APPENDIX B - ZONE 2
REMEDIAL INVESTIGATION REPORT
PERIMETER GROUNDWATER OPERABLE UNIT (OU-5)

AEROJET-GENERAL SUPERFUND SITE
SACRAMENTO, CALIFORNIA

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August 1, 2005

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B1 INTRODUCTION

This Appendix presents the Remedial Investigation (RI) for groundwater within the Zone 2 Perimeter Groundwater Operable Unit (PGOU). The Zone 2 PGOU addresses groundwater flow across the southern Aerojet property boundary between Zone 3 and the Western Groundwater Operable Unit [WGOU (OU-3)] (Figure B-1). This Appendix describes the background information, (Section B1), groundwater flow characteristics (Section B2), the distribution of chemicals in groundwater (Section B3) and the references cited (Section B4).

B1.1 Background

This section describes the location, surface topography, surface water bodies, and land and groundwater uses within or near the Zone 2 PGOU. Background information regarding the historical operations, chemical handling, potential source areas upgradient of the Zone 2 PGOU, and existing remedial actions for groundwater near the Zone 2 PGOU are also presented.

B1.1.1 Location

Zone 2 is located in the southwest portion of the Aerojet Site and has the largest aerial extent of the four zones (Figure B-1). Zone 2 is bounded by Zone 1 to the north and by Zone 3 to the east. The upgradient Zone 2 PGOU boundary is coincident with White Rock Road, except in the east where it is located north of the former White Rock North Dump (WRND). The Zone 2 PGOU extends south of White Rock Road from Aerojet, onto private property and portions of the Inactive Rancho Cordova Test Site (IRCTS) (Figure B-1).

The Zone 2 PGOU is the 600-acre portion of Zone 2 that extends along the southern perimeter of the Aerojet property boundary between White Rock Road and Old White Rock, and between the WGOU and the Zone 3 PGOU.

Groundwater management Sectors F and G are located in the western and eastern portions of Zone 2, respectively. Groundwater in Sector F flows west/southwest towards Groundwater Extraction and Treatment Facility F (GET F). GET F provides hydraulic containment of chemicals in groundwater along the western portion of the southern Aerojet property boundary, and along the western and northern Aerojet property boundaries. Groundwater in Sector F is addressed under the WGOU, and is not included in the Zone 2 PGOU.

B1.1.2 Topography

Figure B-2 shows the surface topography in Zone 2. The overall slope of the ground surface is to the southwest, and surface elevations decrease from approximately 320 feet above mean sea level (ft msl) in the east to approximately 230 ft msl in the west (Figure B-2). The otherwise relatively planer surface was disrupted by extensive dredging operations that deposited roughly parallel, alternating rows of higher cobble ridges and lower silt and clay valleys (slickens)(Figure B-2). In some areas, the cobble ridges are up to 30 feet higher than the slickens; although the differences are more typically 5 to 10 feet.

The predominant topographic features in Zone 2 are two ancestral American River terrace scarps that trend northeast to southwest across Zone 2. Ground surface elevations decrease sharply (approximately 20 to 40 feet) from east to west across the scarps.

B1.1.3 Surface Water Bodies

Surface water bodies within or near the Zone 2 PGOU include Rebel Hill Ditch, Buffalo Creek, and the Westlake Storm-water Retention Cells (Figure 1-6). Rebel Hill Ditch is a man-made canal historically used to convey water for gold dredging operations. Rebel Hill Ditch trends south from Zone 4, west across Zone 3, and then generally west through Zone 2, just north of the Zone 2 PGOU. Treated groundwater from the GET A system is discharged to Rebel Hill Ditch, although the effluent infiltrates prior to reaching Zone 3. Treated groundwater from GET B is also discharged to Rebel Hill Ditch. The GET B effluent flows west from GET B towards southern Zone 2. Generally the effluent has infiltrated prior to reaching Nimbus Road, near Line 03. The GET B effluent does not leave the Aerojet Site.

Additional surface water bodies in Zone 2 include Buffalo Creek, which flows through northern Zone 2 and into the Westlake Storm-water Retention Cells (Figure 1-6). Buffalo Creek and the Westlake Storm-water Retention Cells are located north (sidegradient) of the Zone 2 PGOU.

Storm-water runoff from the southern portions of Zone 2 generally infiltrates locally and does not flow beyond the southern property boundary. Storm-water from portions of northern Zone 2 may enter Buffalo Creek, where it is contained in the Westlake Storm-water Retention Cells prior to sampling and discharge under a National Pollutant Discharge Elimination System (NPDES) Permit.

B1.1.4 Land Use

Land upgradient of the Zone 2 PGOU is owned by Aerojet and is zoned for industrial use. The majority of the land is undeveloped with scattered roads and buildings used for industrial operations in Lines 03 and 04. The industrial buildings are widely-spaced and large areas of undeveloped land served as a buffer between facilities and between the public.

Two areas on Aerojet property upgradient of, or within the Zone 2 PGOU, were formerly used for solid waste disposal. The first area includes a former Sacramento County landfill located south of Potential Source Sites 8G and 9G (Figure B-1). The second area is Potential Source Site 4G (the G-9 Dump) located between Old White Rock and White Rock Roads.

The majority of land south of the southern Aerojet property boundary is undeveloped. Current land uses south of Aerojet include open-pit aggregate mining, cattle grazing, two former municipal landfills, developer-owned private property, and the former industrial facilities on the IRCTS.

Aerojet is the current property owner of the IRCTS. The IRCTS was formerly owned and operated for rocket manufacturing and testing by the McDonnell Douglas Aircraft Company that was subsequently purchased by The Boeing Company. The Remedial Investigation/Feasibility Study (RI/FS) activities on the IRCTS are conducted pursuant to the 1994 California Department of Toxic Substances Control (DTSC) Imminent and/or Substantial Endangerment Order (DTSC, 1994), and the 1997 California Regional Water Quality Control Board (CRWQCB) Cleanup and Abatement Order (CAO) 97-093 (CRWQCB, 1997). The RI/FS activities are addressed jointly by The Boeing Company and Aerojet.

A former Sacramento County municipal landfill is located on the IRCTS, and a second former landfill, the White Rock South Dump (WRSD), is located adjacent to the eastern boundary of the IRCTS (Figure B-1). A third municipal landfill, the WRND is located at the northwest corner of White Rock and Grant Line Roads, and is adjacent to portions of the eastern and southern Zone 2 PGOU boundaries (Figure B-1). The former WRND is currently owned by Aerojet. Chemicals in groundwater beneath and south of the WRND are being addressed by Aerojet under CRWQCB CAO 96-150 (CRWQCB, 1996). One additional area on Aerojet property (Potential Source Site 4G), was formerly used for solid waste disposal. This area, also called the G-9 Dump, is located between Old White Rock and White Rock Roads (Figure B-1).

B1.1.5 Groundwater Use

The Zone 2 PGOU is located in the upgradient portion of the Sacramento groundwater basin. The basin is a Federal Classification IIA drinking water aquifer. Groundwater is not used for industrial or domestic purposes on the Aerojet property, and portions of the land are encumbered by environmental restrictions on future groundwater use. The installation of monitor and water supply wells by Third Parties within and beyond the Zone 2 PGOU is managed under Sacramento County Ordinance. The Sacramento County Environmental Management Department manages a “Consultation Zone” that requires all parties to consult with the DTSC and CRWQCB-CVR prior to drilling a well within a 2,500-foot distance from chemicals in groundwater originating from the Aerojet Site.

A survey of private wells located near Zone 2 was conducted in 1991 during the Stage 1 RI. The survey was updated for this RI to verify the current domestic and agricultural uses of groundwater by private parties within a 1-mile radius of the Zone 2 PGOU. Private water supply wells are shown on Figures 1-5A and 1-5B and well details are summarized in Table 1-2. Ten domestic and industrial use wells have been identified within a one-mile radius of the Zone 2 PGOU. Only two of these wells are currently in use; Well 1028 is used for stock watering at a cattle company and Well 1029 is used for dust control and process water at a trucking/asphalt recycling firm. Of the remaining eight wells, three have been destroyed and the remaining wells are not in use (abandoned). Each of the abandoned wells has been monitored historically by Aerojet. No additional wells were identified within a 1-mile radius of the Zone 2 PGOU during the survey update.

B1.2 Historical Activities

The following subsections summarize the historical activities conducted upgradient of the Zone 2 PGOU. This information is summarized largely from the "*Aerojet Site – Stage 1 RI Report Zone 2*" (ICF Kaiser, 1993). This discussion includes descriptions of the historical operations, chemicals handled, potential source areas, and existing remedial actions. The information presented supports the rationale for the evaluation of the distribution of chemicals in groundwater and development of the Site Conceptual Model.

B1.2.1 Historical Operations

The manufacturing area upgradient of the Zone 2 PGOU primarily supported the manufacture and rehabilitation of solid rocket motors. Operations conducted included fuel preparation, motor inert processing, oxidizer conditioning, propellant mixing, x-raying, propellant removal (Hogout Area), and waste propellant and chemical burning (Former Open Burn Facility).

In addition, wastes were disposed at the G-9 Dump located on Aerojet (Potential Source Site 4G). Wastes deposited at the G-9 Dump included soil and residues from burning operations that were removed from Cavitt Ranch (Area 41), as well as other miscellaneous materials. Liquid and solid wastes were also disposed at a former Sacramento County landfill located on Aerojet, south of Potential Source Sites 8G and 9G, and at the former White Rock Road North and White Rock Road South municipal landfills (Figure B-1).

B1.2.2 Chemicals Handled

The primary chemicals handled upgradient of the Zone 2 PGOU included solvents and oxidizers. Solvents were used for degreasing and cleaning operations. Oxidizer, primarily ammonium perchlorate, was a primary constituent in solid rocket propellant. Lesser quantities of fuels, petroleum, oils, and metals were also handled in Zone 2. The Scoping and Stage 1 RI Reports summarize the materials handled at each Potential Source Site (ICF Kaiser 1989, 1993)(PCD, 1989). The following list summarizes the primary chemicals historically handled in the industrial areas upgradient of the Zone 2 PGOU.

- Solvents - Trichloroethylene (TCE), 1,1,1-Trichloroethane (TCA), glycol, dichloromethane, and unspecified solvents.

- Fuels & Oxidizers - Ammonium perchlorate, HMX and RDX (explosives), polyurethane fuels, polyurethane propellants, oxidizers, and nitroglycerine.
- Petroleum & Oils - Fuel oil and diesel fuel.
- Metals - Aluminum, silver, ferric acetylacetonate, and lead-based paint.
- Acids - Formic acid, and monochloroaecetic acid.
- Miscellaneous - Fixer and developing solution (for x-rays), epoxy, paint, irridite, carbon black, dioctyl azelate, and silicone

B1.3 Previous Investigations

The geologic and hydrologic conditions, distribution of chemicals in groundwater, and evaluation of source areas in Zone 2 have been studied since the mid-1980's. The background information for the RI/FS and the interpretations of geologic, hydrologic, and chemical conditions in the Zone 2 PGOU groundwater were presented in the following reports:

- "*Scoping Report and Phase 1 RI/FS Workplan*": Identified and summarized existing history of potential source sites; evaluated chemical use and disposal; proposed analytical methods for sampling and analysis, including an analytical approach to evaluated non-standard chemicals for the Stage 1 RI/FS (ICF Technology, 1989).
- "Aerojet Site - *Stage 1 Report – Zone 2*": Results of soil-gas, soil, and groundwater samples collected from source sites in Zone 2 and results of site-wide groundwater screening (ICF Kaiser, 1993).
- "*Aerojet Site - Hydrogeologic Evaluation - Southeastern Zone 2*": Presents a hydrogeologic evaluation of the Study Area (Aerojet, 1994).
- "*Aerojet Site, Hydrogeologic Evaluation Update, Southeastern Zone 2*": Provides an update to the 1994 evaluation of hydrogeologic conditions in Southeastern Zone 2 (Kleinfelder, Inc., and Aerojet, 1996).
- "*Draft Groundwater Cleanup and Abatement Plan for the White Rock North Dump*": Summarized recent groundwater data associated with WRND and provided a remedial alternative selection for groundwater containment and restoration (EMSI et. al., 2001).
- "*Technical Memorandum – Evaluation of Perchlorate –Southeastern Zone 2*": Results of perchlorate groundwater sampling and groundwater potentiometric measurements used to evaluate the lateral and vertical extent of perchlorate in southeastern Zone 2 (Aerojet, 1997).
- "*Revised Phase 1, Stage 2 RI/FS Sampling Plan – Zone 2 - Tables and Maps*": Work plans to complete RI/FS activities at source areas. Recommended primarily for completing the characterization of non-volatile organic compounds detected in soil or groundwater during the Stage 1 RI/FS (Aerojet, 1999).

