoLogic, Inc.
FT09-12C	6960590.30	2295771.51	10/28/97	5	HydroGeoLogic, Inc.
FT09-12E	6960701.08	2295821.16	06/19/02	24	HydroGeoLogic, Inc.
GMI-02M	6964661.03	2288826.22	10/06/95	0	Jacobs Engineering Group
GMI-04-01M	6960931.00	2296729.00	07/14/97	1,400	HydroGeoLogic, Inc.
GMI-05M	6964307.19	2288362.92	10/05/95	0	Jacobs Engineering Group
GMI-22-01M	6965122.22	2297689.15	07/16/95	14	Law Environmental
GMI-22-02M	6966633.00	2296187.00	05/01/03	0	Earth Tech Corporation
GMI-22-03M	6966219.92	2298539.37	12/03/01	140	HydroGeoLogic, Inc.
GMI-22-04M	6967250.52	2297341.00	04/30/97	956	CH2M Hill
GMI-22-05M	6966940.33	2299432.08	05/01/03	0	Earth Tech Corporation
GMI-22-06M	6967004.48	2298186.58	05/23/94	660	Geo-Marine, Inc.
GMI-22-07M	6969019.00	2298323.00	05/01/03	0	Earth Tech Corporation
GMI-22-08M	6970324.00	2298972.00	01/11/96	0	Law Environmental
HM-10	6965810.91	2290121.80	04/29/95	38	Jacobs Engineering Group

30 Subsurface Occurrence and Potential Source Areas of Chlorinated Ethenes, AFP4 and NAS–JRB, Fort Worth, Texas

Table A1. Maximum historical trichloroethene (TCE) concentrations in the alluvial aquifer, Air Force Plant 4 (AFP4) and Naval Air Station-Joint Reserve Base Carswell Field (NAS–JRB) study area, Fort Worth, Texas, 1984–2003—Continued.

Well number	Northing	Easting	Date collected	Maximum historical concentration (micrograms per liter)	Source
HM–101	6964442.18	2288886.61	04/18/86	0	Jacobs Engineering Group
HM–104	6963114.28	2291200.56	01/19/96	0	Jacobs Engineering Group
HM–106	6968075.70	2290771.26	10/24/95	0	Jacobs Engineering Group
HM–11	6963091.76	2290932.28	10/17/00	6,900	U.S. Air Force, Center for Environmental Excellence
HM–110	6963667.53	2293163.24	10/13/99	560	HydroGeoLogic, Inc.
HM–111	6963624.05	2293266.53	10/10/95	19	Jacobs Engineering Group
HM–112	6964218.00	2293142.65	10/12/95	14,000	Jacobs Engineering Group
HM–113	6964677.00	2293133.60	01/20/96	640	Jacobs Engineering Group
HM–114	6963912.10	2294352.00	04/10/01	560	HydroGeoLogic, Inc.
HM–116	6966411.43	2294283.69	04/20/99	650	HydroGeoLogic, Inc.
HM–118	6968035.19	2294780.47	10/14/02	180	Ellis Environmental Group
HM–119	6968726.00	2294271.80	11/01/94	38	Jacobs Engineering Group
HM–12	6963088.53	2290396.72	02/14/86	.23	Radian Corporation
HM–120	6969489.04	2295343.23	05/01/03	0	Earth Tech Corporation
HM–121	6967390.20	2295279.20	11/07/95	520	Jacobs Engineering Group
HM–123	6961638.50	2295272.60	07/13/99	4,300	HydroGeoLogic, Inc.
HM–124	6963957.77	2295223.26	11/14/95	2.2	Jacobs Engineering Group
HM–126	6963121.05	2294300.23	11/14/95	3,100	Jacobs Engineering Group
HM–127	6961588.47	2294853.29	11/14/95	1.3	Jacobs Engineering Group
HM–13	6963100.15	2289898.00	10/25/95	0	Jacobs Engineering Group
HM–14	6963093.00	2289243.30	11/01/95	0	Jacobs Engineering Group
HM–16	6964155.13	2290241.53	02/11/86	10,290	Radian Corporation
HM–17	6963993.31	2290451.65	02/11/86	15,274	Radian Corporation
HM–23	6963113.58	2288752.31	04/05/86	0	Radian Corporation
HM–29	6966014.89	2290711.88	02/21/86	5,585	Radian Corporation
HM–31	6963114.44	2291505.33	04/28/99	580	Jacobs Engineering Group
HM–36	6965484.00	2289786.00	10/16/00	38	U.S. Air Force, Center for Environmental Excellence
HM–56	6965454.00	2291472.23	03/20/85	680	Hargis + Associates
HM–59	6966811.00	2291469.61	12/12/84	60	Hargis + Associates
HM–64	6966406.97	2291114.57	08/03/84	390	Hargis + Associates
HM–7	6966159.99	2290135.86	01/27/00	0	U.S. Air Force, Center for Environmental Excellence
HM–71	6966470.35	2292457.39	03/20/85	2,500	Hargis + Associates
HM–88	6964479.91	2291919.17	11/07/98	13,500	Jacobs Engineering Group
HM–89	6964470.44	2292084.17	09/13/00	1,000	U.S. Air Force, Center for Environmental Excellence
HM–90	6965640.09	2292457.85	05/21/93	5.9	Jacobs Engineering Group
HM–91	6966174.30	2292586.29	06/04/93	450	Jacobs Engineering Group
HM–92	6965645.68	2292250.42	10/28/95	1.6	Jacobs Engineering Group
HM–93	6965074.75	2292194.39	04/24/97	38	Jacobs Engineering Group
HM–95	6965442.59	2293156.22	05/01/03	6,724	Earth Tech Corporation
HM–96	6966507.03	2293168.95	01/15/03	230	Earth Tech Corporation
HM–97	6966884.14	2293158.51	05/26/93	330	Jacobs Engineering Group
HM–98	6967418.95	2293207.55	10/17/00	1	U.S. Air Force, Center for Environmental Excellence
ITMW–01T	6961062.05	2298967.00	10/24/00	22	HydroGeoLogic, Inc.
LF01–1D	6964288.00	2301413.00	10/14/98	0	HydroGeoLogic, Inc.
LF01–1E	6964606.00	2301174.00	10/20/97	0	HydroGeoLogic, Inc.
LF03–3D	6962056.65	2293269.12	05/01/03	0	Earth Tech Corporation
LF04–01	6961026.99	2295378.56	12/06/01	0	HydroGeoLogic, Inc.
LF04–02	6961113.06	2296309.10	01/25/99	3,300	HydroGeoLogic, Inc.
LF04–03	6961064.00	2296306.00	11/05/99	3,100	HydroGeoLogic, Inc.
LF04–04	6960941.63	2297165.64	01/13/96	0	Law Environmental

Table A1. Maximum historical trichloroethene (TCE) concentrations in the alluvial aquifer, Air Force Plant 4 (AFP4) and Naval Air Station-Joint Reserve Base Carswell Field (NAS-JRB) study area, Fort Worth, Texas, 1984–2003—Continued.

Well number	Northing	Easting	Date collected	Maximum historical concentration (micrograms per liter)	Source
LF04–10	6960411.83	2297078.91	04/23/97	2	CH2M Hill
LF04–4C	6960600.00	2296588.00	10/06/99	10	HydroGeoLogic, Inc.
LF04–4D	6960828.00	2296412.00	01/15/96	1,330	Law Environmental
LF05–01	6962728.35	2294577.83	06/19/02	62	Science Applications International Corp.
LF05–02	6962653.12	2295278.95	10/28/97	210	HydroGeoLogic, Inc.
LF05–18	6961555.64	2297075.43	04/24/97	1,150	CH2M Hill
LF05–19	6961239.89	2297461.35	04/23/97	1,710	CH2M Hill
LF05–5B	6961901.56	2296078.25	10/16/02	1	Ellis Environmental Group
LF05–5C	6961720.05	2295993.73	01/15/96	939	Law Environmental
LF05–5D	6961739.00	2295754.00	01/14/96	1,110	Law Environmental
LF05–5G	6961558.00	2296690.00	04/23/97	1,240	CH2M Hill
LF05–5H	6961732.39	2296340.79	06/20/02	68	HydroGeoLogic, Inc.
LSA1628–1	6967936.00	2297802.00	10/20/95	0	Law Environmental
LSA1628–2	6967943.00	2297847.00	01/15/96	59	Law Environmental
LSA1628–3	6967993.10	2297791.30	04/28/97	790	CH2M Hill
MW–10	6965836.22	2300542.00	10/30/97	0	HydroGeoLogic, Inc.
MW–11	6965707.00	2300792.00	10/24/97	0	HydroGeoLogic, Inc.
MW–12	6966149.32	2300142.00	10/19/95	2	Law Environmental
MW–19	6963513.00	2295369.00	08/22/01	156	Science Applications International Corp.
MW–38	6965981.00	2298153.00	12/04/01	0	HydroGeoLogic, Inc.
MW–5	6963910.00	2290826.00	05/03/01	920,000	U.S. Air Force, Center for Environmental Excellence
MW–50	6968529.00	2295622.00	07/22/96	4	Jacobs Engineering Group
MW–53	6964378.00	2296200.00	07/24/96	370	Jacobs Engineering Group
MW–5C	6965804.00	2300139.00	04/10/97	0	International Technology Corp.
MW–7CRSWL	6965967.00	2300055.00	08/22/01	0	Science Applications International Corp.
MW–8	6965584.95	2300492.00	01/10/96	0	Law Environmental
MW–9	6966001.79	2300330.00	10/20/97	0	HydroGeoLogic, Inc.
MW–IT–01T	6961062.00	2298967.00	11/05/98	18.5	Jacobs Engineering Group
MWMTAC–001	6959116.00	2296520.00	12/12/96	0	Jacobs Engineering Group
OT–15C	6963316.00	2300948.00	07/16/95	3	Law Environmental
RW–11U	6965385.00	2292586.20	07/30/94	6,900	U.S. Air Force, Center for Environmental Excellence
RW–1U	6965269.00	2292468.70	01/19/93	12,000	U.S. Air Force, Center for Environmental Excellence
RW–2U	6964643.00	2292424.50	01/20/93	12,000	U.S. Air Force, Center for Environmental Excellence
SD13–01	6963377.64	2300623.03	10/09/98	1	HydroGeoLogic, Inc.
SD13–02	6963472.80	2300754.49	10/27/00	0	HydroGeoLogic, Inc.
SD13–03	6963347.97	2300700.85	01/11/96	0	Law Environmental
SD13–04	6963346.39	2300773.06	10/31/00	0	HydroGeoLogic, Inc.
SD13–05	6963904.00	2300776.00	01/12/96	0	Law Environmental
SD13–06	6963164.35	2300908.00	06/26/01	0	HydroGeoLogic, Inc.
SD13–07	6963165.85	2301009.00	07/02/01	0	HydroGeoLogic, Inc.
SPOT35–2	6966175.00	2296854.00	01/29/97	1	CH2M Hill
SPOT35–3	6966109.00	2296851.00	12/03/01	0	HydroGeoLogic, Inc.
SPOT35–4	6966175.00	2296778.00	10/28/97	0	HydroGeoLogic, Inc.
SPOT35–5	6966020.04	2296847.00	10/14/02	0	Ellis Environmental Group
SPOT35–8	6966428.55	2296970.16	04/07/00	25	HydroGeoLogic, Inc.
ST14–01	6963295.30	2300090.83	01/11/96	0	Law Environmental
ST14–02	6963511.64	2300091.66	01/13/96	0	Law Environmental
ST14–03	6964079.97	2299891.62	10/09/02	0	Ellis Environmental Group
ST14–04	6963642.65	2300345.31	01/13/96	0	Law Environmental
ST14–14	6964309.76	2299735.00	05/01/98	0	HydroGeoLogic, Inc.

32 Subsurface Occurrence and Potential Source Areas of Chlorinated Ethenes, AFP4 and NAS–JRB, Fort Worth, Texas

Table A1. Maximum historical trichloroethene (TCE) concentrations in the alluvial aquifer, Air Force Plant 4 (AFP4) and Naval Air Station-Joint Reserve Base Carswell Field (NAS–JRB) study area, Fort Worth, Texas, 1984–2003—Continued.

Well number	Northing	Easting	Date collected	Maximum historical concentration (micrograms per liter)	Source
ST14–24	6964018.00	2299061.45	10/12/99	0	HydroGeoLogic, Inc.
ST14–26	6964593.00	2299557.00	04/13/98	0	HydroGeoLogic, Inc.
ST14–27	6964258.00	2300212.00	10/30/00	0	HydroGeoLogic, Inc.
ST14–W05	6963726.00	2299094.00	10/10/02	0	Ellis Environmental Group
ST14–W06	6963807.00	2299331.00	01/11/96	0	Law Environmental
ST14–W07	6963615.00	2299394.00	01/12/96	0	Law Environmental
ST14–W08	6964324.00	2299480.00	01/12/96	0	Law Environmental
ST14–W09	6963472.00	2299550.00	10/18/95	6	Law Environmental
ST14–W11	6964129.00	2299658.00	10/27/00	0	HydroGeoLogic, Inc.
ST14–W13	6963695.00	2299776.00	01/11/96	0	Law Environmental
ST14–W15	6963316.00	2299923.00	05/01/03	0	Earth Tech Corporation
ST14–W16	6964065.00	2300128.00	10/30/00	0	HydroGeoLogic, Inc.
ST14–W21	6963418.00	2300242.00	07/12/95	4	Law Environmental
ST14–W31	6963550.00	2300831.00	10/12/99	0	HydroGeoLogic, Inc.
T8	6965421.00	2289949.00	01/14/02	0	U.S. Air Force, Center for Environmental Excellence
T9	6965551.00	2289993.00	11/19/01	2	U.S. Air Force, Center for Environmental Excellence
USGS01T	6970384.00	2297661.30	10/21/95	1	Law Environmental
USGS02T	6970326.56	2300333.85	12/09/96	0	Jacobs Engineering Group
USGS03T	6968704.70	2300610.01	10/20/95	6	Law Environmental
USGS04T	6968758.00	2299178.00	10/09/02	0	Ellis Environmental Group
USGS06T	6963763.00	2297542.08	01/24/98	90	Jacobs Engineering Group
USGS07T	6960168.00	2295246.00	10/11/02	0	Ellis Environmental Group
VEP–10	6965452.00	2289741.00	05/07/02	0	Earth Tech Corporation
VEP–11	6965472.00	2289741.00	05/08/02	18	Earth Tech Corporation
VEP–12	6965492.14	2289740.47	05/08/02	260	Earth Tech Corporation
VEP–13	6965512.00	2289740.00	05/08/02	270	Earth Tech Corporation
VEP–14	6965532.35	2289740.23	05/08/02	180	Earth Tech Corporation
VEP–15	6965572.27	2289739.27	05/09/02	60	Earth Tech Corporation
VEP–16	6965593.48	2289739.28	05/09/02	0	Earth Tech Corporation
VEP–17	6965612.88	2289738.95	05/09/02	45	Earth Tech Corporation
VEP–18	6965631.89	2289739.19	05/09/02	5.9	Earth Tech Corporation
VEP–18B	6965652.25	2289740.40	05/09/02	4.2	Earth Tech Corporation
VEP–19	6965673.36	2289738.41	05/09/02	19	Earth Tech Corporation
VEP–20	6965692.62	2289738.81	05/10/02	0	Earth Tech Corporation
VEP–21	6965885.28	2289766.47	05/11/02	9.4	Earth Tech Corporation
VEP–22	6965904.64	2289772.36	05/11/02	23	Earth Tech Corporation
VEP–23	6965923.82	2289776.40	05/11/02	20	Earth Tech Corporation
VEP–24	6965947.42	2289785.33	05/11/02	60	Earth Tech Corporation
VEP–25	6965961.57	2289792.04	05/11/02	85	Earth Tech Corporation
VEP–26	6965979.44	2289801.00	05/15/03	1,780	Shaw Environmental
VEP–27	6965996.42	2289811.11	05/12/02	0	Earth Tech Corporation
VEP–28	6966006.35	2289828.89	05/12/02	0	Earth Tech Corporation
VEP–29	6966014.37	2289844.00	05/15/03	0	Shaw Environmental
VEP–3	6966027.00	2289825.00	05/12/02	4.7	Earth Tech Corporation
VEP–31	6966040.69	2289879.41	05/13/02	4.9	Earth Tech Corporation
VEP–33	6966075.62	2289893.21	05/14/02	0	Earth Tech Corporation
VEP–35	6966114.00	2289901.00	05/14/02	4.3	Earth Tech Corporation
VEP–36	6966135.75	2289905.70	05/14/02	11	Earth Tech Corporation
VEP–37	6966155.08	2289906.66	05/14/02	170	Earth Tech Corporation
VEP–4	6966050.33	2289838.40	05/15/03	0	Shaw Environmental

Table A1. Maximum historical trichloroethene (TCE) concentrations in the alluvial aquifer, Air Force Plant 4 (AFP4) and Naval Air Station-Joint Reserve Base Carswell Field (NAS-JRB) study area, Fort Worth, Texas, 1984–2003—Continued.

Well number	Northing	Easting	Date collected	Maximum historical concentration (micrograms per liter)	Source
VEP-40	6966096.49	2289877.53	05/13/02	0	Earth Tech Corporation
VEP-41	6966067.00	2289850.00	05/13/02	66	Earth Tech Corporation
VEP-5	6965352.65	2289735.96	05/07/02	0	Earth Tech Corporation
VEP-6	6965371.63	2289740.48	05/07/02	0	Earth Tech Corporation
VEP-7	6965393.00	2289742.00	05/07/02	0	Earth Tech Corporation
VEP-8	6965413.00	2289741.00	05/07/02	0	Earth Tech Corporation
VEP-9	6965432.00	2289741.00	05/07/02	0	Earth Tech Corporation
VEPT-1	6965717.00	2289740.00	05/09/02	1.9	Earth Tech Corporation
VEPT-2	6965739.00	2289741.00	05/10/02	1.6	Earth Tech Corporation
W-129	6965935.87	2289777.80	05/12/93	58	Jacobs Engineering Group
W-130	6966042.89	2289868.15	06/14/93	490,000	Jacobs Engineering Group
W-131L	6963276.81	2290536.11	10/19/91	0	Chem-Nuclear Geotech, Inc.
W-131U	6963278.00	2290541.00	10/24/91	21	Chem-Nuclear Geotech, Inc.
W-132	6966136.51	2289895.52	05/12/93	0	Jacobs Engineering Group
W-133U	6963349.00	2290609.00	06/06/93	0	Jacobs Engineering Group
W-134	6969156.00	2291067.00	05/14/93	0	Jacobs Engineering Group
W-135	6967837.68	2290606.07	10/18/00	2	U.S. Air Force, Center for Environmental Excellence
W-137	6963499.00	2290968.00	05/07/93	200	Jacobs Engineering Group
W-141L	6965386.71	2290672.36	10/18/91	0	Chem-Nuclear Geotech, Inc.
W-141U	6965391.58	2290672.52	06/14/93	0	Jacobs Engineering Group
W-143	6968548.58	2291192.24	09/11/91	0	Chem-Nuclear Geotech, Inc.
W-144	6965577.00	2290450.00	09/17/91	45	Chem-Nuclear Geotech, Inc.
W-145	6964387.65	2290600.35	09/15/91	8	Chem-Nuclear Geotech, Inc.
W-146	6965118.51	2290620.30	05/09/93	6.3	Jacobs Engineering Group
W-147	6965824.00	2290711.00	01/15/03	.15	Earth Tech Corporation
W-149	6965190.70	2292456.97	10/17/91	21,000	Chem-Nuclear Geotech, Inc.
W-151	6964980.90	2292475.30	05/25/93	500	Jacobs Engineering Group
W-155	6968275.39	2293145.82	05/27/93	2.1	Jacobs Engineering Group
W-156	6964824.12	2292815.02	09/14/00	7,800	U.S. Air Force, Center for Environmental Excellence
W-158	6963954.83	2291080.82	06/06/93	16,000	Jacobs Engineering Group
W-160	6963448.68	2291368.51	01/24/97	553	Jacobs Engineering Group
WCHMHTA004	6967949.00	2295041.00	09/26/01	54	Science Applications International Corp.
WCHMHTA006	6966690.11	2295406.97	04/11/02	410	Ellis Environmental Group
WCHMHTA008	6967889.89	2295597.48	04/11/00	27	HydroGeoLogic, Inc.
WCHMHTA009	6968444.69	2296663.99	04/10/00	430	HydroGeoLogic, Inc.
WCHMHTA010	6967640.08	2296398.80	04/11/02	660	Ellis Environmental Group
WCHMHTA011	6969295.20	2297328.38	09/26/01	223	Science Applications International Corp.
WCHMHTA013	6967056.00	2300052.00	05/01/03	12	Earth Tech Corporation
WCHMHTA014	6970403.90	2294072.81	10/14/02	1	Ellis Environmental Group
WCOETA002	6962944.00	2296763.00	07/01/02	170	U.S. Geological Survey
WCOETA004	6962828.00	2296675.00	07/01/01	270	U.S. Geological Survey
WCOETA006	6962928.00	2296921.00	07/01/02	170	U.S. Geological Survey
WCOETA010	6962696.00	2296798.00	06/01/98	557	U.S. Geological Survey
WHGLFE001	6961575.00	2296063.00	06/19/02	700	HydroGeoLogic, Inc.
WHGLFE002	6961284.00	2296060.00	06/18/02	1,100	HydroGeoLogic, Inc.
WHGLFE003	6961079.00	2295934.00	06/17/02	3.3	HydroGeoLogic, Inc.
WHGLFE004	6960785.00	2295825.00	06/19/02	0	HydroGeoLogic, Inc.
WHGLRW015	6960871.43	2298662.64	07/28/99	46	HydroGeoLogic, Inc.
WHGLRW016	6961034.95	2299201.47	10/16/02	0	Ellis Environmental Group
WHGLRW017	6960727.11	2299000.59	04/19/02	0	Ellis Environmental Group

34 Subsurface Occurrence and Potential Source Areas of Chlorinated Ethenes, AFP4 and NAS–JRB, Fort Worth, Texas

Table A1. Maximum historical trichloroethene (TCE) concentrations in the alluvial aquifer, Air Force Plant 4 (AFP4) and Naval Air Station-Joint Reserve Base Carswell Field (NAS–JRB) study area, Fort Worth, Texas, 1984–2003—Continued.

Well number	Northing	Easting	Date collected	Maximum historical concentration (micrograms per liter)	Source
WHGLRW018	6960532.93	2298744.63	11/01/99	0	HydroGeoLogic, Inc.
WHGLRW019	6960684.23	2298620.19	11/04/99	0	HydroGeoLogic, Inc.
WHGLTA003	6961043.88	2298029.84	01/23/98	170	HydroGeoLogic, Inc.
WHGLTA004	6962943.38	2295760.62	10/08/98	1,400	HydroGeoLogic, Inc.
WHGLTA005	6963470.00	2301044.00	10/18/99	0	HydroGeoLogic, Inc.
WHGLTA007	6963162.51	2301093.11	10/18/99	1	HydroGeoLogic, Inc.
WHGLTA008	6963955.17	2300016.84	10/11/99	0	HydroGeoLogic, Inc.
WHGLTA009	6965211.65	2297528.70	04/10/00	190	HydroGeoLogic, Inc.
WHGLTA010	6965580.03	2296770.93	04/07/00	16	HydroGeoLogic, Inc.
WHGLTA011	6968356.67	2295873.87	07/13/00	8	HydroGeoLogic, Inc.
WHGLTA012	6965920.84	2297740.00	10/10/02	0	Ellis Environmental Group
WHGLTA013	6965958.00	2297177.00	12/04/01	0	HydroGeoLogic, Inc.
WHGLTA014	6966295.34	2297373.92	10/27/00	36	HydroGeoLogic, Inc.
WHGLTA020	6962285.83	2299684.95	11/05/99	0	HydroGeoLogic, Inc.
WHGLTA022	6960401.65	2297691.54	11/03/99	0	HydroGeoLogic, Inc.
WHGLTA023	6960492.16	2298565.43	11/04/99	0	HydroGeoLogic, Inc.
WHGLTA025	6961608.26	2298942.63	04/06/00	14	HydroGeoLogic, Inc.
WHGLTA028	6967761.00	2297451.00	04/17/02	360	Ellis Environmental Group
WHGLTA029	6965736.00	2298574.00	10/16/02	0	Ellis Environmental Group
WHGLTA034	6963889.66	2301060.21	10/16/00	0	HydroGeoLogic, Inc.
WHGLTA035	6963823.75	2301048.39	10/16/00	0	HydroGeoLogic, Inc.
WHGLTA043	6961771.99	2297021.32	10/16/02	630	Ellis Environmental Group
WHGLTA044	6961721.40	2297347.37	04/03/01	1	HydroGeoLogic, Inc.
WHGLTA045	6961321.90	2298368.80	10/20/00	22	HydroGeoLogic, Inc.
WHGLTA046	6961298.49	2296089.68	02/26/02	2,300	HydroGeoLogic, Inc.
WHGLTA048	6960916.20	2298714.83	10/26/00	35	HydroGeoLogic, Inc.
WHGLTA049	6962329.24	2299269.36	10/20/00	2	HydroGeoLogic, Inc.
WHGLTA050	6963013.36	2296420.09	06/15/01	260	HydroGeoLogic, Inc.
WHGLTA051	6962894.90	2296247.12	10/16/02	350	Ellis Environmental Group
WHGLTA052	6962769.45	2296098.07	06/26/01	570	HydroGeoLogic, Inc.
WHGLTA053	6960334.00	2295474.00	12/05/01	0	HydroGeoLogic, Inc.
WHGLTA054	6960748.26	2295541.09	02/20/01	93	HydroGeoLogic, Inc.
WHGLTA055	6960809.82	2295662.85	06/12/01	0	HydroGeoLogic, Inc.
WHGLTA056	6960787.36	2295827.62	04/06/01	68	HydroGeoLogic, Inc.
WHGLTA060	6965619.32	2298210.18	11/26/01	0	HydroGeoLogic, Inc.
WHGLTA061	6965621.74	2298341.01	11/27/01	0	HydroGeoLogic, Inc.
WHGLTA062	6965663.00	2298317.27	11/26/01	0	HydroGeoLogic, Inc.
WHGLTA063	6965677.07	2298270.14	11/27/01	0	HydroGeoLogic, Inc.
WHGLTA064	6965075.48	2298351.15	11/28/01	30	HydroGeoLogic, Inc.
WHGLTA065	6960593.00	2295633.00	12/06/01	5	HydroGeoLogic, Inc.
WHGLTA066	6960807.00	2295402.00	12/02/01	1	HydroGeoLogic, Inc.
WHGLTA067	6960876.00	2295733.00	12/02/01	42	HydroGeoLogic, Inc.
WHGLTA069	6961708.00	2296063.00	06/18/02	960	HydroGeoLogic, Inc.
WHGLTA070	6961576.00	2296056.00	06/19/02	1,600	HydroGeoLogic, Inc.
WHGLTA071	6961285.00	2296067.00	06/18/02	14	HydroGeoLogic, Inc.
WHGLTA072	6961283.00	2296102.00	06/18/02	1,800	HydroGeoLogic, Inc.
WHGLTA073	6961283.00	2296167.00	05/05/03	3,200	HydroGeoLogic, Inc.
WHGLTA074	6961285.00	2296258.00	06/18/02	2,100	HydroGeoLogic, Inc.
WHGLTA075	6961072.00	2295934.00	05/05/03	0	HydroGeoLogic, Inc.
WHGLTA076	6961086.00	2295934.00	06/17/02	1,700	HydroGeoLogic, Inc.

Table A1. Maximum historical trichloroethene (TCE) concentrations in the alluvial aquifer, Air Force Plant 4 (AFP4) and Naval Air Station-Joint Reserve Base Carswell Field (NAS-JRB) study area, Fort Worth, Texas, 1984–2003—Continued.

Well number	Northing	Easting	Date collected	Maximum historical concentration (micrograms per liter)	Source
WHGLTA077	6960785.00	2295776.00	06/20/02	65	HydroGeoLogic, Inc.
WHGLTA082	6964396.00	2296386.00	10/10/02	7	Ellis Environmental Group
WHGLTA101	6964634.00	2301220.00	06/03/99	0	HydroGeoLogic, Inc.
WHGLTA102	6964449.00	2301388.00	06/03/99	0	HydroGeoLogic, Inc.
WHGLTA103	6964314.53	2301522.24	06/02/99	0	HydroGeoLogic, Inc.
WHGLTA104	6964226.00	2301608.00	11/02/99	0	HydroGeoLogic, Inc.
WHGLTA201	6963198.14	2298660.88	12/09/98	25	HydroGeoLogic, Inc.
WHGLTA202	6963326.21	2298832.59	12/14/98	16	HydroGeoLogic, Inc.
WHGLTA203	6963059.00	2298401.00	05/13/98	4	HydroGeoLogic, Inc.
WHGLTA204	6963625.62	2298104.66	09/23/98	58	HydroGeoLogic, Inc.
WHGLTA302	6962603.00	2294422.00	05/07/98	1,400	HydroGeoLogic, Inc.
WHGLTA303	6962351.00	2294401.00	05/08/98	880	HydroGeoLogic, Inc.
WHGLTA601	6962753.00	2297473.69	09/25/98	200	HydroGeoLogic, Inc.
WHGLTA602	6962752.66	2297625.01	09/25/98	170	HydroGeoLogic, Inc.
WHGLTA603	6962713.38	2297727.19	04/19/02	0	Ellis Environmental Group
WHGLTA604	6963195.00	2297530.00	09/24/98	160	HydroGeoLogic, Inc.
WHGLTA701	6961835.73	2295332.86	09/28/98	4,600	HydroGeoLogic, Inc.
WHGLTA702	6961920.00	2295882.00	05/20/98	19	HydroGeoLogic, Inc.
WHGLTA703	6961680.70	2295741.23	02/21/01	2,200	HydroGeoLogic, Inc.
WHGLTA704	6962141.07	2295831.51	05/19/98	13	HydroGeoLogic, Inc.
WHGLTA705	6962003.00	2296027.00	02/15/01	1	HydroGeoLogic, Inc.
WHGLTA706	6962146.00	2296031.00	07/13/00	5	HydroGeoLogic, Inc.
WHGLTA707	6962188.16	2295592.35	02/19/01	1	HydroGeoLogic, Inc.
WHGLTA708	6962019.93	2295647.18	02/19/01	12	HydroGeoLogic, Inc.
WHGLTA709	6961934.71	2295750.93	02/19/01	110	HydroGeoLogic, Inc.
WHGLTA801	6962790.06	2295857.80	02/22/01	360	HydroGeoLogic, Inc.
WHGLTA901	6967832.00	2299643.00	07/21/99	4	HydroGeoLogic, Inc.
WHGLTA902	6967671.00	2299952.00	10/12/99	0	HydroGeoLogic, Inc.
WHGLTA903	6967830.00	2300086.00	10/12/99	0	HydroGeoLogic, Inc.
WHGLTA904	6968031.00	2300174.00	10/11/99	0	HydroGeoLogic, Inc.
WHGLTA905	6967574.00	2299782.00	10/11/99	0	HydroGeoLogic, Inc.
WITCTA001	6969592.01	2296447.73	04/28/97	0	International Technology Corp.
WITCTA002	6969259.49	2296136.48	05/06/97	0	International Technology Corp.
WITCTA003	6969112.00	2297406.00	04/05/01	1	HydroGeoLogic, Inc.
WITCTA004	6968940.00	2297491.00	04/10/02	260	Ellis Environmental Group
WITCTA005	6968459.46	2298167.79	04/28/97	310	International Technology Corp.
WITCTA006	6968427.00	2298263.00	05/02/97	25	International Technology Corp.
WITCTA007	6968310.56	2298433.07	04/22/97	54	International Technology Corp.
WITCTA008	6967940.00	2298030.00	05/01/97	550	International Technology Corp.
WITCTA009	6967862.00	2298234.00	04/23/97	650	International Technology Corp.
WITCTA010	6967695.00	2298753.00	10/08/02	0	Ellis Environmental Group
WITCTA011	6967455.26	2297357.31	04/30/97	550	International Technology Corp.
WITCTA012	6967348.77	2298224.39	04/28/97	6	International Technology Corp.
WITCTA013	6967017.00	2297752.00	04/28/97	330	International Technology Corp.
WITCTA014	6966904.57	2297418.51	08/23/01	108	Science Applications International Corp.
WITCTA015	6966333.00	2298395.00	08/23/01	68	Science Applications International Corp.
WITCTA016	6966239.00	2298062.00	04/19/99	94	HydroGeoLogic, Inc.
WITCTA017	6967298.15	2299305.78	10/17/02	52	Earth Tech Corporation
WITCTA019	6963107.00	2298838.00	10/09/02	4	Ellis Environmental Group
WITCTA020	6963895.32	2296316.79	04/29/97	7	International Technology Corp.

36 Subsurface Occurrence and Potential Source Areas of Chlorinated Ethenes, AFP4 and NAS–JRB, Fort Worth, Texas

Table A1. Maximum historical trichloroethene (TCE) concentrations in the alluvial aquifer, Air Force Plant 4 (AFP4) and Naval Air Station-Joint Reserve Base Carswell Field (NAS–JRB) study area, Fort Worth, Texas, 1984–2003—Continued.