B1.4 Potential Source Sites

Approximately 25 Potential Source Sites within the eastern and central portions of Line 04 were investigated during the Stage 1 RI (ICF Kaiser, 1993). These Potential Source Sites are shown on Figure B-1. The majority of chemicals reported in central and eastern Line 04 were detected at Potential Source Sites associated with parts cleaning, propellant removal, and open burning (Table B-1).

Volatile organic compounds (VOCs) and perchlorate were the most frequently detected chemicals in the vadose zone and groundwater during the Stage 1 RI (ICF Kaiser, 1993). Consequently, groundwater in Zone 2 is routinely monitored for VOCs and perchlorate. There are no other parameters regularly monitored in Zone 2, although monitoring has been conducted to assess the potential presence of N-nitrosodimethylamine (NDMA) in groundwater (Aerojet, 1998). In addition, the initial samples from all new wells in Zone 2 are analyzed for a comprehensive suite of analytes including VOCs, Semi-Volatile Organic Compounds (SVOCs), perchlorate, NDMA, metals, total petroleum hydrocarbons as diesel (TPH-d), anions, cations, nitrate, and nitrite.

B1.4.1 Central Line 04

The primary facilities in central Line 04 included propellant mixing stations and x-ray facilities. Relatively low concentrations (<20 µg/L) of TCE were reported in soil-gas samples collected from a few of the propellant mix stations (Sites 45F to 49F) during the Stage 1 RI (Table B-1). Silver was reported in shallow soil samples collected from low areas located near the x-ray facilities (Sites 44F and 53F)(Table B-1). TCE and perchlorate were detected in the vadose zone near Sites 8G and 9G, although the concentrations detected during the Stage 1 RI were much lower than those reported in previous investigations (ICF Kaiser, 1993).

B1.4.2 Eastern Line 04

VOCs, primarily TCE, were reported in soil and groundwater collected near a cleaning slab (Site 57F) and perchlorate was detected in soil and groundwater beneath the former Hogout Facility (Sites 50F and 51F). The concentrations of TCE reported at Site 57F approached the vapor-phase saturation limit for TCE and may be indicative of the presence of dense non-aqueous phase liquid (DNAPL)(ICF Kaiser, 1993).

TCE was detected in the vadose zone and groundwater beneath the Former Open Burn Facility during the Stage 1 RI. Perchlorate was detected in soil samples collected in 2001 and 2002 during closure activities conducted pursuant to the Resource Conservation and Recovery Act (RCRA)(ERM, 2002). Perchlorate concentrations detected in soil samples collected from depths of one to 35 feet below ground surface (bgs) ranged from <0.40 to 840 milligrams per kilogram (mg/kg). Perchlorate concentrations in HydroPunch® groundwater samples collected between 18 and 32 feet bgs ranged from 410 to 19,000 µg/L (ERM, 2002).

B1.5 Existing Remedial Actions

There are no remedial actions for groundwater specifically for the Zone 2 PGOU. However, there are several groundwater remedial actions either operating or planned at source areas to the east, south and west of the Zone 2 PGOU. These source areas include the WRND to the east, the IRCTS to the south and GET F of the WGOU to the west. The areas addressed by the groundwater remedial actions for these other source areas are discussed in the following sections.

B1.5.1 White Rock North Dump (WRND)

The WRND is located adjacent to the eastern Zone 2 boundary, and the eastern portion of the southern Zone 2 PGOU boundary (Figure B-1). Groundwater beneath some areas of the WRND is impacted variously with VOCs, NDMA, and perchlorate. Groundwater beneath the eastern areas of the WRND flows southeast, towards the GET B extraction wells. Shallow groundwater in the central areas of the WRND is addressed by an existing approximate 50 gallon per minute (gpm) GET system that has operated since May 2000 (Aerojet, 2000b). Deeper extraction wells are planned to address TCE and perchlorate in groundwater south of the southern WRND property boundary (EMSI, 2001). TCE and perchlorate in groundwater beneath the northwestern WRND flow southwest and are addressed by the Zone 2 PGOU.

B1.5.2 Inactive Rancho Cordova Test Site (IRCTS)

Groundwater remedies are being implemented and evaluated for the IRCTS, downgradient (south) of the Zone 2 PGOU. A perimeter plume control GET system is being constructed for the IRCTS at Mather Field, and additional GET systems are being evaluated for source area and property-line hydraulic containment systems. The PGOU and IRCTS chemical impacts may co-mingle near the Sigma Complex on the IRCTS, and the Zone 2 PGOU boundary was established just upgradient of this location.

Enhanced in-situ biodegradation of groundwater is being pilot tested downgradient of the Zone 2 PGOU, near a segment of the western perimeter of the IRCTS (GeoSyntec, 2002).

B1.5.3 GET F - Western Groundwater Operable Unit (OU-3)

The GET E/F system of the WGOU includes groundwater extraction wells located on Aerojet, west of the Zone 2 PGOU. The GET F extraction wells provide hydraulic capture of chemicals in groundwater flowing through Sector F. Some of the chemicals captured by GET F likely originate at Potential Source Sites located in Line 03, and the western and central areas of Line 04 (Figure B-1).

B1.5.4 Miscellaneous Source Areas – Zone 2

A pilot test is being conducted to evaluate the technical and economic implications of conducting enhanced in-situ biodegradation of perchlorate and TCE in groundwater upgradient of the Zone 2 PGOU (GeoSyntech, 2003). The test is being conducted at the propellant “Hogout Facility” located in eastern Line 04, the probable primary source of groundwater impacts observed in the Zone 2 PGOU.

B2 GROUNDWATER FLOW CHARACTERISTICS

The data presented in this section provide the basis for the presentation of chemical iso-concentration maps, analysis of fate and transport, and the evaluation of remedial alternatives that are evaluated within the FS. The hydrostratigraphic layers and hydraulic gradients for each layer are discussed in the following sections.

B2.1 Hydrostratigraphic Layers

The water-bearing sediments beneath the Zone 2 PGOU are currently divided into six hydrostratigraphic layers defined by lithologic descriptions, water levels, geophysical data, pumping test data, chemical data, and relative depths and thicknesses. Layer A is the shallowest layer and is underlain by Layers B, C, D, E, and F. There are several wells screened in Layer F; however, Layer F is below the depths at which chemicals have been found in groundwater in Zone 2 and is not addressed further in this RI/FS.

The general lithology and hydrostratigraphic layer boundaries in the Zone 2 PGOU are presented on two cross sections. The cross-section transects are shown on Figure B-3. The cross-sections were originally presented in the *Aerojet Site – Hydrogeologic Evaluation Update, Southeastern Zone 2* (Hydrogeologic Update)(Aerojet, 1996) and are presented in this evaluation as Cross-sections A-A' and B-B' (Figures B-4 and B-5, respectively). Cross section A-A' trends west-southwest, parallel to the direction of groundwater flow, and shows the hydrogeologic conditions along the plume axes. Cross-section B-B' trends north-northwest, and is approximately perpendicular to the groundwater flow direction in the western portion of the Zone 2 PGOU.

The following descriptions of the hydrostratigraphic layers are from the Hydrogeologic Update.

B2.1.1 Layer A

Layer A is the shallowest layer and is encountered at depths of between 30 to 55 feet bgs (Figures B-4 and B-5). The base of Layer A is encountered at depths ranging from approximately 50 to 95 feet bgs. The saturated thickness of Layer A is up to 50 feet. Layer A is predominantly coarse-grained and is composed of sand, gravel, and consolidated sand. Layer A has been disturbed by dredging activities, and perched water is often present at the dredged/undredged inter-face.

B2.1.2 Layer B

Layer B is present in the western portion of the Zone 2 PGOU, but is absent in the southeast (Figure B-5). Layer B is encountered at approximate depths of 60 to 180 feet bgs and has a saturated thickness of 10 to 40 feet. Layer B is composed of compacted sand, sand, and gravel; although lenses of silt and clay can comprise up to 40 percent of the overall thickness. Layer B is separated from Layer A by an aquitard that is predominantly clay and silt, with some sandy clay and sandy silt. In the east, the A/B aquitard may have been removed by dredging or may be absent due to the eastward thinning of the sedimentary wedge (Aerojet, 1996). The thickness of the A/B aquitard ranges from 5 to 55 feet.

B2.1.3 Layer C

Layer C is present throughout Zone 2, and is encountered at an approximate depth of 95 feet bgs along the eastern portion of the Zone 2 PGOU and at approximately 225 feet bgs in the western portion of Zone 2. Layer C ranges from 25 to 125 feet thick, generally increasing in thickness from east to west (Figures B-4 and B-5). The relatively permeable portions of Layer C are composed of sand and consolidated sand, although up to 70 percent of Layer C may be comprised of silt and clay lenses. Layer C is separated from Layer B by a 10- to 70-foot thick aquitard, composed predominantly of clay, silt, siltstone, and claystone. Where Layer B is not present, the aquitard separates Layer C from Layer A.

B2.1.4 Layer D

Layer D is present in the western portion of the Zone 2 PGOU although it is relatively fine-grained towards the east (Figures B-4 and B-5). Layer D is encountered at depths ranging from approximately 225 to 290 ft bgs along White Rock Road and ranges from 40 to 60 feet thick. The permeable portions of Layer D are comprised of sand and compacted sand, although lenses of silt and clay may comprise up to 60 percent of the overall thickness of Layer D. Layer D is separated from Layer C by a 5- to 45-foot thick aquitard composed predominantly of clay, silt, siltstone, and claystone. The C/D aquitard does not extend to the northeastern portion of the Zone 2 PGOU and Layers C and D are combined in previous reports (Aerojet, 1996).

B2.1.5 Layer E

Layer E is present throughout the Zone 2 PGOU (Figures B-4 and B-5) and is encountered at depths ranging from approximately 280 feet bgs in the east to 355 feet bgs to the southwest. Layer E is approximately 50- to 100-feet thick and is separated from Layer D by a 5- to 50-foot thick aquitard composed predominantly of clay and claystone. Layer E is composed predominantly of sand, sandy clay, consolidated sand, and gravel, although lenses of clay may comprise as much as 40 percent of the layer.

B2.2 Groundwater Gradients

Potentiometric surface maps were prepared to evaluate lateral and vertical hydraulic gradients in each of the hydrostratigraphic layers (Figures B-6 through B-15). Hydrographs were prepared for selected wells to assess temporal groundwater elevation trends (Figures B-16 through B-27). Vertical head difference maps were prepared by using the “grid-math” feature in Surfer to find the difference in potentiometric surfaces between two adjacent aquifer layers (Figures B-29 through B-31). Well construction details for each of the wells used to create the potentiometric surface maps are included in Table B-2.

The potentiometric surface maps were created from two time periods for each layer. The first set of maps were prepared based on data collected in October 2003, and the second set was generated using data collected in April 2004. Two separate monitoring periods were presented to compare seasonal water level differences. The two monitoring periods coincide with plant-wide water level measurement events. The potentiometric surface maps were generated using Surfer® for Windows (Version 7) to create the initial contour lines. The contour lines were then reviewed and trimmed near some border areas where the data did not support the extension of the contour lines generated by Surfer. The average water levels were used in areas where more than one well was screened in the layer. Water levels from the GET F extraction wells were omitted from the data set used to prepare the contour maps.

The overall hydraulic gradient across the Zone 2 PGOU is towards the southwest, although local deviations have been observed. The magnitude of the average gradient across the Zone 2 PGOU ranged from 0.01 to 0.013 foot per foot (ft/ft) in Layers A through E.

B2.2.1 Layer A

The contoured potentiometric surfaces for Layer A in October 2003 and April 2004 are presented on Figures B-6 and B-7, respectively. Layer A is saturated upgradient and within the PGOU, but is dry or absent approximately 2,500 feet south of White Rock Road (ENSR, 2003). Groundwater elevations in Layer A ranged from approximately 230 ft msl northeast of the Hogout Area, to 70 ft msl in the west. As such, the hydraulic gradient is west to southwest, with an average magnitude of approximately 0.010 ft/ft. In the eastern and central areas of the Zone 2 PGOU, groundwater elevations in Layer A were approximately 1 to 5 feet higher in April 2004 than in October 2003. The groundwater elevation differences from April to October were notably less to the west near GET F.

The general absence of saturated portions of Layer A south of White Rock Road, and downward vertical gradients from Layer A to Layer B, suggest that groundwater may migrate vertically from Layer A to Layer B, south of White Rock Road.

Farther east, Layer A is defined beneath the central and eastern portions of the WRND. Groundwater in this area appears to flow south away from the WRND. Beneath the western portions of the WRND, groundwater appears to flow southwest, the same general direction as Layer A in the Zone 3 PGOU.

B2.2.2 Layer B

The contoured potentiometric surfaces for Layer B in October 2003 and April 2004 are presented on Figures B-8 and B-9, respectively. Layer B is saturated throughout Zone 2. Groundwater elevations in Layer B range from approximately 200 ft msl in the northeast to 30 ft msl near the WGOU in the west. The hydraulic gradient in eastern Line 04 is towards the west-southwest with a magnitude of approximately 0.013 ft/ft. The hydraulic gradient in the central and western portions of the Zone 2 PGOU is towards the west. Groundwater elevations generally ranged from 2 to 8 feet higher in October 2003 than in April 2004.

B2.2.3 Layer C

The contoured potentiometric surfaces for Layer C in October 2003 and April 2004 are presented on Figures B-10 and B-11, respectively. Groundwater elevations in Layer C wells decreased from approximately 195 ft msl in the northeast, to approximately 20 ft msl in the southwest. The contoured potentiometric surface maps show that the hydraulic gradient in Layer C is southwest in the eastern and southeastern areas of the Zone 2 PGOU, but are more to the west in the western areas. Deviations in the groundwater flow direction are apparent in the western portions of Zone 2 due to groundwater extraction at GET F.

The magnitude of the hydraulic gradient averages approximately 0.012 ft/ft, approximately the same as in Layer B. The groundwater elevation decreases from October 2003 to April 2004 were less in Layer C (approximately 2 to 3 feet) than those observed in Layer B (2 to 8 feet).

B2.2.4 Layer D

The contoured potentiometric surfaces for Layer D in October 2003 and April 2004 are presented on Figures B-12 and B-13, respectively. Groundwater elevations in Layer D ranged from approximately 180 ft msl in the east, to approximately 20 ft msl in the west near White Rock Road. The hydraulic gradient across the Zone 2 PGOU in Layer D is west-southwest with a magnitude averaging approximately 0.011 ft/ft. The hydraulic gradient is more westerly in the western portions of the Zone 2 PGOU near Line 03 and western Line 04. Groundwater flow directions deviate near the GET F extraction wells, due to groundwater extraction in Layers C and D. Groundwater elevations in Layer D were approximately 1 to 2 feet higher in October 2003 than in April 2004.

B2.2.5 Layer E

The contoured potentiometric surfaces for Layer E in October 2003 and April 2004 are presented on Figures B-14 and B-15, respectively. Groundwater elevations in Layer E ranged from approximately 190 ft msl in the northeast to approximately 40 ft msl near the WGOU. The hydraulic gradient from eastern Line 04 is towards the west-southwest with a magnitude of approximately 0.010 ft/ft. Groundwater elevations in Layer E were generally less than a foot higher in October 2003 than in April 2004.

B2.3 Water Level Elevation Trends

Changes in water level elevations were evaluated by plotting water level elevations over time (i.e., hydrographs) from various monitor wells screened in Layers A through E. Twenty hydrographs from the wells selected are presented as Figures B-16 through B-27. The hydrographs include data collected from 1982, or when the well was constructed, through April 2003.

The hydrographs show an average overall decrease of approximately 19 feet in water level elevations between 1982 and 2003. Water level elevations declined by approximately 10 to 55 feet (averaging approximately 27 feet) from 1982 through the mid-1990's, during drought conditions. From 1995 through 2001, water levels generally increased (an average of 11 feet) and then generally decreased from 2001 through 2003. Local deviations from the overall trends are apparent in some wells, possibly relating to local recharge or seasonal water level fluctuations.

B2.4 Potentiometric Surface Elevation Differences

Potential vertical gradients were assessed by evaluating the differences in the elevations of the potentiometric surfaces between layers (head differences). Groundwater may move upwards or downwards between layers if there are sufficient head differences and permeable sediments in adjacent layers. Head difference maps between hydrostratigraphic layers were created to illustrate the potentiometric differences between layers (Figures B-28 through B-31). In general, the head difference maps show that there are positive head differences from Layer A to Layer B and from Layer B to Layer C, implying groundwater in Layers A and B could migrate downwards into Layer C. Only minor head differences are noted between Layers C and D and Layers D and E. There is an overall downward gradient from Layer C into Layer D. The head differences in Layers D and E appear to be reversed indicating the potential for some upward vertical migration from Layer E to Layer D.

B3 DISTRIBUTION OF CHEMICALS IN GROUNDWATER

This section describes the nature and extent of chemicals detected in groundwater beneath the Zone 2 PGOU. The majority of water quality data for this RI were collected between January 2000 and June 2004. This time-frame is referred to as the RI Sampling Period. "Historical" data collected prior to, or "supplemental" data collected following the RI Sampling Period, are included where useful for evaluating the chemical distribution or chemical concentration trends.

TCE and perchlorate were the most common constituents detected in the vadose zone and shallow groundwater beneath the Potential Source Sites upgradient of the Zone 2 PGOU (Section B1.2.2). Consequently, these compounds are the most frequently analyzed constituents in groundwater. The majority of water quality data in this RI were collected based on the Annual Aerojet Site-wide Groundwater Monitoring Plan (GMP) (Aerojet, 2003). Sampling for NDMA, metals, nitrate, HMX, and RDX was performed based on the recommendations in the Agency-approved PGOU RI/FS Work Plan (Aerojet, 2002). In addition, water quality data are included that were collected under the IRCTS and WRND monitoring plans.

The VOC data summary tables do not include the results for compounds that were not detected at least one time during the RI Sampling Period (Tables B-3 and B-3a). However, the results of all analyses conducted during the RI Sampling Period are included on a compact disc in Appendix L. The results of NDMA, perchlorate, metals, and miscellaneous water quality analyses are summarized in Tables B-4, B-4a, B-5, and B-6. VOC and perchlorate data collected under the IRCTS monitoring program are summarized in Tables B-3a and B-4a, respectively. Table B-7 includes the list of supplemental wells and analytes, and Table B-8 includes the results of the supplemental sampling.

Data reported with laboratory qualifiers are included in this evaluation and are noted in the text, tables, and on the figures. NDMA data reported between the Practical Quantitation Limit (PQL)[0.005 micrograms per liter (µg/L)] and the Method Detection Limit (MDL)(0.0005 µg/L) are flagged with a "J" qualifier.

Iso-concentration maps were prepared illustrating the distribution of TCE and perchlorate in Layers A through E (Figures B-32 through B-41). The most recent analytical data are posted for each well if there was more than one analysis during the RI Sampling Period. "Historical" data are posted on the figures and noted with a single asterisk (*) if no data were available from the RI Sampling Period. "Supplemental" data collected after the RI Sampling Period are posted and noted on the figures with a double asterisk (**). Figures B-42 through B-47 present chemical concentration trends for wells located in key areas of the groundwater plumes.

There are several groundwater investigations being conducted in areas surrounding the Zone 2 PGOU. Potential source areas nearby include the WRND, WRSD, and the IRCTS. In addition, the WGOU (OU-3) is located adjacent to the Zone 2 PGOU western boundary. The existing or potential remedial actions for these areas were discussed in Section B1.5.

The following sections present the distribution of chemicals in groundwater by class (e.g., VOCs) from the shallowest (Layer A) to the deepest (Layer E) hydrostratigraphic layers.

B3.1 Layer A

Layer A is the shallowest layer in the Zone 2 PGOU. Consequently, the highest chemical concentrations are typically observed in the monitor wells screened in Layer A nearest the Potential Source Areas. TCE and perchlorate were the most commonly detected and widely distributed constituents in Layer A. A southwest trending plume of TCE and perchlorate extends from eastern Line 04, to an area just south of White Rock Road. Layer A is dry farther to the south and groundwater presumably migrates vertically into Layer B (Section B.2.4.). Groundwater in Layer A near the Potential Source Sites located in western Line 04 and Line 03 appears to flows west towards GET F.

B3.1.1 Volatile Organic Compounds (VOCs)

VOC data were evaluated from Layer A wells located within the Zone 2 PGOU, on the IRCTS, and on the WRND. The VOCs detected in Layer A are summarized in Tables B-3 and B-3a. TCE and 1,2-Dichloroethylene (1,2-DCE), and 1,2-Dichloroethane (1,2-DCA) were detected at least one time above their respective Primary or Secondary Maximum Contaminant Levels (MCLs) in monitor wells located in the Zone 2 PGOU (Table B-3). Several other VOCs were detected upgradient or sidegradient of the Zone 2 PGOU, near the potential source areas.

TCE was the most common VOC detected in Layer A, and its extent encompasses the extents of the other VOCs. The most-recent TCE concentrations from each well were contoured on Figure B-32. The highest concentration of TCE within the Zone 2 PGOU (450 µg/L) was reported in Well 3500, located downgradient of eastern Line 04.

TCE is distributed over an area extending from eastern Line 04 to approximately 1,000 feet south of White Rock Road. TCE attenuated to 1.9 µg/L in Well 1324, the farthest downgradient well located near White Rock Road. Layer A is dry or absent farther downgradient (ENSR, 2003). TCE was detected in Line 03 and western Line 04 and groundwater in this area flows west towards GET F (Section B.2.2.1).

Historical TCE concentration trends were evaluated for some wells screened in Layer A. TCE concentrations in Well 3500 increased from 14 µg/L in 1994 to 450 µg/L in 2003 (Figure B-42). However, TCE concentrations decreased from 85 to 23 µg/L in Well 3067, located upgradient of Well 3500 (Figure B-42).

B3.1.2 Semi-Volatile Organic Compounds (SVOCs)

During the Stage 1 RI, no SVOCs other than di-n-butyl-phthalate, a suspected laboratory contaminant, were reported in soil or groundwater samples collected from eastern Line 04 (ICF Kaiser, 1993)(Table B-1). Consequently, SVOCs are not routinely monitored in Zone 2 groundwater. Well 30142, located near GET F at the eastern boundary of the WGOU, was the only well sampled for SVOCs during the RI Sampling Period. No SVOCs were detected in the SVOC analysis conducted under the new well sampling program. Dimexano was reported as a Tentatively Identified Compound (TIC) in Well 30142 with an estimated concentration of 11J µg/L.

B3.1.3 N-Nitrosodimethylamine (NDMA)

NDMA is not routinely monitored in the Zone 2 PGOU; however, the RI Work Plan recommended NDMA analysis for a number of wells to screen for the presence of NDMA (Aerojet, 2002). Layer A Wells 50, 411, and 415 were dry, and Well 3076 was damaged and could not be sampled.

NDMA was not detected (<0.0075 µg/L) in monitor wells located in eastern areas of the Zone 2 PGOU (Wells 111, 3460, 3470, and 3500) (Table B-4). However, NDMA was detected in GET F Extraction Well 4007 at 0.0022J µg/L, and in new Monitor Well 30142 at 0.020J µg/L (Table B-4).

B3.1.4 Perchlorate

During the Stage 1 RI, perchlorate was detected in soil and groundwater at the former Hogout Facility and downgradient Potential Source Site 9G (Table B-1). During the RI Sampling Period, samples collected from 23 monitor wells screened in Layer A were analyzed for perchlorate. The most recent perchlorate sampling results are posted on Figure B-33, and the data are summarized in Tables B-4 and B-4a.

The highest perchlorate concentrations in Layer A (up to 500 µg/L in Well 3500) were detected in wells downgradient of the Hogout Area in eastern Line 04 (Figure B-33). The perchlorate concentrations attenuated to <4.0 µg/L within approximately 1000 feet south of White Rock Road. Layer A is dry farther downgradient.

Supplemental samples were collected for perchlorate analysis from Wells 303 and 307, located south of line 03, and from Well 3471, located south of Line 04 (Figure B-33). Perchlorate was detected at concentrations of 11, 10, and 18 µg/L, respectively in these wells (Table B-8).

There are relatively few wells in Layer A that have been monitored routinely enough to discern perchlorate concentration trends. Perchlorate concentrations declined in Wells 413 and 1281, located near the Former Open Burn Facility and the Former GET F Sprayfield, respectively (Table B-4). Perchlorate concentrations have fluctuated, but are generally increasing at Well 3067, located downgradient of the Hogout Area in eastern Line 04 (Figure B-42).

B3.1.5 Metals

Metals analyses were recommended downgradient of Potential Source Sites where metals were detected in soil or groundwater during the Stage 1 RI (Aerojet 2002). The metals detected in Layer A groundwater are summarized in Table B-5. Iron concentrations exceeded the Secondary MCL (0.3 mg/L) in Wells 109 (up to 10 mg/L) and 1324 (up to 0.56 mg/L). Manganese concentrations exceeded the Secondary MCL (0.05 mg/L) in Wells 109 (up to 0.18 mg/L), 161 (0.17 mg/L) and 3067 (0.17 mg/L). The samples from Well 109 were unfiltered and results may not be representative of dissolved concentrations.