Well number	Northing	Easting	Date collected	Maximum historical concentration (micrograms per liter)	Source
WITCTA022	6963651.00	2298744.00	04/29/97	2	International Technology Corp.
WITCTA024	6965971.78	2298956.02	10/09/02	0	Ellis Environmental Group
WITCTA025	6966005.00	2299534.00	04/09/02	100	Ellis Environmental Group
WITCTA026	6965458.00	2299481.00	04/19/02	2	Ellis Environmental Group
WITCTA028	6965161.00	2300621.00	04/24/97	0	International Technology Corp.
WITCTA031	6964690.00	2299152.00	05/01/97	0	International Technology Corp.
WITCTA032	6964501.67	2299196.64	04/30/97	0	International Technology Corp.
WITCTA033	6964388.00	2300520.00	04/30/97	0	International Technology Corp.
WITCTA034	6963956.68	2300951.49	10/17/00	2	HydroGeoLogic, Inc.
WITCTA035	6963388.12	2299094.68	05/01/97	0	International Technology Corp.
WITCTA036	6963182.00	2299629.00	05/02/97	0	International Technology Corp.
WITCTA037	6963424.00	2297784.00	04/29/97	58	International Technology Corp.
WITCTA039	6962339.77	2295415.41	05/01/97	39	International Technology Corp.
WITCTA040	6963260.00	2299515.00	04/05/01	58	HydroGeoLogic, Inc.
WITCTA041	6963169.00	2299642.00	04/05/01	0	HydroGeoLogic, Inc.
WITCTA043	6963110.00	2299725.00	04/09/02	0	Ellis Environmental Group
WITCTA044	6963056.00	2299836.00	10/06/99	0	HydroGeoLogic, Inc.
WJETA060	6963892.00	2290889.00	05/01/03	5,192	Earth Tech Corporation
WJETA061	6963915.00	2290873.00	05/03/02	58,000	Earth Tech Corporation
WJETA501	6962953.00	2296722.00	05/01/99	448	U.S. Geological Survey
WJETA502	6962955.00	2296726.00	06/01/98	720	U.S. Geological Survey
WJETA503	6962957.00	2296723.00	05/01/99	433	U.S. Geological Survey
WJETA504	6962911.00	2296817.00	05/01/99	478	U.S. Geological Survey
WJETA505	6962911.00	2296820.00	02/01/98	480	U.S. Geological Survey
WJETA507	6962835.00	2296843.00	05/01/99	463	U.S. Geological Survey
WJETA508	6962836.00	2296841.00	05/01/99	537	U.S. Geological Survey
WJETA509	6962837.00	2296842.00	05/01/99	507	U.S. Geological Survey
WJETA510	6962680.00	2296812.00	02/01/98	40.8	U.S. Geological Survey
WJETA511	6962679.00	2296809.00	01/01/01	64	U.S. Geological Survey
WJETA512	6962682.00	2296810.00	06/01/98	538	U.S. Geological Survey
WJETA513	6962998.00	2296754.00	06/01/98	614	U.S. Geological Survey
WJETA514	6962864.00	2296751.00	07/01/98	390	U.S. Geological Survey
WJETA515	6962863.00	2296894.00	06/01/98	730	U.S. Geological Survey
WJETA516	6962969.00	2296860.00	05/01/99	731	U.S. Geological Survey
WJETA517	6962866.00	2296714.00	05/01/99	507	U.S. Geological Survey
WJETA518	6962950.00	2296714.00	05/01/99	642	U.S. Geological Survey
WJETA519	6962842.00	2296754.00	05/01/99	403	U.S. Geological Survey
WJETA520	6962879.00	2296810.00	06/01/98	634	U.S. Geological Survey
WJETA521	6962921.00	2296867.00	06/01/98	576	U.S. Geological Survey
WJETA522	6962871.00	2296834.00	06/01/98	691	U.S. Geological Survey
WJETA523	6962887.00	2296845.00	06/01/98	691	U.S. Geological Survey
WJETA524	6962818.00	2296807.00	06/01/98	730	U.S. Geological Survey
WJETA525	6962800.00	2296820.00	06/01/98	461	U.S. Geological Survey
WJETA526	6962778.00	2296826.00	11/01/97	479	U.S. Geological Survey
WJETA527	6962856.00	2296937.00	06/01/98	576	U.S. Geological Survey
WJETA528	6962815.00	2296880.00	06/01/98	365	U.S. Geological Survey
WJETA529	6962759.00	2296997.00	05/01/99	552	U.S. Geological Survey
WJETA530	6959546.93	2296533.87	12/14/96	0	Jacobs Engineering Group
WJETA531	6958909.00	2295894.00	12/08/96	0	Jacobs Engineering Group
WJETA534	6958941.15	2296341.54	12/14/96	0	Jacobs Engineering Group

Table A1. Maximum historical trichloroethene (TCE) concentrations in the alluvial aquifer, Air Force Plant 4 (AFP4) and Naval Air Station-Joint Reserve Base Carswell Field (NAS-JRB) study area, Fort Worth, Texas, 1984–2003—Continued.

Well number	Northing	Easting	Date collected	Maximum historical concentration (micrograms per liter)	Source
WJETA535	6959722.27	2296794.44	10/26/00	0	HydroGeoLogic, Inc.
WL-090JETA	6963983.92	2291896.50	07/28/98	158	Jacobs Engineering Group
WL-091JETA	6964268.00	2291919.00	07/28/98	1,400	Jacobs Engineering Group
WL-095JETA	6964195.00	2291863.00	08/11/98	1,770	Jacobs Engineering Group
WP07-10B	6961277.46	2296040.45	04/20/99	3,100	HydroGeoLogic, Inc.
WSAICTA002	6964473.05	2294921.57	12/14/00	21	Science Applications International Corp.
WSAICTA003	6962921.08	2294630.39	12/11/00	1,100	Science Applications International Corp.
WSAICTA004	6963343.80	2293586.34	12/14/00	270	Science Applications International Corp.
WSAICTA005	6963578.03	2293587.28	12/14/00	600	Science Applications International Corp.
WSAICTA007	6961971.36	2294861.23	09/27/01	1,010	Science Applications International Corp.
WSAICTA008	6961974.34	2294585.80	04/11/02	200	Ellis Environmental Group
WSAICTA010	6962655.14	2294341.87	04/11/02	2,600	Ellis Environmental Group
WSAICTA014	6963885.00	2293582.00	09/25/01	1,020	Science Applications International Corp.
WSAICTA015	6966805.36	2299042.92	09/24/01	1	Science Applications International Corp.
WSAICTA016	6966551.89	2299049.00	05/01/03	249	Earth Tech Corporation
WSAICTA017	6966921.03	2298810.34	09/24/01	0	Science Applications International Corp.
WSAICTA021	6966905.72	2299748.32	10/03/01	0	Science Applications International Corp.
WSAICTA023	6967077.62	2298656.36	05/07/02	5	Earth Tech Corporation
WSAICTA025	6961666.49	2294798.23	06/21/02	0	Science Applications International Corp.
WSAICTA026	6961723.12	2294432.29	06/21/02	0	Science Applications International Corp.
WUSGSTA001	6962644.00	2297002.00	02/01/98	393.6	U.S. Geological Survey
WUSGSTA002	6962263.00	2296964.00	02/01/98	.948	U.S. Geological Survey
WUSGSTA003	6961872.00	2296987.00	06/01/98	16	U.S. Geological Survey
WUSGSTA004	6962085.00	2297504.00	06/01/98	307	U.S. Geological Survey
WUSGSTA005	6961955.00	2297925.00	02/01/98	58.8	U.S. Geological Survey
WUSGSTA006	6961670.00	2298251.00	02/01/98	3.49	U.S. Geological Survey
WUSGSTA007	6962684.00	2298206.00	02/01/98	240	U.S. Geological Survey
WUSGSTA008	6962636.00	2296832.00	06/01/98	72	U.S. Geological Survey
WUSGSTA009	6962766.00	2296661.00	02/01/98	5.45	U.S. Geological Survey
WUSGSTA010	6962707.00	2296719.00	02/01/98	163.2	U.S. Geological Survey
WUSGSTA011	6962668.00	2296825.00	06/01/98	595	U.S. Geological Survey
WUSGSTA012	6962787.00	2297104.00	02/01/98	460.8	U.S. Geological Survey
WUSGSTA013	6962745.00	2297215.00	02/01/98	268.8	U.S. Geological Survey
WUSGSTA014	6962826.00	2297306.00	06/01/98	211	U.S. Geological Survey
WUSGSTA015	6963054.00	2296591.00	02/01/98	691.2	U.S. Geological Survey
WUSGSTA016	6963036.00	2296370.00	02/01/98	681.6	U.S. Geological Survey
WUSGSTA017	6962675.00	2296815.00	06/01/98	614	U.S. Geological Survey
WUSGSTA018	6962566.00	2297413.00	02/01/98	384	U.S. Geological Survey
WUSGSTA019	6963009.00	2297050.00	02/01/98	460.8	U.S. Geological Survey
WUSGSTA020	6962722.00	2296818.00	06/01/98	614	U.S. Geological Survey
WUSGSTA021	6962659.00	2296814.00	06/01/98	403	U.S. Geological Survey
WUSGSTA022	6962736.00	2296740.00	06/01/98	691	U.S. Geological Survey
WUSGSTA023	6962638.00	2296810.00	02/01/98	33.6	U.S. Geological Survey

38 Subsurface Occurrence and Potential Source Areas of Chlorinated Ethenes, AFP4 and NAS–JRB, Fort Worth, Texas

Table A2. Maximum historical tetrachloroethene (PCE) concentrations in the alluvial aquifer, Air Force Plant 4 (AFP4) and Naval Air Station-Joint Reserve Base Carswell Field (NAS–JRB) study area, Fort Worth, Texas, 1983–2003.

[Northing, north state plane coordinate of north-south distance, in feet, from reference location (N6561666.67); Easting, east state plane coordinate of east-west distance, in feet, from reference location (E1968500.00)]

Well number	Northing	Easting	Date collected	Maximum historical concentration (micrograms per liter)	Source
1–A	6964505.00	2300900.00	03/05/85	0	Radian Corporation
1–B	6964685.00	2301062.00	10/15/97	0	HydroGeoLogic, Inc.
1–C	6964450.00	2301255.00	03/05/85	0	Radian Corporation
5–B	6962558.83	2295444.82	03/05/85	0	Radian Corporation
BGSMW01	6964916.00	2299511.00	04/09/97	0	International Technology Corp.
BSS–A	6965476.60	2300120.78	01/10/96	0	Law Environmental
BSS–B	6965797.63	2300091.88	01/15/96	0	Law Environmental
CAR–RW1	6960869.00	2296755.00	09/16/99	2	HydroGeoLogic, Inc.
CAR–RW10	6961279.06	2296078.88	06/20/02	0	HydroGeoLogic, Inc.
CAR–RW11	6961412.39	2296075.74	09/16/99	13	HydroGeoLogic, Inc.
CAR–RW12	6961192.46	2295933.72	02/27/02	.54	HydroGeoLogic, Inc.
CAR–RW2	6961223.00	2296673.00	09/16/99	3	HydroGeoLogic, Inc.
CAR–RW4	6961112.00	2296685.00	09/17/99	7	HydroGeoLogic, Inc.
CAR–RW5	6961318.00	2296638.00	11/05/99	0	HydroGeoLogic, Inc.
CAR–RW6	6961112.00	2296510.00	09/17/99	4	HydroGeoLogic, Inc.
CAR–RW8	6961214.00	2296306.00	09/16/99	14	HydroGeoLogic, Inc.
CAR–RW9	6961221.00	2297006.00	09/17/99	6	HydroGeoLogic, Inc.
F–204	6965223.00	2290634.70	11/10/95	0	Jacobs Engineering Group
F–209	6969007.27	2290901.72	05/01/03	0	Earth Tech Corporation
F–214	6966040.04	2289864.00	10/24/02	0	Earth Tech Corporation
F–216	6965776.18	2290219.93	10/08/95	0	Jacobs Engineering Group
F–217	6965959.98	2290109.05	01/27/00	0	U.S. Air Force, Center for Environmental Excellence
F–218	6964024.29	2291474.21	05/01/03	0	Earth Tech Corporation
F–219	6964343.31	2291472.82	10/30/95	0	Jacobs Engineering Group
F–220	6964050.32	2290236.60	11/13/95	0	Jacobs Engineering Group
F–221	6963244.60	2290575.22	10/27/95	0	Jacobs Engineering Group
FSA–3–03	6969021.17	2290678.81	11/10/95	0	Jacobs Engineering Group
FSA–3–04	6969021.23	2290632.44	11/10/95	0	Jacobs Engineering Group
FSA–3–06	6969077.00	2290679.76	11/16/95	0	Jacobs Engineering Group
FSA–3–08	6969116.51	2290712.86	11/14/95	0	Jacobs Engineering Group
FSA–3–10	6969075.75	2290779.47	11/14/95	0	Jacobs Engineering Group
FSA–3–12	6968999.05	2290836.80	11/13/95	0	Jacobs Engineering Group
FT08–11A	6962321.00	2295878.00	02/16/01	0	HydroGeoLogic, Inc.
FT08–11B	6962034.00	2295931.00	01/14/96	0	Law Environmental
FT09–12A	6960549.82	2295439.22	12/05/01	0	HydroGeoLogic, Inc.
FT09–12B	6960709.31	2295697.41	02/21/01	56	HydroGeoLogic, Inc.
FT09–12C	6960590.30	2295771.51	12/04/01	0	HydroGeoLogic, Inc.
FT09–12E	6960701.08	2295821.16	12/05/01	3	HydroGeoLogic, Inc.
GMI–02M	6964661.03	2288826.22	10/06/95	0	Jacobs Engineering Group
GMI–04–01M	6960931.00	2296729.00	10/29/97	0	HydroGeoLogic, Inc.
GMI–05M	6964307.19	2288362.92	10/05/95	0	Jacobs Engineering Group
GMI–22–01M	6965122.22	2297689.15	07/16/95	0	Law Environmental
GMI–22–02M	6966633.00	2296187.00	05/01/03	0	Earth Tech Corporation
GMI–22–03M	6966219.92	2298539.37	05/23/94	23	Geo-Marine, Inc.
GMI–22–04M	6967250.52	2297341.00	10/26/00	1	HydroGeoLogic, Inc.
GMI–22–05M	6966940.33	2299432.08	05/01/03	0	Earth Tech Corporation
GMI–22–06M	6967004.48	2298186.58	05/23/94	7	Geo-Marine, Inc.
GMI–22–07M	6969019.00	2298323.00	05/01/03	0	Earth Tech Corporation
GMI–22–08M	6970324.00	2298972.00	01/11/96	0	Law Environmental
HM–10	6965810.91	2290121.80	01/27/00	0	U.S. Air Force, Center for Environmental Excellence

Table A2. Maximum historical tetrachloroethene (PCE) concentrations in the alluvial aquifer, Air Force Plant 4 (AFP4) and Naval Air Station-Joint Reserve Base Carswell Field (NAS-JRB) study area, Fort Worth, Texas, 1983–2003—Continued.

Well number	Northing	Easting	Date collected	Maximum historical concentration (micrograms per liter)	Source
HM-101	6964442.18	2288886.61	04/18/86	0	Radian Corporation
HM-104	6963114.28	2291200.56	01/19/96	0	Jacobs Engineering Group
HM-106	6968075.70	2290771.26	10/24/95	0	Jacobs Engineering Group
HM-11	6963091.76	2290932.28	08/29/83	24	Hargis + Associates
HM-110	6963667.53	2293163.24	12/08/00	0	Science Applications International Corp.
HM-111	6963624.05	2293266.53	10/10/95	0	Jacobs Engineering Group
HM-112	6964218.00	2293142.65	04/06/00	2	HydroGeoLogic, Inc.
HM-113	6964677.00	2293133.60	01/20/96	0	Jacobs Engineering Group
HM-114	6963912.10	2294352.00	04/11/02	1	Ellis Environmental Group
HM-116	6966411.43	2294283.69	10/14/02	22	Ellis Environmental Group
HM-118	6968035.19	2294780.47	10/14/02	6	Ellis Environmental Group
HM-119	6968726.00	2294271.80	11/01/94	3.6	Jacobs Engineering Group
HM-12	6963088.53	2290396.72	02/14/86	0	Radian Corporation
HM-120	6969489.04	2295343.23	05/01/03	0	Earth Tech Corporation
HM-121	6967390.20	2295279.20	11/07/95	0	Jacobs Engineering Group
HM-123	6961638.50	2295272.60	05/01/03	0	Earth Tech Corporation
HM-124	6963957.77	2295223.26	11/14/95	0	Jacobs Engineering Group
HM-126	6963121.05	2294300.23	07/20/00	1	HydroGeoLogic, Inc.
HM-127	6961588.47	2294853.29	05/01/03	0	Earth Tech Corporation
HM-13	6963100.15	2289898.00	10/25/95	0	Jacobs Engineering Group
HM-14	6963093.00	2289243.30	11/01/95	0	Jacobs Engineering Group
HM-16	6964155.13	2290241.53	04/05/86	0	Radian Corporation
HM-17	6963993.31	2290451.65	10/31/95	0	Jacobs Engineering Group
HM-23	6963113.58	2288752.31	04/05/86	0	Radian Corporation
HM-29	6966014.89	2290711.88	03/21/85	4	Hargis + Associates
HM-31	6963114.44	2291505.33	05/01/03	0	Earth Tech Corporation
HM-36	6965484.00	2289786.00	05/01/03	0	Earth Tech Corporation
HM-56	6965454.00	2291472.23	10/11/85	10	Hargis + Associates
HM-59	6966811.00	2291469.61	08/08/84	920	Hargis + Associates
HM-64	6966406.97	2291114.57	10/30/95	410	Jacobs Engineering Group
HM-7	6966159.99	2290135.86	01/27/00	0	U.S. Air Force, Center for Environmental Excellence
HM-71	6966470.35	2292457.39	05/27/93	77	Jacobs Engineering Group
HM-88	6964479.91	2291919.17	05/01/03	4.5	Earth Tech Corporation
HM-90	6965640.09	2292457.85	05/21/93	0	Jacobs Engineering Group
HM-91	6966174.30	2292586.29	06/04/93	0	Jacobs Engineering Group
HM-92	6965645.68	2292250.42	10/28/95	0	Jacobs Engineering Group
HM-93	6965074.75	2292194.39	05/01/03	0	Earth Tech Corporation
HM-95	6965442.59	2293156.22	05/01/03	0	Earth Tech Corporation
HM-96	6966507.03	2293168.95	01/15/03	15	Earth Tech Corporation
HM-97	6966884.14	2293158.51	05/26/93	45	Jacobs Engineering Group
HM-98	6967418.95	2293207.55	05/01/03	0	Earth Tech Corporation
ITMW-01T	6961062.05	2298967.00	10/08/02	0	Ellis Environmental Group
LF01-1D	6964288.00	2301413.00	10/14/98	0	HydroGeoLogic, Inc.
LF01-1E	6964606.00	2301174.00	10/20/97	0	HydroGeoLogic, Inc.
LF03-3D	6962056.65	2293269.12	05/01/03	0	Earth Tech Corporation
LF04-01	6961026.99	2295378.56	12/06/01	0	HydroGeoLogic, Inc.
LF04-02	6961113.06	2296309.10	04/20/99	10	HydroGeoLogic, Inc.
LF04-03	6961064.00	2296306.00	09/16/99	2	HydroGeoLogic, Inc.
LF04-04	6960941.63	2297165.64	01/13/96	0	Law Environmental
LF04-10	6960411.83	2297078.91	05/01/03	0	Earth Tech Corporation

40 Subsurface Occurrence and Potential Source Areas of Chlorinated Ethenes, AFP4 and NAS–JRB, Fort Worth, Texas

Table A2. Maximum historical tetrachloroethene (PCE) concentrations in the alluvial aquifer, Air Force Plant 4 (AFP4) and Naval Air Station-Joint Reserve Base Carswell Field (NAS–JRB) study area, Fort Worth, Texas, 1983–2003—Continued.

Well number	Northing	Easting	Date collected	Maximum historical concentration (micrograms per liter)	Source
LF04–4C	6960600.00	2296588.00	10/06/99	0	HydroGeoLogic, Inc.
LF04–4D	6960828.00	2296412.00	05/05/03	0	HydroGeoLogic, Inc.
LF05–01	6962728.35	2294577.83	10/14/02	0	Ellis Environmental Group
LF05–02	6962653.12	2295278.95	04/18/02	0	Ellis Environmental Group
LF05–18	6961555.64	2297075.43	10/29/97	0	HydroGeoLogic, Inc.
LF05–19	6961239.89	2297461.35	05/01/03	0	Earth Tech Corporation
LF05–5B	6961901.56	2296078.25	10/16/02	0	Ellis Environmental Group
LF05–5C	6961720.05	2295993.73	01/15/96	0	Law Environmental
LF05–5D	6961739.00	2295754.00	01/14/96	0	Law Environmental
LF05–5G	6961558.00	2296690.00	05/05/03	0	HydroGeoLogic, Inc.
LF05–5H	6961732.39	2296340.79	05/05/03	0	HydroGeoLogic, Inc.
LSA1628–1	6967936.00	2297802.00	10/20/95	0	Law Environmental
LSA1628–2	6967943.00	2297847.00	01/15/96	0	Law Environmental
LSA1628–3	6967993.10	2297791.30	10/07/99	1	HydroGeoLogic, Inc.
MW–10	6965836.22	2300542.00	10/30/97	0	HydroGeoLogic, Inc.
MW–11	6965707.00	2300792.00	10/24/97	0	HydroGeoLogic, Inc.
MW–12	6966149.32	2300142.00	08/22/01	0	Science Applications International Corp.
MW–19	6963513.00	2295369.00	08/22/01	0	Science Applications International Corp.
MW–38	6965981.00	2298153.00	12/04/01	0	HydroGeoLogic, Inc.
MW–5	6963910.00	2290826.00	10/25/01	0	U.S. Air Force, Center for Environmental Excellence
MW–50	6968529.00	2295622.00	07/22/96	0	Jacobs Engineering Group
MW–53	6964378.00	2296200.00	01/20/99	25	HydroGeoLogic, Inc.
MW–5C	6965804.00	2300139.00	04/10/97	0	International Technology Corp.
MW–7CRSWL	6965967.00	2300055.00	08/22/01	0	Science Applications International Corp.
MW–8	6965584.95	2300492.00	01/10/96	0	Law Environmental
MW–9	6966001.79	2300330.00	10/20/97	0	HydroGeoLogic, Inc.
MWMTAC–001	6959116.00	2296520.00	12/12/96	0	Jacobs Engineering Group
OT–15C	6963316.00	2300948.00	04/23/97	4	CH2M Hill
RW–11U	6965385.00	2292586.20	07/30/94	0	U.S. Air Force, Center for Environmental Excellence
RW–1U	6965269.00	2292468.70	01/19/93	0	U.S. Air Force, Center for Environmental Excellence
RW–2U	6964643.00	2292424.50	01/20/93	0	U.S. Air Force, Center for Environmental Excellence
SD13–01	6963377.64	2300623.03	10/31/00	0	HydroGeoLogic, Inc.
SD13–02	6963472.80	2300754.49	10/27/00	0	HydroGeoLogic, Inc.
SD13–03	6963347.97	2300700.85	01/11/96	0	Law Environmental
SD13–04	6963346.39	2300773.06	10/31/00	0	HydroGeoLogic, Inc.
SD13–05	6963904.00	2300776.00	01/12/96	0	Law Environmental
SD13–06	6963164.35	2300908.00	01/22/99	15	HydroGeoLogic, Inc.
SD13–07	6963165.85	2301009.00	07/02/01	0	HydroGeoLogic, Inc.
SPOT35–2	6966175.00	2296854.00	10/28/97	0	HydroGeoLogic, Inc.
SPOT35–3	6966109.00	2296851.00	12/03/01	0	HydroGeoLogic, Inc.
SPOT35–4	6966175.00	2296778.00	10/28/97	0	HydroGeoLogic, Inc.
SPOT35–5	6966020.04	2296847.00	01/22/99	5	HydroGeoLogic, Inc.
SPOT35–8	6966428.55	2296970.16	10/26/00	0	HydroGeoLogic, Inc.
ST14–01	6963295.30	2300090.83	01/11/96	0	Law Environmental
ST14–02	6963511.64	2300091.66	01/13/96	0	Law Environmental
ST14–03	6964079.97	2299891.62	10/09/02	0	Ellis Environmental Group
ST14–04	6963642.65	2300345.31	01/13/96	0	Law Environmental
ST14–14	6964309.76	2299735.00	05/01/98	0	HydroGeoLogic, Inc.
ST14–24	6964018.00	2299061.45	01/19/99	6	HydroGeoLogic, Inc.
ST14–26	6964593.00	2299557.00	04/13/98	0	HydroGeoLogic, Inc.

Table A2. Maximum historical tetrachloroethene (PCE) concentrations in the alluvial aquifer, Air Force Plant 4 (AFP4) and Naval Air Station-Joint Reserve Base Carswell Field (NAS-JRB) study area, Fort Worth, Texas, 1983–2003—Continued.

Well number	Northing	Easting	Date collected	Maximum historical concentration (micrograms per liter)	Source
ST14–27	6964258.00	2300212.00	10/30/00	0	HydroGeoLogic, Inc.
ST14–W05	6963726.00	2299094.00	10/10/02	0	Ellis Environmental Group
ST14–W06	6963807.00	2299331.00	01/11/96	0	Law Environmental
ST14–W07	6963615.00	2299394.00	01/12/96	0	Law Environmental
ST14–W08	6964324.00	2299480.00	01/12/96	0	Law Environmental
ST14–W09	6963472.00	2299550.00	01/13/96	0	Law Environmental
ST14–W11	6964129.00	2299658.00	10/27/00	0	HydroGeoLogic, Inc.
ST14–W13	6963695.00	2299776.00	01/11/96	0	Law Environmental
ST14–W15	6963316.00	2299923.00	05/01/03	0	Earth Tech Corporation
ST14–W16	6964065.00	2300128.00	10/30/00	0	HydroGeoLogic, Inc.
ST14–W21	6963418.00	2300242.00	10/31/00	0	HydroGeoLogic, Inc.
ST14–W31	6963550.00	2300831.00	01/19/99	1	HydroGeoLogic, Inc.
T8	6965421.00	2289949.00	01/14/02	0	U.S. Air Force, Center for Environmental Excellence
T9	6965551.00	2289993.00	01/14/02	0	U.S. Air Force, Center for Environmental Excellence
USGS01T	6970384.00	2297661.30	12/09/96	0	Jacobs Engineering Group
USGS02T	6970326.56	2300333.85	12/09/96	0	Jacobs Engineering Group
USGS03T	6968704.70	2300610.01	01/10/96	0	Law Environmental
USGS04T	6968758.00	2299178.00	10/09/02	0	Ellis Environmental Group
USGS06T	6963763.00	2297542.08	05/01/03	0	Earth Tech Corporation
USGS07T	6960168.00	2295246.00	12/05/01	1	HydroGeoLogic, Inc.
VEP–10	6965452.00	2289741.00	05/07/02	0	Earth Tech Corporation
VEP–11	6965472.00	2289741.00	05/08/02	0	Earth Tech Corporation
VEP–12	6965492.14	2289740.47	05/08/02	0	Earth Tech Corporation
VEP–13	6965512.00	2289740.00	05/15/03	0	Shaw Environmental
VEP–14	6965532.35	2289740.23	05/08/02	0	Earth Tech Corporation
VEP–15	6965572.27	2289739.27	05/09/02	0	Earth Tech Corporation
VEP–16	6965593.48	2289739.28	05/09/02	0	Earth Tech Corporation
VEP–17	6965612.88	2289738.95	05/09/02	0	Earth Tech Corporation
VEP–18	6965631.89	2289739.19	05/09/02	0	Earth Tech Corporation
VEP–18B	6965652.25	2289740.40	05/15/03	0	Shaw Environmental
VEP–19	6965673.36	2289738.41	05/09/02	0	Earth Tech Corporation
VEP–20	6965692.62	2289738.81	05/10/02	0	Earth Tech Corporation
VEP–21	6965885.28	2289766.47	05/11/02	0	Earth Tech Corporation
VEP–22	6965904.64	2289772.36	05/11/02	0	Earth Tech Corporation
VEP–23	6965923.82	2289776.40	05/11/02	0	Earth Tech Corporation
VEP–24	6965947.42	2289785.33	05/11/02	0	Earth Tech Corporation
VEP–25	6965961.57	2289792.04	05/11/02	0	Earth Tech Corporation
VEP–26	6965979.44	2289801.00	05/15/03	0	Shaw Environmental
VEP–27	6965996.42	2289811.11	05/12/02	0	Earth Tech Corporation
VEP–28	6966006.35	2289828.89	05/12/02	0	Earth Tech Corporation
VEP–29	6966014.37	2289844.00	05/15/03	0	Shaw Environmental
VEP–3	6966027.00	2289825.00	05/12/02	0	Earth Tech Corporation
VEP–31	6966040.69	2289879.41	05/13/02	0	Earth Tech Corporation
VEP–32	6966058.55	2289884.99	05/13/02	0	Earth Tech Corporation
VEP–33	6966075.62	2289893.21	05/14/02	0	Earth Tech Corporation
VEP–35	6966114.00	2289901.00	05/15/03	0	Shaw Environmental
VEP–36	6966135.75	2289905.70	05/14/02	0	Earth Tech Corporation
VEP–37	6966155.08	2289906.66	05/14/02	0	Earth Tech Corporation
VEP–39	6966193.26	2289910.01	05/14/02	0	Earth Tech Corporation
VEP–4	6966050.33	2289838.40	05/15/03	0	Shaw Environmental

42 Subsurface Occurrence and Potential Source Areas of Chlorinated Ethenes, AFP4 and NAS–JRB, Fort Worth, Texas

Table A2. Maximum historical tetrachloroethene (PCE) concentrations in the alluvial aquifer, Air Force Plant 4 (AFP4) and Naval Air Station-Joint Reserve Base Carswell Field (NAS–JRB) study area, Fort Worth, Texas, 1983–2003—Continued.

Well number	Northing	Easting	Date collected	Maximum historical concentration (micrograms per liter)	Source
VEP-40	6966096.49	2289877.53	05/13/02	0	Earth Tech Corporation
VEP-41	6966067.00	2289850.00	05/13/02	2.3	Earth Tech Corporation
VEP-5	6965352.65	2289735.96	05/07/02	0	Earth Tech Corporation
VEP-6	6965371.63	2289740.48	05/07/02	0	Earth Tech Corporation
VEP-7	6965393.00	2289742.00	05/07/02	0	Earth Tech Corporation
VEP-8	6965413.00	2289741.00	05/07/02	0	Earth Tech Corporation
VEP-9	6965432.00	2289741.00	05/07/02	0	Earth Tech Corporation
VEPT-1	6965717.00	2289740.00	05/09/02	0	Earth Tech Corporation
VEPT-2	6965739.00	2289741.00	05/10/02	0	Earth Tech Corporation
W-129	6965935.87	2289777.80	05/12/93	0	Jacobs Engineering Group
W-130	6966042.89	2289868.15	06/14/93	0	Jacobs Engineering Group
W-131L	6963276.81	2290536.11	10/19/91	0	Chem-Nuclear Geotech, Inc.
W-131U	6963278.00	2290541.00	10/24/91	0	Chem-Nuclear Geotech, Inc.
W-132	6966136.51	2289895.52	05/12/93	0	Jacobs Engineering Group
W-133U	6963349.00	2290609.00	06/06/93	0	Jacobs Engineering Group
W-134	6969156.00	2291067.00	05/14/93	0	Jacobs Engineering Group
W-135	6967837.68	2290606.07	05/01/03	0	Earth Tech Corporation
W-137	6963499.00	2290968.00	01/25/97	0	Jacobs Engineering Group
W-141L	6965386.71	2290672.36	10/18/91	0	Chem-Nuclear Geotech, Inc.
W-141U	6965391.58	2290672.52	06/14/93	0	Jacobs Engineering Group
W-143	6968548.58	2291192.24	09/11/91	0	Chem-Nuclear Geotech, Inc.
W-144	6965577.00	2290450.00	10/17/91	0	Chem-Nuclear Geotech, Inc.
W-145	6964387.65	2290600.35	09/15/91	0	Chem-Nuclear Geotech, Inc.
W-146	6965118.51	2290620.30	05/09/93	0	Jacobs Engineering Group
W-147	6965824.00	2290711.00	01/15/03	.15	Earth Tech Corporation
W-149	6965190.70	2292456.97	05/01/03	0	Earth Tech Corporation
W-151	6964980.90	2292475.30	05/25/93	0	Jacobs Engineering Group
W-154	6963926.46	2290107.04	10/20/91	0	Chem-Nuclear Geotech, Inc.
W-155	6968275.39	2293145.82	01/15/03	0	Earth Tech Corporation
W-156	6964824.12	2292815.02	05/27/93	0	Jacobs Engineering Group
W-158	6963954.83	2291080.82	06/06/93	0	Jacobs Engineering Group
W-160	6963448.68	2291368.51	01/24/97	0	Jacobs Engineering Group
W7TAITC	6966050.00	2290097.00	01/26/00	0	U.S. Air Force, Center for Environmental Excellence
W9AWNITC	6965921.00	2289851.00	01/24/00	0	U.S. Air Force, Center for Environmental Excellence
W9WNITC	6965916.00	2289859.00	10/16/99	0	U.S. Air Force, Center for Environmental Excellence
WCHMHTA004	6967949.00	2295041.00	09/26/01	1	Science Applications International Corp.
WCHMHTA006	6966690.11	2295406.97	05/01/03	.7	Earth Tech Corporation
WCHMHTA008	6967889.89	2295597.48	05/01/03	0	Earth Tech Corporation
WCHMHTA009	6968444.69	2296663.99	10/31/00	4	HydroGeoLogic, Inc.
WCHMHTA010	6967640.08	2296398.80	10/11/02	6	Ellis Environmental Group
WCHMHTA011	6969295.20	2297328.38	09/26/01	5	Science Applications International Corp.
WCHMHTA013	6967056.00	2300052.00	05/01/03	0	Earth Tech Corporation
WCHMHTA014	6970403.90	2294072.81	10/14/02	0	Ellis Environmental Group
WHGLFE001	6961575.00	2296063.00	06/19/02	0	HydroGeoLogic, Inc.
WHGLFE002	6961284.00	2296060.00	06/18/02	0	HydroGeoLogic, Inc.
WHGLFE003	6961079.00	2295934.00	06/17/02	0	HydroGeoLogic, Inc.
WHGLFE004	6960785.00	2295825.00	06/19/02	0	HydroGeoLogic, Inc.
WHGLRW015	6960871.43	2298662.64	10/24/00	0	HydroGeoLogic, Inc.
WHGLRW016	6961034.95	2299201.47	10/16/02	0	Ellis Environmental Group
WHGLRW017	6960727.11	2299000.59	04/19/02	0	Ellis Environmental Group

Table A2. Maximum historical tetrachloroethene (PCE) concentrations in the alluvial aquifer, Air Force Plant 4 (AFP4) and Naval Air Station-Joint Reserve Base Carswell Field (NAS-JRB) study area, Fort Worth, Texas, 1983–2003—Continued.