B3.1.6 Miscellaneous Compounds

Six Layer A wells were sampled to assess nitrate detected in shallow groundwater near the Hogout Area during the Stage 1 RI (Aerojet, et. al., 2002). During the RI Sampling Period, samples were collected from five wells downgradient of the Hogout Area and analyzed for nitrate (as NO_3). Concentrations were below the MCL (45 mg/L) in each of the wells at concentrations ranging from 1.4 to 11 mg/L (Table B-6). The results of other water quality parameters analyzed are also summarized in Table B-6.

During the Stage 1 RI, HMX (an explosive) was reported in a soil sample collected from Site G(a), located in eastern Line 04. Downgradient Well 412 was recommended for HMX sampling; however, this well and alternately selected Well 161 were dry and could not be sampled (Aerojet et. al., 2002). The next closest downgradient Well to Site G(a) is Well 3071. HMX and RDX concentrations were both below detection limits (<1.2 µg/L) in the sample collected. HMX and RDX do not have established MCLs and the lowest potential ARARs for HMX and RDX are 350 µg/L and 2.1 µg/L, respectively.

B3.2 Layer B

The analytical results from Layer B wells located on Aerojet and on portions of the IRCTS and WRND are included in this evaluation. As with Layer A, TCE and perchlorate were the most common and widely distributed compounds detected in Layer B. Both compounds were detected upgradient of the Zone 2 PGOU and are present in groundwater extending southwest onto the IRCTS.

B3.2.1 VOCs

VOCs detected at least one-time above MCLs during the RI Sampling Period included: TCE (up to 5,600 µg/L); 1,1-DCE (up to 27 µg/L); 1,2-DCA (up to 14 µg/L); 1,2-DCE (up to 130 µg/L); chloroform (up to 170 µg/L), and vinyl chloride (up to 0.86 µg/L) (Tables B-3, B-3a, and B-8). The majority of these compounds detected over MCLs were detected in Well 132, located near the GET F extraction wells.

The TCE iso-concentration contour map for Layer B shows that TCE is present across most of Zone 2 (Figure B-34). The Zone 2 PGOU addresses the TCE that extends from the Hogout Area on Aerojet, southwest onto the IRCTS. The southeastern extent of TCE is defined by Monitor Wells 1256, 1257, 1305, STSW-104A, and STSW-96B, located on the WRND and IRCTS. The southwestern extent of TCE is defined by Wells 1028, 1333, and STSW-19 (Figure B-34).

The downgradient southwestern extent of TCE was not delineated within the Zone 2 PGOU due to the apparent co-mingling of TCE from Aerojet and the IRCTS. However, the RI/FS for the IRCTS has delineated the extent of TCE farther downgradient. The 50 µg/L contour interval for TCE extends approximately 2,000 feet south of White Rock Road (Figure B-34). TCE concentrations increase to above 50 µg/L farther south, suggesting potential impacts from source areas located on the IRCTS.

TCE concentration trends were evaluated for several wells screened in Layer B. TCE concentrations in Well 3068, located just upgradient of the PGOU, increased from 1,200 µg/L in 1991 to 4,600 µg/L in 2003 (Figure B-43). Farther downgradient near White Rock Road, TCE concentrations in Wells 314 and 315 increased from less than 10 in 1991 to approximately 40 to 60 µg/L in 2002 (Figures B-43 and B-44, respectively). Farther downgradient, TCE concentrations in Well 1325 increased from 67 to 260 µg/L from 1991 to 2000, and then decreased to 100 µg/L by 2003 (Figure B-44).

B3.2.2 NDMA

Wells 314, 315, and 3501 were sampled for NDMA to supplement historical NDMA analyses that were conducted with higher MDLs (0.1 µg/L)(Aerojet, et. al., 2002). NDMA was not detected in the samples collected from Wells 314, 315, and 3501 using an MDL of 0.0075 µg/L (Table B-4). NDMA was also not-detected (<0.0075 µg/L) in Well 3329.

B3.2.3 Perchlorate

Perchlorate was distributed over a similar area in Layer B as TCE. The results of perchlorate sampling are summarized in Tables B-4, B-4a, and B-8, and the most recent data are posted on Figure B-35. The 600 µg/L contour interval for perchlorate extends from the Aerojet Site southwest approximately 3,000 feet onto the IRCTS. The southeastern extent of perchlorate below 6 µg/L is delineated by wells located on Aerojet and on the IRCTS. The western extent of perchlorate in the Zone 2 PGOU is poorly defined, and there appear to be multiple sources of perchlorate both on Aerojet and on the IRCTS.

Perchlorate concentrations attenuated from 3,700 detected upgradient of the Zone 2 PGOU to less than 50 µg/L detected upgradient of the “circular feature” on the IRCTS (Figure B-35). Farther downgradient, perchlorate concentrations increased up to 11,000 µg/L, suggesting contributions from a local source on the IRCTS. Therefore, the downgradient extent of perchlorate on the IRCTS was not delineated to below the California State Action Level (State AL) of 6 µg/L.

The concentration trends for perchlorate varied depending on the locations of the monitor wells relative to the potential source areas. In general, perchlorate concentrations were decreasing at wells located nearest the source areas or central portions of the plumes, while concentrations generally increased at the downgradient and sidegradient plume extents. Deceasing trends were observed at Well 3068 from 8,300 to 3,700 µg/L between 1992 and 2003 (Figures B-43). Decreasing trends in this well, and in Layer A wells farther upgradient, suggest the downgradient flux of perchlorate from upgradient sources is diminishing. Farther downgradient on the IRCTS, perchlorate concentrations have remained about the same (approximately 200 µg/L) for the past five years in Well 1325 (Figure B-44).

B3.2.4 Miscellaneous Compounds

Nitrate was identified as a potential chemical of concern in the Zone 2 PGOU because it can form as a result of ammonium perchlorate degradation. Wells 3077 and 3357 were sampled for nitrate (as NO_3) to assess nitrate historically detected upgradient near the Hogout Area (Aerojet, et. al., 2002). Nitrate was not detected (<0.05 µg/L) in Well 3077, and was detected at a concentration of 5.9 mg/L, below the MCL of 45 mg/L, in Well 3357 (Table B-6).

B3.3 Layer C

Layer C is saturated and continuous throughout the Zone 2 PGOU and the IRCTS. TCE and perchlorate are the most common and widely distributed chemicals in Layer C; these compounds are distributed over larger areas in Layer C than in the other layers.

B3.3.1 VOCs

VOCs that were detected at least one time above MCLs in Layer C included: TCE (up to 6,800 µg/L); 1,1-DCE (up to 17 µg/L); 1,2-DCE (up to 100 µg/L); 1,2-DCA (2.7 µg/L); chloroform (up to 450 µg/L); and tetrachloroethylene (PCE)(6.1 µg/L)(Tables B-3, B-3a, and B-8). With the exception of TCE and 1,2-DCE, the compounds reported above MCLs were detected near the GET F extraction wells, west of the Zone 2 PGOU. Groundwater in this area is addressed by the remedy for the WGOU.

Figure B-36 shows three general areas of groundwater containing TCE above the MCL. Groundwater impacts in these three areas are addressed by different regulatory programs. The CAO for the WRND addresses TCE (and perchlorate) in the eastern area, beneath and south of the WRND. The WGOU addresses TCE and other constituents in the western area near GET E/F. The Zone 2 PGOU “fills the gap” between these areas and includes the TCE present in the “middle” plume shown on Figure B-36.

The “middle” TCE plume extends from Potential Source Areas located in eastern Line 04, southwest onto the IRCTS. The TCE in Layer C is in approximately the same location as the TCE observed in overlying Layer B. There is a slight decrease in TCE concentrations with depth as indicated by TCE concentrations of 4,600 and 3,500 µg/L in co-located Layer B and C Monitor Wells 3068 and 3069. The eastern, middle, and western TCE plumes are separated by relatively few monitor wells with low or non-detect TCE results.

Farther downgradient (southwest) on the IRCTS, the TCE concentrations in the middle plume attenuated to concentrations generally less than 5 µg/L north of the “Circular Feature” (Figure B-36). TCE concentrations increased farther downgradient at Well STSW-48C (62 µg/L), suggesting local sources on the IRCTS may be contributing to the TCE in groundwater.

TCE concentration trends were evaluated for several wells screened in Layer C. The concentrations increased in two monitor wells located upgradient of the Zone 2 PGOU near the former Hogout Facility. From 1992 through 2003, TCE concentrations increased from approximately 100 to 6,800 µg/L in Well 159 and from less than 10 to 950 µg/L in Well 160, screened in the deeper portions of Layer C (Figure B-45). From 1992 to 2003, TCE concentrations increased from 2,900 to 3,500 µg/L farther downgradient at Well 3069 (Figure B-46). TCE concentrations also increased near the downgradient and sidegradient extent of TCE as illustrated by the increase from 14 to 36 µg/L in Well 1326 (Figure B-46).

B3.3.2 SVOCs

SVOCs are not typically analyzed in samples collected from monitor wells located in the Zone 2 PGOU with the exception of the initial sample collected from new wells. No SVOCs other than TICs (dimexano and one unknown) were reported in the SVOC analysis from new Well 3605.

B3.3.3 NDMA

There are no known sources of NDMA in the Zone 2 PGOU, and consequently monitoring for NDMA is not routinely conducted (Aerojet, 2003). However, confirmation sampling for NDMA was conducted for two wells where NDMA had not been detected, but was analyzed using a higher MDL (0.1 µg/L) than current methods. NDMA was not detected (<0.0075 µg/L) in the samples collected from wells 3078 and 3358 (Table B-4).

B3.3.4 Perchlorate

The distribution and concentration trends for perchlorate in Layer C are similar to those observed for TCE. The distribution of perchlorate in Layer C is presented on Figure B-37. The perchlorate data collected during the RI Sampling Period from the Aerojet Site and the IRCTS are summarized in Table B-4 and B-4a. Supplemental perchlorate data are included in Table B-8.

The highest perchlorate concentrations (71,000 µg/L) were reported in Well 159, which also yielded the highest TCE concentration. The perchlorate from this area extends south, and southwest towards the WRND and IRCTS, respectively (Figure B-37). The southern extent of perchlorate is addressed under the CAO for the WRND. The southwestern extent of perchlorate above 60 µg/L is located near the “Circular Feature” on the IRCTS, and is addressed by the Zone 2 PGOU.

Perchlorate was also reported in the western portions of the Zone 2 PGOU, near the GET F extraction wells (Figure B-37). Hydraulic capture of perchlorate this area is addressed under the WGOU.

Perchlorate data collected from 1991 through 2003 were plotted for several wells to assess concentration trends. In the upgradient areas, perchlorate concentrations increased from 2,700 to 71,000 µg/L in Well 159, and from less than 500 up to 6,600 µg/L in Well 160 (Figure B-45). Both wells are located near, but somewhat side-gradient of potential sources in the Hogout Area. Similar trends were observed for TCE in both wells.

Farther downgradient at Well 3069, perchlorate concentrations decreased from 7,400 to 3,500 µg/L from 1991 to 2003 (Figure B-46). Well 3069 is located near the axis of the middle perchlorate plume. On the IRCTS, perchlorate concentrations in Well 1326 increased from 32 µg/L to 72 from 1997 to 2002 (Figure B-46).

B3.3.5 Miscellaneous Compounds

Monitor wells screened in Layer C were not sampled for metals. Samples collected from Wells 3078 and 3358 were analyzed for nitrate to assess nitrate historically detected in shallow groundwater near the Hogout Area (Aerojet, et. al., 2002). Nitrate (as NO_3) was not detected in the sample collected from Well 3078, and was detected below the MCL (45 mg/L) at a concentration of 4.4 mg/L in the sample from Well 3358 (Table B-6).

B3.4 Layer D

There are relatively few wells screened in Layer D in the Zone 2 PGOU. Most of the Layer D wells are located along White Rock Road, generally parallel to the southern Aerojet property boundary (Figure B-38). The monitor wells screened in Layer D are not routinely sampled because historically there were very few chemicals detected. Therefore, supplemental samples were collected from the Layer D wells located along the southern Aerojet property boundary (Table B-7).

B3.4.1 VOCs

Few VOCs were reported in Layer D, and the concentrations were typically lower than those reported in the overlying Layer C. 1,2-DCA (0.92 µg/L); 1,1-DCE (up to 95 µg/L); 1,2-DCE (up to 25 µg/L); chloroform (up to 730 µg/L); methylene chloride (up to 350 µg/L); and TCE (up to 7,900 µg/L) were reported above their respective MCLs at least one time during the RI sampling Period (Tables B-3, B-3a, and B-8).

Of the above-noted compounds, TCE was the only VOC detected above the MCL within the Zone 2 PGOU. TCE was reported at 16 µg/L at Well 3360, located just west of the WRND and just north of White Rock Road (Figure B-38). VOCs were not detected in the Layer D wells located on the IRCTS, although TCE was detected (up to 33 µg/L) in wells located east of the Zone 2 PGOU on the WRND (Figure D-38).

The remaining VOCs in Layer D were detected within or downgradient of Line 03 and Chemical Plant II. Groundwater in these areas is addressed under the WGOU and the existing GET E/F facility.

TCE concentrations were compared for several nested wells with screened intervals completed in Layers C and D. Layer C Well 163 yielded TCE at 230 µg/L, and co-located Layer D Well 164 yielded 0.86 µg/L. TCE was reported at 3,500 µg/L in Layer C Well 3069 compared with 1.6 µg/L detected in underlying Layer D Well 3070. These data, combined with the negligible head differences between Layers C and D suggests that the downward migration of TCE from Layer C to Layer D is minimal.

B3.4.2 Perchlorate

The perchlorate detected in Layer D was detected in approximately the same locations as TCE (Figure D-39). Perchlorate was detected just west of the WRND and west and southwest of Line 03. Perchlorate was not detected in Layer D south of White Rock Road. The perchlorate data collected during the RI Sampling Period, and the supplemental data, are summarized in Tables B-4 and B-8, respectively.

The highest perchlorate concentration in Layer D was 680 µg/L detected in Well 3360 (Figure B-39). Perchlorate was also detected upgradient of Well 3360 in Well 3070 (22 µg/L). The perchlorate reported in Well 3070 appears consistent with historical data that show increasing concentration trends in this well (Figure B-47).

B3.4.3 Miscellaneous Compounds

Wells screened in Layer D were not sampled for SVOCs, NDMA, metals, or other miscellaneous parameters.

B3.5 Layer E

Groundwater monitoring in Layer E is conducted infrequently because few chemicals were historically reported in Layer E and in overlying Layer D. There are five monitor wells in the Zone 2 PGOU that are screened in Layer E (Wells 3076, 3080, 3123, 3330, and 3361). There are several Layer E wells located west and southwest of the Zone 2 PGOU, near Line 03 and on the IRCTS.

B3.5.1 VOCs

The five Layer E wells located in the Zone 2 PGOU were not sampled during the RI Sampling Period (Figure B-40). Prior to the RI sampling Period, neither TCE (<1 and <0.5 µg/L) nor perchlorate (<4 µg/L) were reported in four of the five Layer E wells, and the fifth well was not sampled (Well 3075). Due to the lack of recent data, supplemental samples were collected for VOC and perchlorate analysis from Wells 3080, 3328, 3330, 3361, 3328, and 3537. No VOCs were detected in the samples collected from Wells 3080 and 3328, and the VOC data were pending for the three remaining wells (Figure B-40 and Table B-8).

B3.5.2 Perchlorate

Perchlorate was not detected in four of the wells, however perchlorate was reported at a concentration of 350 µg/L in Well 3330 (Table B-8). Well 3330 will be re-sampled to verify the data because perchlorate was not historically detected in this well and it was not detected upgradient in Layers D or E (Figures B-39 and B-41).

B3.5.3 Miscellaneous Compounds

Wells screened in Layer E were not sampled for SVOCs, NDMA, metals, or other miscellaneous parameters.

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4800 Area
(Magazine Area)

Chemical Plant 1

Line 01

Line 03

Hogout Area

Former Open
Burn Facility

Eastern Line 04

Central Line 04

Western Line 04

Zone 3
PGOU

Former White Rock North Dump
Study Area

G9
Dump

Zone 2 PGOU

GET B South
(Ehnizs Property)

Chemical Plant 2

GET E/F

Former White Rock
South Dump

Western Groundwater
Operable Unit

Former GET F
Sprayfield

Former Municipal
Landfill

Joint Propellant
Burn Area

IRCTS Study Area

Teichert Sand and
Gravel Quarry

GET B Pon

New York Rd
Nebraska Rd
Kansas St
Nevada St
Nimbus Rd
Louisiana Rd
Oklahoma Rd
Old White Rock Road
White Rock Road
White Rock Rd
Grant Line Rd

EXPLANATION

Zone Boundary (Dashed where Projected Off-site)
PGOU Boundary
Sector Boundary
Aerojet Site Boundary
Western Groundwater Operable Unit Boundary

1 Zone Designation
A Sector Designation
● or □ Exhibit III Potential Source Sites in Sector G
● or □ Exhibit III Potential Source Sites Outside Sector G

N

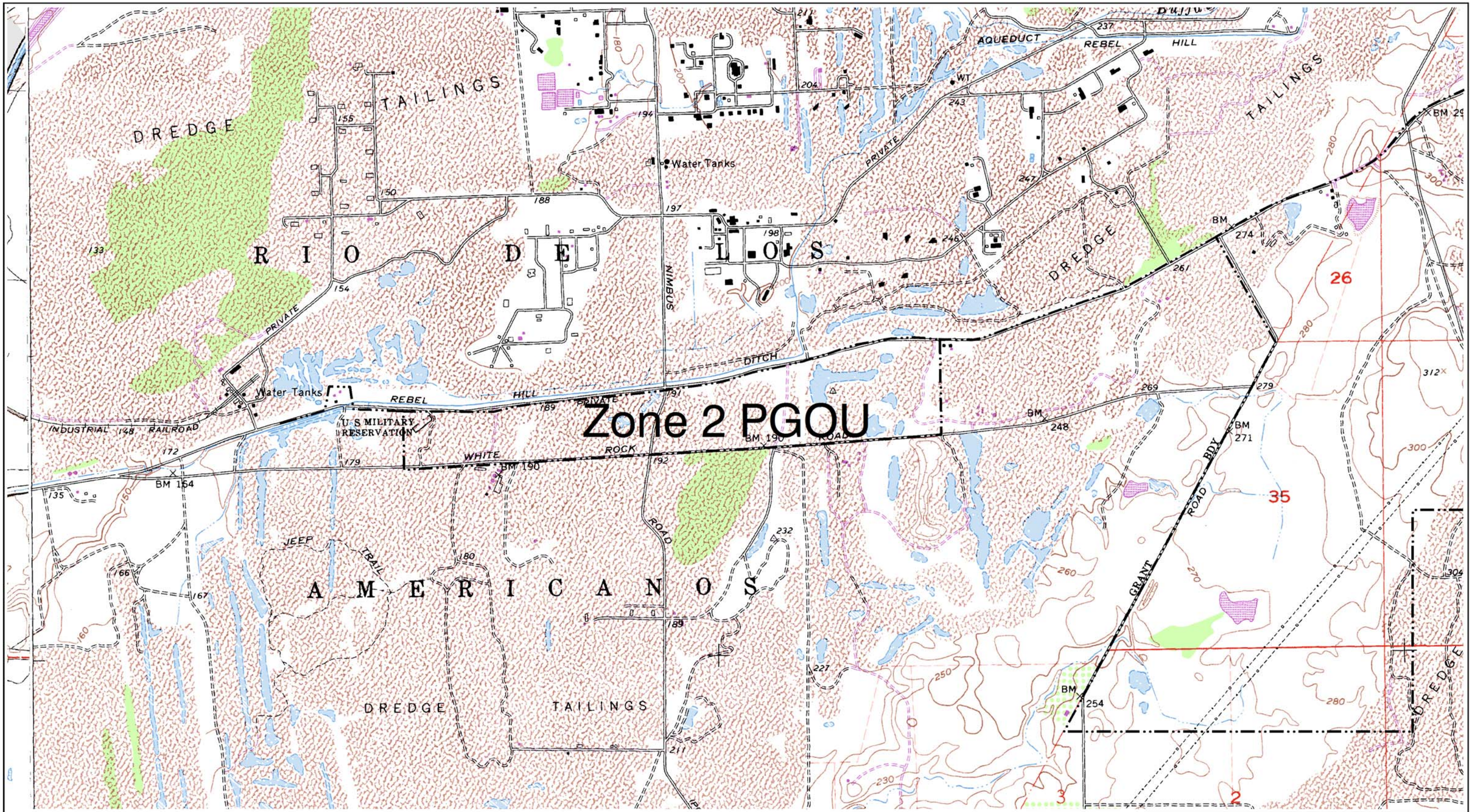
Scale: 1" = 1500'
0 750 1500

AEROJET
Environmental Remediation

FIGURE B-1

Location Map
Zone 2 PGOU

1/28/05 ah SR10114784



Source: USGS 7.5° Topographic Quadrangle(s), 1967: Buffalo Creek, Carmichael, Citrus Heights, Folsom from RealTopo™, copyright by Gecko Software

LEGEND

Dredge Tailings

N

Scale: 1" = 1600'

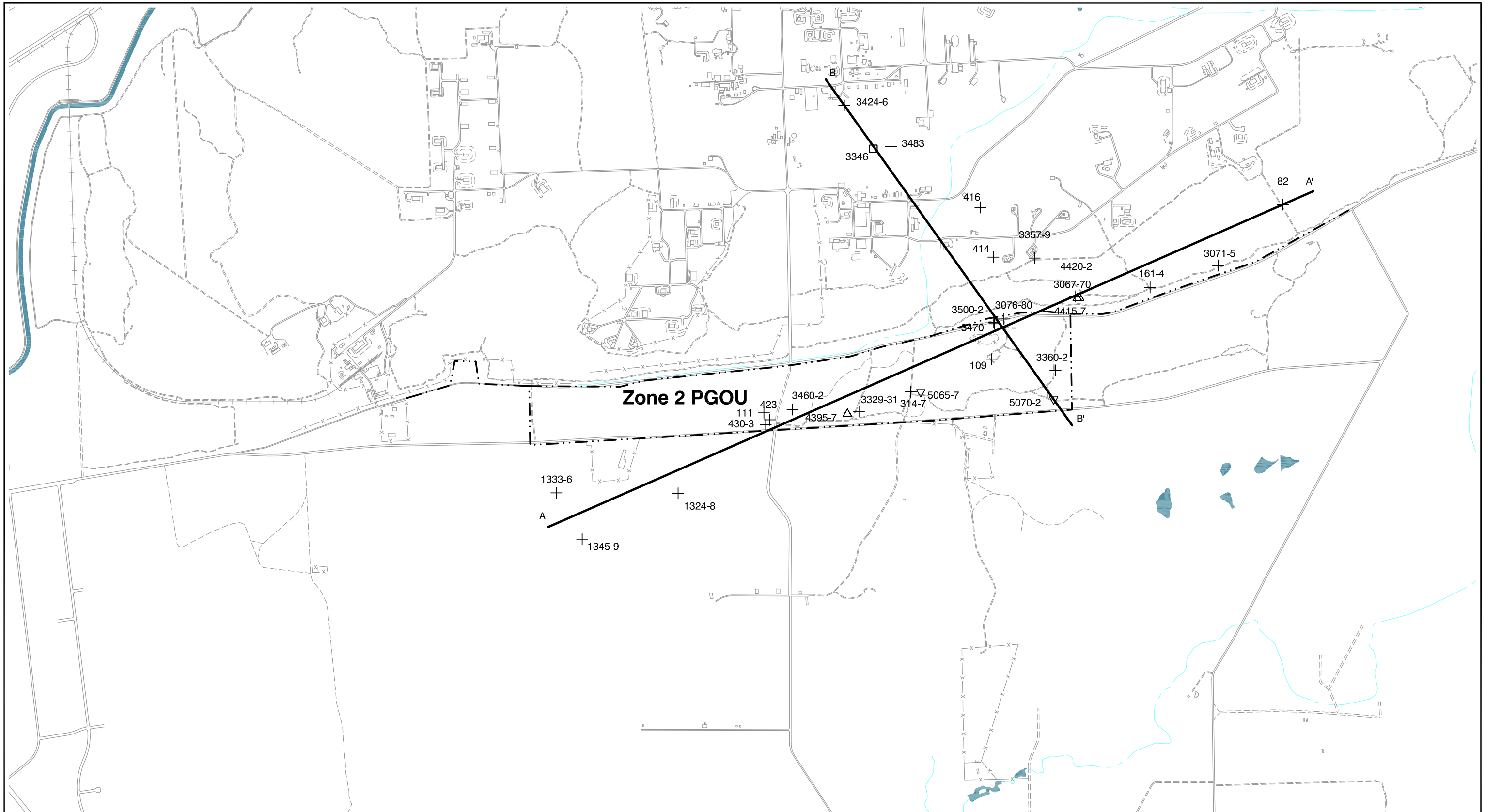
0 800 1600

AEROJET
Environmental Remediation

FIGURE B-2

Surface Topography and Spatial Extent of Dredged Areas Zone 2 PGOU

6/9/05 ah SR10119799



EXPLANATION

- Perimeter Groundwater Operable Unit - Zone 2
- A — A' Cross Section Transect
- Monitor Well
- Extraction Well
- Recharge Well
- Core Boring