Well number	Northing	Easting	Date collected	Maximum historical concentration (micrograms per liter)	Source
WHGLRW018	6960532.93	2298744.63	11/01/99	0	HydroGeoLogic, Inc.
WHGLRW019	6960684.23	2298620.19	11/04/99	0	HydroGeoLogic, Inc.
WHGLTA003	6961043.88	2298029.84	10/05/99	0	HydroGeoLogic, Inc.
WHGLTA004	6962943.38	2295760.62	04/18/02	0	Ellis Environmental Group
WHGLTA005	6963470.00	2301044.00	10/18/99	0	HydroGeoLogic, Inc.
WHGLTA007	6963162.51	2301093.11	06/26/01	0	HydroGeoLogic, Inc.
WHGLTA008	6963955.17	2300016.84	10/11/99	0	HydroGeoLogic, Inc.
WHGLTA009	6965211.65	2297528.70	05/01/03	0	Earth Tech Corporation
WHGLTA010	6965580.03	2296770.93	10/31/00	0	HydroGeoLogic, Inc.
WHGLTA011	6968356.67	2295873.87	07/13/00	0	HydroGeoLogic, Inc.
WHGLTA012	6965920.84	2297740.00	10/10/02	0	Ellis Environmental Group
WHGLTA013	6965958.00	2297177.00	12/04/01	0	HydroGeoLogic, Inc.
WHGLTA014	6966295.34	2297373.92	10/27/00	0	HydroGeoLogic, Inc.
WHGLTA020	6962285.83	2299684.95	11/05/99	0	HydroGeoLogic, Inc.
WHGLTA022	6960401.65	2297691.54	11/03/99	0	HydroGeoLogic, Inc.
WHGLTA023	6960492.16	2298565.43	11/04/99	0	HydroGeoLogic, Inc.
WHGLTA025	6961608.26	2298942.63	10/08/02	0	Ellis Environmental Group
WHGLTA028	6967761.00	2297451.00	10/11/02	1	Ellis Environmental Group
WHGLTA029	6965736.00	2298574.00	10/16/02	0	Ellis Environmental Group
WHGLTA034	6963889.66	2301060.21	10/16/00	0	HydroGeoLogic, Inc.
WHGLTA035	6963823.75	2301048.39	10/16/00	0	HydroGeoLogic, Inc.
WHGLTA043	6961771.99	2297021.32	05/01/03	0	Earth Tech Corporation
WHGLTA044	6961721.40	2297347.37	10/17/02	0	Ellis Environmental Group
WHGLTA045	6961321.90	2298368.80	10/17/02	0	Ellis Environmental Group
WHGLTA046	6961298.49	2296089.68	02/26/02	6.9	HydroGeoLogic, Inc.
WHGLTA048	6960916.20	2298714.83	05/01/03	0	Earth Tech Corporation
WHGLTA049	6962329.24	2299269.36	10/17/02	0	Ellis Environmental Group
WHGLTA051	6962894.90	2296247.12	10/16/02	1	Ellis Environmental Group
WHGLTA052	6962769.45	2296098.07	04/06/01	0	HydroGeoLogic, Inc.
WHGLTA053	6960334.00	2295474.00	12/05/01	0	HydroGeoLogic, Inc.
WHGLTA054	6960748.26	2295541.09	06/11/01	40	HydroGeoLogic, Inc.
WHGLTA055	6960809.82	2295662.85	10/11/02	1	Ellis Environmental Group
WHGLTA056	6960787.36	2295827.62	05/05/03	0	HydroGeoLogic, Inc.
WHGLTA060	6965619.32	2298210.18	11/26/01	0	HydroGeoLogic, Inc.
WHGLTA061	6965621.74	2298341.01	11/27/01	0	HydroGeoLogic, Inc.
WHGLTA062	6965663.00	2298317.27	11/26/01	0	HydroGeoLogic, Inc.
WHGLTA063	6965677.07	2298270.14	11/27/01	0	HydroGeoLogic, Inc.
WHGLTA064	6965075.48	2298351.15	05/01/03	0	Earth Tech Corporation
WHGLTA065	6960593.00	2295633.00	12/06/01	0	HydroGeoLogic, Inc.
WHGLTA066	6960807.00	2295402.00	12/02/01	2	HydroGeoLogic, Inc.
WHGLTA067	6960876.00	2295733.00	12/02/01	0	HydroGeoLogic, Inc.
WHGLTA069	6961708.00	2296063.00	05/05/03	0	HydroGeoLogic, Inc.
WHGLTA070	6961576.00	2296056.00	05/05/03	0	HydroGeoLogic, Inc.
WHGLTA072	6961283.00	2296102.00	06/18/02	6.7	HydroGeoLogic, Inc.
WHGLTA073	6961283.00	2296167.00	05/05/03	28	HydroGeoLogic, Inc.
WHGLTA074	6961285.00	2296258.00	05/05/03	0	HydroGeoLogic, Inc.
WHGLTA075	6961072.00	2295934.00	05/05/03	0	HydroGeoLogic, Inc.
WHGLTA076	6961086.00	2295934.00	05/05/03	0	HydroGeoLogic, Inc.
WHGLTA077	6960785.00	2295776.00	05/05/03	0	HydroGeoLogic, Inc.
WHGLTA082	6964396.00	2296386.00	10/10/02	0	Ellis Environmental Group

44 Subsurface Occurrence and Potential Source Areas of Chlorinated Ethenes, AFP4 and NAS–JRB, Fort Worth, Texas

Table A2. Maximum historical tetrachloroethene (PCE) concentrations in the alluvial aquifer, Air Force Plant 4 (AFP4) and Naval Air Station-Joint Reserve Base Carswell Field (NAS–JRB) study area, Fort Worth, Texas, 1983–2003—Continued.

Well number	Northing	Easting	Date collected	Maximum historical concentration (micrograms per liter)	Source
WHGLTA101	6964634.00	2301220.00	06/03/99	0	HydroGeoLogic, Inc.
WHGLTA102	6964449.00	2301388.00	06/03/99	0	HydroGeoLogic, Inc.
WHGLTA103	6964314.53	2301522.24	06/02/99	0	HydroGeoLogic, Inc.
WHGLTA104	6964226.00	2301608.00	11/02/99	0	HydroGeoLogic, Inc.
WHGLTA201	6963198.14	2298660.88	12/09/98	0	HydroGeoLogic, Inc.
WHGLTA202	6963326.21	2298832.59	12/14/98	0	HydroGeoLogic, Inc.
WHGLTA203	6963059.00	2298401.00	01/20/99	1	HydroGeoLogic, Inc.
WHGLTA204	6963625.62	2298104.66	12/10/98	0	HydroGeoLogic, Inc.
WHGLTA302	6962603.00	2294422.00	06/20/02	0	Science Applications International Corp.
WHGLTA303	6962351.00	2294401.00	06/21/02	0	Science Applications International Corp.
WHGLTA601	6962753.00	2297473.69	10/16/02	0	Ellis Environmental Group
WHGLTA602	6962752.66	2297625.01	12/08/98	0	HydroGeoLogic, Inc.
WHGLTA603	6962713.38	2297727.19	04/19/02	0	Ellis Environmental Group
WHGLTA604	6963195.00	2297530.00	12/14/98	0	HydroGeoLogic, Inc.
WHGLTA701	6961835.73	2295332.86	07/03/02	0	Science Applications International Corp.
WHGLTA702	6961920.00	2295882.00	02/21/01	0	HydroGeoLogic, Inc.
WHGLTA703	6961680.70	2295741.23	02/21/01	0	HydroGeoLogic, Inc.
WHGLTA704	6962141.07	2295831.51	10/10/02	0	Ellis Environmental Group
WHGLTA705	6962003.00	2296027.00	02/15/01	0	HydroGeoLogic, Inc.
WHGLTA706	6962146.00	2296031.00	02/16/01	0	HydroGeoLogic, Inc.
WHGLTA707	6962188.16	2295592.35	02/19/01	0	HydroGeoLogic, Inc.
WHGLTA708	6962019.93	2295647.18	02/19/01	0	HydroGeoLogic, Inc.
WHGLTA709	6961934.71	2295750.93	02/19/01	0	HydroGeoLogic, Inc.
WHGLTA801	6962790.06	2295857.80	04/06/01	0	HydroGeoLogic, Inc.
WHGLTA901	6967832.00	2299643.00	11/02/99	0	HydroGeoLogic, Inc.
WHGLTA902	6967671.00	2299952.00	10/12/99	0	HydroGeoLogic, Inc.
WHGLTA903	6967830.00	2300086.00	10/12/99	0	HydroGeoLogic, Inc.
WHGLTA904	6968031.00	2300174.00	10/11/99	0	HydroGeoLogic, Inc.
WHGLTA905	6967574.00	2299782.00	10/11/99	0	HydroGeoLogic, Inc.
WITCTA001	6969592.01	2296447.73	04/28/97	0	International Technology Corp.
WITCTA002	6969259.49	2296136.48	05/06/97	0	International Technology Corp.
WITCTA003	6969112.00	2297406.00	10/09/02	0	Ellis Environmental Group
WITCTA004	6968940.00	2297491.00	04/03/01	1	HydroGeoLogic, Inc.
WITCTA005	6968459.46	2298167.79	04/28/97	0	International Technology Corp.
WITCTA006	6968427.00	2298263.00	05/02/97	0	International Technology Corp.
WITCTA007	6968310.56	2298433.07	04/22/97	0	International Technology Corp.
WITCTA008	6967940.00	2298030.00	05/01/97	0	International Technology Corp.
WITCTA009	6967862.00	2298234.00	08/23/01	0	Science Applications International Corp.
WITCTA010	6967695.00	2298753.00	10/08/02	0	Ellis Environmental Group
WITCTA011	6967455.26	2297357.31	04/30/97	0	International Technology Corp.
WITCTA012	6967348.77	2298224.39	05/01/03	0	Earth Tech Corporation
WITCTA013	6967017.00	2297752.00	08/23/01	0	Science Applications International Corp.
WITCTA014	6966904.57	2297418.51	08/23/01	0	Science Applications International Corp.
WITCTA015	6966333.00	2298395.00	08/23/01	4	Science Applications International Corp.
WITCTA016	6966239.00	2298062.00	10/08/99	0	HydroGeoLogic, Inc.
WITCTA017	6967298.15	2299305.78	10/17/02	0	Earth Tech Corporation
WITCTA019	6963107.00	2298838.00	10/09/02	0	Ellis Environmental Group
WITCTA020	6963895.32	2296316.79	04/29/97	0	International Technology Corp.
WITCTA021	6963795.40	2298719.16	05/01/97	0	International Technology Corp.
WITCTA022	6963651.00	2298744.00	04/29/97	0	International Technology Corp.

Table A2. Maximum historical tetrachloroethene (PCE) concentrations in the alluvial aquifer, Air Force Plant 4 (AFP4) and Naval Air Station-Joint Reserve Base Carswell Field (NAS-JRB) study area, Fort Worth, Texas, 1983–2003—Continued.

Well number	Northing	Easting	Date collected	Maximum historical concentration (micrograms per liter)	Source
WITCTA024	6965971.78	2298956.02	10/09/02	0	Ellis Environmental Group
WITCTA025	6966005.00	2299534.00	04/24/97	14	International Technology Corp.
WITCTA026	6965458.00	2299481.00	10/09/02	0	Ellis Environmental Group
WITCTA027	6965194.74	2299511.86	04/24/97	0	International Technology Corp.
WITCTA028	6965161.00	2300621.00	04/24/97	0	International Technology Corp.
WITCTA031	6964690.00	2299152.00	05/01/97	0	International Technology Corp.
WITCTA032	6964501.67	2299196.64	04/30/97	0	International Technology Corp.
WITCTA033	6964388.00	2300520.00	04/30/97	0	International Technology Corp.
WITCTA034	6963956.68	2300951.49	10/17/00	4	HydroGeoLogic, Inc.
WITCTA035	6963388.12	2299094.68	05/01/97	0	International Technology Corp.
WITCTA036	6963182.00	2299629.00	05/02/97	0	International Technology Corp.
WITCTA037	6963424.00	2297784.00	04/29/97	0	International Technology Corp.
WITCTA039	6962339.77	2295415.41	05/01/97	0	International Technology Corp.
WITCTA040	6963260.00	2299515.00	05/01/03	0	Earth Tech Corporation
WITCTA041	6963169.00	2299642.00	10/09/02	0	Ellis Environmental Group
WITCTA043	6963110.00	2299725.00	10/10/02	0	Ellis Environmental Group
WITCTA044	6963056.00	2299836.00	10/06/99	0	HydroGeoLogic, Inc.
WJETA060	6963892.00	2290889.00	05/01/03	0	Earth Tech Corporation
WJETA061	6963915.00	2290873.00	05/03/02	0	Earth Tech Corporation
WJETA530	6959546.93	2296533.87	12/14/96	0	Jacobs Engineering Group
WJETA531	6958909.00	2295894.00	12/08/96	0	Jacobs Engineering Group
WJETA534	6958941.15	2296341.54	12/14/96	0	Jacobs Engineering Group
WJETA535	6959722.27	2296794.44	10/26/00	0	HydroGeoLogic, Inc.
WP07–10B	6961277.46	2296040.45	01/22/99	15	HydroGeoLogic, Inc.
WSAICTA002	6964473.05	2294921.57	12/14/00	0	Science Applications International Corp.
WSAICTA003	6962921.08	2294630.39	06/19/02	0	Science Applications International Corp.
WSAICTA004	6963343.80	2293586.34	06/26/02	0	Science Applications International Corp.
WSAICTA005	6963578.03	2293587.28	06/26/02	0	Science Applications International Corp.
WSAICTA007	6961971.36	2294861.23	06/26/02	0	Science Applications International Corp.
WSAICTA008	6961974.34	2294585.80	10/14/02	0	Ellis Environmental Group
WSAICTA010	6962655.14	2294341.87	05/01/03	0	Earth Tech Corporation
WSAICTA014	6963885.00	2293582.00	06/26/02	0	Science Applications International Corp.
WSAICTA015	6966805.36	2299042.92	09/24/01	9	Science Applications International Corp.
WSAICTA016	6966551.89	2299049.00	05/01/03	0	Earth Tech Corporation
WSAICTA017	6966921.03	2298810.34	09/24/01	0	Science Applications International Corp.
WSAICTA021	6966905.72	2299748.32	10/03/01	0	Science Applications International Corp.
WSAICTA023	6967077.62	2298656.36	10/03/01	17	Science Applications International Corp.
WSAICTA025	6961666.49	2294798.23	06/21/02	0	Science Applications International Corp.
WSAICTA026	6961723.12	2294432.29	06/21/02	0	Science Applications International Corp.
WUSGSTA011	6962668.00	2296825.00	01/15/03	0	U.S. Geological Survey
WUSGSTA014	6962826.00	2297306.00	01/15/03	0	U.S. Geological Survey
WUSGSTA015	6963054.00	2296591.00	01/15/03	0	U.S. Geological Survey
WUSGSTA018	6962566.00	2297413.00	01/15/03	0	U.S. Geological Survey

46 Subsurface Occurrence and Potential Source Areas of Chlorinated Ethenes, AFP4 and NAS-JRB, Fort Worth, Texas

Table A3. Maximum historical *cis*-1,2-dichloroethene (*cis*-DCE) concentrations in the alluvial aquifer, Air Force Plant 4 (AFP4) and Naval Air Station-Joint Reserve Base Carswell Field (NAS-JRB) study area, Fort Worth, Texas, 1991–2003.

[Northing, north state plane coordinate of north-south distance, in feet, from reference location (N6561666.67); Easting, east state plane coordinate of east-west distance, in feet, from reference location (E1968500.00)]

Well number	Northing	Easting	Date collected	Maximum historical concentration (micrograms per liter)	Source
1-B	6964685.00	2301062.00	10/15/97	0	HydroGeoLogic, Inc.
BGSMW01	6964916.00	2299511.00	04/09/97	0	International Technology Corp.
BSS-A	6965476.60	2300120.78	10/19/95	0	Law Environmental
BSS-B	6965797.63	2300091.88	01/15/96	0	Law Environmental
CAR-RW1	6960869.00	2296755.00	11/05/99	740	HydroGeoLogic, Inc.
CAR-RW10	6961279.06	2296078.88	11/05/99	440	HydroGeoLogic, Inc.
CAR-RW11	6961412.39	2296075.74	11/05/99	580	HydroGeoLogic, Inc.
CAR-RW12	6961192.46	2295933.72	11/05/99	860	HydroGeoLogic, Inc.
CAR-RW2	6961223.00	2296673.00	11/05/99	490	HydroGeoLogic, Inc.
CAR-RW4	6961112.00	2296685.00	11/05/99	650	HydroGeoLogic, Inc.
CAR-RW5	6961318.00	2296638.00	11/05/99	330	HydroGeoLogic, Inc.
CAR-RW6	6961112.00	2296510.00	11/05/99	760	HydroGeoLogic, Inc.
CAR-RW8	6961214.00	2296306.00	11/05/99	610	HydroGeoLogic, Inc.
CAR-RW9	6961221.00	2297006.00	11/05/99	490	HydroGeoLogic, Inc.
F-204	6965223.00	2290634.70	11/10/95	.91	Jacobs Engineering Group
F-209	6969007.27	2290901.72	05/05/02	1.6	Earth Tech Corporation
F-214	6966040.04	2289864.00	10/24/02	710,000	Earth Tech Corporation
F-216	6965776.18	2290219.93	10/08/95	14	Jacobs Engineering Group
F-217	6965959.98	2290109.05	01/27/00	1,100	U.S. Air Force, Center for Environmental Excellence
F-218	6964024.29	2291474.21	05/06/01	4,400	U.S. Air Force, Center for Environmental Excellence
F-219	6964343.31	2291472.82	10/30/95	0	Jacobs Engineering Group
F-220	6964050.32	2290236.60	11/13/95	0	Jacobs Engineering Group
F-221	6963244.60	2290575.22	10/27/95	0	Jacobs Engineering Group
FSA-3-03	6969021.17	2290678.81	11/10/95	0	Jacobs Engineering Group
FSA-3-04	6969021.23	2290632.44	11/10/95	0	Jacobs Engineering Group
FSA-3-06	6969077.00	2290679.76	11/16/95	0	Jacobs Engineering Group
FSA-3-08	6969116.51	2290712.86	11/14/95	0	Jacobs Engineering Group
FSA-3-10	6969075.75	2290779.47	11/14/95	0	Jacobs Engineering Group
FSA-3-12	6968999.05	2290836.80	11/13/95	0	Jacobs Engineering Group
FT08-11A	6962321.00	2295878.00	01/14/96	8	Law Environmental
FT08-11B	6962034.00	2295931.00	04/12/95	110	Law Environmental
FT09-12A	6960549.82	2295439.22	12/05/01	0	HydroGeoLogic, Inc.
FT09-12B	6960709.31	2295697.41	12/05/01	24	HydroGeoLogic, Inc.
FT09-12C	6960590.30	2295771.51	04/23/97	93	CH2M Hill
FT09-12E	6960701.08	2295821.16	05/05/03	63	HydroGeoLogic, Inc.
GMI-02M	6964661.03	2288826.22	10/06/95	0	Jacobs Engineering Group
GMI-04-01M	6960931.00	2296729.00	04/07/95	520	Law Environmental
GMI-05M	6964307.19	2288362.92	10/05/95	0	Jacobs Engineering Group
GMI-22-01M	6965122.22	2297689.15	04/12/95	40	Law Environmental
GMI-22-02M	6966633.00	2296187.00	05/01/03	0	Earth Tech Corporation
GMI-22-03M	6966219.92	2298539.37	10/17/02	150	Earth Tech Corporation
GMI-22-04M	6967250.52	2297341.00	04/17/98	200	HydroGeoLogic, Inc.
GMI-22-05M	6966940.33	2299432.08	05/01/03	0	Earth Tech Corporation
GMI-22-06M	6967004.48	2298186.58	04/30/97	239	CH2M Hill
GMI-22-07M	6969019.00	2298323.00	05/01/03	0	Earth Tech Corporation
GMI-22-08M	6970324.00	2298972.00	01/11/96	0	Law Environmental
HM-10	6965810.91	2290121.80	04/29/95	12	Jacobs Engineering Group
HM-104	6963114.28	2291200.56	01/19/96	0	Jacobs Engineering Group
HM-106	6968075.70	2290771.26	10/24/95	0	Jacobs Engineering Group
HM-110	6963667.53	2293163.24	12/08/00	110	Science Applications International Corp.
HM-111	6963624.05	2293266.53	10/10/95	3.2	Jacobs Engineering Group
HM-112	6964218.00	2293142.65	05/04/02	430	Earth Tech Corporation
HM-113	6964677.00	2293133.60	01/20/96	120	Jacobs Engineering Group
HM-114	6963912.10	2294352.00	04/10/01	80	HydroGeoLogic, Inc.
HM-116	6966411.43	2294283.69	04/20/99	64	HydroGeoLogic, Inc.

Table A3. Maximum historical *cis*-1,2-dichloroethene (*cis*-DCE) concentrations in the alluvial aquifer, Air Force Plant 4 (AFP4) and Naval Air Station-Joint Reserve Base Carswell Field (NAS-JRB) study area, Fort Worth, Texas, 1991–2003—Continued.

Well number	Northing	Easting	Date collected	Maximum historical concentration (micrograms per liter)	Source
HM-118	6968035.19	2294780.47	10/14/02	4	Ellis Environmental Group
HM-119	6968726.00	2294271.80	05/02/00	1	U.S. Air Force, Center for Environmental Excellence
HM-120	6969489.04	2295343.23	05/01/03	0	Earth Tech Corporation
HM-121	6967390.20	2295279.20	11/07/95	0	Jacobs Engineering Group
HM-123	6961638.50	2295272.60	07/13/99	880	HydroGeoLogic, Inc.
HM-124	6963957.77	2295223.26	11/14/95	0	Jacobs Engineering Group
HM-126	6963121.05	2294300.23	10/15/02	110	Ellis Environmental Group
HM-127	6961588.47	2294853.29	05/01/03	0	Earth Tech Corporation
HM-13	6963100.15	2289898.00	10/25/95	0	Jacobs Engineering Group
HM-14	6963093.00	2289243.30	11/01/95	0	Jacobs Engineering Group
HM-17	6963993.31	2290451.65	10/31/95	27	Jacobs Engineering Group
HM-29	6966014.89	2290711.88	10/27/95	13	Jacobs Engineering Group
HM-31	6963114.44	2291505.33	10/12/00	170	U.S. Air Force, Center for Environmental Excellence
HM-36	6965484.00	2289786.00	10/16/00	55	U.S. Air Force, Center for Environmental Excellence
HM-56	6965454.00	2291472.23	11/17/95	0	Jacobs Engineering Group
HM-59	6966811.00	2291469.61	01/15/03	6.1	Earth Tech Corporation
HM-64	6966406.97	2291114.57	10/30/95	220	Jacobs Engineering Group
HM-7	6966159.99	2290135.86	01/27/00	0	U.S. Air Force, Center for Environmental Excellence
HM-71	6966470.35	2292457.39	10/14/95	16	Jacobs Engineering Group
HM-88	6964479.91	2291919.17	10/13/00	440	U.S. Air Force, Center for Environmental Excellence
HM-89	6964470.44	2292084.17	09/13/00	500	U.S. Air Force, Center for Environmental Excellence
HM-90	6965640.09	2292457.85	05/21/93	1.7	Jacobs Engineering Group
HM-91	6966174.30	2292586.29	06/04/93	15	Jacobs Engineering Group
HM-92	6965645.68	2292250.42	10/28/95	0	Jacobs Engineering Group
HM-93	6965074.75	2292194.39	05/01/03	0	Earth Tech Corporation
HM-95	6965442.59	2293156.22	05/01/03	1,258	Earth Tech Corporation
HM-96	6966507.03	2293168.95	01/15/03	.9	Earth Tech Corporation
HM-97	6966884.14	2293158.51	05/26/93	12	Jacobs Engineering Group
HM-98	6967418.95	2293207.55	05/01/03	0	Earth Tech Corporation
ITMW-01T	6961062.05	2298967.00	10/24/00	10	HydroGeoLogic, Inc.
LF01-1D	6964288.00	2301413.00	10/14/98	0	HydroGeoLogic, Inc.
LF01-1E	6964606.00	2301174.00	10/20/97	0	HydroGeoLogic, Inc.
LF03-3D	6962056.65	2293269.12	05/01/03	0	Earth Tech Corporation
LF04-01	6961026.99	2295378.56	12/06/01	0	HydroGeoLogic, Inc.
LF04-02	6961113.06	2296309.10	06/17/02	600	HydroGeoLogic, Inc.
LF04-03	6961064.00	2296306.00	11/05/99	750	HydroGeoLogic, Inc.
LF04-04	6960941.63	2297165.64	01/13/96	359	Law Environmental
LF04-10	6960411.83	2297078.91	04/23/97	1	CH2M Hill
LF04-4C	6960600.00	2296588.00	01/25/99	7	HydroGeoLogic, Inc.
LF04-4D	6960828.00	2296412.00	04/06/95	390	Law Environmental
LF05-01	6962728.35	2294577.83	01/28/99	450	HydroGeoLogic, Inc.
LF05-02	6962653.12	2295278.95	10/28/97	650	HydroGeoLogic, Inc.
LF05-18	6961555.64	2297075.43	04/24/97	364	CH2M Hill
LF05-19	6961239.89	2297461.35	04/23/97	822	CH2M Hill
LF05-5B	6961901.56	2296078.25	10/16/02	1,100	Ellis Environmental Group
LF05-5C	6961720.05	2295993.73	01/15/96	244	Law Environmental
LF05-5D	6961739.00	2295754.00	01/14/96	386	Law Environmental
LF05-5G	6961558.00	2296690.00	04/23/97	488	CH2M Hill
LF05-5H	6961732.39	2296340.79	06/20/02	500	HydroGeoLogic, Inc.
LSA1628-1	6967936.00	2297802.00	10/20/95	0	Law Environmental
LSA1628-2	6967943.00	2297847.00	10/21/95	0	Law Environmental
LSA1628-3	6967993.10	2297791.30	04/28/97	150	CH2M Hill
MW-10	6965836.22	2300542.00	10/30/97	0	HydroGeoLogic, Inc.
MW-11	6965707.00	2300792.00	10/24/97	0	HydroGeoLogic, Inc.
MW-12	6966149.32	2300142.00	08/22/01	0	Science Applications International Corp.

48 Subsurface Occurrence and Potential Source Areas of Chlorinated Ethenes, AFP4 and NAS–JRB, Fort Worth, Texas

Table A3. Maximum historical *cis*-1,2-dichloroethene (*cis*-DCE) concentrations in the alluvial aquifer, Air Force Plant 4 (AFP4) and Naval Air Station-Joint Reserve Base Carswell Field (NAS–JRB) study area, Fort Worth, Texas, 1991–2003—Continued.

Well number	Northing	Easting	Date collected	Maximum historical concentration (micrograms per liter)	Source
MW–19	6963513.00	2295369.00	08/22/01	41	Science Applications International Corp.
MW–38	6965981.00	2298153.00	12/04/01	0	HydroGeoLogic, Inc.
MW–5	6963910.00	2290826.00	10/25/01	0	U.S. Air Force, Center for Environmental Excellence
MW–50	6968529.00	2295622.00	07/22/96	0	Jacobs Engineering Group
MW–53	6964378.00	2296200.00	07/24/96	65	Jacobs Engineering Group
MW–5C	6965804.00	2300139.00	04/10/97	0	International Technology Corp.
MW–7CRSWL	6965967.00	2300055.00	08/22/01	0	Science Applications International Corp.
MW–8	6965584.95	2300492.00	01/10/96	0	Law Environmental
MW–9	6966001.79	2300330.00	10/20/97	0	HydroGeoLogic, Inc.
MW–IT–01T	6961062.00	2298967.00	11/05/98	7.85	Jacobs Engineering Group
MWMTAC–001	6959116.00	2296520.00	12/12/96	0	Jacobs Engineering Group
OT–15C	6963316.00	2300948.00	10/20/97	0	HydroGeoLogic, Inc.
RW–11U	6965385.00	2292586.20	07/30/94	1,300	U.S. Air Force, Center for Environmental Excellence
RW–1U	6965269.00	2292468.70	01/19/93	1,800	U.S. Air Force, Center for Environmental Excellence
RW–3UR	6964444.10	2292090.10	12/14/00	440	U.S. Air Force, Center for Environmental Excellence
RW–8UR	6964339.00	2291990.60	12/14/00	510	U.S. Air Force, Center for Environmental Excellence
SD13–01	6963377.64	2300623.03	10/31/00	0	HydroGeoLogic, Inc.
SD13–02	6963472.80	2300754.49	10/27/00	0	HydroGeoLogic, Inc.
SD13–03	6963347.97	2300700.85	01/11/96	0	Law Environmental
SD13–04	6963346.39	2300773.06	10/31/00	0	HydroGeoLogic, Inc.
SD13–05	6963904.00	2300776.00	01/12/96	0	Law Environmental
SD13–06	6963164.35	2300908.00	06/26/01	0	HydroGeoLogic, Inc.
SD13–07	6963165.85	2301009.00	07/02/01	0	HydroGeoLogic, Inc.
SPOT35–2	6966175.00	2296854.00	10/28/97	0	HydroGeoLogic, Inc.
SPOT35–3	6966109.00	2296851.00	12/03/01	0	HydroGeoLogic, Inc.
SPOT35–4	6966175.00	2296778.00	10/28/97	0	HydroGeoLogic, Inc.
SPOT35–5	6966020.04	2296847.00	10/14/02	0	Ellis Environmental Group
SPOT35–8	6966428.55	2296970.16	04/07/00	43	HydroGeoLogic, Inc.
ST14–01	6963295.30	2300090.83	01/11/96	0	Law Environmental
ST14–02	6963511.64	2300091.66	01/13/96	0	Law Environmental
ST14–03	6964079.97	2299891.62	10/09/02	0	Ellis Environmental Group
ST14–04	6963642.65	2300345.31	01/13/96	0	Law Environmental
ST14–14	6964309.76	2299735.00	05/01/98	0	HydroGeoLogic, Inc.
ST14–24	6964018.00	2299061.45	10/12/99	0	HydroGeoLogic, Inc.
ST14–26	6964593.00	2299557.00	04/13/98	0	HydroGeoLogic, Inc.
ST14–27	6964258.00	2300212.00	10/30/00	0	HydroGeoLogic, Inc.
ST14–W05	6963726.00	2299094.00	10/10/02	0	Ellis Environmental Group
ST14–W06	6963807.00	2299331.00	01/11/96	0	Law Environmental
ST14–W07	6963615.00	2299394.00	01/12/96	0	Law Environmental
ST14–W08	6964324.00	2299480.00	01/12/96	0	Law Environmental
ST14–W09	6963472.00	2299550.00	10/18/95	7	Law Environmental
ST14–W11	6964129.00	2299658.00	10/27/00	0	HydroGeoLogic, Inc.
ST14–W13	6963695.00	2299776.00	01/11/96	0	Law Environmental
ST14–W15	6963316.00	2299923.00	05/01/03	1.8	Earth Tech Corporation
ST14–W16	6964065.00	2300128.00	10/30/00	0	HydroGeoLogic, Inc.
ST14–W21	6963418.00	2300242.00	10/31/00	0	HydroGeoLogic, Inc.
ST14–W31	6963550.00	2300831.00	10/12/99	0	HydroGeoLogic, Inc.
T8	6965421.00	2289949.00	01/14/02	2	U.S. Air Force, Center for Environmental Excellence
T9	6965551.00	2289993.00	11/19/01	11	U.S. Air Force, Center for Environmental Excellence
USGS01T	6970384.00	2297661.30	12/09/96	0	Jacobs Engineering Group
USGS02T	6970326.56	2300333.85	12/09/96	0	Jacobs Engineering Group
USGS03T	6968704.70	2300610.01	01/10/96	0	Law Environmental
USGS04T	6968758.00	2299178.00	10/09/02	0	Ellis Environmental Group
USGS06T	6963763.00	2297542.08	01/24/98	12	Jacobs Engineering Group
USGS07T	6960168.00	2295246.00	10/11/02	0	Ellis Environmental Group

Table A3. Maximum historical *cis*-1,2-dichloroethene (*cis*-DCE) concentrations in the alluvial aquifer, Air Force Plant 4 (AFP4) and Naval Air Station-Joint Reserve Base Carswell Field (NAS-JRB) study area, Fort Worth, Texas, 1991–2003—Continued.

Well number	Northing	Easting	Date collected	Maximum historical concentration (micrograms per liter)	Source
VEP-10	6965452.00	2289741.00	05/07/02	2.4	Earth Tech Corporation
VEP-11	6965472.00	2289741.00	05/08/02	26	Earth Tech Corporation
VEP-12	6965492.14	2289740.47	05/08/02	230	Earth Tech Corporation
VEP-13	6965512.00	2289740.00	05/15/03	2,411	Shaw Environmental
VEP-14	6965532.35	2289740.23	05/08/02	280	Earth Tech Corporation
VEP-15	6965572.27	2289739.27	05/09/02	85	Earth Tech Corporation
VEP-16	6965593.48	2289739.28	05/09/02	12	Earth Tech Corporation
VEP-17	6965612.88	2289738.95	05/09/02	9.6	Earth Tech Corporation
VEP-18	6965631.89	2289739.19	05/09/02	740	Earth Tech Corporation
VEP-18B	6965652.25	2289740.40	05/09/02	540	Earth Tech Corporation
VEP-19	6965673.36	2289738.41	05/09/02	28	Earth Tech Corporation
VEP-20	6965692.62	2289738.81	05/10/02	18	Earth Tech Corporation
VEP-21	6965885.28	2289766.47	05/11/02	11	Earth Tech Corporation
VEP-22	6965904.64	2289772.36	05/11/02	26	Earth Tech Corporation
VEP-23	6965923.82	2289776.40	05/11/02	28	Earth Tech Corporation
VEP-24	6965947.42	2289785.33	05/11/02	270	Earth Tech Corporation
VEP-25	6965961.57	2289792.04	05/11/02	390	Earth Tech Corporation
VEP-26	6965979.44	2289801.00	05/11/02	34,000	Earth Tech Corporation
VEP-27	6965996.42	2289811.11	05/12/02	4,900	Earth Tech Corporation
VEP-28	6966006.35	2289828.89	05/12/02	580	Earth Tech Corporation
VEP-29	6966014.37	2289844.00	05/15/03	350,650	Shaw Environmental
VEP-3	6966027.00	2289825.00	05/12/02	890	Earth Tech Corporation
VEP-31	6966040.69	2289879.41	05/13/02	230	Earth Tech Corporation
VEP-32	6966058.55	2289884.99	05/13/02	39	Earth Tech Corporation
VEP-33	6966075.62	2289893.21	05/14/02	110	Earth Tech Corporation
VEP-35	6966114.00	2289901.00	05/15/03	616,800	Shaw Environmental
VEP-36	6966135.75	2289905.70	05/14/02	990	Earth Tech Corporation
VEP-37	6966155.08	2289906.66	05/14/02	400	Earth Tech Corporation
VEP-39	6966193.26	2289910.01	05/14/02	17	Earth Tech Corporation
VEP-4	6966050.33	2289838.40	05/12/02	7,600	Earth Tech Corporation
VEP-40	6966096.49	2289877.53	05/13/02	8.9	Earth Tech Corporation
VEP-41	6966067.00	2289850.00	05/13/02	2,000	Earth Tech Corporation
VEP-5	6965352.65	2289735.96	05/07/02	0	Earth Tech Corporation
VEP-6	6965371.63	2289740.48	05/07/02	0	Earth Tech Corporation
VEP-7	6965393.00	2289742.00	05/07/02	0	Earth Tech Corporation
VEP-8	6965413.00	2289741.00	05/07/02	0	Earth Tech Corporation
VEP-9	6965432.00	2289741.00	05/07/02	1.2	Earth Tech Corporation
VEPT-1	6965717.00	2289740.00	05/09/02	23	Earth Tech Corporation
VEPT-2	6965739.00	2289741.00	05/10/02	20	Earth Tech Corporation
W-129	6965935.87	2289777.80	05/12/93	54	Jacobs Engineering Group
W-130	6966042.89	2289868.15	06/14/93	48,000	Jacobs Engineering Group
W-131L	6963276.81	2290536.11	10/19/91	0	Chem-Nuclear Geotech, Inc.
W-131U	6963278.00	2290541.00	10/24/91	0	Chem-Nuclear Geotech, Inc.
W-132	6966136.51	2289895.52	09/10/91	25	Chem-Nuclear Geotech, Inc.
W-133U	6963349.00	2290609.00	06/06/93	12	Jacobs Engineering Group
W-134	6969156.00	2291067.00	05/14/93	0	Jacobs Engineering Group
W-135	6967837.68	2290606.07	05/01/03	0	Earth Tech Corporation
W-137	6963499.00	2290968.00	01/25/97	83.6	Jacobs Engineering Group
W-141L	6965386.71	2290672.36	10/18/91	0	Chem-Nuclear Geotech, Inc.
W-141U	6965391.58	2290672.52	06/14/93	0	Jacobs Engineering Group
W-143	6968548.58	2291192.24	09/11/91	0	Chem-Nuclear Geotech, Inc.
W-144	6965577.00	2290450.00	10/17/91	0	Chem-Nuclear Geotech, Inc.
W-145	6964387.65	2290600.35	09/15/91	0	Chem-Nuclear Geotech, Inc.
W-146	6965118.51	2290620.30	05/09/93	0	Jacobs Engineering Group
W-147	6965824.00	2290711.00	01/15/03	17	Earth Tech Corporation

50 Subsurface Occurrence and Potential Source Areas of Chlorinated Ethenes, AFP4 and NAS–JRB, Fort Worth, Texas

Table A3. Maximum historical *cis*-1,2-dichloroethene (*cis*-DCE) concentrations in the alluvial aquifer, Air Force Plant 4 (AFP4) and Naval Air Station-Joint Reserve Base Carswell Field (NAS–JRB) study area, Fort Worth, Texas, 1991–2003—Continued.