N

Scale: 1" = 1600'

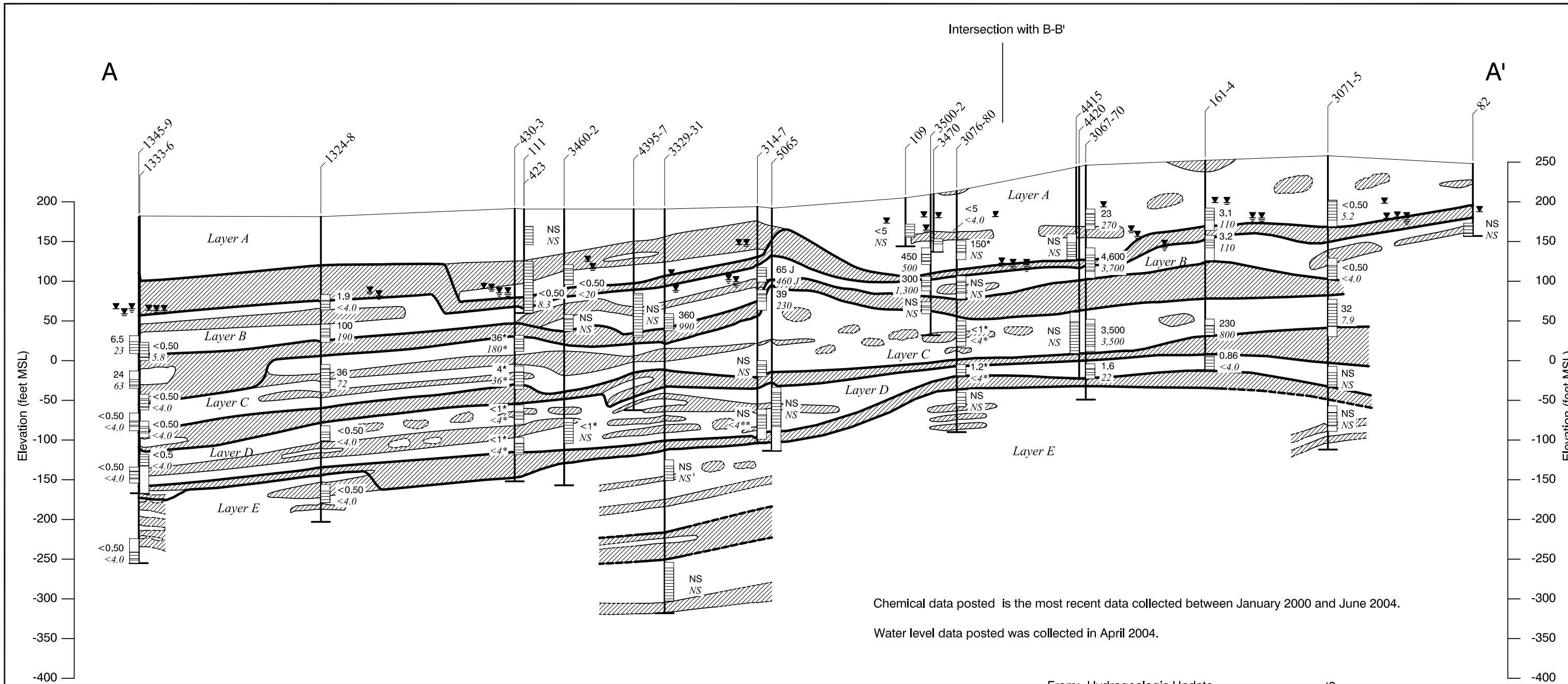
0 800 1600

AEROJET
Environmental Remediation

FIGURE B-3

Cross Section Transects and Zone 2 Boundaries
Zone 2 PGOU

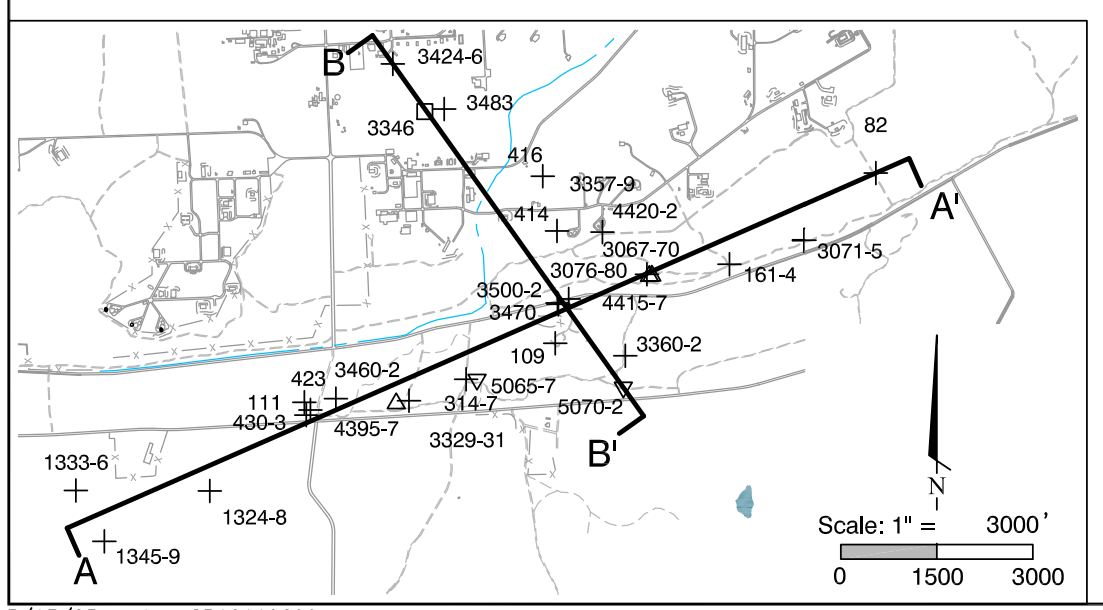
1/21/05 ah SR10118090



Chemical data posted is the most recent data collected between January 2000 and June 2004.

Water level data posted was collected in April 2004.

From: Hydrogeologic Update
Southeastern Zone 2
Aerojet, 1996



EXPLANATION

1001 — Well Designation
Multiple Completions: Depth Increases by Ascending Well Number Order

<0.5 — TCE Concentration in µg/L
<4 — Perchlorate Concentration in µg/L
(See Notes Below)
Screened Interval
Filter Pack
Total Borehole Depth

Notes:
Asterisk (*) Indicates Data Collected Prior to Sampling Period
Double Asterisk (**) Indicates Supplemental Data Collected After RI Sampling Period
NS = Not Sampled
J = Estimated Concentration

Layer Boundary
Geologic Contact
Relatively permeable sediments: Silty, poorly and well-graded sands and gravels (GP,GW,SP,SW); silty and clayey gravels (GM/GC) and silts.
Relatively lower permeability sediments: Low plasiticity clays and silts (CL,ML); silty and clayey sand (SM/SC).
Water Level: Number of Ticks Indicates Screen Level

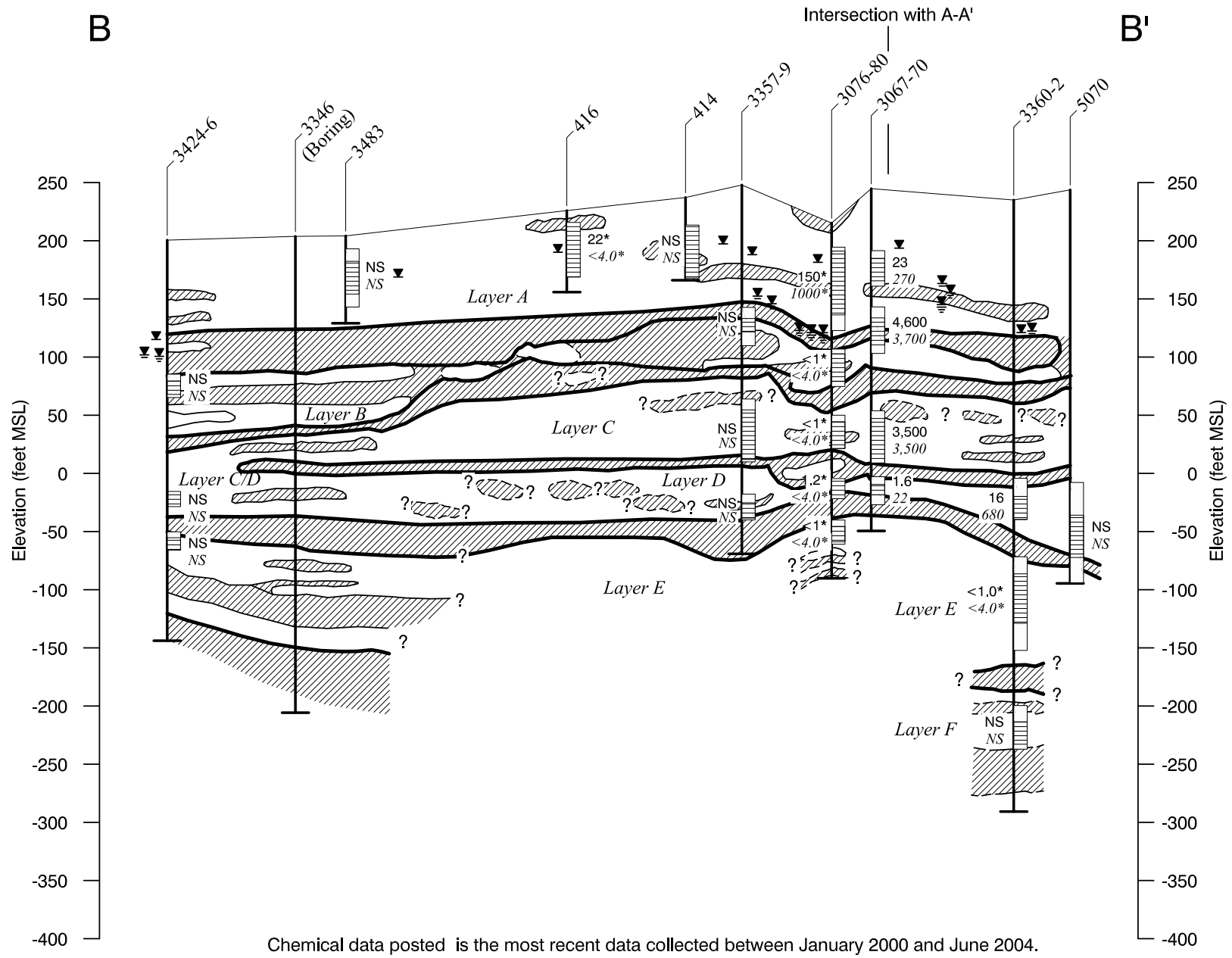
Vertical Scale
1' = 125'
125
0
1,000
Horizontal Scale
1' = 1,000'
Vertical Exaggeration: 8x

AEROJET
Environmental Remediation

FIGURE B-4

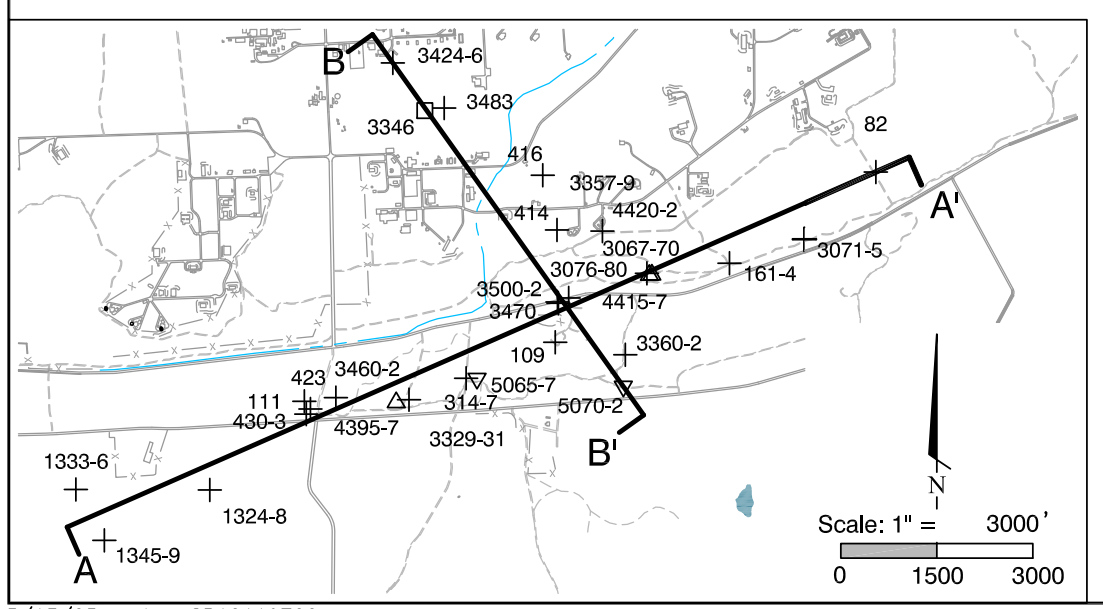
Hydrostratigraphic Cross Section A - A'
Zone 2 PGOU

5/13/05 ah SR10119699



Chemical data posted is the most recent data collected between January 2000 and June 2004.

Water level data posted was collected in April 2004.



EXPLANATION

1001 — Well Designation
Multiple Completions: Depth Increases by Ascending Well Number Order

<0.5 — TCE Concentration in µg/L
<4 — Perchlorate Concentration in µg/L
Asterisk (*) Indicates Data Collected Prior to Sampling Period
NS = Not Sampled
Screened Interval
Filter Pack
Total Borehole Depth

Water Level: Number of Ticks Indicates Screen Level

Layer Boundary
Geologic Contact

Relatively permeable sediments: Silty, poorly and well-graded sands and gravels (GP,GW,SP,SW); silty and clayey gravels (GM/GC) and silts.

Relatively lower permeability sediments: Low plasiticity clays and silts (CL,ML); silty and clayey sand (SM/SC).

From: Hydrogeologic Update
Southeastern Zone 2
Aerojet, 1996

Vertical Scale
1' = 125'
125
0
1,000
Horizontal Scale
1' = 1,000'
Vertical Exaggeration: 8x

AEROJET
Environmental Remediation

FIGURE B-5

Hydrostratigraphic Cross Section B - B'
Zone 2 PGOU

5/13/05 ah SR10119700

Former Open Burn Facility

Hogout Area

Line 01

Line 03

Line 04

Sites 8G & 9G

Zone 3 PGOU

To GET F

Nimbus Rd

Old White Rock Road

White Rock Road

GET F Extraction Wells

Zone 2 PGOU

Former White Rock North Dump

GET E (Ehnizs

Former White Rock South Dump

Former Municipal Landfill

IRCTS

Circular Feature

Teichert Sand and Gravel Quarry

EXPLANATION

KEY TO WELL SYMBOLS

Well Identification — 3431 81.18 — Water Level
Blank = Not Measured
Well Type and Location

WELL TYPES

- Monitor Well
- Extraction Well
- State-owned Well
- Water Supply Well
- Domestic Well
- Destroyed Well

- Consent Decree Boundary
- Perimeter Groundwater Operable Unit
- 50 Groundwater Elevation Contour (Feet, MSL)

N

Scale: 1" = 1600'

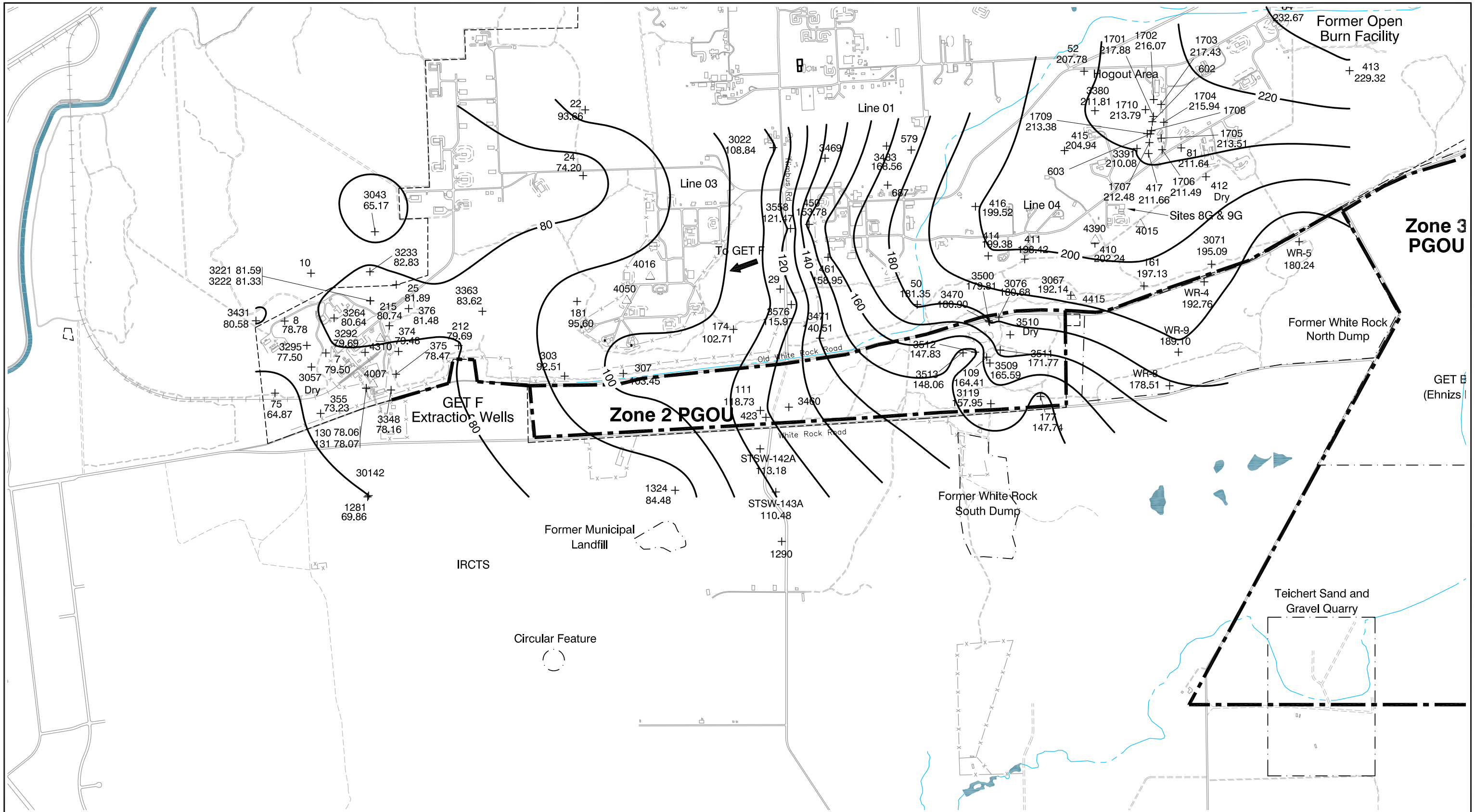
0 800 1600

AEROJET
Environmental Remediation

FIGURE B-6

Layer A
Potentiometric Surface Map, October 2003
Zone 2 PGOU

5/13/05 kk SR10119693



EXPLANATION

KEY TO WELL SYMBOLS

Well Identification — 3431 81.18 — Water Level
Blank = Not Measured
Well Type and Location

WELL TYPES

- Monitor Well
- Extraction Well
- State-owned Well
- Water Supply Well
- Domestic Well
- Destroyed Well

Consent Decree Boundary

Perimeter Groundwater Operable Unit

50 — Groundwater Elevation Contour (Feet, MSL)

N

Scale: 1" = 1600'

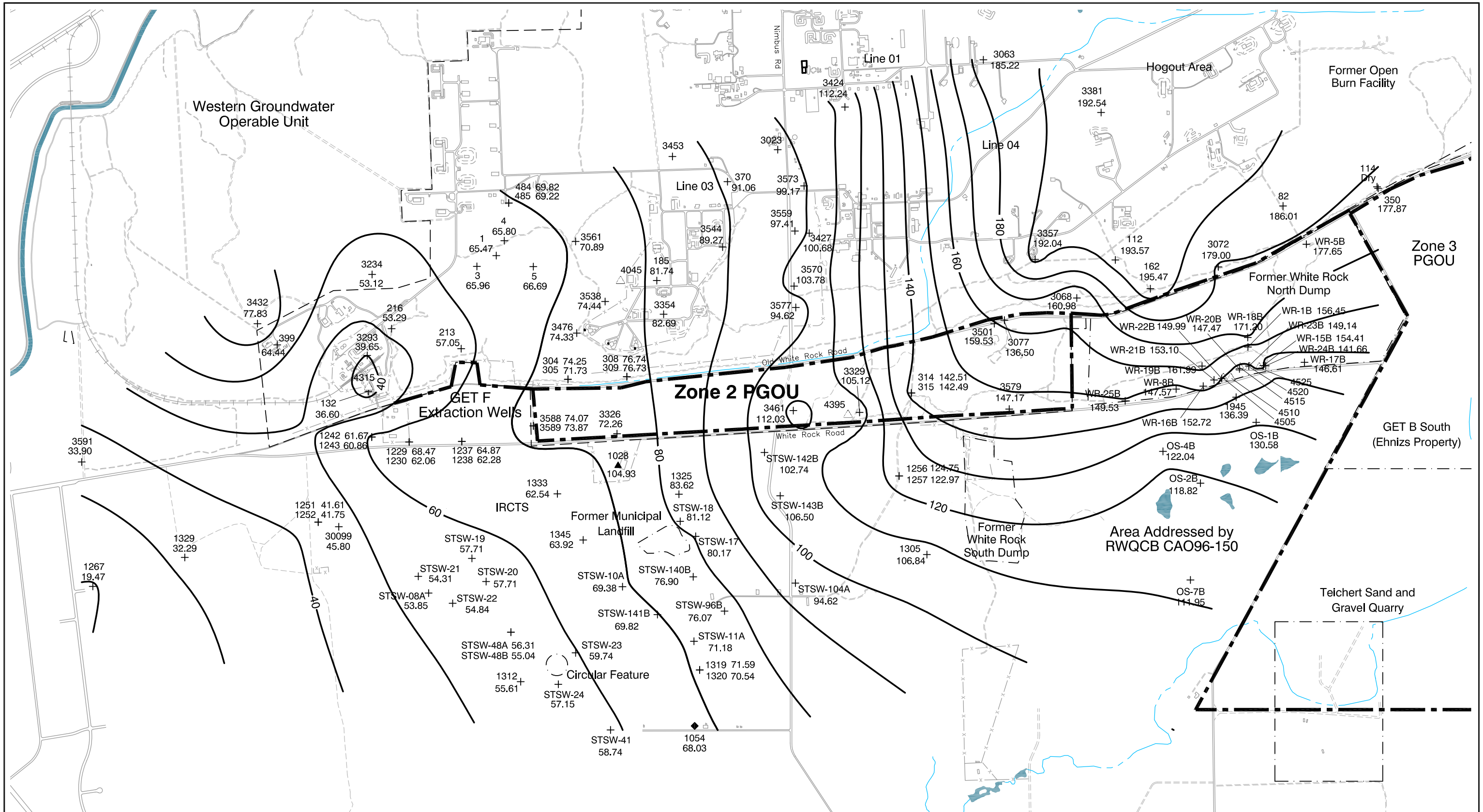
0 800 1600

AEROJET
Environmental Remediation

FIGURE B-7

Layer A
Potentiometric Surface Map, April 2004
Zone 2 PGOU

1/21/05 kk SR10114737



EXPLANATION

KEY TO WELL SYMBOLS

Well Identification — 3431 81.18 — Water Level (feet, msl) If Blank, No Sample Taken During Time Period

+ — Well Type and Location

WELL TYPES

- + Monitor Well
- △ Extraction Well
- × State-owned Well
- ◆ Water Supply Well
- ▲ Domestic Well
- ⊗ Destroyed Well

- - - - - - - - Consent Decree Boundary

— · — Perimeter Groundwater Operable Unit

—— 50 —— Groundwater Elevation Contour (feet, msl)

N

Scale: 1" = 1600'