Well number	Northing	Easting	Date collected	Maximum historical concentration (micrograms per liter)	Source
W-149	6965190.70	2292456.97	10/17/91	1,500	Chem-Nuclear Geotech, Inc.
W-151	6964980.90	2292475.30	09/13/91	28	Chem-Nuclear Geotech, Inc.
W-154	6963926.46	2290107.04	10/20/91	0	Chem-Nuclear Geotech, Inc.
W-155	6968275.39	2293145.82	01/15/03	0	Earth Tech Corporation
W-156	6964824.12	2292815.02	09/14/00	440	U.S. Air Force, Center for Environmental Excellence
W-158	6963954.83	2291080.82	09/14/91	18	Chem-Nuclear Geotech, Inc.
W-160	6963448.68	2291368.51	01/24/97	454	Jacobs Engineering Group
WCHMHTA004	6967949.00	2295041.00	09/26/01	2	Science Applications International Corp.
WCHMHTA006	6966690.11	2295406.97	04/11/02	77	Ellis Environmental Group
WCHMHTA008	6967889.89	2295597.48	05/01/03	73	Earth Tech Corporation
WCHMHTA009	6968444.69	2296663.99	10/31/00	8	HydroGeoLogic, Inc.
WCHMHTA010	6967640.08	2296398.80	04/11/02	11	Ellis Environmental Group
WCHMHTA011	6969295.20	2297328.38	09/26/01	5	Science Applications International Corp.
WCHMHTA013	6967056.00	2300052.00	05/01/03	5.2	Earth Tech Corporation
WCHMHTA014	6970403.90	2294072.81	10/14/02	0	Ellis Environmental Group
WCOETA002	6962944.00	2296763.00	07/01/02	29	U.S. Geological Survey
WCOETA004	6962828.00	2296675.00	07/01/01	55	U.S. Geological Survey
WCOETA006	6962928.00	2296921.00	07/01/02	31	U.S. Geological Survey
WCOETA010	6962696.00	2296798.00	05/01/99	150	U.S. Geological Survey
WHGLFE001	6961575.00	2296063.00	06/19/02	400	HydroGeoLogic, Inc.
WHGLFE002	6961284.00	2296060.00	06/18/02	500	HydroGeoLogic, Inc.
WHGLFE003	6961079.00	2295934.00	06/17/02	890	HydroGeoLogic, Inc.
WHGLFE004	6960785.00	2295825.00	06/19/02	18	HydroGeoLogic, Inc.
WHGLRW015	6960871.43	2298662.64	10/24/00	17	HydroGeoLogic, Inc.
WHGLRW016	6961034.95	2299201.47	10/16/02	0	Ellis Environmental Group
WHGLRW017	6960727.11	2299000.59	04/19/02	0	Ellis Environmental Group
WHGLRW018	6960532.93	2298744.63	11/01/99	0	HydroGeoLogic, Inc.
WHGLRW019	6960684.23	2298620.19	11/04/99	0	HydroGeoLogic, Inc.
WHGLTA003	6961043.88	2298029.84	01/23/98	61	HydroGeoLogic, Inc.
WHGLTA004	6962943.38	2295760.62	01/27/99	180	HydroGeoLogic, Inc.
WHGLTA005	6963470.00	2301044.00	10/18/99	0	HydroGeoLogic, Inc.
WHGLTA007	6963162.51	2301093.11	06/26/01	0	HydroGeoLogic, Inc.
WHGLTA008	6963955.17	2300016.84	10/11/99	0	HydroGeoLogic, Inc.
WHGLTA009	6965211.65	2297528.70	10/31/00	260	HydroGeoLogic, Inc.
WHGLTA010	6965580.03	2296770.93	04/07/00	4	HydroGeoLogic, Inc.
WHGLTA011	6968356.67	2295873.87	07/13/00	0	HydroGeoLogic, Inc.
WHGLTA012	6965920.84	2297740.00	04/10/02	18	Ellis Environmental Group
WHGLTA013	6965958.00	2297177.00	12/04/01	0	HydroGeoLogic, Inc.
WHGLTA014	6966295.34	2297373.92	10/27/00	110	HydroGeoLogic, Inc.
WHGLTA020	6962285.83	2299684.95	11/05/99	0	HydroGeoLogic, Inc.
WHGLTA022	6960401.65	2297691.54	11/03/99	0	HydroGeoLogic, Inc.
WHGLTA023	6960492.16	2298565.43	11/04/99	0	HydroGeoLogic, Inc.
WHGLTA025	6961608.26	2298942.63	04/06/00	4	HydroGeoLogic, Inc.
WHGLTA028	6967761.00	2297451.00	10/11/02	230	Ellis Environmental Group
WHGLTA029	6965736.00	2298574.00	11/28/01	3	HydroGeoLogic, Inc.
WHGLTA043	6961771.99	2297021.32	04/18/02	290	Ellis Environmental Group
WHGLTA044	6961721.40	2297347.37	01/04/01	5	HydroGeoLogic, Inc.
WHGLTA045	6961321.90	2298368.80	10/20/00	9	HydroGeoLogic, Inc.
WHGLTA046	6961298.49	2296089.68	02/26/02	480	HydroGeoLogic, Inc.
WHGLTA048	6960916.20	2298714.83	05/01/03	108	Earth Tech Corporation
WHGLTA049	6962329.24	2299269.36	10/17/02	0	Ellis Environmental Group
WHGLTA050	6963013.36	2296420.09	04/06/01	31	HydroGeoLogic, Inc.
WHGLTA051	6962894.90	2296247.12	10/16/02	67	Ellis Environmental Group
WHGLTA052	6962769.45	2296098.07	04/06/01	61	HydroGeoLogic, Inc.
WHGLTA053	6960334.00	2295474.00	12/05/01	0	HydroGeoLogic, Inc.

Table A3. Maximum historical *cis*-1,2-dichloroethene (*cis*-DCE) concentrations in the alluvial aquifer, Air Force Plant 4 (AFP4) and Naval Air Station-Joint Reserve Base Carswell Field (NAS-JRB) study area, Fort Worth, Texas, 1991–2003—Continued.

Well number	Northing	Easting	Date collected	Maximum historical concentration (micrograms per liter)	Source
WHGLTA054	6960748.26	2295541.09	10/11/02	43	Ellis Environmental Group
WHGLTA055	6960809.82	2295662.85	10/11/02	0	Ellis Environmental Group
WHGLTA056	6960787.36	2295827.62	05/05/03	190	HydroGeoLogic, Inc.
WHGLTA060	6965619.32	2298210.18	09/25/01	48	HydroGeoLogic, Inc.
WHGLTA061	6965621.74	2298341.01	11/27/01	0	HydroGeoLogic, Inc.
WHGLTA062	6965663.00	2298317.27	07/20/01	12	HydroGeoLogic, Inc.
WHGLTA063	6965677.07	2298270.14	07/20/01	8	HydroGeoLogic, Inc.
WHGLTA064	6965075.48	2298351.15	11/28/01	57	HydroGeoLogic, Inc.
WHGLTA065	6960593.00	2295633.00	12/06/01	310	HydroGeoLogic, Inc.
WHGLTA066	6960807.00	2295402.00	12/02/01	0	HydroGeoLogic, Inc.
WHGLTA067	6960876.00	2295733.00	12/02/01	13	HydroGeoLogic, Inc.
WHGLTA069	6961708.00	2296063.00	06/18/02	600	HydroGeoLogic, Inc.
WHGLTA070	6961576.00	2296056.00	05/05/03	430	HydroGeoLogic, Inc.
WHGLTA071	6961285.00	2296067.00	06/18/02	330	HydroGeoLogic, Inc.
WHGLTA072	6961283.00	2296102.00	05/05/03	340	HydroGeoLogic, Inc.
WHGLTA073	6961283.00	2296167.00	06/18/02	190	HydroGeoLogic, Inc.
WHGLTA074	6961285.00	2296258.00	06/18/02	410	HydroGeoLogic, Inc.
WHGLTA075	6961072.00	2295934.00	06/17/02	1,000	HydroGeoLogic, Inc.
WHGLTA076	6961086.00	2295934.00	05/05/03	620	HydroGeoLogic, Inc.
WHGLTA077	6960785.00	2295776.00	05/05/03	480	HydroGeoLogic, Inc.
WHGLTA082	6964396.00	2296386.00	10/10/02	11	Ellis Environmental Group
WHGLTA101	6964634.00	2301220.00	06/03/99	0	HydroGeoLogic, Inc.
WHGLTA102	6964449.00	2301388.00	06/03/99	0	HydroGeoLogic, Inc.
WHGLTA103	6964314.53	2301522.24	06/02/99	0	HydroGeoLogic, Inc.
WHGLTA104	6964226.00	2301608.00	11/02/99	0	HydroGeoLogic, Inc.
WHGLTA201	6963198.14	2298660.88	12/09/98	4	HydroGeoLogic, Inc.
WHGLTA202	6963326.21	2298832.59	12/14/98	2	HydroGeoLogic, Inc.
WHGLTA203	6963059.00	2298401.00	05/13/98	20	HydroGeoLogic, Inc.
WHGLTA204	6963625.62	2298104.66	09/23/98	8	HydroGeoLogic, Inc.
WHGLTA302	6962603.00	2294422.00	09/29/98	2,300	HydroGeoLogic, Inc.
WHGLTA303	6962351.00	2294401.00	05/08/98	1,100	HydroGeoLogic, Inc.
WHGLTA601	6962753.00	2297473.69	10/05/99	39	HydroGeoLogic, Inc.
WHGLTA602	6962752.66	2297625.01	09/25/98	39	HydroGeoLogic, Inc.
WHGLTA603	6962713.38	2297727.19	09/25/98	9	HydroGeoLogic, Inc.
WHGLTA604	6963195.00	2297530.00	09/24/98	23	HydroGeoLogic, Inc.
WHGLTA701	6961835.73	2295332.86	09/28/98	920	HydroGeoLogic, Inc.
WHGLTA702	6961920.00	2295882.00	09/28/98	580	HydroGeoLogic, Inc.
WHGLTA703	6961680.70	2295741.23	02/21/01	530	HydroGeoLogic, Inc.
WHGLTA704	6962141.07	2295831.51	09/24/98	38	HydroGeoLogic, Inc.
WHGLTA705	6962003.00	2296027.00	06/01/00	30	HydroGeoLogic, Inc.
WHGLTA706	6962146.00	2296031.00	07/13/00	20	HydroGeoLogic, Inc.
WHGLTA707	6962188.16	2295592.35	02/19/01	3	HydroGeoLogic, Inc.
WHGLTA708	6962019.93	2295647.18	02/19/01	15	HydroGeoLogic, Inc.
WHGLTA709	6961934.71	2295750.93	02/19/01	160	HydroGeoLogic, Inc.
WHGLTA801	6962790.06	2295857.80	04/06/01	200	HydroGeoLogic, Inc.
WHGLTA901	6967832.00	2299643.00	11/02/99	0	HydroGeoLogic, Inc.
WHGLTA902	6967671.00	2299952.00	10/12/99	0	HydroGeoLogic, Inc.
WHGLTA903	6967830.00	2300086.00	10/12/99	0	HydroGeoLogic, Inc.
WHGLTA904	6968031.00	2300174.00	10/11/99	0	HydroGeoLogic, Inc.
WHGLTA905	6967574.00	2299782.00	10/11/99	0	HydroGeoLogic, Inc.
WINTTA022	6964617.36	2292408.66	09/13/00	370	U.S. Air Force, Center for Environmental Excellence
WINTTA027	6964477.66	2291931.10	12/20/00	0	U.S. Air Force, Center for Environmental Excellence
WITCTA001	6969592.01	2296447.73	04/28/97	0	International Technology Corp.
WITCTA002	6969259.49	2296136.48	05/06/97	0	International Technology Corp.
WITCTA003	6969112.00	2297406.00	10/09/02	0	Ellis Environmental Group

52 Subsurface Occurrence and Potential Source Areas of Chlorinated Ethenes, AFP4 and NAS–JRB, Fort Worth, Texas

Table A3. Maximum historical *cis*-1,2-dichloroethene (*cis*-DCE) concentrations in the alluvial aquifer, Air Force Plant 4 (AFP4) and Naval Air Station-Joint Reserve Base Carswell Field (NAS–JRB) study area, Fort Worth, Texas, 1991–2003—Continued.

Well number	Northing	Easting	Date collected	Maximum historical concentration (micrograms per liter)	Source
WITCTA004	6968940.00	2297491.00	10/08/02	21	Ellis Environmental Group
WITCTA005	6968459.46	2298167.79	04/28/97	93	International Technology Corp.
WITCTA006	6968427.00	2298263.00	05/02/97	110	International Technology Corp.
WITCTA007	6968310.56	2298433.07	04/22/97	57	International Technology Corp.
WITCTA009	6967862.00	2298234.00	08/23/01	20	Science Applications International Corp.
WITCTA010	6967695.00	2298753.00	04/04/00	2	HydroGeoLogic, Inc.
WITCTA012	6967348.77	2298224.39	08/23/01	98	Science Applications International Corp.
WITCTA013	6967017.00	2297752.00	04/28/97	50	International Technology Corp.
WITCTA014	6966904.57	2297418.51	08/23/01	41	Science Applications International Corp.
WITCTA015	6966333.00	2298395.00	04/23/97	240	International Technology Corp.
WITCTA016	6966239.00	2298062.00	07/20/99	150	HydroGeoLogic, Inc.
WITCTA017	6967298.15	2299305.78	10/17/02	17	Earth Tech Corporation
WITCTA019	6963107.00	2298838.00	10/09/02	1	Ellis Environmental Group
WITCTA020	6963895.32	2296316.79	04/29/97	0	International Technology Corp.
WITCTA021	6963795.40	2298719.16	05/01/97	0	International Technology Corp.
WITCTA024	6965971.78	2298956.02	10/09/02	0	Ellis Environmental Group
WITCTA025	6966005.00	2299534.00	04/09/02	100	Ellis Environmental Group
WITCTA026	6965458.00	2299481.00	04/19/02	0	Ellis Environmental Group
WITCTA027	6965194.74	2299511.86	04/24/97	0	International Technology Corp.
WITCTA028	6965161.00	2300621.00	04/24/97	0	International Technology Corp.
WITCTA032	6964501.67	2299196.64	04/30/97	0	International Technology Corp.
WITCTA033	6964388.00	2300520.00	04/30/97	0	International Technology Corp.
WITCTA034	6963956.68	2300951.49	04/30/97	0	International Technology Corp.
WITCTA036	6963182.00	2299629.00	05/02/97	0	International Technology Corp.
WITCTA037	6963424.00	2297784.00	04/29/97	8	International Technology Corp.
WITCTA039	6962339.77	2295415.41	05/01/97	210	International Technology Corp.
WITCTA040	6963260.00	2299515.00	05/01/03	71	Earth Tech Corporation
WITCTA041	6963169.00	2299642.00	10/09/02	0	Ellis Environmental Group
WITCTA043	6963110.00	2299725.00	10/10/02	0	Ellis Environmental Group
WITCTA044	6963056.00	2299836.00	10/06/99	0	HydroGeoLogic, Inc.
WJETA043	6964667.72	2292227.72	09/12/00	350	U.S. Air Force, Center for Environmental Excellence
WJETA047	6964393.06	2292176.36	09/13/00	350	U.S. Air Force, Center for Environmental Excellence
WJETA060	6963892.00	2290889.00	05/01/03	0	Earth Tech Corporation
WJETA061	6963915.00	2290873.00	05/03/02	0	Earth Tech Corporation
WJETA083	6964204.32	2292903.92	12/20/00	250	U.S. Air Force, Center for Environmental Excellence
WJETA086	6965443.05	2292457.02	12/14/00	59	U.S. Air Force, Center for Environmental Excellence
WJETA087	6964208.00	2293100.00	09/14/00	200	U.S. Air Force, Center for Environmental Excellence
WJETA088	6964424.00	2293106.00	09/14/00	110	U.S. Air Force, Center for Environmental Excellence
WJETA501	6962953.00	2296722.00	06/01/98	81.8	U.S. Geological Survey
WJETA502	6962955.00	2296726.00	06/01/98	100.5	U.S. Geological Survey
WJETA503	6962957.00	2296723.00	06/01/98	101.5	U.S. Geological Survey
WJETA504	6962911.00	2296817.00	06/01/98	93.8	U.S. Geological Survey
WJETA505	6962911.00	2296820.00	06/01/98	93.8	U.S. Geological Survey
WJETA507	6962835.00	2296843.00	06/01/98	80.4	U.S. Geological Survey
WJETA508	6962836.00	2296841.00	05/01/99	98	U.S. Geological Survey
WJETA509	6962837.00	2296842.00	05/01/99	98	U.S. Geological Survey
WJETA510	6962680.00	2296812.00	07/01/00	140	U.S. Geological Survey
WJETA511	6962679.00	2296809.00	01/01/00	130	U.S. Geological Survey
WJETA512	6962682.00	2296810.00	06/01/98	294.8	U.S. Geological Survey
WJETA513	6962998.00	2296754.00	06/01/98	167.5	U.S. Geological Survey
WJETA514	6962864.00	2296751.00	05/01/99	148	U.S. Geological Survey
WJETA515	6962863.00	2296894.00	06/01/98	154.1	U.S. Geological Survey
WJETA516	6962969.00	2296860.00	06/01/98	536	U.S. Geological Survey
WJETA517	6962866.00	2296714.00	06/01/98	113.9	U.S. Geological Survey
WJETA518	6962950.00	2296714.00	05/01/99	97	U.S. Geological Survey

Table A3. Maximum historical *cis*-1,2-dichloroethene (*cis*-DCE) concentrations in the alluvial aquifer, Air Force Plant 4 (AFP4) and Naval Air Station-Joint Reserve Base Carswell Field (NAS-JRB) study area, Fort Worth, Texas, 1991–2003—Continued.

Well number	Northing	Easting	Date collected	Maximum historical concentration (micrograms per liter)	Source
WJETA519	6962842.00	2296754.00	06/01/98	100.5	U.S. Geological Survey
WJETA520	6962879.00	2296810.00	06/01/98	147.4	U.S. Geological Survey
WJETA521	6962921.00	2296867.00	06/01/98	140.7	U.S. Geological Survey
WJETA522	6962871.00	2296834.00	06/01/98	140.7	U.S. Geological Survey
WJETA523	6962887.00	2296845.00	06/01/98	201	U.S. Geological Survey
WJETA524	6962818.00	2296807.00	06/01/98	154.1	U.S. Geological Survey
WJETA525	6962800.00	2296820.00	05/01/99	162	U.S. Geological Survey
WJETA526	6962778.00	2296826.00	05/01/99	103	U.S. Geological Survey
WJETA527	6962856.00	2296937.00	07/01/00	150	U.S. Geological Survey
WJETA528	6962815.00	2296880.00	07/01/00	180	U.S. Geological Survey
WJETA529	6962759.00	2296997.00	05/01/99	138	U.S. Geological Survey
WJETA530	6959546.93	2296533.87	12/14/96	0	Jacobs Engineering Group
WJETA531	6958909.00	2295894.00	12/08/96	0	Jacobs Engineering Group
WJETA534	6958941.15	2296341.54	12/14/96	0	Jacobs Engineering Group
WJETA535	6959722.27	2296794.44	10/26/00	0	HydroGeoLogic, Inc.
WL-090JETA	6963983.92	2291896.50	07/28/98	225	Jacobs Engineering Group
WL-091JETA	6964268.00	2291919.00	09/12/00	450	U.S. Air Force, Center for Environmental Excellence
WL-101JETA	6965358.00	2292299.00	12/12/00	550	U.S. Air Force, Center for Environmental Excellence
WL-102JETA	6964785.97	2292815.37	01/22/01	280	U.S. Air Force, Center for Environmental Excellence
WL-104JETA	6964423.59	2292886.41	12/13/00	240	U.S. Air Force, Center for Environmental Excellence
WL-105JETA	6963929.81	2293101.42	12/13/00	180	U.S. Air Force, Center for Environmental Excellence
WL-106JETA	6963806.49	2293001.85	12/13/00	290	U.S. Air Force, Center for Environmental Excellence
WL-107JETA	6964701.29	2292815.04	12/13/00	370	U.S. Air Force, Center for Environmental Excellence
WL-111JETA	6965121.90	2292395.25	12/12/00	1,200	U.S. Air Force, Center for Environmental Excellence
WL-112JETA	6965174.34	2292533.25	12/20/00	0	U.S. Air Force, Center for Environmental Excellence
WL-113JETA	6964978.06	2292461.75	12/12/00	86	U.S. Air Force, Center for Environmental Excellence
WL-115JETA	6964589.06	2292916.26	01/22/01	310	U.S. Air Force, Center for Environmental Excellence
WL-116JETA	6964025.89	2292914.56	12/13/00	190	U.S. Air Force, Center for Environmental Excellence
WL-117JETA	6963947.23	2293003.37	12/13/00	290	U.S. Air Force, Center for Environmental Excellence
WL-118JETA	6964485.69	2292811.17	12/13/00	310	U.S. Air Force, Center for Environmental Excellence
WL-119JETA	6964313.78	2292916.79	01/22/01	240	U.S. Air Force, Center for Environmental Excellence
WL-120JETA	6964237.93	2293001.62	01/22/01	270	U.S. Air Force, Center for Environmental Excellence
WL-121JETA	6963866.38	2293059.70	12/13/00	310	U.S. Air Force, Center for Environmental Excellence
WL-122JETA	6964091.58	2293038.73	12/13/00	360	U.S. Air Force, Center for Environmental Excellence
WL-124AJETA	6965108.00	2292368.00	01/22/01	310	U.S. Air Force, Center for Environmental Excellence
WL-127JETA	6964804.08	2292467.36	12/12/00	75	U.S. Air Force, Center for Environmental Excellence
WL-150JETA	6964352.32	2291866.76	12/12/00	250	U.S. Air Force, Center for Environmental Excellence
WL-153JETA	6964329.24	2291906.43	12/12/00	240	U.S. Air Force, Center for Environmental Excellence
WL-155JETA	6964315.00	2291929.84	12/12/00	310	U.S. Air Force, Center for Environmental Excellence
WL-158JETA	6964300.36	2291955.82	12/12/00	140	U.S. Air Force, Center for Environmental Excellence
WL-160JETA	6964290.24	2291969.86	12/20/00	490	U.S. Air Force, Center for Environmental Excellence
WL-161JETA	6964284.87	2291981.87	12/12/00	180	U.S. Air Force, Center for Environmental Excellence
WL-163JETA	6964274.54	2291998.95	12/12/00	180	U.S. Air Force, Center for Environmental Excellence
WL-164JETA	6964269.73	2292007.70	12/12/00	230	U.S. Air Force, Center for Environmental Excellence
WL-165JETA	6964259.62	2292024.31	12/12/00	400	U.S. Air Force, Center for Environmental Excellence
WL-166JETA	6964264.16	2292015.93	12/12/00	290	U.S. Air Force, Center for Environmental Excellence
WL-167JETA	6964254.13	2292033.79	12/12/00	370	U.S. Air Force, Center for Environmental Excellence
WL-169JETA	6964244.25	2292050.42	12/12/00	430	U.S. Air Force, Center for Environmental Excellence
WL-171JETA	6964233.96	2292067.54	12/12/00	110	U.S. Air Force, Center for Environmental Excellence
WL-174JETA	6964219.01	2292093.61	12/12/00	24	U.S. Air Force, Center for Environmental Excellence
WL-177JETA	6964202.14	2292120.93	12/12/00	16	U.S. Air Force, Center for Environmental Excellence
WL-106PJETA	6964408.57	2291918.53	09/12/00	450	U.S. Air Force, Center for Environmental Excellence
WL-107PJETA	6964270.67	2292104.81	09/12/00	36	U.S. Air Force, Center for Environmental Excellence
WL-111PJETA	6965503.53	2292457.25	09/12/00	47	U.S. Air Force, Center for Environmental Excellence
WL-112PJETA	6965552.59	2292611.65	09/14/00	18	U.S. Air Force, Center for Environmental Excellence

54 Subsurface Occurrence and Potential Source Areas of Chlorinated Ethenes, AFP4 and NAS–JRB, Fort Worth, Texas

Table A3. Maximum historical *cis*-1,2-dichloroethene (*cis*-DCE) concentrations in the alluvial aquifer, Air Force Plant 4 (AFP4) and Naval Air Station-Joint Reserve Base Carswell Field (NAS–JRB) study area, Fort Worth, Texas, 1991–2003—Continued.

Well number	Northing	Easting	Date collected	Maximum historical concentration (micrograms per liter)	Source
WL–113PJETA	6963992.83	2293299.90	09/13/00	240	U.S. Air Force, Center for Environmental Excellence
WL–114PJETA	6963706.19	2292811.25	09/13/00	0	U.S. Air Force, Center for Environmental Excellence
WL–115PJETA	6964132.59	2292806.95	09/13/00	290	U.S. Air Force, Center for Environmental Excellence
WL–116PJETA	6964862.56	2292604.32	09/14/00	190	U.S. Air Force, Center for Environmental Excellence
WP07–10B	6961277.46	2296040.45	01/22/99	500	HydroGeoLogic, Inc.
WSAICTA002	6964473.05	2294921.57	12/14/00	1	Science Applications International Corp.
WSAICTA003	6962921.08	2294630.39	12/11/00	500	Science Applications International Corp.
WSAICTA004	6963343.80	2293586.34	12/14/00	23	Science Applications International Corp.
WSAICTA005	6963578.03	2293587.28	12/14/00	86	Science Applications International Corp.
WSAICTA007	6961971.36	2294861.23	09/27/01	357	Science Applications International Corp.
WSAICTA008	6961974.34	2294585.80	04/11/02	100	Ellis Environmental Group
WSAICTA010	6962655.14	2294341.87	04/11/02	230	Ellis Environmental Group
WSAICTA014	6963885.00	2293582.00	09/25/01	103	Science Applications International Corp.
WSAICTA015	6966805.36	2299042.92	09/24/01	12	Science Applications International Corp.
WSAICTA016	6966551.89	2299049.00	05/01/03	110	Earth Tech Corporation
WSAICTA017	6966921.03	2298810.34	09/24/01	0	Science Applications International Corp.
WSAICTA021	6966905.72	2299748.32	10/03/01	0	Science Applications International Corp.
WSAICTA023	6967077.62	2298656.36	10/17/02	100	Earth Tech Corporation
WSAICTA025	6961666.49	2294798.23	10/03/01	2	Science Applications International Corp.
WSAICTA026	6961723.12	2294432.29	06/21/02	0	Science Applications International Corp.
WUSGSTA001	6962644.00	2297002.00	06/01/98	80.4	U.S. Geological Survey
WUSGSTA002	6962263.00	2296964.00	02/01/98	0	U.S. Geological Survey
WUSGSTA003	6961872.00	2296987.00	06/01/98	3.9	U.S. Geological Survey
WUSGSTA004	6962085.00	2297504.00	06/01/98	87.1	U.S. Geological Survey
WUSGSTA005	6961955.00	2297925.00	02/01/98	5.15	U.S. Geological Survey
WUSGSTA006	6961670.00	2298251.00	02/01/98	3.95	U.S. Geological Survey
WUSGSTA007	6962684.00	2298206.00	02/01/98	65	U.S. Geological Survey
WUSGSTA008	6962636.00	2296832.00	06/01/98	21.1	U.S. Geological Survey
WUSGSTA009	6962766.00	2296661.00	02/01/98	195	U.S. Geological Survey
WUSGSTA010	6962707.00	2296719.00	02/01/98	140	U.S. Geological Survey
WUSGSTA011	6962668.00	2296825.00	06/01/98	140.7	U.S. Geological Survey
WUSGSTA012	6962787.00	2297104.00	05/01/99	83	U.S. Geological Survey
WUSGSTA013	6962745.00	2297215.00	02/01/98	55	U.S. Geological Survey
WUSGSTA014	6962826.00	2297306.00	06/01/98	67	U.S. Geological Survey
WUSGSTA015	6963054.00	2296591.00	02/01/98	112.5	U.S. Geological Survey
WUSGSTA016	6963036.00	2296370.00	02/01/98	110	U.S. Geological Survey
WUSGSTA017	6962675.00	2296815.00	06/01/98	154.1	U.S. Geological Survey
WUSGSTA018	6962566.00	2297413.00	06/01/98	80.4	U.S. Geological Survey
WUSGSTA019	6963009.00	2297050.00	02/01/98	65	U.S. Geological Survey
WUSGSTA020	6962722.00	2296818.00	06/01/98	160.8	U.S. Geological Survey
WUSGSTA021	6962659.00	2296814.00	05/01/99	241	U.S. Geological Survey
WUSGSTA022	6962736.00	2296740.00	06/01/98	174.2	U.S. Geological Survey
WUSGSTA023	6962638.00	2296810.00	02/01/98	4.78	U.S. Geological Survey
W7TAITC	6966050.00	2290097.00	01/26/00	3,400	U.S. Air Force, Center for Environmental Excellence
W9AWNITC	6965921.00	2289851.00	01/24/00	11,000	U.S. Air Force, Center for Environmental Excellence
W9WNITC	6965916.00	2289859.00	10/16/99	0	U.S. Air Force, Center for Environmental Excellence

Table A4. Maximum historical *trans*-1,2-dichloroethene (*trans*-DCE) concentrations in the alluvial aquifer, Air Force Plant 4 (AFP4) and Naval Air Station-Joint Reserve Base Carswell Field (NAS-JRB) study area, Fort Worth, Texas, 1983–2003.

[Northing, north state plane coordinate of north-south distance, in feet, from reference location (N6561666.67); Easting, east state plane coordinate of east-west distance, in feet, from reference location (E1968500.00)]

Well number	Northing	Easting	Date collected	Maximum historical concentration (micrograms per liter)	Source
1-A	6964505.00	2300900.00	03/05/85	0	Radian Corporation
1-B	6964685.00	2301062.00	10/15/97	0	HydroGeoLogic, Inc.
1-C	6964450.00	2301255.00	03/05/85	0	Radian Corporation
5-B	6962558.83	2295444.82	03/05/85	0	Radian Corporation
BGSMW01	6964916.00	2299511.00	04/09/97	0	International Technology Corp.
BSS-A	6965476.60	2300120.78	01/10/96	0	Law Environmental
BSS-B	6965797.63	2300091.88	01/15/96	0	Law Environmental
CAR-RW1	6960869.00	2296755.00	09/16/99	51	HydroGeoLogic, Inc.
CAR-RW10	6961279.06	2296078.88	09/16/99	49	HydroGeoLogic, Inc.
CAR-RW11	6961412.39	2296075.74	09/16/99	66	HydroGeoLogic, Inc.
CAR-RW12	6961192.46	2295933.72	09/16/99	65	HydroGeoLogic, Inc.
CAR-RW2	6961223.00	2296673.00	09/16/99	63	HydroGeoLogic, Inc.
CAR-RW4	6961112.00	2296685.00	09/17/99	38	HydroGeoLogic, Inc.
CAR-RW5	6961318.00	2296638.00	09/16/99	85	HydroGeoLogic, Inc.
CAR-RW6	6961112.00	2296510.00	09/17/99	45	HydroGeoLogic, Inc.
CAR-RW8	6961214.00	2296306.00	09/16/99	54	HydroGeoLogic, Inc.
CAR-RW9	6961221.00	2297006.00	09/17/99	39	HydroGeoLogic, Inc.
F-204	6965223.00	2290634.70	11/10/95	0	Jacobs Engineering Group
F-209	6969007.27	2290901.72	05/01/03	0	Earth Tech Corporation
F-214	6966040.04	2289864.00	10/24/02	1,700	Earth Tech Corporation
F-216	6965776.18	2290219.93	10/08/95	0	Jacobs Engineering Group
F-217	6965959.98	2290109.05	01/27/00	10	U.S. Air Force, Center for Environmental Excellence
F-218	6964024.29	2291474.21	05/06/01	36	U.S. Air Force, Center for Environmental Excellence
F-219	6964343.31	2291472.82	10/30/95	0	Jacobs Engineering Group
F-220	6964050.32	2290236.60	11/13/95	0	Jacobs Engineering Group
F-221	6963244.60	2290575.22	10/27/95	0	Jacobs Engineering Group
FSA-3-03	6969021.17	2290678.81	11/10/95	0	Jacobs Engineering Group
FSA-3-04	6969021.23	2290632.44	11/10/95	0	Jacobs Engineering Group
FSA-3-06	6969077.00	2290679.76	11/16/95	0	Jacobs Engineering Group
FSA-3-08	6969116.51	2290712.86	11/14/95	0	Jacobs Engineering Group
FSA-3-10	6969075.75	2290779.47	11/14/95	0	Jacobs Engineering Group
FSA-3-12	6968999.05	2290836.80	11/13/95	0	Jacobs Engineering Group
FT08-11A	6962321.00	2295878.00	02/16/01	0	HydroGeoLogic, Inc.
FT08-11B	6962034.00	2295931.00	04/12/95	12	Law Environmental
FT09-12A	6960549.82	2295439.22	12/05/01	0	HydroGeoLogic, Inc.
FT09-12B	6960709.31	2295697.41	02/21/01	7	HydroGeoLogic, Inc.
FT09-12C	6960590.30	2295771.51	01/24/97	3	CH2M Hill
FT09-12E	6960701.08	2295821.16	12/05/01	5	HydroGeoLogic, Inc.
GMI-02M	6964661.03	2288826.22	10/06/95	0	Jacobs Engineering Group
GMI-04-01M	6960931.00	2296729.00	10/29/97	41	HydroGeoLogic, Inc.
GMI-05M	6964307.19	2288362.92	10/05/95	0	Jacobs Engineering Group
GMI-22-01M	6965122.22	2297689.15	07/16/95	0	Law Environmental
GMI-22-02M	6966633.00	2296187.00	05/01/03	0	Earth Tech Corporation
GMI-22-03M	6966219.92	2298539.37	05/01/03	77	Earth Tech Corporation
GMI-22-04M	6967250.52	2297341.00	04/30/97	15	CH2M Hill
GMI-22-05M	6966940.33	2299432.08	05/01/03	0	Earth Tech Corporation
GMI-22-06M	6967004.48	2298186.58	04/27/98	110	HydroGeoLogic, Inc.
GMI-22-07M	6969019.00	2298323.00	05/01/03	0	Earth Tech Corporation
GMI-22-08M	6970324.00	2298972.00	01/11/96	0	Law Environmental
HM-10	6965810.91	2290121.80	04/29/95	1.1	Jacobs Engineering Group

56 Subsurface Occurrence and Potential Source Areas of Chlorinated Ethenes, AFP4 and NAS–JRB, Fort Worth, Texas

Table A4. Maximum historical *trans*-1,2-dichloroethene (*trans*-DCE) concentrations in the alluvial aquifer, Air Force Plant 4 (AFP4) and Naval Air Station-Joint Reserve Base Carswell Field (NAS–JRB) study area, Fort Worth, Texas, 1983–2003—Continued.

Well number	Northing	Easting	Date collected	Maximum historical concentration (micrograms per liter)	Source
HM–101	6964442.18	2288886.61	04/18/86	0	Radian Corporation
HM–104	6963114.28	2291200.56	01/19/96	0	Jacobs Engineering Group
HM–106	6968075.70	2290771.26	10/24/95	0	Jacobs Engineering Group
HM–11	6963091.76	2290932.28	08/29/83	1,000	Hargis + Associates
HM–110	6963667.53	2293163.24	10/13/99	1	HydroGeoLogic, Inc.
HM–111	6963624.05	2293266.53	10/10/95	0	Jacobs Engineering Group
HM–112	6964218.00	2293142.65	04/06/00	5	HydroGeoLogic, Inc.
HM–113	6964677.00	2293133.60	01/20/96	480	Jacobs Engineering Group
HM–114	6963912.10	2294352.00	04/11/02	1	Ellis Environmental Group
HM–116	6966411.43	2294283.69	10/18/99	1	HydroGeoLogic, Inc.
HM–118	6968035.19	2294780.47	10/14/02	0	Ellis Environmental Group
HM–119	6968726.00	2294271.80	05/01/03	0	Earth Tech Corporation
HM–12	6963088.53	2290396.72	02/14/86	0	Radian Corporation
HM–120	6969489.04	2295343.23	05/01/03	0	Earth Tech Corporation
HM–121	6967390.20	2295279.20	11/07/95	0	Jacobs Engineering Group
HM–123	6961638.50	2295272.60	01/27/99	24	HydroGeoLogic, Inc.
HM–124	6963957.77	2295223.26	11/14/95	0	Jacobs Engineering Group
HM–126	6963121.05	2294300.23	04/03/01	3	HydroGeoLogic, Inc.
HM–127	6961588.47	2294853.29	05/01/03	0	Earth Tech Corporation
HM–13	6963100.15	2289898.00	10/25/95	0	Jacobs Engineering Group
HM–14	6963093.00	2289243.30	11/01/95	0	Jacobs Engineering Group
HM–16	6964155.13	2290241.53	04/05/86	0	Radian Corporation
HM–17	6963993.31	2290451.65	10/31/95	0	Jacobs Engineering Group
HM–23	6963113.58	2288752.31	04/05/86	0	Radian Corporation
HM–29	6966014.89	2290711.88	04/02/86	25	Radian Corporation
HM–31	6963114.44	2291505.33	10/21/02	11	Earth Tech Corporation
HM–36	6965484.00	2289786.00	10/28/99	3	U.S. Air Force, Center for Environmental Excellence
HM–56	6965454.00	2291472.23	03/20/85	35	Hargis + Associates
HM–59	6966811.00	2291469.61	01/15/03	0	Earth Tech Corporation
HM–64	6966406.97	2291114.57	10/11/85	1	Radian Corporation
HM–7	6966159.99	2290135.86	01/27/00	1	U.S. Air Force, Center for Environmental Excellence
HM–71	6966470.35	2292457.39	02/03/86	74.5	Radian Corporation
HM–88	6964479.91	2291919.17	11/07/98	23.3	Jacobs Engineering Group
HM–90	6965640.09	2292457.85	05/21/93	0	Jacobs Engineering Group
HM–91	6966174.30	2292586.29	06/04/93	0	Jacobs Engineering Group
HM–92	6965645.68	2292250.42	10/28/95	0	Jacobs Engineering Group
HM–93	6965074.75	2292194.39	05/01/03	0	Earth Tech Corporation
HM–95	6965442.59	2293156.22	10/24/01	1	U.S. Air Force, Center for Environmental Excellence
HM–96	6965442.59	2293156.22	01/15/03	1.2	Earth Tech Corporation
HM–97	6966507.03	2293168.95	05/26/93	0	Jacobs Engineering Group
HM–98	6966884.14	2293158.51	05/01/03	0	Earth Tech Corporation
ITMW–01T	6967418.95	2293207.55	10/08/98	1	HydroGeoLogic, Inc.
LF01–1D	6961062.05	2298967.00	10/14/98	0	HydroGeoLogic, Inc.
LF01–1E	6964288.00	2301413.00	10/20/97	0	HydroGeoLogic, Inc.
LF03–3D	6964606.00	2301174.00	05/01/03	0	Earth Tech Corporation
LF04–01	6962056.65	2293269.12	12/06/01	0	HydroGeoLogic, Inc.
LF04–02	6961026.99	2295378.56	03/26/01	38	HydroGeoLogic, Inc.
LF04–03	6961113.06	2296309.10	09/16/99	53	HydroGeoLogic, Inc.
LF04–04	6961064.00	2296306.00	01/13/96	0	Law Environmental
LF04–10	6960941.63	2297165.64	05/01/03	0	Earth Tech Corporation

Table A4. Maximum historical *trans*-1,2-dichloroethene (*trans*-DCE) concentrations in the alluvial aquifer, Air Force Plant 4 (AFP4) and Naval Air Station-Joint Reserve Base Carswell Field (NAS-JRB) study area, Fort Worth, Texas, 1983–2003—Continued.

Well number	Northing	Easting	Date collected	Maximum historical concentration (micrograms per liter)	Source
LF04-4C	6960411.83	2297078.91	04/13/99	2	HydroGeoLogic, Inc.
LF04-4D	6960600.00	2296588.00	05/05/03	3.5	HydroGeoLogic, Inc.
LF05-01	6960828.00	2296412.00	01/28/99	13	HydroGeoLogic, Inc.
LF05-02	6962728.35	2294577.83	01/13/96	57	Law Environmental
LF05-18	6962653.12	2295278.95	10/29/97	41	HydroGeoLogic, Inc.
LF05-19	6961555.64	2297075.43	01/25/97	15	CH2M Hill
LF05-5B	6961239.89	2297461.35	10/16/02	26	Ellis Environmental Group
LF05-5D	6961901.56	2296078.25	01/14/96	67	Law Environmental
LF05-5G	6961739.00	2295754.00	10/25/00	36	HydroGeoLogic, Inc.
LF05-5H	6961558.00	2296690.00	06/20/02	140	HydroGeoLogic, Inc.
LSA1628-1	6961732.39	2296340.79	10/20/95	0	Law Environmental
LSA1628-2	6967936.00	2297802.00	01/15/96	52	Law Environmental
LSA1628-3	6967943.00	2297847.00	07/19/99	67	HydroGeoLogic, Inc.
MW-10	6967993.10	2297791.30	10/30/97	0	HydroGeoLogic, Inc.
MW-11	6965836.22	2300542.00	10/24/97	0	HydroGeoLogic, Inc.
MW-12	6965707.00	2300792.00	08/22/01	0	Science Applications International Corp.
MW-19	6966149.32	2300142.00	08/22/01	1	Science Applications International Corp.
MW-38	6963513.00	2295369.00	12/04/01	0	HydroGeoLogic, Inc.
MW-5	6965981.00	2298153.00	10/16/00	0	U.S. Air Force, Center for Environmental Excellence
MW-5	6963910.00	2290826.00	10/25/01	0	U.S. Air Force, Center for Environmental Excellence
MW-50	6968529.00	2295622.00	07/22/96	0	Jacobs Engineering Group
MW-53	6964378.00	2296200.00	05/01/03	0	Earth Tech Corporation
MW-5C	6965804.00	2300139.00	04/10/97	0	International Technology Corp.
MW-7CRSWL	6965967.00	2300055.00	08/22/01	0	Science Applications International Corp.
MW-8	6965584.95	2300492.00	01/10/96	0	Law Environmental
MW-9	6966001.79	2300330.00	10/20/97	0	HydroGeoLogic, Inc.
MW-IT-01T	6961062.00	2298967.00	11/05/98	.99	Jacobs Engineering Group
MWMTAC-001	6959116.00	2296520.00	12/12/96	0	Jacobs Engineering Group
OT-15C	6963316.00	2300948.00	10/20/97	0	HydroGeoLogic, Inc.
RW-11U	6965385.00	2292586.20	07/30/94	6	U.S. Air Force, Center for Environmental Excellence
RW-1U	6965269.00	2292468.70	01/19/93	0	U.S. Air Force, Center for Environmental Excellence
RW-3UR	6964444.10	2292090.10	12/14/00	8	U.S. Air Force, Center for Environmental Excellence
RW-8UR	6964339.00	2291990.60	12/14/00	0	U.S. Air Force, Center for Environmental Excellence
SD13-01	6963377.64	2300623.03	10/31/00	0	HydroGeoLogic, Inc.
SD13-02	6963472.80	2300754.49	10/27/00	0	HydroGeoLogic, Inc.
SD13-03	6963347.97	2300700.85	01/11/96	0	Law Environmental
SD13-04	6963346.39	2300773.06	10/31/00	0	HydroGeoLogic, Inc.
SD13-05	6963904.00	2300776.00	01/12/96	0	Law Environmental
SD13-06	6963164.35	2300908.00	06/26/01	0	HydroGeoLogic, Inc.
SD13-07	6963165.85	2301009.00	07/02/01	0	HydroGeoLogic, Inc.
SPOT35-2	6966175.00	2296854.00	10/28/97	0	HydroGeoLogic, Inc.
SPOT35-3	6966109.00	2296851.00	12/03/01	0	HydroGeoLogic, Inc.
SPOT35-4	6966175.00	2296778.00	10/28/97	0	HydroGeoLogic, Inc.
SPOT35-5	6966020.04	2296847.00	10/14/02	0	Ellis Environmental Group
SPOT35-8	6966428.55	2296970.16	04/07/00	53	HydroGeoLogic, Inc.
ST14-01	6963295.30	2300090.83	01/11/96	0	Law Environmental
ST14-02	6963511.64	2300091.66	01/13/96	0	Law Environmental
ST14-03	6964079.97	2299891.62	10/09/02	0	Ellis Environmental Group
ST14-04	6963642.65	2300345.31	01/13/96	0	Law Environmental
ST14-14	6964309.76	2299735.00	05/01/98	0	HydroGeoLogic, Inc.

58 Subsurface Occurrence and Potential Source Areas of Chlorinated Ethenes, AFP4 and NAS–JRB, Fort Worth, Texas

Table A4. Maximum historical *trans*-1,2-dichloroethene (*trans*-DCE) concentrations in the alluvial aquifer, Air Force Plant 4 (AFP4) and Naval Air Station-Joint Reserve Base Carswell Field (NAS–JRB) study area, Fort Worth, Texas, 1983–2003—Continued.

Well number	Northing	Easting	Date collected	Maximum historical concentration (micrograms per liter)	Source
ST14–24	6964018.00	2299061.45	10/12/99	0	HydroGeoLogic, Inc.
ST14–26	6964593.00	2299557.00	04/13/98	0	HydroGeoLogic, Inc.
ST14–27	6964258.00	2300212.00	10/30/00	0	HydroGeoLogic, Inc.
ST14–W05	6963726.00	2299094.00	10/10/02	0	Ellis Environmental Group
ST14–W06	6963807.00	2299331.00	01/11/96	0	Law Environmental
ST14–W07	6963615.00	2299394.00	01/12/96	0	Law Environmental
ST14–W08	6964324.00	2299480.00	01/12/96	0	Law Environmental
ST14–W09	6963472.00	2299550.00	10/18/95	2	Law Environmental
ST14–W11	6964129.00	2299658.00	10/27/00	0	HydroGeoLogic, Inc.
ST14–W13	6963695.00	2299776.00	01/11/96	0	Law Environmental
ST14–W15	6963316.00	2299923.00	05/01/03	0	Earth Tech Corporation
ST14–W16	6964065.00	2300128.00	10/30/00	0	HydroGeoLogic, Inc.
ST14–W21	6963418.00	2300242.00	10/31/00	0	HydroGeoLogic, Inc.
ST14–W31	6963550.00	2300831.00	10/12/99	0	HydroGeoLogic, Inc.
T8	6965421.00	2289949.00	01/14/02	0	U.S. Air Force, Center for Environmental Excellence
T9	6965551.00	2289993.00	01/14/02	1	U.S. Air Force, Center for Environmental Excellence
USGS01T	6970384.00	2297661.30	12/09/96	0	Jacobs Engineering Group
USGS02T	6970326.56	2300333.85	12/09/96	0	Jacobs Engineering Group
USGS03T	6968704.70	2300610.01	01/10/96	0	Law Environmental
USGS04T	6968758.00	2299178.00	10/09/02	0	Ellis Environmental Group
USGS06T	6963763.00	2297542.08	05/01/03	0	Earth Tech Corporation
USGS07T	6960168.00	2295246.00	10/11/02	0	Ellis Environmental Group
VEP–10	6965452.00	2289741.00	05/07/02	0	Earth Tech Corporation
VEP–11	6965472.00	2289741.00	05/08/02	2.4	Earth Tech Corporation
VEP–12	6965492.14	2289740.47	05/08/02	24	Earth Tech Corporation
VEP–13	6965512.00	2289740.00	05/15/03	17	Shah Environmental
VEP–14	6965532.35	2289740.23	05/08/02	11	Earth Tech Corporation
VEP–15	6965572.27	2289739.27	05/09/02	2.2	Earth Tech Corporation
VEP–16	6965593.48	2289739.28	05/09/02	0	Earth Tech Corporation
VEP–18	6965631.89	2289739.19	05/09/02	29	Earth Tech Corporation
VEP–18B	6965652.25	2289740.40	10/22/02	50	Earth Tech Corporation
VEP–19	6965673.36	2289738.41	05/09/02	8	Earth Tech Corporation
VEP–20	6965692.62	2289738.81	05/10/02	1.9	Earth Tech Corporation
VEP–21	6965885.28	2289766.47	05/11/02	1.4	Earth Tech Corporation
VEP–22	6965904.64	2289772.36	05/11/02	4.9	Earth Tech Corporation
VEP–23	6965923.82	2289776.40	05/11/02	5.4	Earth Tech Corporation
VEP–24	6965947.42	2289785.33	05/11/02	12	Earth Tech Corporation
VEP–25	6965961.57	2289792.04	05/11/02	16	Earth Tech Corporation
VEP–26	6965979.44	2289801.00	05/15/03	1,150	Shah Environmental
VEP–27	6965996.42	2289811.11	05/12/02	120	Earth Tech Corporation
VEP–28	6966006.35	2289828.89	05/12/02	23	Earth Tech Corporation
VEP–29	6966014.37	2289844.00	05/15/03	980	Shah Environmental
VEP–3	6966027.00	2289825.00	05/12/02	22	Earth Tech Corporation
VEP–31	6966040.69	2289879.41	05/13/02	15	Earth Tech Corporation
VEP–32	6966058.55	2289884.99	05/13/02	5.6	Earth Tech Corporation
VEP–33	6966075.62	2289893.21	05/14/02	23	Earth Tech Corporation
VEP–35	6966114.00	2289901.00	05/14/02	140	Earth Tech Corporation
VEP–36	6966135.75	2289905.70	05/14/02	59	Earth Tech Corporation
VEP–37	6966155.08	2289906.66	05/14/02	51	Earth Tech Corporation
VEP–4	6966050.33	2289838.40	05/12/02	100	Earth Tech Corporation

Table A4. Maximum historical *trans*-1,2-dichloroethene (*trans*-DCE) concentrations in the alluvial aquifer, Air Force Plant 4 (AFP4) and Naval Air Station-Joint Reserve Base Carswell Field (NAS-JRB) study area, Fort Worth, Texas, 1983–2003—Continued.

Well number	Northing	Easting	Date collected	Maximum historical concentration (micrograms per liter)	Source
VEP-40	6966096.49	2289877.53	05/13/02	1.4	Earth Tech Corporation
VEP-41	6966067.00	2289850.00	05/13/02	38	Earth Tech Corporation
VEP-5	6965352.65	2289735.96	05/07/02	0	Earth Tech Corporation
VEP-6	6965371.63	2289740.48	05/07/02	0	Earth Tech Corporation
VEP-7	6965393.00	2289742.00	05/07/02	0	Earth Tech Corporation
VEP-8	6965413.00	2289741.00	05/07/02	0	Earth Tech Corporation
VEP-9	6965432.00	2289741.00	05/07/02	0	Earth Tech Corporation
VEPT-1	6965717.00	2289740.00	05/09/02	2.1	Earth Tech Corporation
VEPT-2	6965739.00	2289741.00	05/10/02	2.2	Earth Tech Corporation
W-129	6965935.87	2289777.80	05/12/93	1.6	Jacobs Engineering Group
W-130	6966042.89	2289868.15	06/14/93	0	Jacobs Engineering Group
W-131L	6963276.81	2290536.11	10/19/91	0	Chem-Nuclear Geotech, Inc.
W-131U	6963278.00	2290541.00	10/24/91	0	Chem-Nuclear Geotech, Inc.
W-132	6966136.51	2289895.52	09/10/91	8	Chem-Nuclear Geotech, Inc.
W-133U	6963349.00	2290609.00	06/06/93	0	Jacobs Engineering Group
W-134	6969156.00	2291067.00	05/14/93	0	Jacobs Engineering Group
W-135	6967837.68	2290606.07	05/01/03	0	Earth Tech Corporation
W-137	6963499.00	2290968.00	01/25/97	0	Jacobs Engineering Group
W-141L	6965386.71	2290672.36	10/18/91	0	Chem-Nuclear Geotech, Inc.
W-141U	6965391.58	2290672.52	06/14/93	0	Jacobs Engineering Group
W-143	6968548.58	2291192.24	09/11/91	0	Chem-Nuclear Geotech, Inc.
W-144	6965577.00	2290450.00	10/17/91	0	Chem-Nuclear Geotech, Inc.
W-145	6964387.65	2290600.35	09/15/91	0	Chem-Nuclear Geotech, Inc.
W-146	6965118.51	2290620.30	05/09/93	0	Jacobs Engineering Group
W-147	6965824.00	2290711.00	01/15/03	0	Earth Tech Corporation
W-149	6965190.70	2292456.97	04/23/98	3.1	Jacobs Engineering Group
W-151	6964980.90	2292475.30	05/25/93	0	Jacobs Engineering Group
W-154	6963926.46	2290107.04	10/20/91	0	Chem-Nuclear Geotech, Inc.
W-155	6968275.39	2293145.82	01/15/03	0	Earth Tech Corporation
W-156	6964824.12	2292815.02	05/27/93	0	Jacobs Engineering Group
W-158	6963954.83	2291080.82	06/06/93	0	Jacobs Engineering Group
W-160	6963448.68	2291368.51	01/24/97	17.2	Jacobs Engineering Group
W7TAITC	6966050.00	2290097.00	01/26/00	10	U.S. Air Force, Center for Environmental Excellence
W9AWNITC	6965921.00	2289851.00	01/24/00	0	U.S. Air Force, Center for Environmental Excellence
W9WNITC	6965916.00	2289859.00	10/16/99	0	U.S. Air Force, Center for Environmental Excellence
WCHMHTA004	6967949.00	2295041.00	09/26/01	0	Science Applications International Corp.
WCHMHTA006	6966690.11	2295406.97	05/01/03	.8	Earth Tech Corporation
WCHMHTA008	6967889.89	2295597.48	05/01/03	0	Earth Tech Corporation
WCHMHTA009	6968444.69	2296663.99	04/04/01	0	HydroGeoLogic, Inc.
WCHMHTA010	6967640.08	2296398.80	05/01/03	0	Earth Tech Corporation
WCHMHTA011	6969295.20	2297328.38	09/26/01	0	Science Applications International Corp.
WCHMHTA013	6967056.00	2300052.00	05/01/03	0	Earth Tech Corporation
WCHMHTA014	6970403.90	2294072.81	10/14/02	0	Ellis Environmental Group
WCOETA002	6962944.00	2296763.00	07/01/03	0	U.S. Geological Survey
WCOETA004	6962828.00	2296675.00	07/01/03	0	U.S. Geological Survey
WCOETA006	6962928.00	2296921.00	07/01/02	0	U.S. Geological Survey
WCOETA010	6962696.00	2296798.00	01/01/00	2.2	U.S. Geological Survey
WHGLFE001	6961575.00	2296063.00	06/19/02	24	HydroGeoLogic, Inc.
WHGLFE002	6961284.00	2296060.00	06/18/02	26	HydroGeoLogic, Inc.
WHGLFE003	6961079.00	2295934.00	06/17/02	5.9	HydroGeoLogic, Inc.

60 Subsurface Occurrence and Potential Source Areas of Chlorinated Ethenes, AFP4 and NAS–JRB, Fort Worth, Texas

Table A4. Maximum historical *trans*-1,2-dichloroethene (*trans*-DCE) concentrations in the alluvial aquifer, Air Force Plant 4 (AFP4) and Naval Air Station-Joint Reserve Base Carswell Field (NAS–JRB) study area, Fort Worth, Texas, 1983–2003—Continued.

Well number	Northing	Easting	Date collected	Maximum historical concentration (micrograms per liter)	Source
WHGLFE004	6960785.00	2295825.00	06/19/02	0	HydroGeoLogic, Inc.
WHGLRW015	6960871.43	2298662.64	10/24/00	0	HydroGeoLogic, Inc.
WHGLRW016	6961034.95	2299201.47	10/16/02	0	Ellis Environmental Group
WHGLRW017	6960727.11	2299000.59	04/19/02	0	Ellis Environmental Group
WHGLRW018	6960532.93	2298744.63	11/01/99	0	HydroGeoLogic, Inc.
WHGLRW019	6960684.23	2298620.19	11/04/99	0	HydroGeoLogic, Inc.
WHGLTA003	6961043.88	2298029.84	10/05/99	0	HydroGeoLogic, Inc.
WHGLTA004	6962943.38	2295760.62	10/18/99	7	HydroGeoLogic, Inc.
WHGLTA005	6963470.00	2301044.00	10/18/99	0	HydroGeoLogic, Inc.
WHGLTA007	6963162.51	2301093.11	06/26/01	0	HydroGeoLogic, Inc.
WHGLTA008	6963955.17	2300016.84	10/11/99	0	HydroGeoLogic, Inc.
WHGLTA009	6965211.65	2297528.70	04/11/02	1	Ellis Environmental Group
WHGLTA010	6965580.03	2296770.93	10/31/00	0	HydroGeoLogic, Inc.
WHGLTA011	6968356.67	2295873.87	07/13/00	0	HydroGeoLogic, Inc.
WHGLTA012	6965920.84	2297740.00	04/10/02	14	Ellis Environmental Group
WHGLTA013	6965958.00	2297177.00	12/04/01	0	HydroGeoLogic, Inc.
WHGLTA014	6966295.34	2297373.92	10/27/00	140	HydroGeoLogic, Inc.
WHGLTA020	6962285.83	2299684.95	11/05/99	0	HydroGeoLogic, Inc.
WHGLTA022	6960401.65	2297691.54	11/03/99	0	HydroGeoLogic, Inc.
WHGLTA023	6960492.16	2298565.43	11/04/99	0	HydroGeoLogic, Inc.
WHGLTA025	6961608.26	2298942.63	10/08/02	0	Ellis Environmental Group
WHGLTA028	6967761.00	2297451.00	04/17/02	16	Ellis Environmental Group
WHGLTA029	6965736.00	2298574.00	11/28/01	2	HydroGeoLogic, Inc.
WHGLTA043	6961771.99	2297021.32	10/16/02	19	Ellis Environmental Group
WHGLTA044	6961721.40	2297347.37	10/17/02	0	Ellis Environmental Group
WHGLTA045	6961321.90	2298368.80	10/17/02	0	Ellis Environmental Group
WHGLTA046	6961298.49	2296089.68	02/26/02	35	HydroGeoLogic, Inc.
WHGLTA048	6960916.20	2298714.83	05/01/03	0	Earth Tech Corporation
WHGLTA049	6962329.24	2299269.36	10/17/02	0	Ellis Environmental Group
WHGLTA050	6963013.36	2296420.09	04/06/01	0	HydroGeoLogic, Inc.
WHGLTA051	6962894.90	2296247.12	10/16/02	1	Ellis Environmental Group
WHGLTA052	6962769.45	2296098.07	04/06/01	2	HydroGeoLogic, Inc.
WHGLTA053	6960334.00	2295474.00	12/05/01	0	HydroGeoLogic, Inc.
WHGLTA054	6960748.26	2295541.09	10/11/02	68	Ellis Environmental Group
WHGLTA055	6960809.82	2295662.85	10/11/02	0	Ellis Environmental Group
WHGLTA056	6960787.36	2295827.62	04/06/01	1	HydroGeoLogic, Inc.
WHGLTA060	6965619.32	2298210.18	07/20/01	12	HydroGeoLogic, Inc.
WHGLTA061	6965621.74	2298341.01	11/27/01	0	HydroGeoLogic, Inc.
WHGLTA062	6965663.00	2298317.27	11/26/01	4	HydroGeoLogic, Inc.
WHGLTA063	6965677.07	2298270.14	07/20/01	4	HydroGeoLogic, Inc.
WHGLTA064	6965075.48	2298351.15	05/01/03	0	Earth Tech Corporation
WHGLTA065	6960593.00	2295633.00	12/06/01	2	HydroGeoLogic, Inc.
WHGLTA066	6960807.00	2295402.00	12/02/01	0	HydroGeoLogic, Inc.
WHGLTA067	6960876.00	2295733.00	12/02/01	0	HydroGeoLogic, Inc.
WHGLTA069	6961708.00	2296063.00	05/05/03	86	HydroGeoLogic, Inc.
WHGLTA070	6961576.00	2296056.00	05/05/03	93	HydroGeoLogic, Inc.
WHGLTA072	6961283.00	2296102.00	06/18/02	28	HydroGeoLogic, Inc.
WHGLTA073	6961283.00	2296167.00	06/18/02	15	HydroGeoLogic, Inc.
WHGLTA074	6961285.00	2296258.00	05/05/03	110	HydroGeoLogic, Inc.
WHGLTA075	6961072.00	2295934.00	06/17/02	2	HydroGeoLogic, Inc.

Table A4. Maximum historical *trans*-1,2-dichloroethene (*trans*-DCE) concentrations in the alluvial aquifer, Air Force Plant 4 (AFP4) and Naval Air Station-Joint Reserve Base Carswell Field (NAS-JRB) study area, Fort Worth, Texas, 1983–2003—Continued.

Well number	Northing	Easting	Date collected	Maximum historical concentration (micrograms per liter)	Source
WHGLTA076	6961086.00	2295934.00	05/05/03	29	HydroGeoLogic, Inc.
WHGLTA077	6960785.00	2295776.00	06/20/02	1.5	HydroGeoLogic, Inc.
WHGLTA082	6964396.00	2296386.00	10/10/02	3	Ellis Environmental Group
WHGLTA101	6964634.00	2301220.00	06/03/99	0	HydroGeoLogic, Inc.
WHGLTA102	6964449.00	2301388.00	06/03/99	0	HydroGeoLogic, Inc.
WHGLTA103	6964314.53	2301522.24	06/02/99	0	HydroGeoLogic, Inc.
WHGLTA104	6964226.00	2301608.00	11/02/99	0	HydroGeoLogic, Inc.
WHGLTA201	6963198.14	2298660.88	12/09/98	1	HydroGeoLogic, Inc.
WHGLTA202	6963326.21	2298832.59	12/14/98	0	HydroGeoLogic, Inc.
WHGLTA203	6963059.00	2298401.00	09/23/98	9	HydroGeoLogic, Inc.
WHGLTA204	6963625.62	2298104.66	12/10/98	0	HydroGeoLogic, Inc.
WHGLTA302	6962603.00	2294422.00	05/07/98	42	HydroGeoLogic, Inc.
WHGLTA303	6962351.00	2294401.00	05/08/98	46	HydroGeoLogic, Inc.
WHGLTA601	6962753.00	2297473.69	10/05/99	4	HydroGeoLogic, Inc.
WHGLTA602	6962752.66	2297625.01	09/25/98	6	HydroGeoLogic, Inc.
WHGLTA603	6962713.38	2297727.19	04/19/02	0	Ellis Environmental Group
WHGLTA604	6963195.00	2297530.00	12/14/98	0	HydroGeoLogic, Inc.
WHGLTA701	6961835.73	2295332.86	07/21/99	70	HydroGeoLogic, Inc.
WHGLTA702	6961920.00	2295882.00	09/28/98	37	HydroGeoLogic, Inc.
WHGLTA703	6961680.70	2295741.23	02/21/01	30	HydroGeoLogic, Inc.
WHGLTA704	6962141.07	2295831.51	09/24/98	8	HydroGeoLogic, Inc.
WHGLTA705	6962003.00	2296027.00	06/01/00	7	HydroGeoLogic, Inc.
WHGLTA706	6962146.00	2296031.00	07/13/00	1	HydroGeoLogic, Inc.
WHGLTA708	6962019.93	2295647.18	02/19/01	2	HydroGeoLogic, Inc.
WHGLTA709	6961934.71	2295750.93	02/19/01	34	HydroGeoLogic, Inc.
WHGLTA801	6962790.06	2295857.80	04/06/01	29	HydroGeoLogic, Inc.
WHGLTA901	6967832.00	2299643.00	11/02/99	0	HydroGeoLogic, Inc.
WHGLTA902	6967671.00	2299952.00	10/12/99	0	HydroGeoLogic, Inc.
WHGLTA903	6967830.00	2300086.00	10/12/99	0	HydroGeoLogic, Inc.
WHGLTA904	6968031.00	2300174.00	10/11/99	0	HydroGeoLogic, Inc.
WHGLTA905	6967574.00	2299782.00	10/11/99	0	HydroGeoLogic, Inc.
WINTTA027	6964477.66	2291931.10	12/20/00	0	U.S. Air Force, Center for Environmental Excellence
WITCTA001	6969592.01	2296447.73	04/28/97	0	International Technology Corp.
WITCTA002	6969259.49	2296136.48	05/06/97	0	International Technology Corp.
WITCTA003	6969112.00	2297406.00	10/09/02	0	Ellis Environmental Group
WITCTA004	6968940.00	2297491.00	05/01/03	1.7	Earth Tech Corporation
WITCTA005	6968459.46	2298167.79	04/28/97	0	International Technology Corp.
WITCTA006	6968427.00	2298263.00	05/02/97	0	International Technology Corp.
WITCTA008	6967940.00	2298030.00	05/01/97	0	International Technology Corp.
WITCTA009	6967862.00	2298234.00	08/23/01	9	Science Applications International Corp.
WITCTA010	6967695.00	2298753.00	04/04/00	2	HydroGeoLogic, Inc.
WITCTA011	6967455.26	2297357.31	04/30/97	0	International Technology Corp.
WITCTA012	6967348.77	2298224.39	05/01/03	110	Earth Tech Corporation
WITCTA013	6967017.00	2297752.00	08/23/01	7	Science Applications International Corp.
WITCTA014	6966904.57	2297418.51	08/23/01	8	Science Applications International Corp.
WITCTA015	6966333.00	2298395.00	08/23/01	38	Science Applications International Corp.
WITCTA016	6966239.00	2298062.00	07/20/99	160	HydroGeoLogic, Inc.
WITCTA017	6967298.15	2299305.78	10/17/02	11	Earth Tech Corporation
WITCTA019	6963107.00	2298838.00	10/09/02	0	Ellis Environmental Group
WITCTA020	6963895.32	2296316.79	04/29/97	0	International Technology Corp.

62 Subsurface Occurrence and Potential Source Areas of Chlorinated Ethenes, AFP4 and NAS–JRB, Fort Worth, Texas

Table A4. Maximum historical *trans*-1,2-dichloroethene (*trans*-DCE) concentrations in the alluvial aquifer, Air Force Plant 4 (AFP4) and Naval Air Station-Joint Reserve Base Carswell Field (NAS–JRB) study area, Fort Worth, Texas, 1983–2003—Continued.

Well number	Northing	Easting	Date collected	Maximum historical concentration (micrograms per liter)	Source
WITCTA021	6963795.40	2298719.16	05/01/97	0	International Technology Corp.
WITCTA022	6963651.00	2298744.00	04/29/97	0	International Technology Corp.
WITCTA024	6965971.78	2298956.02	10/09/02	0	Ellis Environmental Group
WITCTA025	6966005.00	2299534.00	04/09/02	39	Ellis Environmental Group
WITCTA026	6965458.00	2299481.00	10/09/02	0	Ellis Environmental Group
WITCTA027	6965194.74	2299511.86	04/24/97	0	International Technology Corp.
WITCTA028	6965161.00	2300621.00	04/24/97	0	International Technology Corp.
WITCTA031	6964690.00	2299152.00	05/01/97	0	International Technology Corp.
WITCTA032	6964501.67	2299196.64	04/30/97	0	International Technology Corp.
WITCTA033	6964388.00	2300520.00	04/30/97	0	International Technology Corp.
WITCTA034	6963956.68	2300951.49	04/30/97	0	International Technology Corp.
WITCTA035	6963388.12	2299094.68	05/01/97	0	International Technology Corp.
WITCTA036	6963182.00	2299629.00	05/02/97	0	International Technology Corp.
WITCTA037	6963424.00	2297784.00	04/29/97	0	International Technology Corp.
WITCTA039	6962339.77	2295415.41	05/01/97	0	International Technology Corp.
WITCTA040	6963260.00	2299515.00	05/01/03	0	Earth Tech Corporation
WITCTA041	6963169.00	2299642.00	10/09/02	0	Ellis Environmental Group
WITCTA043	6963110.00	2299725.00	10/10/02	0	Ellis Environmental Group
WITCTA044	6963056.00	2299836.00	10/06/99	0	HydroGeoLogic, Inc.
WJETA060	6963892.00	2290889.00	05/01/03	0	Earth Tech Corporation
WJETA061	6963915.00	2290873.00	05/03/02	0	Earth Tech Corporation
WJETA083	6964204.32	2292903.92	12/20/00	4	U.S. Air Force, Center for Environmental Excellence
WJETA086	6965443.05	2292457.02	12/14/00	0	U.S. Air Force, Center for Environmental Excellence
WJETA501	6962953.00	2296722.00	06/01/98	.5	U.S. Geological Survey
WJETA502	6962955.00	2296726.00	06/01/98	.6	U.S. Geological Survey
WJETA503	6962957.00	2296723.00	06/01/98	.5	U.S. Geological Survey
WJETA504	6962911.00	2296817.00	01/01/02	5.8	U.S. Geological Survey
WJETA505	6962911.00	2296820.00	02/01/98	.52	U.S. Geological Survey
WJETA507	6962835.00	2296843.00	06/01/98	.4	U.S. Geological Survey
WJETA508	6962836.00	2296841.00	07/01/00	4.2	U.S. Geological Survey
WJETA509	6962837.00	2296842.00	06/01/98	.4	U.S. Geological Survey
WJETA510	6962680.00	2296812.00	01/01/00	20	U.S. Geological Survey
WJETA511	6962679.00	2296809.00	01/01/03	8.5	U.S. Geological Survey
WJETA512	6962682.00	2296810.00	06/01/98	10.4	U.S. Geological Survey
WJETA513	6962998.00	2296754.00	06/01/98	1.1	U.S. Geological Survey
WJETA514	6962864.00	2296751.00	07/01/01	1.1	U.S. Geological Survey
WJETA515	6962863.00	2296894.00	06/01/98	.8	U.S. Geological Survey
WJETA516	6962969.00	2296860.00	01/01/00	1.1	U.S. Geological Survey
WJETA517	6962866.00	2296714.00	01/01/00	.99	U.S. Geological Survey
WJETA518	6962950.00	2296714.00	02/01/98	.47	U.S. Geological Survey
WJETA519	6962842.00	2296754.00	01/01/03	1.1	U.S. Geological Survey
WJETA520	6962879.00	2296810.00	06/01/98	.8	U.S. Geological Survey
WJETA521	6962921.00	2296867.00	06/01/98	.8	U.S. Geological Survey
WJETA522	6962871.00	2296834.00	06/01/98	.7	U.S. Geological Survey
WJETA523	6962887.00	2296845.00	06/01/98	1	U.S. Geological Survey
WJETA524	6962818.00	2296807.00	06/01/98	1	U.S. Geological Survey
WJETA525	6962800.00	2296820.00	01/01/00	.7	U.S. Geological Survey
WJETA526	6962778.00	2296826.00	02/01/98	.53	U.S. Geological Survey
WJETA527	6962856.00	2296937.00	07/01/02	1.2	U.S. Geological Survey
WJETA528	6962815.00	2296880.00	07/01/01	12	U.S. Geological Survey

Table A4. Maximum historical *trans*-1,2-dichloroethene (*trans*-DCE) concentrations in the alluvial aquifer, Air Force Plant 4 (AFP4) and Naval Air Station-Joint Reserve Base Carswell Field (NAS-JRB) study area, Fort Worth, Texas, 1983–2003—Continued.

Well number	Northing	Easting	Date collected	Maximum historical concentration (micrograms per liter)	Source
WJETA529	6962759.00	2296997.00	01/01/00	1	U.S. Geological Survey
WJETA530	6959546.93	2296533.87	12/14/96	0	Jacobs Engineering Group
WJETA531	6958909.00	2295894.00	12/08/96	0	Jacobs Engineering Group
WJETA534	6958941.15	2296341.54	12/14/96	0	Jacobs Engineering Group
WJETA535	6959722.27	2296794.44	10/26/00	0	HydroGeoLogic, Inc.
WL-090JETA	6963983.92	2291896.50	07/28/98	5.6	Jacobs Engineering Group
WL-091JETA	6964268.00	2291919.00	07/28/98	0	Jacobs Engineering Group
WL-091JETA	6964268.00	2291919.00	07/28/98	1.46	Jacobs Engineering Group
WL-095JETA	6964195.00	2291863.00	08/11/98	1.99	Jacobs Engineering Group
WL-101JETA	6965358.00	2292299.00	12/12/00	0	U.S. Air Force, Center for Environmental Excellence
WL-102JETA	6964785.97	2292815.37	01/22/01	2	U.S. Air Force, Center for Environmental Excellence
WL-104JETA	6964423.59	2292886.41	12/13/00	0	U.S. Air Force, Center for Environmental Excellence
WL-105JETA	6963929.81	2293101.42	12/13/00	0	U.S. Air Force, Center for Environmental Excellence
WL-106JETA	6963806.49	2293001.85	12/13/00	11	U.S. Air Force, Center for Environmental Excellence
WL-107JETA	6964701.29	2292815.04	12/13/00	0	U.S. Air Force, Center for Environmental Excellence
WL-111JETA	6965121.90	2292395.25	12/12/00	0	U.S. Air Force, Center for Environmental Excellence
WL-112JETA	6965174.34	2292533.25	12/20/00	0	U.S. Air Force, Center for Environmental Excellence
WL-113JETA	6964978.06	2292461.75	12/12/00	0	U.S. Air Force, Center for Environmental Excellence
WL-115JETA	6964589.06	2292916.26	01/22/01	3	U.S. Air Force, Center for Environmental Excellence
WL-116JETA	6964025.89	2292914.56	12/13/00	0	U.S. Air Force, Center for Environmental Excellence
WL-117JETA	6963947.23	2293003.37	12/13/00	6	U.S. Air Force, Center for Environmental Excellence
WL-118JETA	6964485.69	2292811.17	12/13/00	0	U.S. Air Force, Center for Environmental Excellence
WL-119JETA	6964313.78	2292916.79	01/22/01	2	U.S. Air Force, Center for Environmental Excellence
WL-120JETA	6964237.93	2293001.62	01/22/01	2	U.S. Air Force, Center for Environmental Excellence
WL-121JETA	6963866.38	2293059.70	12/13/00	0	U.S. Air Force, Center for Environmental Excellence
WL-122JETA	6964091.58	2293038.73	12/13/00	0	U.S. Air Force, Center for Environmental Excellence
WL-124AJETA	6965108.00	2292368.00	01/22/01	0	U.S. Air Force, Center for Environmental Excellence
WL-127JETA	6964804.08	2292467.36	12/12/00	0	U.S. Air Force, Center for Environmental Excellence
WL-150JETA	6964352.32	2291866.76	12/12/00	0	U.S. Air Force, Center for Environmental Excellence
WL-153JETA	6964329.24	2291906.43	12/12/00	0	U.S. Air Force, Center for Environmental Excellence
WL-155JETA	6964315.00	2291929.84	12/12/00	0	U.S. Air Force, Center for Environmental Excellence
WL-158JETA	6964300.36	2291955.82	12/12/00	0	U.S. Air Force, Center for Environmental Excellence
WL-160JETA	6964290.24	2291969.86	12/20/00	2	U.S. Air Force, Center for Environmental Excellence
WL-161JETA	6964284.87	2291981.87	12/12/00	0	U.S. Air Force, Center for Environmental Excellence
WL-163JETA	6964274.54	2291998.95	12/12/00	0	U.S. Air Force, Center for Environmental Excellence
WL-164JETA	6964269.73	2292007.70	12/12/00	0	U.S. Air Force, Center for Environmental Excellence
WL-165JETA	6964259.62	2292024.31	12/12/00	0	U.S. Air Force, Center for Environmental Excellence
WL-166JETA	6964264.16	2292015.93	12/12/00	0	U.S. Air Force, Center for Environmental Excellence
WL-167JETA	6964254.13	2292033.79	12/12/00	0	U.S. Air Force, Center for Environmental Excellence
WL-169JETA	6964244.25	2292050.42	12/12/00	5	U.S. Air Force, Center for Environmental Excellence
WL-171JETA	6964233.96	2292067.54	12/12/00	2	U.S. Air Force, Center for Environmental Excellence
WL-174JETA	6964219.01	2292093.61	12/12/00	0	U.S. Air Force, Center for Environmental Excellence
WL-177JETA	6964202.14	2292120.93	12/12/00	0	U.S. Air Force, Center for Environmental Excellence
WP07-10B	6961277.46	2296040.45	05/01/97	123	CH2M Hill
WSAICTA002	6964473.05	2294921.57	12/14/00	0	Science Applications International Corp.
WSAICTA003	6962921.08	2294630.39	12/11/00	29	Science Applications International Corp.
WSAICTA004	6963343.80	2293586.34	06/26/02	0	Science Applications International Corp.
WSAICTA005	6963578.03	2293587.28	06/26/02	0	Science Applications International Corp.
WSAICTA007	6961971.36	2294861.23	06/26/02	8	Science Applications International Corp.
WSAICTA008	6961974.34	2294585.80	04/11/02	9	Ellis Environmental Group

64 Subsurface Occurrence and Potential Source Areas of Chlorinated Ethenes, AFP4 and NAS–JRB, Fort Worth, Texas

Table A4. Maximum historical *trans*-1,2-dichloroethene (*trans*-DCE) concentrations in the alluvial aquifer, Air Force Plant 4 (AFP4) and Naval Air Station-Joint Reserve Base Carswell Field (NAS–JRB) study area, Fort Worth, Texas, 1983–2003—Continued.

Well number	Northing	Easting	Date collected	Maximum historical concentration (micrograms per liter)	Source
WSAICTA010	6962655.14	2294341.87	05/01/03	3.5	Earth Tech Corporation
WSAICTA014	6963885.00	2293582.00	09/25/01	1	Science Applications International Corp.
WSAICTA015	6966805.36	2299042.92	09/24/01	5	Science Applications International Corp.
WSAICTA016	6966551.89	2299049.00	10/17/02	44	Earth Tech Corporation
WSAICTA017	6966921.03	2298810.34	09/24/01	0	Science Applications International Corp.
WSAICTA021	6966905.72	2299748.32	10/03/01	0	Science Applications International Corp.
WSAICTA023	6967077.62	2298656.36	10/17/02	74	Earth Tech Corporation
WSAICTA025	6961666.49	2294798.23	10/03/01	1	Science Applications International Corp.
WSAICTA026	6961723.12	2294432.29	06/21/02	0	Science Applications International Corp.
WUSGSTA001	6962644.00	2297002.00	02/01/98	.47	U.S. Geological Survey
WUSGSTA002	6962263.00	2296964.00	02/01/98	0	U.S. Geological Survey
WUSGSTA003	6961872.00	2296987.00	06/01/98	.7	U.S. Geological Survey
WUSGSTA004	6962085.00	2297504.00	02/01/98	3.17	U.S. Geological Survey
WUSGSTA005	6961955.00	2297925.00	02/01/98	.15	U.S. Geological Survey
WUSGSTA006	6961670.00	2298251.00	02/01/98	8.25	U.S. Geological Survey
WUSGSTA007	6962684.00	2298206.00	02/01/98	3.74	U.S. Geological Survey
WUSGSTA008	6962636.00	2296832.00	06/01/98	.5	U.S. Geological Survey
WUSGSTA009	6962766.00	2296661.00	02/01/98	7.26	U.S. Geological Survey
WUSGSTA010	6962707.00	2296719.00	02/01/98	3.77	U.S. Geological Survey
WUSGSTA011	6962668.00	2296825.00	01/01/00	1.5	U.S. Geological Survey
WUSGSTA012	6962787.00	2297104.00	02/01/98	.54	U.S. Geological Survey
WUSGSTA013	6962745.00	2297215.00	02/01/98	.7	U.S. Geological Survey
WUSGSTA014	6962826.00	2297306.00	05/01/99	18	U.S. Geological Survey
WUSGSTA015	6963054.00	2296591.00	02/01/98	.94	U.S. Geological Survey
WUSGSTA016	6963036.00	2296370.00	02/01/98	.64	U.S. Geological Survey
WUSGSTA017	6962675.00	2296815.00	05/01/99	3	U.S. Geological Survey
WUSGSTA018	6962566.00	2297413.00	06/01/98	6.9	U.S. Geological Survey
WUSGSTA019	6963009.00	2297050.00	02/01/98	.74	U.S. Geological Survey
WUSGSTA020	6962722.00	2296818.00	01/01/00	1.6	U.S. Geological Survey
WUSGSTA021	6962659.00	2296814.00	05/01/99	5	U.S. Geological Survey
WUSGSTA022	6962736.00	2296740.00	06/01/98	1.6	U.S. Geological Survey
WUSGSTA023	6962638.00	2296810.00	02/01/98	.24	U.S. Geological Survey

Table A5. Maximum historical tetrachloroethene (PCE) and trichloroethene (TCE) concentrations in the alluvial aquifer, used to compute parent-compound to daughter-product concentration ratios, Air Force Plant 4 (AFP4) and Naval Air Station-Joint Reserve Base Carswell Field (NAS-JRB) study area, Fort Worth, Texas, 1983–2003.

[Northing, north state plane coordinate of north-south distance, in feet, from reference location (N6561666.67); Easting, east state plane coordinate of east-west distance, in feet, from reference location (E1968500.00)]

Well number	Northing	Easting	Date collected	PCE concentration (micrograms per liter)	TCE concentration (micrograms per liter)	Source
1-C	6964450.00	2301255.00	03/05/85	0	1	Radian Corporation
5-B	6962558.83	2295444.82	03/05/85	0	39	Radian Corporation
CAR-RW1	6960869.00	2296755.00	09/16/99	2	540	HydroGeoLogic, Inc.
CAR-RW10	6961279.06	2296078.88	11/05/99	0	3,200	HydroGeoLogic, Inc.
CAR-RW11	6961412.39	2296075.74	09/16/99	13	540	HydroGeoLogic, Inc.
CAR-RW12	6961192.46	2295933.72	02/27/02	.54	2,400	HydroGeoLogic, Inc.
CAR-RW2	6961223.00	2296673.00	09/16/99	3	490	HydroGeoLogic, Inc.
CAR-RW4	6961112.00	2296685.00	09/17/99	7	560	HydroGeoLogic, Inc.
CAR-RW5	6961318.00	2296638.00	11/05/99	0	1,500	HydroGeoLogic, Inc.
CAR-RW6	6961112.00	2296510.00	09/17/99	4	550	HydroGeoLogic, Inc.
CAR-RW8	6961214.00	2296306.00	09/16/99	14	570	HydroGeoLogic, Inc.
CAR-RW9	6961221.00	2297006.00	09/17/99	6	550	HydroGeoLogic, Inc.
F-214	6966040.04	2289864.00	10/24/02	0	210,000	Earth Tech Corporation
F-216	6965776.18	2290219.93	10/08/95	0	20	Jacobs Engineering Group
F-217	6965959.98	2290109.05	01/27/00	0	170	U.S. Air Force, Center for Environmental Excellence
F-218	6964024.29	2291474.21	05/01/03	0	6,570	Earth Tech Corporation
F-219	6964343.31	2291472.82	10/30/95	0	56	Jacobs Engineering Group
F-220	6964050.32	2290236.60	11/13/95	0	160,000	Jacobs Engineering Group
FSA-3-08	6969116.51	2290712.86	11/14/95	0	9.8	Jacobs Engineering Group
FSA-3-10	6969075.75	2290779.47	11/14/95	0	21	Jacobs Engineering Group
FSA-3-12	6968999.05	2290836.80	11/13/95	0	17	Jacobs Engineering Group
FT08-11B	6962034.00	2295931.00	01/14/96	0	37	Law Environmental
FT09-12B	6960709.31	2295697.41	02/21/01	56	100	HydroGeoLogic, Inc.
FT09-12E	6960701.08	2295821.16	12/05/01	3	13	HydroGeoLogic, Inc.
GMI-04-01M	6960931.00	2296729.00	10/29/97	0	880	HydroGeoLogic, Inc.
GMI-22-01M	6965122.22	2297689.15	07/16/95	0	14	Law Environmental
GMI-22-03M	6966219.92	2298539.37	05/23/94	23	26	Geo-Marine, Inc.
GMI-22-04M	6967250.52	2297341.00	07/19/99	1	200	HydroGeoLogic, Inc.
GMI-22-06M	6967004.48	2298186.58	05/23/94	7	660	Geo-Marine, Inc.
HM-10	6965810.91	2290121.80	01/27/00	0	12	U.S. Air Force, Center for Environmental Excellence
HM-11	6963091.76	2290932.28	08/29/83	24	560	Hargis + Associates
HM-110	6963667.53	2293163.24	12/08/00	0	540	Science Applications International Corp.
HM-111	6963624.05	2293266.53	10/10/95	0	19	Jacobs Engineering Group
HM-112	6964218.00	2293142.65	04/06/00	2	7,400	HydroGeoLogic, Inc.
HM-113	6964677.00	2293133.60	01/20/96	0	640	Jacobs Engineering Group
HM-114	6963912.10	2294352.00	04/11/02	1	290	Ellis Environmental Group
HM-116	6966411.43	2294283.69	04/11/02	8	140	Ellis Environmental Group
HM-118	6968035.19	2294780.47	10/14/02	6	180	Ellis Environmental Group
HM-119	6968726.00	2294271.80	10/18/02	1	7.6	Earth Tech Corporation
HM-12	6963088.53	2290396.72	02/14/86	0	.23	Radian Corporation
HM-121	6967390.20	2295279.20	11/07/95	0	520	Jacobs Engineering Group
HM-123	6961638.50	2295272.60	05/01/03	0	244	Earth Tech Corporation
HM-124	6963957.77	2295223.26	11/14/95	0	2.2	Jacobs Engineering Group
HM-126	6963121.05	2294300.23	07/20/00	1	1,500	HydroGeoLogic, Inc.
HM-17	6963993.31	2290451.65	10/31/95	0	2,400	Jacobs Engineering Group
HM-29	6966014.89	2290711.88	07/31/84	2	480	Hargis + Associates
HM-31	6963114.44	2291505.33	05/01/03	0	127	Earth Tech Corporation
HM-56	6965454.00	2291472.23	10/11/85	10	10	Hargis + Associates
HM-59	6966811.00	2291469.61	08/08/84	920	18	Hargis + Associates
HM-64	6966406.97	2291114.57	05/08/93	390	10	Jacobs Engineering Group

66 Subsurface Occurrence and Potential Source Areas of Chlorinated Ethenes, AFP4 and NAS-JRB, Fort Worth, Texas

Table A5. Maximum historical tetrachloroethene (PCE) and trichloroethene (TCE) concentrations in the alluvial aquifer, used to compute parent-compound to daughter-product concentration ratios, Air Force Plant 4 (AFP4) and Naval Air Station-Joint Reserve Base Carswell Field (NAS-JRB) study area, Fort Worth, Texas, 1983–2003—Continued.

Well number	Northing	Easting	Date collected	PCE concentration (micrograms per liter)	TCE concentration (micrograms per liter)	Source
HM-71	6966470.35	2292457.39	10/14/95	70	280	Jacobs Engineering Group
HM-88	6964479.91	2291919.17	05/01/03	4.5	4,768	Earth Tech Corporation
HM-90	6965640.09	2292457.85	05/21/93	0	5.9	Jacobs Engineering Group
HM-91	6966174.30	2292586.29	06/04/93	0	450	Jacobs Engineering Group
HM-92	6965645.68	2292250.42	10/28/95	0	1.6	Jacobs Engineering Group
HM-95	6965442.59	2293156.22	05/01/03	0	6,724	Earth Tech Corporation
HM-96	6966507.03	2293168.95	01/15/03	15	230	Earth Tech Corporation
HM-97	6966884.14	2293158.51	05/26/93	45	330	Jacobs Engineering Group
LF04-02	6961113.06	2296309.10	07/08/99	6	310	HydroGeoLogic, Inc.
LF04-03	6961064.00	2296306.00	09/16/99	2	540	HydroGeoLogic, Inc.
LF04-4C	6960600.00	2296588.00	10/06/99	0	10	HydroGeoLogic, Inc.
LF04-4D	6960828.00	2296412.00	05/05/03	0	330	HydroGeoLogic, Inc.
LF05-01	6962728.35	2294577.83	10/14/02	0	58	Ellis Environmental Group
LF05-18	6961555.64	2297075.43	10/29/97	0	860	HydroGeoLogic, Inc.
LF05-19	6961239.89	2297461.35	05/01/03	0	1	Earth Tech Corporation
LF05-5B	6961901.56	2296078.25	10/16/02	0	1	Ellis Environmental Group
LF05-5C	6961720.05	2295993.73	01/15/96	0	939	Law Environmental
LF05-5D	6961739.00	2295754.00	01/14/96	0	1,110	Law Environmental
LF05-5G	6961558.00	2296690.00	05/05/03	0	530	HydroGeoLogic, Inc.
LF05-5H	6961732.39	2296340.79	05/05/03	0	6.7	HydroGeoLogic, Inc.
LSA1628-2	6967943.00	2297847.00	01/15/96	0	59	Law Environmental
LSA1628-3	6967993.10	2297791.30	07/19/99	1	200	HydroGeoLogic, Inc.
MW-19	6963513.00	2295369.00	08/22/01	0	156	Science Applications International Corp.
MW-5	6963910.00	2290826.00	10/25/01	0	330,000	U.S. Air Force, Center for Environmental Excellence
MW-50	6968529.00	2295622.00	07/22/96	0	4	Jacobs Engineering Group
MW-53	6964378.00	2296200.00	01/20/99	25	89	HydroGeoLogic, Inc.
RW-11U	6965385.00	2292586.20	07/30/94	0	6,900	U.S. Air Force, Center for Environmental Excellence
RW-1U	6965269.00	2292468.70	01/19/93	0	12,000	U.S. Air Force, Center for Environmental Excellence
RW-2U	6964643.00	2292424.50	01/20/93	0	12,000	U.S. Air Force, Center for Environmental Excellence
ST14-W09	6963472.00	2299550.00	01/13/96	0	1	Law Environmental
T9	6965551.00	2289993.00	01/14/02	0	1	U.S. Air Force, Center for Environmental Excellence
USGS06T	6963763.00	2297542.08	05/01/03	0	1.3	Earth Tech Corporation
VEP-11	6965472.00	2289741.00	05/08/02	0	18	Earth Tech Corporation
VEP-12	6965492.14	2289740.47	05/08/02	0	260	Earth Tech Corporation
VEP-13	6965512.00	2289740.00	05/15/03	0	154	Shaw Environmental
VEP-14	6965532.35	2289740.23	05/08/02	0	180	Earth Tech Corporation
VEP-15	6965572.27	2289739.27	05/09/02	0	60	Earth Tech Corporation
VEP-17	6965612.88	2289738.95	05/09/02	0	45	Earth Tech Corporation
VEP-18	6965631.89	2289739.19	05/09/02	0	5.9	Earth Tech Corporation
VEP-19	6965673.36	2289738.41	05/09/02	0	19	Earth Tech Corporation
VEP-21	6965885.28	2289766.47	05/11/02	0	9.4	Earth Tech Corporation
VEP-22	6965904.64	2289772.36	05/11/02	0	23	Earth Tech Corporation
VEP-23	6965923.82	2289776.40	05/11/02	0	20	Earth Tech Corporation
VEP-24	6965947.42	2289785.33	05/11/02	0	60	Earth Tech Corporation
VEP-25	6965961.57	2289792.04	05/11/02	0	85	Earth Tech Corporation
VEP-26	6965979.44	2289801.00	05/15/03	0	1,780	Shaw Environmental
VEP-3	6966027.00	2289825.00	05/12/02	0	4.7	Earth Tech Corporation
VEP-31	6966040.69	2289879.41	05/13/02	0	4.9	Earth Tech Corporation
VEP-36	6966135.75	2289905.70	05/14/02	0	11	Earth Tech Corporation
VEP-37	6966155.08	2289906.66	05/14/02	0	170	Earth Tech Corporation

Table A5. Maximum historical tetrachloroethene (PCE) and trichloroethene (TCE) concentrations in the alluvial aquifer, used to compute parent-compound to daughter-product concentration ratios, Air Force Plant 4 (AFP4) and Naval Air Station-Joint Reserve Base Carswell Field (NAS-JRB) study area, Fort Worth, Texas, 1983–2003—Continued.

Well number	Northing	Easting	Date collected	PCE concentration (micrograms per liter)	TCE concentration (micrograms per liter)	Source
VEP-41	6966067.00	2289850.00	05/13/02	2.3	66	Earth Tech Corporation
VEPT-1	6965717.00	2289740.00	05/09/02	0	1.9	Earth Tech Corporation
VEPT-2	6965739.00	2289741.00	05/10/02	0	1.6	Earth Tech Corporation
W-129	6965935.87	2289777.80	05/12/93	0	58	Jacobs Engineering Group
W-130	6966042.89	2289868.15	06/14/93	0	490,000	Jacobs Engineering Group
W-131U	6963278.00	2290541.00	10/24/91	0	21	Chem-Nuclear Geotech, Inc.
W-137	6963499.00	2290968.00	01/25/97	0	102	Jacobs Engineering Group
W-144	6965577.00	2290450.00	09/17/91	0	45	Chem-Nuclear Geotech, Inc.
W-145	6964387.65	2290600.35	09/15/91	0	8	Chem-Nuclear Geotech, Inc.
W-146	6965118.51	2290620.30	05/09/93	0	6.3	Jacobs Engineering Group
W-147	6965824.00	2290711.00	01/15/03	.15	.15	Earth Tech Corporation
W-149	6965190.70	2292456.97	05/01/03	0	3,220	Earth Tech Corporation
W-151	6964980.90	2292475.30	05/25/93	0	500	Jacobs Engineering Group
W-155	6968275.39	2293145.82	01/15/03	0	.07	Earth Tech Corporation
W-156	6964824.12	2292815.02	05/27/93	0	6,400	Jacobs Engineering Group
W-158	6963954.83	2291080.82	06/06/93	0	16,000	Jacobs Engineering Group
W-160	6963448.68	2291368.51	01/24/97	0	553	Jacobs Engineering Group
WCHMHTA004	6967949.00	2295041.00	09/26/01	1	52	Science Applications International Corp.
WCHMHTA006	6966690.11	2295406.97	05/01/03	.7	263	Earth Tech Corporation
WCHMHTA008	6967889.89	2295597.48	05/01/03	0	1.4	Earth Tech Corporation
WCHMHTA009	6968444.69	2296663.99	10/31/00	4	350	HydroGeoLogic, Inc.
WCHMHTA010	6967640.08	2296398.80	05/01/03	5.7	387	Earth Tech Corporation
WCHMHTA011	6969295.20	2297328.38	09/26/01	5	198	Science Applications International Corp.
WCHMHTA013	6967056.00	2300052.00	05/01/03	0	12	Earth Tech Corporation
WCHMHTA014	6970403.90	2294072.81	10/14/02	0	1	Ellis Environmental Group
WHGLFE001	6961575.00	2296063.00	06/19/02	0	700	HydroGeoLogic, Inc.
WHGLFE002	6961284.00	2296060.00	06/18/02	0	1,100	HydroGeoLogic, Inc.
WHGLFE003	6961079.00	2295934.00	06/17/02	0	3.3	HydroGeoLogic, Inc.
WHGLRW015	6960871.43	2298662.64	10/24/00	0	36	HydroGeoLogic, Inc.
WHGLTA003	6961043.88	2298029.84	10/05/99	0	24	HydroGeoLogic, Inc.
WHGLTA004	6962943.38	2295760.62	04/18/02	0	370	Ellis Environmental Group
WHGLTA009	6965211.65	2297528.70	05/01/03	0	45	Earth Tech Corporation
WHGLTA010	6965580.03	2296770.93	10/31/00	0	14	HydroGeoLogic, Inc.
WHGLTA011	6968356.67	2295873.87	07/13/00	0	8	HydroGeoLogic, Inc.
WHGLTA014	6966295.34	2297373.92	10/27/00	0	36	HydroGeoLogic, Inc.
WHGLTA025	6961608.26	2298942.63	10/08/02	0	1	Ellis Environmental Group
WHGLTA028	6967761.00	2297451.00	10/11/02	1	300	Ellis Environmental Group
WHGLTA043	6961771.99	2297021.32	05/01/03	0	357	Earth Tech Corporation
WHGLTA045	6961321.90	2298368.80	10/17/02	0	2	Ellis Environmental Group
WHGLTA046	6961298.49	2296089.68	02/26/02	6.9	2,300	HydroGeoLogic, Inc.
WHGLTA048	6960916.20	2298714.83	05/01/03	0	3	Earth Tech Corporation
WHGLTA049	6962329.24	2299269.36	10/17/02	0	1	Ellis Environmental Group
WHGLTA051	6962894.90	2296247.12	10/16/02	1	350	Ellis Environmental Group
WHGLTA052	6962769.45	2296098.07	04/06/01	0	300	HydroGeoLogic, Inc.
WHGLTA054	6960748.26	2295541.09	04/06/01	38	53	HydroGeoLogic, Inc.
WHGLTA065	6960593.00	2295633.00	12/06/01	0	5	HydroGeoLogic, Inc.
WHGLTA066	6960807.00	2295402.00	12/02/01	2	1	HydroGeoLogic, Inc.
WHGLTA067	6960876.00	2295733.00	12/02/01	0	42	HydroGeoLogic, Inc.
WHGLTA069	6961708.00	2296063.00	05/05/03	0	770	HydroGeoLogic, Inc.
WHGLTA070	6961576.00	2296056.00	05/05/03	0	1,500	HydroGeoLogic, Inc.

68 Subsurface Occurrence and Potential Source Areas of Chlorinated Ethenes, AFP4 and NAS–JRB, Fort Worth, Texas

Table A5. Maximum historical tetrachloroethene (PCE) and trichloroethene (TCE) concentrations in the alluvial aquifer, used to compute parent-compound to daughter-product concentration ratios, Air Force Plant 4 (AFP4) and Naval Air Station-Joint Reserve Base Carswell Field (NAS–JRB) study area, Fort Worth, Texas, 1983–2003—Continued.

Well number	Northing	Easting	Date collected	PCE concentration (micrograms per liter)	TCE concentration (micrograms per liter)	Source
WHGLTA072	6961283.00	2296102.00	05/05/03	0.31	14	HydroGeoLogic, Inc.
WHGLTA073	6961283.00	2296167.00	06/18/02	27	2,600	HydroGeoLogic, Inc.
WHGLTA074	6961285.00	2296258.00	05/05/03	0	120	HydroGeoLogic, Inc.
WHGLTA076	6961086.00	2295934.00	05/05/03	0	1,300	HydroGeoLogic, Inc.
WHGLTA077	6960785.00	2295776.00	05/05/03	0	7.2	HydroGeoLogic, Inc.
WHGLTA082	6964396.00	2296386.00	10/10/02	0	7	Ellis Environmental Group
WHGLTA201	6963198.14	2298660.88	12/09/98	0	25	HydroGeoLogic, Inc.
WHGLTA202	6963326.21	2298832.59	12/14/98	0	16	HydroGeoLogic, Inc.
WHGLTA204	6963625.62	2298104.66	12/10/98	0	2	HydroGeoLogic, Inc.
WHGLTA303	6962351.00	2294401.00	06/21/02	0	206	Science Applications International Corp.
WHGLTA601	6962753.00	2297473.69	10/16/02	0	74	Ellis Environmental Group
WHGLTA602	6962752.66	2297625.01	12/08/98	0	110	HydroGeoLogic, Inc.
WHGLTA604	6963195.00	2297530.00	12/14/98	0	120	HydroGeoLogic, Inc.
WHGLTA701	6961835.73	2295332.86	07/03/02	0	1,280	Science Applications International Corp.
WHGLTA702	6961920.00	2295882.00	02/21/01	0	4	HydroGeoLogic, Inc.
WHGLTA703	6961680.70	2295741.23	02/21/01	0	2,200	HydroGeoLogic, Inc.
WHGLTA704	6962141.07	2295831.51	10/10/02	0	1	Ellis Environmental Group
WHGLTA705	6962003.00	2296027.00	02/15/01	0	1	HydroGeoLogic, Inc.
WHGLTA706	6962146.00	2296031.00	02/16/01	0	3	HydroGeoLogic, Inc.
WHGLTA707	6962188.16	2295592.35	02/19/01	0	1	HydroGeoLogic, Inc.
WHGLTA708	6962019.93	2295647.18	02/19/01	0	12	HydroGeoLogic, Inc.
WHGLTA709	6961934.71	2295750.93	02/19/01	0	110	HydroGeoLogic, Inc.
WHGLTA801	6962790.06	2295857.80	04/06/01	0	150	HydroGeoLogic, Inc.
WITCTA004	6968940.00	2297491.00	04/03/01	1	230	HydroGeoLogic, Inc.
WITCTA005	6968459.46	2298167.79	04/28/97	0	310	International Technology Corp.
WITCTA006	6968427.00	2298263.00	05/02/97	0	25	International Technology Corp.
WITCTA007	6968310.56	2298433.07	04/22/97	0	54	International Technology Corp.
WITCTA008	6967940.00	2298030.00	05/01/97	0	550	International Technology Corp.
WITCTA009	6967862.00	2298234.00	08/23/01	0	353	Science Applications International Corp.
WITCTA011	6967455.26	2297357.31	04/30/97	0	550	International Technology Corp.
WITCTA013	6967017.00	2297752.00	08/23/01	0	116	Science Applications International Corp.
WITCTA014	6966904.57	2297418.51	08/23/01	0	108	Science Applications International Corp.
WITCTA015	6966333.00	2298395.00	08/23/01	4	67	Science Applications International Corp.
WITCTA016	6966239.00	2298062.00	10/08/99	0	80	HydroGeoLogic, Inc.
WITCTA017	6967298.15	2299305.78	10/17/02	0	52	Earth Tech Corporation
WITCTA019	6963107.00	2298838.00	10/09/02	0	4	Ellis Environmental Group
WITCTA020	6963895.32	2296316.79	04/29/97	0	7	International Technology Corp.
WITCTA022	6963651.00	2298744.00	04/29/97	0	2	International Technology Corp.
WITCTA025	6966005.00	2299534.00	10/15/02	4	78	Ellis Environmental Group
WITCTA034	6963956.68	2300951.49	10/17/00	4	2	HydroGeoLogic, Inc.
WITCTA037	6963424.00	2297784.00	04/29/97	0	58	International Technology Corp.
WITCTA039	6962339.77	2295415.41	05/01/97	0	39	International Technology Corp.
WITCTA040	6963260.00	2299515.00	05/01/03	0	50.8	Earth Tech Corporation
WJETA060	6963892.00	2290889.00	05/01/03	0	5,192	Earth Tech Corporation
WJETA061	6963915.00	2290873.00	05/03/02	0	58,000	Earth Tech Corporation
WP07–10B	6961277.46	2296040.45	07/07/99	3	300	HydroGeoLogic, Inc.
WSAICTA002	6964473.05	2294921.57	12/14/00	0	21	Science Applications International Corp.
WSAICTA003	6962921.08	2294630.39	06/19/02	0	21	Science Applications International Corp.
WSAICTA004	6963343.80	2293586.34	06/26/02	0	85	Science Applications International Corp.
WSAICTA005	6963578.03	2293587.28	06/26/02	0	107	Science Applications International Corp.

Table A5. Maximum historical tetrachloroethene (PCE) and trichloroethene (TCE) concentrations in the alluvial aquifer, used to compute parent-compound to daughter-product concentration ratios, Air Force Plant 4 (AFP4) and Naval Air Station-Joint Reserve Base Carswell Field (NAS-JRB) study area, Fort Worth, Texas, 1983–2003—Continued.

Well number	Northing	Easting	Date collected	PCE concentration (micrograms per liter)	TCE concentration (micrograms per liter)	Source
WSAICTA007	6961971.36	2294861.23	06/26/02	0	380	Science Applications International Corp.
WSAICTA008	6961974.34	2294585.80	10/14/02	0	37	Ellis Environmental Group
WSAICTA010	6962655.14	2294341.87	05/01/03	0	1,767	Earth Tech Corporation
WSAICTA014	6963885.00	2293582.00	06/26/02	0	639	Science Applications International Corp.
WSAICTA015	6966805.36	2299042.92	09/24/01	9	1	Science Applications International Corp.
WSAICTA016	6966551.89	2299049.00	05/01/03	0	249	Earth Tech Corporation
WSAICTA023	6967077.62	2298656.36	10/03/01	17	5	Science Applications International Corp.
WUSGSTA011	6962668.00	2296825.00	01/15/03	0	140	U.S. Geological Survey
WUSGSTA014	6962826.00	2297306.00	01/15/03	0	44	U.S. Geological Survey
WUSGSTA015	6963054.00	2296591.00	01/15/03	0	130	U.S. Geological Survey
WUSGSTA018	6962566.00	2297413.00	01/15/03	0	54	U.S. Geological Survey

70 Subsurface Occurrence and Potential Source Areas of Chlorinated Ethenes, AFP4 and NAS–JRB, Fort Worth, Texas

Table A6. Maximum historical trichloroethene (TCE) and total 1,2-dichloroethene (total DCE) concentrations in the alluvial aquifer, used to compute parent-compound to daughter-product concentration ratios, Air Force Plant 4 (AFP4) and Naval Air Station-Joint Reserve Base Carswell Field (NAS–JRB) study area, Fort Worth, Texas, 1991–2003.

[Northing, north state plane coordinate of north-south distance, in feet, from reference location (N6561666.67); Easting, east state plane coordinate of east-west distance, in feet, from reference location (E1968500.00)]

Well number	Northing	Easting	Date collected	TCE concentration (micrograms per liter)	Total DCE concentration (micrograms per liter)	Source
CAR–RW1	6960869.00	2296755.00	09/16/99	2,800	400	HydroGeoLogic, Inc.
CAR–RW10	6961279.06	2296078.88	09/16/99	3,100	350	HydroGeoLogic, Inc.
CAR–RW11	6961412.39	2296075.74	09/16/99	2,500	320	HydroGeoLogic, Inc.
CAR–RW12	6961192.46	2295933.72	09/16/99	3,100	460	HydroGeoLogic, Inc.
CAR–RW2	6961223.00	2296673.00	09/16/99	2,800	350	HydroGeoLogic, Inc.
CAR–RW4	6961112.00	2296685.00	09/17/99	2,900	330	HydroGeoLogic, Inc.
CAR–RW5	6961318.00	2296638.00	09/16/99	1,400	240	HydroGeoLogic, Inc.
CAR–RW6	6961112.00	2296510.00	09/17/99	2,900	390	HydroGeoLogic, Inc.
CAR–RW8	6961214.00	2296306.00	09/16/99	3,800	380	HydroGeoLogic, Inc.
CAR–RW9	6961221.00	2297006.00	09/17/99	3,200	330	HydroGeoLogic, Inc.
F–204	6965223.00	2290634.70	11/10/95	0	.91	Jacobs Engineering Group
F–209	6969007.27	2290901.72	05/05/02	2.3	1.6	Earth Tech Corporation
F–214	6966040.04	2289864.00	07/11/95	190,000	85,000	Jacobs Engineering Group
F–216	6965776.18	2290219.93	10/08/95	20	14	Jacobs Engineering Group
F–217	6965959.98	2290109.05	01/27/00	170	1,110	U.S. Air Force, Center for Environmental Excellence
F–218	6964024.29	2291474.21	04/22/95	60,000	1,700	Jacobs Engineering Group
FT08–11A	6962321.00	2295878.00	07/14/95	1	1	Law Environmental
FT08–11B	6962034.00	2295931.00	10/19/95	5	4	Law Environmental
FT09–12B	6960709.31	2295697.41	10/18/95	28	7	Law Environmental
FT09–12C	6960590.30	2295771.51	10/28/97	5	60	HydroGeoLogic, Inc.
FT09–12E	6960701.08	2295821.16	02/27/02	4.6	5.54	HydroGeoLogic, Inc.
GMI–04–01M	6960931.00	2296729.00	07/14/97	1,400	280	HydroGeoLogic, Inc.
GMI–22–01M	6965122.22	2297689.15	07/16/95	14	21	Law Environmental
GMI–22–03M	6966219.92	2298539.37	01/26/98	76	99	HydroGeoLogic, Inc.
GMI–22–04M	6967250.52	2297341.00	05/23/94	780	48	Geo-Marine, Inc.
GMI–22–06M	6967004.48	2298186.58	05/23/94	660	74	Geo-Marine, Inc.
HM–10	6965810.91	2290121.80	10/08/95	22	4.5	Jacobs Engineering Group
HM–110	6963667.53	2293163.24	10/30/94	23	2.1	Jacobs Engineering Group
HM–111	6963624.05	2293266.53	10/10/95	19	3.2	Jacobs Engineering Group
HM–112	6964218.00	2293142.65	10/12/95	14,000	150	Jacobs Engineering Group
HM–113	6964677.00	2293133.60	10/10/95	470	265	Jacobs Engineering Group
HM–114	6963912.10	2294352.00	04/10/01	560	81	HydroGeoLogic, Inc.
HM–116	6966411.43	2294283.69	05/01/03	416	18	Earth Tech Corporation
HM–118	6968035.19	2294780.47	01/31/92	180	3	Jacobs Engineering Group
HM–123	6961638.50	2295272.60	04/05/00	3,100	554	HydroGeoLogic, Inc.
HM–126	6963121.05	2294300.23	11/14/95	3,100	96	Jacobs Engineering Group
HM–17	6963993.31	2290451.65	10/31/95	2,400	27	Jacobs Engineering Group
HM–29	6966014.89	2290711.88	01/15/03	270	1.2	Earth Tech Corporation
HM–31	6963114.44	2291505.33	10/23/01	270	66	U.S. Air Force, Center for Environmental Excellence
HM–36	6965484.00	2289786.00	11/03/98	9.23	8.77	Jacobs Engineering Group
HM–59	6966811.00	2291469.61	01/15/03	.25	6.1	Earth Tech Corporation
HM–64	6966406.97	2291114.57	10/30/95	23	220	Jacobs Engineering Group
HM–7	6966159.99	2290135.86	01/27/00	0	1	U.S. Air Force, Center for Environmental Excellence
HM–71	6966470.35	2292457.39	05/27/93	370	14	Jacobs Engineering Group
HM–88	6964479.91	2291919.17	10/25/01	6,400	180	U.S. Air Force, Center for Environmental Excellence
HM–89	6964470.44	2292084.17	09/13/00	1,000	500	U.S. Air Force, Center for Environmental Excellence
HM–90	6965640.09	2292457.85	05/21/93	5.9	1.5	Jacobs Engineering Group
HM–91	6966174.30	2292586.29	06/04/93	450	15	Jacobs Engineering Group
HM–95	6965442.59	2293156.22	10/24/01	2,200	120	U.S. Air Force, Center for Environmental Excellence
HM–96	6966507.03	2293168.95	01/15/03	230	2.1	Earth Tech Corporation

Table A6. Maximum historical trichloroethene (TCE) and total 1,2-dichloroethene (total DCE) concentrations in the alluvial aquifer, used to compute parent-compound to daughter-product concentration ratios, Air Force Plant 4 (AFP4) and Naval Air Station-Joint Reserve Base Carswell Field (NAS-JRB) study area, Fort Worth, Texas, 1991–2003—Continued.

Well number	Northing	Easting	Date collected	TCE concentration (micrograms per liter)	Total DCE concentration (micrograms per liter)	Source
HM-97	6966884.14	2293158.51	05/26/93	330	12	Jacobs Engineering Group
ITMW-01T	6961062.05	2298967.00	04/10/00	8	3	HydroGeoLogic, Inc.
LF04-02	6961113.06	2296309.10	05/05/03	140	5.4	HydroGeoLogic, Inc.
LF04-03	6961064.00	2296306.00	09/16/99	2,700	370	HydroGeoLogic, Inc.
LF04-04	6960941.63	2297165.64	01/13/96	0	359	Law Environmental
LF04-10	6960411.83	2297078.91	04/23/97	2	1	CH2M Hill
LF04-4C	6960600.00	2296588.00	10/06/99	10	7	HydroGeoLogic, Inc.
LF04-4D	6960828.00	2296412.00	06/20/02	100	40.1	HydroGeoLogic, Inc.
LF05-01	6962728.35	2294577.83	06/19/02	62	8	Science Applications International Corp.
LF05-02	6962653.12	2295278.95	01/24/97	115	221	CH2M Hill
LF05-18	6961555.64	2297075.43	01/22/97	970	293	CH2M Hill
LF05-19	6961239.89	2297461.35	07/22/99	96	1	HydroGeoLogic, Inc.
LF05-5B	6961901.56	2296078.25	10/16/02	1	1,126	Ellis Environmental Group
LF05-5D	6961739.00	2295754.00	01/14/96	1,110	453	Law Environmental
LF05-5G	6961558.00	2296690.00	07/07/99	920	190	HydroGeoLogic, Inc.
LF05-5H	6961732.39	2296340.79	06/20/02	68	640	HydroGeoLogic, Inc.
LSA1628-3	6967993.10	2297791.30	10/29/97	320	49	HydroGeoLogic, Inc.
MW-19	6963513.00	2295369.00	08/22/01	156	38	Science Applications International Corp.
MW-53	6964378.00	2296200.00	10/08/02	15	1	Ellis Environmental Group
MW-IT-01T	6961062.00	2298967.00	11/05/98	18.5	8.84	Jacobs Engineering Group
RW-11U	6965385.00	2292586.20	07/30/94	6,900	1,306	U.S. Air Force, Center for Environmental Excellence
RW-1U	6965269.00	2292468.70	01/19/93	12,000	1,800	U.S. Air Force, Center for Environmental Excellence
SPOT35-8	6966428.55	2296970.16	04/07/00	25	96	HydroGeoLogic, Inc.
ST14-W09	6963472.00	2299550.00	10/18/95	6	9	Law Environmental
ST14-W15	6963316.00	2299923.00	05/01/03	0	1.8	Earth Tech Corporation
T8	6965421.00	2289949.00	01/14/02	0	2	U.S. Air Force, Center for Environmental Excellence
T9	6965551.00	2289993.00	01/14/02	1	10	U.S. Air Force, Center for Environmental Excellence
USGS06T	6963763.00	2297542.08	10/19/95	20	1	Law Environmental
VEP-10	6965452.00	2289741.00	05/07/02	0	2.4	Earth Tech Corporation
VEP-11	6965472.00	2289741.00	05/08/02	18	28.4	Earth Tech Corporation
VEP-12	6965492.14	2289740.47	05/08/02	260	233	Earth Tech Corporation
VEP-13	6965512.00	2289740.00	05/08/02	270	220	Earth Tech Corporation
VEP-14	6965532.35	2289740.23	05/08/02	180	250	Earth Tech Corporation
VEP-15	6965572.27	2289739.27	05/09/02	60	87.2	Earth Tech Corporation
VEP-16	6965593.48	2289739.28	05/09/02	0	12	Earth Tech Corporation
VEP-18	6965631.89	2289739.19	05/09/02	5.9	594	Earth Tech Corporation
VEP-18B	6965652.25	2289740.40	05/09/02	4.2	469	Earth Tech Corporation
VEP-19	6965673.36	2289738.41	05/09/02	19	36	Earth Tech Corporation
VEP-20	6965692.62	2289738.81	05/10/02	0	19.9	Earth Tech Corporation
VEP-21	6965885.28	2289766.47	05/11/02	9.4	12.4	Earth Tech Corporation
VEP-22	6965904.64	2289772.36	05/11/02	23	30.9	Earth Tech Corporation
VEP-23	6965923.82	2289776.40	05/11/02	20	33.4	Earth Tech Corporation
VEP-24	6965947.42	2289785.33	05/11/02	60	242	Earth Tech Corporation
VEP-25	6965961.57	2289792.04	05/11/02	85	395	Earth Tech Corporation
VEP-26	6965979.44	2289801.00	05/15/03	1,780	1,323	Shaw Environmental
VEP-27	6965996.42	2289811.11	05/12/02	0	5,020	Earth Tech Corporation
VEP-28	6966006.35	2289828.89	05/12/02	0	603	Earth Tech Corporation
VEP-29	6966014.37	2289844.00	05/15/03	0	351,630	Shaw Environmental
VEP-3	6966027.00	2289825.00	05/12/02	4.7	850	Earth Tech Corporation
VEP-31	6966040.69	2289879.41	05/13/02	4.9	214	Earth Tech Corporation

72 Subsurface Occurrence and Potential Source Areas of Chlorinated Ethenes, AFP4 and NAS–JRB, Fort Worth, Texas

Table A6. Maximum historical trichloroethene (TCE) and total 1,2-dichloroethene (total DCE) concentrations in the alluvial aquifer, used to compute parent-compound to daughter-product concentration ratios, Air Force Plant 4 (AFP4) and Naval Air Station-Joint Reserve Base Carswell Field (NAS–JRB) study area, Fort Worth, Texas, 1991–2003—Continued.

Well number	Northing	Easting	Date collected	TCE concentration (micrograms per liter)	Total DCE concentration (micrograms per liter)	Source
VEP–33	6966075.62	2289893.21	05/14/02	0	133	Earth Tech Corporation
VEP–35	6966114.00	2289901.00	05/14/02	4.3	2,200	Earth Tech Corporation
VEP–36	6966135.75	2289905.70	05/14/02	11	959	Earth Tech Corporation
VEP–37	6966155.08	2289906.66	05/14/02	170	412	Earth Tech Corporation
VEP–4	6966050.33	2289838.40	05/15/03	0	24	Shaw Environmental
VEP–40	6966096.49	2289877.53	05/13/02	0	10.3	Earth Tech Corporation
VEP–41	6966067.00	2289850.00	05/13/02	66	1,300	Earth Tech Corporation
VEP–9	6965432.00	2289741.00	05/07/02	0	1.2	Earth Tech Corporation
VEPT–1	6965717.00	2289740.00	05/09/02	1.9	25.1	Earth Tech Corporation
VEPT–2	6965739.00	2289741.00	05/10/02	1.6	21.2	Earth Tech Corporation
W–129	6965935.87	2289777.80	05/12/93	58	55.6	Jacobs Engineering Group
W–130	6966042.89	2289868.15	06/14/93	490,000	48,000	Jacobs Engineering Group
W–133U	6963349.00	2290609.00	06/06/93	0	12	Jacobs Engineering Group
W–137	6963499.00	2290968.00	09/16/91	76	16	Chem-Nuclear Geotech, Inc.
W–147	6965824.00	2290711.00	01/15/03	.15	17	Earth Tech Corporation
W–149	6965190.70	2292456.97	05/06/01	7,800	510	U.S. Air Force, Center for Environmental Excellence
W–151	6964980.90	2292475.30	05/25/93	500	25	Jacobs Engineering Group
W–156	6964824.12	2292815.02	05/27/93	6,400	170	Jacobs Engineering Group
W–160	6963448.68	2291368.51	01/24/97	553	471.2	Jacobs Engineering Group
WCHMHTA004	6967949.00	2295041.00	09/26/01	54	2	Science Applications International Corp.
WCHMHTA006	6966690.11	2295406.97	05/01/03	263	.8	Earth Tech Corporation
WCHMHTA008	6967889.89	2295597.48	04/11/00	27	2	HydroGeoLogic, Inc.
WCHMHTA009	6968444.69	2296663.99	04/10/00	430	6	HydroGeoLogic, Inc.
WCHMHTA010	6967640.08	2296398.80	05/01/03	387	1.1	Earth Tech Corporation
WCHMHTA011	6969295.20	2297328.38	09/26/01	223	4	Science Applications International Corp.
WCHMHTA013	6967056.00	2300052.00	05/01/03	12	5.2	Earth Tech Corporation
WCOETA002	6962944.00	2296763.00	01/01/03	96	15	U.S. Geological Survey
WCOETA004	6962828.00	2296675.00	07/01/03	160	31	U.S. Geological Survey
WCOETA006	6962928.00	2296921.00	07/01/02	170	31	U.S. Geological Survey
WCOETA010	6962696.00	2296798.00	02/01/98	556.8	83.42	U.S. Geological Survey
WHGLFE001	6961575.00	2296063.00	06/19/02	700	424	HydroGeoLogic, Inc.
WHGLFE002	6961284.00	2296060.00	06/18/02	1,100	526	HydroGeoLogic, Inc.
WHGLFE003	6961079.00	2295934.00	06/17/02	3.3	895.9	HydroGeoLogic, Inc.
WHGLFE004	6960785.00	2295825.00	06/19/02	0	18	HydroGeoLogic, Inc.
WHGLRW015	6960871.43	2298662.64	07/28/99	46	13	HydroGeoLogic, Inc.
WHGLTA003	6961043.88	2298029.84	04/14/99	27	7	HydroGeoLogic, Inc.
WHGLTA004	6962943.38	2295760.62	04/23/99	1,300	125	HydroGeoLogic, Inc.
WHGLTA009	6965211.65	2297528.70	05/01/03	45	3.4	Earth Tech Corporation
WHGLTA010	6965580.03	2296770.93	10/31/00	14	3	HydroGeoLogic, Inc.
WHGLTA012	6965920.84	2297740.00	10/10/02	0	24	Ellis Environmental Group
WHGLTA014	6966295.34	2297373.92	10/27/00	36	250	HydroGeoLogic, Inc.
WHGLTA025	6961608.26	2298942.63	11/05/99	9	2	HydroGeoLogic, Inc.
WHGLTA028	6967761.00	2297451.00	04/17/02	360	206	Ellis Environmental Group
WHGLTA029	6965736.00	2298574.00	10/16/02	0	1	Ellis Environmental Group
WHGLTA043	6961771.99	2297021.32	01/04/01	20	4	HydroGeoLogic, Inc.
WHGLTA044	6961721.40	2297347.37	10/17/02	0	4	Ellis Environmental Group
WHGLTA045	6961321.90	2298368.80	04/18/02	3	1	Ellis Environmental Group
WHGLTA046	6961298.49	2296089.68	02/26/02	2,300	515	HydroGeoLogic, Inc.
WHGLTA048	6960916.20	2298714.83	10/15/02	3	1	Earth Tech Corporation
WHGLTA050	6963013.36	2296420.09	04/06/01	170	31	HydroGeoLogic, Inc.

Table A6. Maximum historical trichloroethene (TCE) and total 1,2-dichloroethene (total DCE) concentrations in the alluvial aquifer, used to compute parent-compound to daughter-product concentration ratios, Air Force Plant 4 (AFP4) and Naval Air Station-Joint Reserve Base Carswell Field (NAS-JRB) study area, Fort Worth, Texas, 1991–2003—Continued.

Well number	Northing	Easting	Date collected	TCE concentration (micrograms per liter)	Total DCE concentration (micrograms per liter)	Source
WHGLTA051	6962894.90	2296247.12	04/06/01	170	32	HydroGeoLogic, Inc.
WHGLTA052	6962769.45	2296098.07	04/06/01	300	63	HydroGeoLogic, Inc.
WHGLTA054	6960748.26	2295541.09	02/20/01	93	23	HydroGeoLogic, Inc.
WHGLTA056	6960787.36	2295827.62	06/13/01	58	16	HydroGeoLogic, Inc.
WHGLTA060	6965619.32	2298210.18	11/26/01	0	43	HydroGeoLogic, Inc.
WHGLTA062	6965663.00	2298317.27	11/26/01	0	15	HydroGeoLogic, Inc.
WHGLTA063	6965677.07	2298270.14	11/27/01	0	3	HydroGeoLogic, Inc.
WHGLTA064	6965075.48	2298351.15	07/23/01	15	13	HydroGeoLogic, Inc.
WHGLTA065	6960593.00	2295633.00	12/06/01	5	312	HydroGeoLogic, Inc.
WHGLTA067	6960876.00	2295733.00	12/02/01	42	13	HydroGeoLogic, Inc.
WHGLTA069	6961708.00	2296063.00	05/05/03	770	94.8	HydroGeoLogic, Inc.
WHGLTA070	6961576.00	2296056.00	06/19/02	1,600	453	HydroGeoLogic, Inc.
WHGLTA072	6961283.00	2296102.00	06/18/02	1,800	318	HydroGeoLogic, Inc.
WHGLTA073	6961283.00	2296167.00	05/05/03	3,200	77	HydroGeoLogic, Inc.
WHGLTA074	6961285.00	2296258.00	06/18/02	2,100	447	HydroGeoLogic, Inc.
WHGLTA075	6961072.00	2295934.00	05/05/03	0	280	HydroGeoLogic, Inc.
WHGLTA076	6961086.00	2295934.00	06/17/02	1,700	517	HydroGeoLogic, Inc.
WHGLTA077	6960785.00	2295776.00	06/20/02	65	24.5	HydroGeoLogic, Inc.
WHGLTA082	6964396.00	2296386.00	10/10/02	7	14	Ellis Environmental Group
WHGLTA201	6963198.14	2298660.88	05/21/98	15	2	HydroGeoLogic, Inc.
WHGLTA202	6963326.21	2298832.59	12/14/98	16	2	HydroGeoLogic, Inc.
WHGLTA203	6963059.00	2298401.00	05/13/98	4	27	HydroGeoLogic, Inc.
WHGLTA204	6963625.62	2298104.66	09/23/98	58	8	HydroGeoLogic, Inc.
WHGLTA302	6962603.00	2294422.00	05/07/98	1,400	1,142	HydroGeoLogic, Inc.
WHGLTA303	6962351.00	2294401.00	06/21/02	206	84	HydroGeoLogic, Inc.
WHGLTA601	6962753.00	2297473.69	04/19/99	150	29	HydroGeoLogic, Inc.
WHGLTA602	6962752.66	2297625.01	12/08/98	110	26	HydroGeoLogic, Inc.
WHGLTA603	6962713.38	2297727.19	04/19/02	0	7	Ellis Environmental Group
WHGLTA604	6963195.00	2297530.00	09/24/98	160	23	HydroGeoLogic, Inc.
WHGLTA701	6961835.73	2295332.86	09/28/98	4,600	975	HydroGeoLogic, Inc.
WHGLTA702	6961920.00	2295882.00	02/21/01	4	37	HydroGeoLogic, Inc.
WHGLTA703	6961680.70	2295741.23	12/16/98	97	17	HydroGeoLogic, Inc.
WHGLTA704	6962141.07	2295831.51	05/19/98	13	39	HydroGeoLogic, Inc.
WHGLTA705	6962003.00	2296027.00	02/15/01	1	8	HydroGeoLogic, Inc.
WHGLTA706	6962146.00	2296031.00	02/16/01	3	9	HydroGeoLogic, Inc.
WHGLTA708	6962019.93	2295647.18	02/19/01	12	17	HydroGeoLogic, Inc.
WHGLTA709	6961934.71	2295750.93	02/19/01	110	194	HydroGeoLogic, Inc.
WHGLTA801	6962790.06	2295857.80	04/06/01	150	229	HydroGeoLogic, Inc.
WITCTA004	6968940.00	2297491.00	05/01/03	49.4	1.7	Earth Tech Corporation
WITCTA005	6968459.46	2298167.79	04/28/97	310	93	International Technology Corp.
WITCTA006	6968427.00	2298263.00	05/02/97	25	110	International Technology Corp.
WITCTA009	6967862.00	2298234.00	08/23/01	353	28	Science Applications International Corp.
WITCTA012	6967348.77	2298224.39	04/28/97	6	92	International Technology Corp.
WITCTA013	6967017.00	2297752.00	04/28/97	330	50	International Technology Corp.
WITCTA014	6966904.57	2297418.51	04/28/97	92	15	International Technology Corp.
WITCTA015	6966333.00	2298395.00	08/23/01	68	225	Science Applications International Corp.
WITCTA016	6966239.00	2298062.00	04/29/97	29	72	International Technology Corp.
WITCTA017	6967298.15	2299305.78	10/17/02	52	28	Earth Tech Corporation
WITCTA019	6963107.00	2298838.00	10/09/02	4	1	Ellis Environmental Group
WITCTA025	6966005.00	2299534.00	04/09/02	100	139	Ellis Environmental Group

74 Subsurface Occurrence and Potential Source Areas of Chlorinated Ethenes, AFP4 and NAS–JRB, Fort Worth, Texas

Table A6. Maximum historical trichloroethene (TCE) and total 1,2-dichloroethene (total DCE) concentrations in the alluvial aquifer, used to compute parent-compound to daughter-product concentration ratios, Air Force Plant 4 (AFP4) and Naval Air Station-Joint Reserve Base Carswell Field (NAS–JRB) study area, Fort Worth, Texas, 1991–2003—Continued.

Well number	Northing	Easting	Date collected	TCE concentration (micrograms per liter)	Total DCE concentration (micrograms per liter)	Source
WITCTA037	6963424.00	2297784.00	04/29/97	58	8	International Technology Corp.
WITCTA039	6962339.77	2295415.41	05/01/97	39	210	International Technology Corp.
WITCTA040	6963260.00	2299515.00	04/05/01	58	11	HydroGeoLogic, Inc.
WJETA501	6962953.00	2296722.00	02/01/98	326.4	45.35	U.S. Geological Survey
WJETA502	6962955.00	2296726.00	06/01/98	720	101.1	U.S. Geological Survey
WJETA503	6962957.00	2296723.00	02/01/98	345.6	40.35	U.S. Geological Survey
WJETA504	6962911.00	2296817.00	10/01/02	170	28	U.S. Geological Survey
WJETA505	6962911.00	2296820.00	02/01/98	480	68.02	U.S. Geological Survey
WJETA507	6962835.00	2296843.00	02/01/98	345.6	42.75	U.S. Geological Survey
WJETA508	6962836.00	2296841.00	02/01/98	288	43.19	U.S. Geological Survey
WJETA509	6962837.00	2296842.00	02/01/98	316.8	42.75	U.S. Geological Survey
WJETA510	6962680.00	2296812.00	02/01/98	40.8	97.73	U.S. Geological Survey
WJETA511	6962679.00	2296809.00	01/01/01	64	81.2	U.S. Geological Survey
WJETA512	6962682.00	2296810.00	01/01/01	150	56.6	U.S. Geological Survey
WJETA513	6962998.00	2296754.00	02/01/98	489.6	62.97	U.S. Geological Survey
WJETA514	6962864.00	2296751.00	10/01/02	180	42	U.S. Geological Survey
WJETA515	6962863.00	2296894.00	02/01/98	403.2	60.47	U.S. Geological Survey
WJETA516	6962969.00	2296860.00	02/01/98	489.6	73.1	U.S. Geological Survey
WJETA517	6962866.00	2296714.00	02/01/98	345.6	47.78	U.S. Geological Survey
WJETA518	6962950.00	2296714.00	02/01/98	412.8	60.47	U.S. Geological Survey
WJETA519	6962842.00	2296754.00	02/01/98	326.4	42.78	U.S. Geological Survey
WJETA520	6962879.00	2296810.00	02/01/98	595.2	45.34	U.S. Geological Survey
WJETA521	6962921.00	2296867.00	01/01/04	110	16	U.S. Geological Survey
WJETA522	6962871.00	2296834.00	02/01/98	345.6	42.82	U.S. Geological Survey
WJETA523	6962887.00	2296845.00	02/01/98	681.6	97.6	U.S. Geological Survey
WJETA524	6962818.00	2296807.00	02/01/98	336	42.82	U.S. Geological Survey
WJETA525	6962800.00	2296820.00	02/01/98	134.4	25.18	U.S. Geological Survey
WJETA526	6962778.00	2296826.00	02/01/98	355.2	58.03	U.S. Geological Survey
WJETA527	6962856.00	2296937.00	02/01/98	451.2	60.1	U.S. Geological Survey
WJETA528	6962815.00	2296880.00	02/01/98	249.6	35.32	U.S. Geological Survey
WJETA529	6962759.00	2296997.00	02/01/98	364.8	55.42	U.S. Geological Survey
WL–090JETA	6963983.92	2291896.50	07/28/98	158	230.6	Jacobs Engineering Group
WL–091JETA	6964268.00	2291919.00	07/28/98	1,400	111	Jacobs Engineering Group
WP07–10B	6961277.46	2296040.45	05/05/03	1,500	36.2	HydroGeoLogic, Inc.
WSAICTA002	6964473.05	2294921.57	12/14/00	21	1	Science Applications International Corp.
WSAICTA003	6962921.08	2294630.39	12/11/00	1,100	410	Science Applications International Corp.
WSAICTA004	6963343.80	2293586.34	12/14/00	270	9	Science Applications International Corp.
WSAICTA005	6963578.03	2293587.28	12/14/00	600	11	Science Applications International Corp.
WSAICTA007	6961971.36	2294861.23	05/23/02	186	56	Science Applications International Corp.
WSAICTA008	6961974.34	2294585.80	04/11/02	200	109	Ellis Environmental Group
WSAICTA010	6962655.14	2294341.87	05/01/03	1,767	10.2	Earth Tech Corporation
WSAICTA014	6963885.00	2293582.00	06/26/02	639	50	Science Applications International Corp.
WSAICTA015	6966805.36	2299042.92	09/24/01	1	17	Science Applications International Corp.
WSAICTA016	6966551.89	2299049.00	05/07/02	220	53	Earth Tech Corporation
WSAICTA023	6967077.62	2298656.36	10/03/01	5	77	Science Applications International Corp.
WUSGSTA001	6962644.00	2297002.00	02/01/98	393.6	62.97	U.S. Geological Survey
WUSGSTA003	6961872.00	2296987.00	06/01/98	16	4.6	U.S. Geological Survey
WUSGSTA004	6962085.00	2297504.00	02/01/98	278.4	59.65	U.S. Geological Survey
WUSGSTA005	6961955.00	2297925.00	02/01/98	58.8	5.3	U.S. Geological Survey
WUSGSTA006	6961670.00	2298251.00	02/01/98	3.49	12.2	U.S. Geological Survey

Table A6. Maximum historical trichloroethene (TCE) and total 1,2-dichloroethene (total DCE) concentrations in the alluvial aquifer, used to compute parent-compound to daughter-product concentration ratios, Air Force Plant 4 (AFP4) and Naval Air Station-Joint Reserve Base Carswell Field (NAS-JRB) study area, Fort Worth, Texas, 1991–2003—Continued.

Well number	Northing	Easting	Date collected	TCE concentration (micrograms per liter)	Total DCE concentration (micrograms per liter)	Source
WUSGSTA007	6962684.00	2298206.00	02/01/98	240	68.74	U.S. Geological Survey
WUSGSTA008	6962636.00	2296832.00	02/01/98	33.6	4.74	U.S. Geological Survey
WUSGSTA009	6962766.00	2296661.00	01/01/00	1.2	19.82	U.S. Geological Survey
WUSGSTA010	6962707.00	2296719.00	02/01/98	163.2	143.77	U.S. Geological Survey
WUSGSTA011	6962668.00	2296825.00	01/15/03	140	5	U.S. Geological Survey
WUSGSTA012	6962787.00	2297104.00	02/01/98	460.8	60.54	U.S. Geological Survey
WUSGSTA013	6962745.00	2297215.00	02/01/98	268.8	55.7	U.S. Geological Survey
WUSGSTA014	6962826.00	2297306.00	01/15/03	44	14.5	U.S. Geological Survey
WUSGSTA015	6963054.00	2296591.00	01/15/03	130	12	U.S. Geological Survey
WUSGSTA016	6963036.00	2296370.00	02/01/98	681.6	110.64	U.S. Geological Survey
WUSGSTA017	6962675.00	2296815.00	02/01/98	499.2	73.58	U.S. Geological Survey
WUSGSTA018	6962566.00	2297413.00	01/15/03	54	64.28	U.S. Geological Survey
WUSGSTA019	6963009.00	2297050.00	02/01/98	460.8	65.74	U.S. Geological Survey
WUSGSTA020	6962722.00	2296818.00	02/01/98	336	54.7	U.S. Geological Survey
WUSGSTA021	6962659.00	2296814.00	02/01/98	326.4	152.15	U.S. Geological Survey
WUSGSTA022	6962736.00	2296740.00	02/01/98	480	73.19	U.S. Geological Survey
WUSGSTA023	6962638.00	2296810.00	02/01/98	33.6	5.015	U.S. Geological Survey

76 Subsurface Occurrence and Potential Source Areas of Chlorinated Ethenes, AFP4 and NAS–JRB, Fort Worth, Texas

Table A7. Maximum historical *trans*-1,2-dichloroethene (*trans*-DCE) and *cis*-1,2-dichloroethene (*cis*-DCE) concentrations in the alluvial aquifer, used to compute concentration ratios, Air Force Plant 4 (AFP4) and Naval Air Station-Joint Reserve Base Carswell Field (NAS–JRB) study area, Fort Worth, Texas, 1991–2003.

[Northing, north state plane coordinate of north-south distance, in feet, from reference location (N6561666.67); Easting, east state plane coordinate of east-west distance, in feet, from reference location (E1968500.00)]

Well number	Northing	Easting	Date collected	<i>trans</i> -DCE concentration (micrograms per liter)	<i>cis</i> -DCE concentration (micrograms per liter)	Source
CAR–RW1	6960869.00	2296755.00	09/16/99	51	400	HydroGeoLogic, Inc.
CAR–RW10	6961279.00	2296078.88	09/16/99	49	350	HydroGeoLogic, Inc.
CAR–RW11	6961412.50	2296075.74	09/16/99	66	320	HydroGeoLogic, Inc.
CAR–RW12	6961192.50	2295933.72	09/16/99	65	460	HydroGeoLogic, Inc.
CAR–RW2	6961223.00	2296673.00	09/16/99	63	350	HydroGeoLogic, Inc.
CAR–RW4	6961112.00	2296685.00	09/17/99	38	330	HydroGeoLogic, Inc.
CAR–RW5	6961318.00	2296638.00	09/16/99	85	240	HydroGeoLogic, Inc.
CAR–RW6	6961112.00	2296510.00	09/17/99	45	390	HydroGeoLogic, Inc.
CAR–RW8	6961214.00	2296306.00	09/16/99	54	380	HydroGeoLogic, Inc.
CAR–RW9	6961221.00	2297006.00	09/17/99	39	330	HydroGeoLogic, Inc.
F–204	6965223.00	2290634.70	11/10/95	0	.91	Jacobs Engineering Group
F–214	6966040.00	2289864.00	05/14/02	1,000	93,000	Earth Tech Corporation
F–216	6965776.00	2290219.93	10/08/95	0	14	Jacobs Engineering Group
F–217	6965960.00	2290109.05	01/27/00	10	1,100	U.S. Air Force, Center for Environmental Excellence
F–218	6964024.50	2291474.21	05/06/01	36	3,300	U.S. Air Force, Center for Environmental Excellence
FT08–11B	6962034.00	2295931.00	01/14/96	4	29	Law Environmental
FT09–12B	6960709.50	2295697.41	01/14/96	6	10	Law Environmental
FT09–12C	6960590.50	2295771.51	01/24/97	3	22	CH2M Hill
FT09–12E	6960701.00	2295821.16	12/05/01	5	14	HydroGeoLogic, Inc.
GMI–04–01M	6960931.00	2296729.00	10/29/97	41	240	HydroGeoLogic, Inc.
GMI–22–01M	6965122.00	2297689.15	07/16/95	0	21	Law Environmental
GMI–22–03M	6966220.00	2298539.37	07/16/95	49	27	Law Environmental
GMI–22–04M	6967250.50	2297341.00	07/19/99	10	72	HydroGeoLogic, Inc.
GMI–22–06M	6967004.50	2298186.58	05/23/94	48	26	Geo-Marine, Inc.
HM–10	6965811.00	2290121.80	04/29/95	1.1	12	Jacobs Engineering Group
HM–110	6963667.50	2293163.24	10/13/99	1	56	HydroGeoLogic, Inc.
HM–111	6963624.00	2293266.53	10/10/95	0	3.2	Jacobs Engineering Group
HM–112	6964218.00	2293142.65	04/06/00	5	200	HydroGeoLogic, Inc.
HM–113	6964677.00	2293133.60	01/20/96	480	120	Jacobs Engineering Group
HM–114	6963912.00	2294352.00	04/11/02	1	48	Ellis Environmental Group
HM–116	6966411.50	2294283.69	10/18/99	1	48	HydroGeoLogic, Inc.
HM–118	6968035.00	2294780.47	10/14/02	0	4	Ellis Environmental Group
HM–123	6961638.50	2295272.60	05/01/03	13	153	Earth Tech Corporation
HM–126	6963121.00	2294300.23	04/03/01	3	19	HydroGeoLogic, Inc.
HM–17	6963993.50	2290451.65	10/31/95	0	27	Jacobs Engineering Group
HM–31	6963114.50	2291505.33	05/05/02	6.1	43	Earth Tech Corporation
HM–36	6965484.00	2289786.00	04/27/00	4	54	U.S. Air Force, Center for Environmental Excellence
HM–59	6966811.00	2291469.61	01/15/03	0	6.1	Earth Tech Corporation
HM–64	6966407.00	2291114.57	10/30/95	0	220	Jacobs Engineering Group
HM–71	6966470.50	2292457.39	10/14/95	0	16	Jacobs Engineering Group
HM–88	6964480.00	2291919.17	04/27/00	4	270	U.S. Air Force, Center for Environmental Excellence
HM–89	6964470.50	2292084.17	09/13/00	0	500	U.S. Air Force, Center for Environmental Excellence
HM–90	6965640.00	2292457.85	05/21/93	0	1.7	Jacobs Engineering Group
HM–91	6966174.50	2292586.29	06/04/93	0	15	Jacobs Engineering Group
HM–95	6965442.50	2293156.22	10/24/01	1	120	U.S. Air Force, Center for Environmental Excellence
HM–96	6966507.00	2293168.95	01/15/03	1.2	.9	Earth Tech Corporation
HM–97	6966884.00	2293158.51	05/26/93	0	12	Jacobs Engineering Group
ITMW–01T	6961062.00	2298967.00	10/08/98	1	8	HydroGeoLogic, Inc.
LF04–02	6961113.00	2296309.10	05/05/03	2.8	2.6	HydroGeoLogic, Inc.
LF04–03	6961064.00	2296306.00	09/16/99	53	370	HydroGeoLogic, Inc.
LF04–04	6960941.50	2297165.64	01/13/96	0	359	Law Environmental
LF04–4C	6960600.00	2296588.00	04/13/99	2	6	HydroGeoLogic, Inc.
LF04–4D	6960828.00	2296412.00	06/20/02	1.1	39	HydroGeoLogic, Inc.
LF05–01	6962728.50	2294577.83	06/19/02	3	5	Science Applications International Corp.
LF05–02	6962653.00	2295278.95	01/24/97	28	199	CH2M Hill

Table A7. Maximum historical *trans*-1,2-dichloroethene (*trans*-DCE) and *cis*-1,2-dichloroethene (*cis*-DCE) concentrations in the alluvial aquifer, used to compute concentration ratios, Air Force Plant 4 (AFP4) and Naval Air Station-Joint Reserve Base Carswell Field (NAS-JRB) study area, Fort Worth, Texas, 1991–2003—Continued.

Well number	Northing	Easting	Date collected	<i>trans</i> -DCE concentration (micrograms per liter)	<i>cis</i> -DCE concentration (micrograms per liter)	Source
LF05–18	6961555.50	2297075.43	10/29/97	41	310	HydroGeoLogic, Inc.
LF05–19	6961240.00	2297461.35	01/25/97	15	293	CH2M Hill
LF05–5B	6961901.50	2296078.25	10/16/02	26	1,100	Ellis Environmental Group
LF05–5D	6961739.00	2295754.00	04/12/95	6	14	Law Environmental
LF05–5G	6961558.00	2296690.00	04/06/00	27	210	HydroGeoLogic, Inc.
LF05–5H	6961732.50	2296340.79	05/05/03	62	85	HydroGeoLogic, Inc.
LSA1628–3	6967993.00	2297791.30	01/14/96	7	10	Law Environmental
MW–19	6963513.00	2295369.00	08/22/01	1	38	Science Applications International Corp.
MW–IT–01T	6961062.00	2298967.00	11/05/98	.99	7.85	Jacobs Engineering Group
RW–11U	6965385.00	2292586.20	07/30/94	6	1,300	U.S. Air Force, Center for Environmental Excellence
RW–1U	6965269.00	2292468.70	01/19/93	0	1,800	U.S. Air Force, Center for Environmental Excellence
RW–3UR	6964444.00	2292090.10	12/14/00	8	440	U.S. Air Force, Center for Environmental Excellence
RW–8UR	6964339.00	2291990.60	12/14/00	0	510	U.S. Air Force, Center for Environmental Excellence
SPOT35–8	6966428.50	2296970.16	04/07/00	53	43	HydroGeoLogic, Inc.
ST14–W09	6963472.00	2299550.00	10/18/95	2	7	Law Environmental
ST14–W15	6963316.00	2299923.00	05/01/03	0	1.8	Earth Tech Corporation
T8	6965421.00	2289949.00	01/14/02	0	2	U.S. Air Force, Center for Environmental Excellence
T9	6965551.00	2289993.00	01/14/02	1	9	U.S. Air Force, Center for Environmental Excellence
VEP–10	6965452.00	2289741.00	05/07/02	0	2.4	Earth Tech Corporation
VEP–11	6965472.00	2289741.00	05/08/02	2.4	26	Earth Tech Corporation
VEP–12	6965492.00	2289740.47	05/08/02	24	210	Earth Tech Corporation
VEP–13	6965512.00	2289740.00	05/08/02	15	220	Earth Tech Corporation
VEP–14	6965532.50	2289740.23	05/08/02	11	240	Earth Tech Corporation
VEP–15	6965572.50	2289739.27	05/09/02	2.2	85	Earth Tech Corporation
VEP–16	6965593.50	2289739.28	05/09/02	0	12	Earth Tech Corporation
VEP–18	6965632.00	2289739.19	05/09/02	29	570	Earth Tech Corporation
VEP–18B	6965652.00	2289740.40	10/22/02	50	500	Earth Tech Corporation
VEP–19	6965673.50	2289738.41	05/09/02	8	28	Earth Tech Corporation
VEP–20	6965692.50	2289738.81	05/10/02	1.9	18	Earth Tech Corporation
VEP–21	6965885.50	2289766.47	05/11/02	1.4	11	Earth Tech Corporation
VEP–22	6965904.50	2289772.36	05/11/02	4.9	26	Earth Tech Corporation
VEP–23	6965924.00	2289776.40	05/11/02	5.4	28	Earth Tech Corporation
VEP–24	6965947.50	2289785.33	05/11/02	12	230	Earth Tech Corporation
VEP–25	6965961.50	2289792.04	05/11/02	16	380	Earth Tech Corporation
VEP–26	6965979.50	2289801.00	05/15/03	1,150	173	Shaw Environmental
VEP–27	6965996.50	2289811.11	05/12/02	120	4,900	Earth Tech Corporation
VEP–28	6966006.50	2289828.89	05/12/02	23	510	Earth Tech Corporation
VEP–29	6966014.50	2289844.00	10/24/02	380	73,000	Earth Tech Corporation
VEP–3	6966027.00	2289825.00	05/12/02	22	850	Earth Tech Corporation
VEP–31	6966040.50	2289879.41	05/13/02	15	200	Earth Tech Corporation
VEP–32	6966058.50	2289884.99	05/13/02	5.6	39	Earth Tech Corporation
VEP–33	6966075.50	2289893.21	05/14/02	23	100	Earth Tech Corporation
VEP–35	6966114.00	2289901.00	05/14/02	140	2,200	Earth Tech Corporation
VEP–36	6966136.00	2289905.70	05/14/02	59	900	Earth Tech Corporation
VEP–37	6966155.00	2289906.66	05/14/02	51	380	Earth Tech Corporation
VEP–4	6966050.50	2289838.40	05/15/03	8	16	Shaw Environmental
VEP–40	6966096.50	2289877.53	05/13/02	1.4	8.9	Earth Tech Corporation
VEP–41	6966067.00	2289850.00	05/13/02	38	1,300	Earth Tech Corporation
VEP–9	6965432.00	2289741.00	05/07/02	0	1.2	Earth Tech Corporation
VEPT–1	6965717.00	2289740.00	05/09/02	2.1	23	Earth Tech Corporation
VEPT–2	6965739.00	2289741.00	05/10/02	2.2	19	Earth Tech Corporation
W–129	6965936.00	2289777.80	05/12/93	1.6	54	Jacobs Engineering Group
W–130	6966043.00	2289868.15	06/14/93	0	48,000	Jacobs Engineering Group
W–132	6966136.50	2289895.52	09/10/91	8	24	Chem-Nuclear Geotech, Inc.
W–133U	6963349.00	2290609.00	06/06/93	0	12	Jacobs Engineering Group

78 Subsurface Occurrence and Potential Source Areas of Chlorinated Ethenes, AFP4 and NAS–JRB, Fort Worth, Texas

Table A7. Maximum historical *trans*-1,2-dichloroethene (*trans*-DCE) and *cis*-1,2-dichloroethene (*cis*-DCE) concentrations in the alluvial aquifer, used to compute concentration ratios, Air Force Plant 4 (AFP4) and Naval Air Station-Joint Reserve Base Carswell Field (NAS–JRB) study area, Fort Worth, Texas, 1991–2003—Continued.

Well number	Northing	Easting	Date collected	<i>trans</i> -DCE concentration (micrograms per liter)	<i>cis</i> -DCE concentration (micrograms per liter)	Source
W-137	6963499.00	2290968.00	01/25/97	0	83.6	Jacobs Engineering Group
W-147	6965824.00	2290711.00	01/15/03	0	17	Earth Tech Corporation
W-149	6965190.50	2292456.97	10/25/01	3	420	U.S. Air Force, Center for Environmental Excellence
W-151	6964981.00	2292475.30	05/25/93	0	25	Jacobs Engineering Group
W-156	6964824.00	2292815.02	09/14/00	0	440	U.S. Air Force, Center for Environmental Excellence
W-160	6963448.50	2291368.51	01/24/97	17.2	454	Jacobs Engineering Group
W7TAITC	6966050.00	2290097.00	01/26/00	10	2,400	U.S. Air Force, Center for Environmental Excellence
W9AWNITC	6965921.00	2289851.00	01/24/00	0	11,000	U.S. Air Force, Center for Environmental Excellence
WCHMHTA004	6967949.00	2295041.00	09/26/01	0	2	Science Applications International Corp.
WCHMHTA008	6967890.00	2295597.48	05/01/03	0	73	Earth Tech Corporation
WCHMHTA009	6968444.50	2296663.99	04/04/01	0	3	HydroGeoLogic, Inc.
WCHMHTA010	6967640.00	2296398.80	05/01/03	0	1.1	Earth Tech Corporation
WCHMHTA011	6969295.00	2297328.38	09/26/01	0	5	Science Applications International Corp.
WCHMHTA013	6967056.00	2300052.00	05/01/03	0	5.2	Earth Tech Corporation
WCOETA002	6962944.00	2296763.00	07/01/03	0	17	U.S. Geological Survey
WCOETA004	6962828.00	2296675.00	07/01/03	0	31	U.S. Geological Survey
WCOETA006	6962928.00	2296921.00	07/01/02	0	31	U.S. Geological Survey
WCOETA010	6962696.00	2296798.00	07/01/02	1.8	46	U.S. Geological Survey
WHGLFE001	6961575.00	2296063.00	06/19/02	24	400	HydroGeoLogic, Inc.
WHGLFE002	6961284.00	2296060.00	06/18/02	26	500	HydroGeoLogic, Inc.
WHGLFE003	6961079.00	2295934.00	06/17/02	5.9	890	HydroGeoLogic, Inc.
WHGLFE004	6960785.00	2295825.00	06/19/02	0	18	HydroGeoLogic, Inc.
WHGLRW015	6960871.50	2298662.64	10/24/00	0	17	HydroGeoLogic, Inc.
WHGLTA003	6961044.00	2298029.84	10/05/99	0	9	HydroGeoLogic, Inc.
WHGLTA004	6962943.50	2295760.62	10/18/99	7	100	HydroGeoLogic, Inc.
WHGLTA009	6965211.50	2297528.70	05/01/03	.4	3	Earth Tech Corporation
WHGLTA010	6965580.00	2296770.93	10/31/00	0	3	HydroGeoLogic, Inc.
WHGLTA012	6965921.00	2297740.00	04/10/02	14	18	Ellis Environmental Group
WHGLTA014	6966295.50	2297373.92	04/07/00	130	98	HydroGeoLogic, Inc.
WHGLTA028	6967761.00	2297451.00	04/17/02	16	190	Ellis Environmental Group
WHGLTA029	6965736.00	2298574.00	11/28/01	2	3	HydroGeoLogic, Inc.
WHGLTA043	6961772.00	2297021.32	05/01/03	13.5	104	Earth Tech Corporation
WHGLTA044	6961721.50	2297347.37	10/17/02	0	4	Ellis Environmental Group
WHGLTA045	6961322.00	2298368.80	04/18/02	0	1	Ellis Environmental Group
WHGLTA046	6961298.50	2296089.68	02/26/02	35	480	HydroGeoLogic, Inc.
WHGLTA048	6960916.00	2298714.83	05/01/03	0	108	Earth Tech Corporation
WHGLTA050	6963013.50	2296420.09	04/06/01	0	31	HydroGeoLogic, Inc.
WHGLTA051	6962895.00	2296247.12	10/16/02	1	67	Ellis Environmental Group
WHGLTA052	6962769.50	2296098.07	04/06/01	2	61	HydroGeoLogic, Inc.
WHGLTA054	6960748.50	2295541.09	10/11/02	68	39	Ellis Environmental Group
WHGLTA056	6960787.50	2295827.62	04/06/01	1	27	HydroGeoLogic, Inc.
WHGLTA060	6965619.50	2298210.18	07/20/01	12	38	HydroGeoLogic, Inc.
WHGLTA062	6965663.00	2298317.27	11/26/01	4	11	HydroGeoLogic, Inc.
WHGLTA063	6965677.00	2298270.14	11/27/01	2	1	HydroGeoLogic, Inc.
WHGLTA065	6960593.00	2295633.00	12/06/01	2	310	HydroGeoLogic, Inc.
WHGLTA067	6960876.00	2295733.00	12/02/01	0	13	HydroGeoLogic, Inc.
WHGLTA069	6961708.00	2296063.00	05/05/03	86	8.8	HydroGeoLogic, Inc.
WHGLTA070	6961576.00	2296056.00	05/05/03	93	430	HydroGeoLogic, Inc.
WHGLTA072	6961283.00	2296102.00	06/18/02	28	290	HydroGeoLogic, Inc.
WHGLTA073	6961283.00	2296167.00	06/18/02	15	190	HydroGeoLogic, Inc.
WHGLTA074	6961285.00	2296258.00	05/05/03	110	220	HydroGeoLogic, Inc.
WHGLTA075	6961072.00	2295934.00	06/17/02	2	1,000	HydroGeoLogic, Inc.
WHGLTA076	6961086.00	2295934.00	06/17/02	27	490	HydroGeoLogic, Inc.
WHGLTA077	6960785.00	2295776.00	06/20/02	1.5	23	HydroGeoLogic, Inc.
WHGLTA082	6964396.00	2296386.00	10/10/02	3	11	Ellis Environmental Group

Table A7. Maximum historical *trans*-1,2-dichloroethene (*trans*-DCE) and *cis*-1,2-dichloroethene (*cis*-DCE) concentrations in the alluvial aquifer, used to compute concentration ratios, Air Force Plant 4 (AFP4) and Naval Air Station-Joint Reserve Base Carswell Field (NAS-JRB) study area, Fort Worth, Texas, 1991–2003—Continued.

Well number	Northing	Easting	Date collected	<i>trans</i> -DCE concentration (micrograms per liter)	<i>cis</i> -DCE concentration (micrograms per liter)	Source
WHGLTA201	6963198.00	2298660.88	12/09/98	1	4	HydroGeoLogic, Inc.
WHGLTA202	6963326.00	2298832.59	12/14/98	0	2	HydroGeoLogic, Inc.
WHGLTA203	6963059.00	2298401.00	09/23/98	9	11	HydroGeoLogic, Inc.
WHGLTA302	6962603.00	2294422.00	05/07/98	42	1,100	HydroGeoLogic, Inc.
WHGLTA303	6962351.00	2294401.00	05/08/98	46	1,100	HydroGeoLogic, Inc.
WHGLTA601	6962753.00	2297473.69	12/13/98	3	21	HydroGeoLogic, Inc.
WHGLTA602	6962752.50	2297625.01	12/08/98	4	22	HydroGeoLogic, Inc.
WHGLTA603	6962713.50	2297727.19	04/19/02	0	7	Ellis Environmental Group
WHGLTA604	6963195.00	2297530.00	12/14/98	0	19	HydroGeoLogic, Inc.
WHGLTA701	6961835.50	2295332.86	07/21/99	70	88	HydroGeoLogic, Inc.
WHGLTA702	6961920.00	2295882.00	05/20/98	17	220	HydroGeoLogic, Inc.
WHGLTA703	6961680.50	2295741.23	09/24/98	14	180	HydroGeoLogic, Inc.
WHGLTA704	6962141.00	2295831.51	10/15/99	2	7	HydroGeoLogic, Inc.
WHGLTA705	6962003.00	2296027.00	02/15/01	2	6	HydroGeoLogic, Inc.
WHGLTA706	6962146.00	2296031.00	07/13/00	1	20	HydroGeoLogic, Inc.
WHGLTA708	6962020.00	2295647.18	02/19/01	2	15	HydroGeoLogic, Inc.
WHGLTA709	6961934.50	2295750.93	02/19/01	34	160	HydroGeoLogic, Inc.
WHGLTA801	6962790.00	2295857.80	04/06/01	29	200	HydroGeoLogic, Inc.
WINTTA022	6964617.50	2292408.66	09/13/00	0	370	U.S. Air Force, Center for Environmental Excellence
WITCTA005	6968459.50	2298167.79	04/28/97	0	93	Jacobs Engineering Group
WITCTA006	6968427.00	2298263.00	05/02/97	0	110	Jacobs Engineering Group
WITCTA009	6967862.00	2298234.00	08/23/01	9	20	Science Applications International Corp.
WITCTA010	6967695.00	2298753.00	04/04/00	2	2	HydroGeoLogic, Inc.
WITCTA012	6967349.00	2298224.39	05/01/03	110	18.1	Earth Tech Corporation
WITCTA013	6967017.00	2297752.00	08/23/01	7	22	Science Applications International Corp.
WITCTA014	6966904.50	2297418.51	08/23/01	8	40	Science Applications International Corp.
WITCTA015	6966333.00	2298395.00	08/23/01	38	189	Science Applications International Corp.
WITCTA016	6966239.00	2298062.00	10/08/99	150	120	HydroGeoLogic, Inc.
WITCTA017	6967298.00	2299305.78	10/17/02	11	17	Earth Tech Corporation
WITCTA019	6963107.00	2298838.00	10/09/02	0	1	Ellis Environmental Group
WITCTA025	6966005.00	2299534.00	08/22/01	32	65	Science Applications International Corp.
WITCTA037	6963424.00	2297784.00	04/29/97	0	8	Jacobs Engineering Group
WITCTA039	6962340.00	2295415.41	05/01/97	0	210	Jacobs Engineering Group
WITCTA040	6963260.00	2299515.00	05/01/03	0	71	Earth Tech Corporation
WJETA043	6964667.50	2292227.72	09/12/00	0	350	U.S. Air Force, Center for Environmental Excellence
WJETA047	6964393.00	2292176.36	09/13/00	8	350	U.S. Air Force, Center for Environmental Excellence
WJETA083	6964204.50	2292903.92	12/20/00	4	110	U.S. Air Force, Center for Environmental Excellence
WJETA086	6965443.00	2292457.02	12/14/00	0	59	U.S. Air Force, Center for Environmental Excellence
WJETA087	6964208.00	2293100.00	09/14/00	0	200	U.S. Air Force, Center for Environmental Excellence
WJETA088	6964424.00	2293106.00	09/14/00	0	110	U.S. Air Force, Center for Environmental Excellence
WJETA501	6962953.00	2296722.00	02/01/98	.35	45	U.S. Geological Survey
WJETA502	6962955.00	2296726.00	02/01/98	.44	62.5	U.S. Geological Survey
WJETA503	6962957.00	2296723.00	02/01/98	.35	40	U.S. Geological Survey
WJETA504	6962911.00	2296817.00	01/01/02	5.8	45	U.S. Geological Survey
WJETA505	6962911.00	2296820.00	02/01/98	.52	67.5	U.S. Geological Survey
WJETA507	6962835.00	2296843.00	06/01/98	.4	80.4	U.S. Geological Survey
WJETA508	6962836.00	2296841.00	07/01/00	4.2	55	U.S. Geological Survey
WJETA509	6962837.00	2296842.00	06/01/98	.4	93.8	U.S. Geological Survey
WJETA510	6962680.00	2296812.00	01/01/04	9.7	46	U.S. Geological Survey
WJETA511	6962679.00	2296809.00	01/01/03	8.5	80	U.S. Geological Survey
WJETA512	6962682.00	2296810.00	05/01/99	10	126	U.S. Geological Survey
WJETA513	6962998.00	2296754.00	02/01/98	.47	62.5	U.S. Geological Survey
WJETA514	6962864.00	2296751.00	07/01/01	1.1	82	U.S. Geological Survey
WJETA515	6962863.00	2296894.00	01/01/02	.56	25	U.S. Geological Survey
WJETA516	6962969.00	2296860.00	02/01/98	.6	72.5	U.S. Geological Survey

80 Subsurface Occurrence and Potential Source Areas of Chlorinated Ethenes, AFP4 and NAS–JRB, Fort Worth, Texas

Table A7. Maximum historical *trans*-1,2-dichloroethene (*trans*-DCE) and *cis*-1,2-dichloroethene (*cis*-DCE) concentrations in the alluvial aquifer, used to compute concentration ratios, Air Force Plant 4 (AFP4) and Naval Air Station-Joint Reserve Base Carswell Field (NAS–JRB) study area, Fort Worth, Texas, 1991–2003—Continued.

Well number	Northing	Easting	Date collected	<i>trans</i> -DCE concentration (micrograms per liter)	<i>cis</i> -DCE concentration (micrograms per liter)	Source
WJETA517	6962866.00	2296714.00	01/01/00	0.99	75	U.S. Geological Survey
WJETA518	6962950.00	2296714.00	02/01/98	.47	60	U.S. Geological Survey
WJETA519	6962842.00	2296754.00	01/01/03	1.1	30	U.S. Geological Survey
WJETA520	6962879.00	2296810.00	02/01/98	.34	45	U.S. Geological Survey
WJETA521	6962921.00	2296867.00	02/01/98	.57	72.5	U.S. Geological Survey
WJETA522	6962871.00	2296834.00	02/01/98	.32	42.5	U.S. Geological Survey
WJETA523	6962887.00	2296845.00	02/01/98	.6	97	U.S. Geological Survey
WJETA524	6962818.00	2296807.00	01/01/00	.83	72	U.S. Geological Survey
WJETA525	6962800.00	2296820.00	02/01/98	.18	25	U.S. Geological Survey
WJETA526	6962778.00	2296826.00	02/01/98	.53	57.5	U.S. Geological Survey
WJETA527	6962856.00	2296937.00	07/01/02	1.2	16	U.S. Geological Survey
WJETA528	6962815.00	2296880.00	01/01/02	3.6	1.9	U.S. Geological Survey
WJETA529	6962759.00	2296997.00	01/01/00	1	110	U.S. Geological Survey
WL–090JETA	6963984.00	2291896.50	08/08/98	5.58	73.9	Jacobs Engineering Group
WL–091JETA	6964268.00	2291919.00	07/28/98	1.46	111	Jacobs Engineering Group
WL–101JETA	6965358.00	2292299.00	12/12/00	0	550	U.S. Air Force, Center for Environmental Excellence
WL–102JETA	6964786.00	2292815.37	01/22/01	2	210	U.S. Air Force, Center for Environmental Excellence
WL–104JETA	6964423.50	2292886.41	12/13/00	0	240	U.S. Air Force, Center for Environmental Excellence
WL–105JETA	6963930.00	2293101.42	12/13/00	0	180	U.S. Air Force, Center for Environmental Excellence
WL–106JETA	6963806.50	2293001.85	12/13/00	11	290	U.S. Air Force, Center for Environmental Excellence
WL–106PJETA	6964408.50	2291918.53	09/12/00	0	450	U.S. Air Force, Center for Environmental Excellence
WL–107JETA	6964701.50	2292815.04	12/13/00	0	370	U.S. Air Force, Center for Environmental Excellence
WL–107PJETA	6964270.50	2292104.81	09/12/00	0	36	U.S. Air Force, Center for Environmental Excellence
WL–111JETA	6965122.00	2292395.25	12/12/00	0	1,200	U.S. Air Force, Center for Environmental Excellence
WL–111PJETA	6965503.50	2292457.25	09/12/00	0	47	U.S. Air Force, Center for Environmental Excellence
WL–112PJETA	6965552.50	2292611.65	09/14/00	0	18	U.S. Air Force, Center for Environmental Excellence
WL–113JETA	6964978.00	2292461.75	12/12/00	0	86	U.S. Air Force, Center for Environmental Excellence
WL–113PJETA	6963993.00	2293299.90	09/13/00	0	240	U.S. Air Force, Center for Environmental Excellence
WL–115JETA	6964589.00	2292916.26	01/22/01	3	240	U.S. Air Force, Center for Environmental Excellence
WL–115PJETA	6964132.50	2292806.95	09/13/00	0	290	U.S. Air Force, Center for Environmental Excellence
WL–116JETA	6964026.00	2292914.56	12/13/00	0	190	U.S. Air Force, Center for Environmental Excellence
WL–116PJETA	6964862.50	2292604.32	09/14/00	0	190	U.S. Air Force, Center for Environmental Excellence
WL–117JETA	6963947.00	2293003.37	12/13/00	6	290	U.S. Air Force, Center for Environmental Excellence
WL–118JETA	6964485.50	2292811.17	12/13/00	0	310	U.S. Air Force, Center for Environmental Excellence
WL–119JETA	6964314.00	2292916.79	01/22/01	2	200	U.S. Air Force, Center for Environmental Excellence
WL–120JETA	6964238.00	2293001.62	12/20/00	2	210	U.S. Air Force, Center for Environmental Excellence
WL–121JETA	6963866.50	2293059.70	12/13/00	0	310	U.S. Air Force, Center for Environmental Excellence
WL–122JETA	6964091.50	2293038.73	12/13/00	0	360	U.S. Air Force, Center for Environmental Excellence
WL–124AJETA	6965108.00	2292368.00	01/22/01	0	310	U.S. Air Force, Center for Environmental Excellence
WL–127JETA	6964804.00	2292467.36	12/12/00	0	75	U.S. Air Force, Center for Environmental Excellence
WL–150JETA	6964352.50	2291866.76	12/12/00	0	250	U.S. Air Force, Center for Environmental Excellence
WL–153JETA	6964329.00	2291906.43	12/12/00	0	240	U.S. Air Force, Center for Environmental Excellence
WL–155JETA	6964315.00	2291929.84	12/12/00	0	310	U.S. Air Force, Center for Environmental Excellence
WL–158JETA	6964300.50	2291955.82	12/12/00	0	140	U.S. Air Force, Center for Environmental Excellence
WL–160JETA	6964290.00	2291969.86	12/20/00	2	280	U.S. Air Force, Center for Environmental Excellence
WL–161JETA	6964285.00	2291981.87	12/12/00	0	180	U.S. Air Force, Center for Environmental Excellence
WL–163JETA	6964274.50	2291998.95	12/12/00	0	180	U.S. Air Force, Center for Environmental Excellence
WL–164JETA	6964269.50	2292007.70	12/12/00	0	230	U.S. Air Force, Center for Environmental Excellence
WL–165JETA	6964259.50	2292024.31	12/12/00	0	400	U.S. Air Force, Center for Environmental Excellence
WL–166JETA	6964264.00	2292015.93	12/12/00	0	290	U.S. Air Force, Center for Environmental Excellence
WL–167JETA	6964254.00	2292033.79	12/12/00	0	370	U.S. Air Force, Center for Environmental Excellence
WL–169JETA	6964244.00	2292050.42	12/12/00	5	430	U.S. Air Force, Center for Environmental Excellence
WL–171JETA	6964234.00	2292067.54	12/12/00	2	110	U.S. Air Force, Center for Environmental Excellence
WL–174JETA	6964219.00	2292093.61	12/12/00	0	24	U.S. Air Force, Center for Environmental Excellence
WL–177JETA	6964202.00	2292120.93	12/12/00	0	16	U.S. Air Force, Center for Environmental Excellence

Table A7. Maximum historical *trans*-1,2-dichloroethene (*trans*-DCE) and *cis*-1,2-dichloroethene (*cis*-DCE) concentrations in the alluvial aquifer, used to compute concentration ratios, Air Force Plant 4 (AFP4) and Naval Air Station-Joint Reserve Base Carswell Field (NAS-JRB) study area, Fort Worth, Texas, 1991–2003—Continued.

Well number	Northing	Easting	Date collected	<i>trans</i> -DCE concentration (micrograms per liter)	<i>cis</i> -DCE concentration (micrograms per liter)	Source
WP07–10B	6961277.50	2296040.45	05/05/03	34	2.2	HydroGeoLogic, Inc.
WSAICTA002	6964473.00	2294921.57	12/14/00	0	1	Science Applications International Corp.
WSAICTA003	6962921.00	2294630.39	12/11/00	29	410	Science Applications International Corp.
WSAICTA004	6963344.00	2293586.34	06/26/02	0	8	Science Applications International Corp.
WSAICTA005	6963578.00	2293587.28	06/26/02	0	18	Science Applications International Corp.
WSAICTA007	6961971.50	2294861.23	05/23/02	3	56	Science Applications International Corp.
WSAICTA008	6961974.50	2294585.80	09/25/01	6	43	Science Applications International Corp.
WSAICTA010	6962655.00	2294341.87	05/01/03	3.5	6.7	Earth Tech Corporation
WSAICTA014	6963885.00	2293582.00	09/25/01	1	101	Science Applications International Corp.
WSAICTA015	6966805.50	2299042.92	09/24/01	5	12	Science Applications International Corp.
WSAICTA016	6966552.00	2299049.00	10/17/02	44	53	Earth Tech Corporation
WSAICTA023	6967077.50	2298656.36	10/17/02	74	95	Earth Tech Corporation
WSAICTA025	6961666.50	2294798.23	10/03/01	1	2	Science Applications International Corp.
WUSGSTA001	6962644.00	2297002.00	02/01/98	.47	62.5	U.S. Geological Survey
WUSGSTA003	6961872.00	2296987.00	02/01/98	.67	3.35	U.S. Geological Survey
WUSGSTA004	6962085.00	2297504.00	02/01/98	3.17	56.48	U.S. Geological Survey
WUSGSTA005	6961955.00	2297925.00	02/01/98	.15	5.15	U.S. Geological Survey
WUSGSTA006	6961670.00	2298251.00	02/01/98	8.25	3.95	U.S. Geological Survey
WUSGSTA007	6962684.00	2298206.00	02/01/98	3.74	65	U.S. Geological Survey
WUSGSTA008	6962636.00	2296832.00	02/01/98	.19	4.55	U.S. Geological Survey
WUSGSTA009	6962766.00	2296661.00	01/01/00	.82	19	U.S. Geological Survey
WUSGSTA010	6962707.00	2296719.00	02/01/98	3.77	140	U.S. Geological Survey
WUSGSTA012	6962787.00	2297104.00	02/01/98	.54	60	U.S. Geological Survey
WUSGSTA013	6962745.00	2297215.00	02/01/98	.7	55	U.S. Geological Survey
WUSGSTA016	6963036.00	2296370.00	02/01/98	.64	110	U.S. Geological Survey
WUSGSTA017	6962675.00	2296815.00	01/01/00	2	96	U.S. Geological Survey
WUSGSTA019	6963009.00	2297050.00	02/01/98	.74	65	U.S. Geological Survey
WUSGSTA020	6962722.00	2296818.00	01/01/00	1.6	79	U.S. Geological Survey
WUSGSTA021	6962659.00	2296814.00	05/01/99	5	241	U.S. Geological Survey
WUSGSTA022	6962736.00	2296740.00	02/01/98	.89	72.3	U.S. Geological Survey
WUSGSTA023	6962638.00	2296810.00	02/01/98	.24	4.78	U.S. Geological Survey

Prepared by the USGS Texas Water Science Center:

8027 Exchange Drive
Austin, TX 78754-4733

Information regarding water resources in Texas is available at

<http://tx.usgs.gov/>