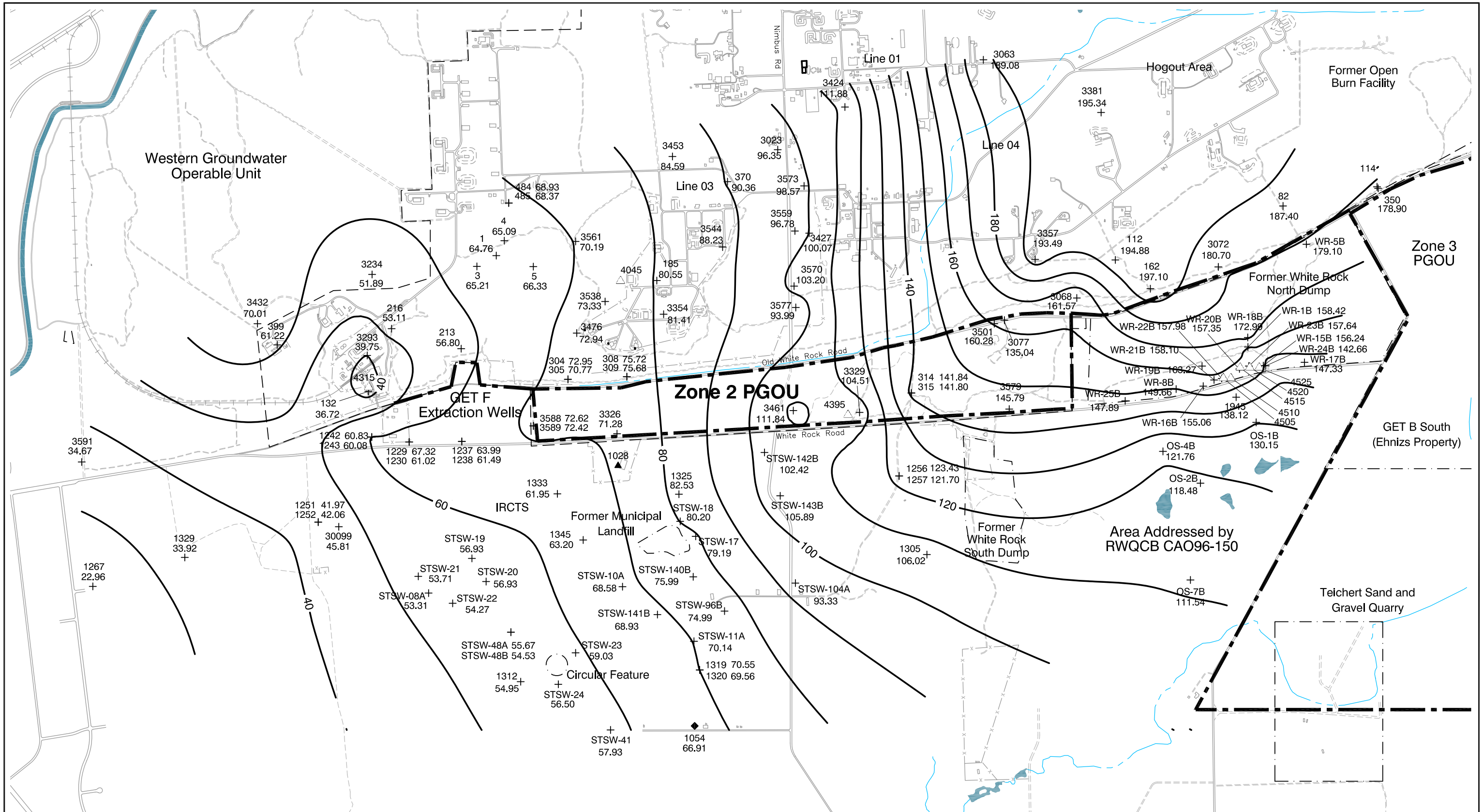
0 800 1600

AEROJET
Environmental Remediation

FIGURE B-8

Layer B
Potentiometric Surface Map, October 2003
Zone 2 PGOU

1/21/05 kk SR10114741



EXPLANATION

KEY TO WELL SYMBOLS

Well Identification — 3431 81.18 — Water Level (feet, msl) If Blank, No Sample Taken During Time Period

+ — Well Type and Location

WELL TYPES

- + Monitor Well
- △ Extraction Well
- × State-owned Well
- ◆ Water Supply Well
- ▲ Domestic Well
- ⊗ Destroyed Well

- - - - - - - - Consent Decree Boundary
- — · — Perimeter Groundwater Operable Unit
- — 50 — Groundwater Elevation Contour (feet, msl)

N

Scale: 1" = 1600'

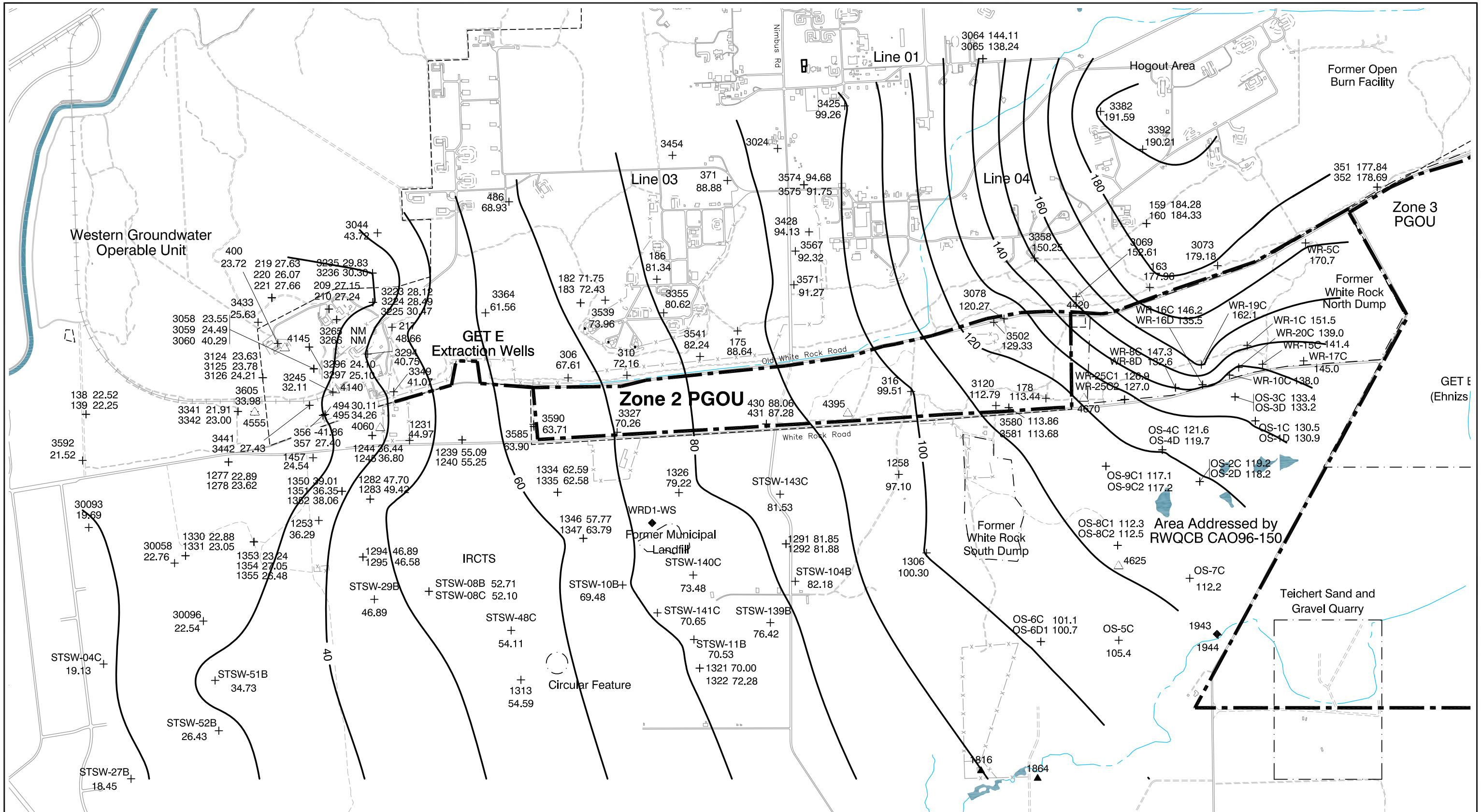
0 800 1600

AEROJET
Environmental Remediation

FIGURE B-9

Layer B
Potentiometric Surface Map, April 2004
Zone 2 PGOU

1/21/05 kk SR10114742



EXPLANATION

KEY TO WELL SYMBOLS

Well Identification — 3431 81.18 — Water Level (feet, msl) If Blank, No Sample Taken During Time Period

+ — Well Type and Location

WELL TYPES

- + Monitor Well
- △ Extraction Well
- × State-owned Well
- ◆ Water Supply Well
- ▲ Domestic Well
- ⊗ Destroyed Well

- - - - - - - Consent Decree Boundary
- — · — Perimeter Groundwater Operable Unit
- — 50 — Groundwater Elevation Contour (feet, msl)

N

Scale: 1" = 1600'

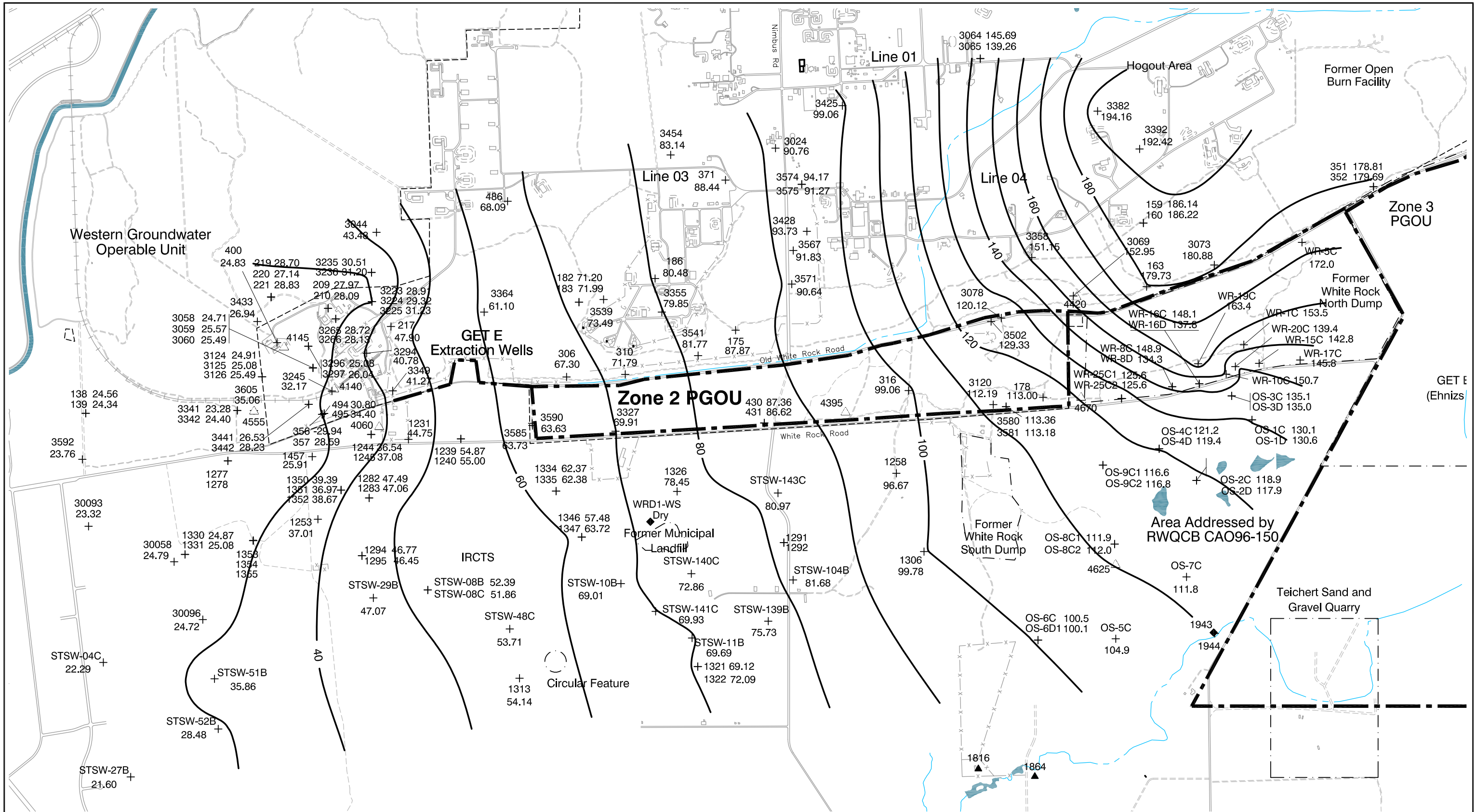
0 800 1600

AEROJET Environmental Remediation

FIGURE B-10

Layer C
Potentiometric Surface Map, October 2003
Zone 2 PGOU

1/21/05 kk SR10114743

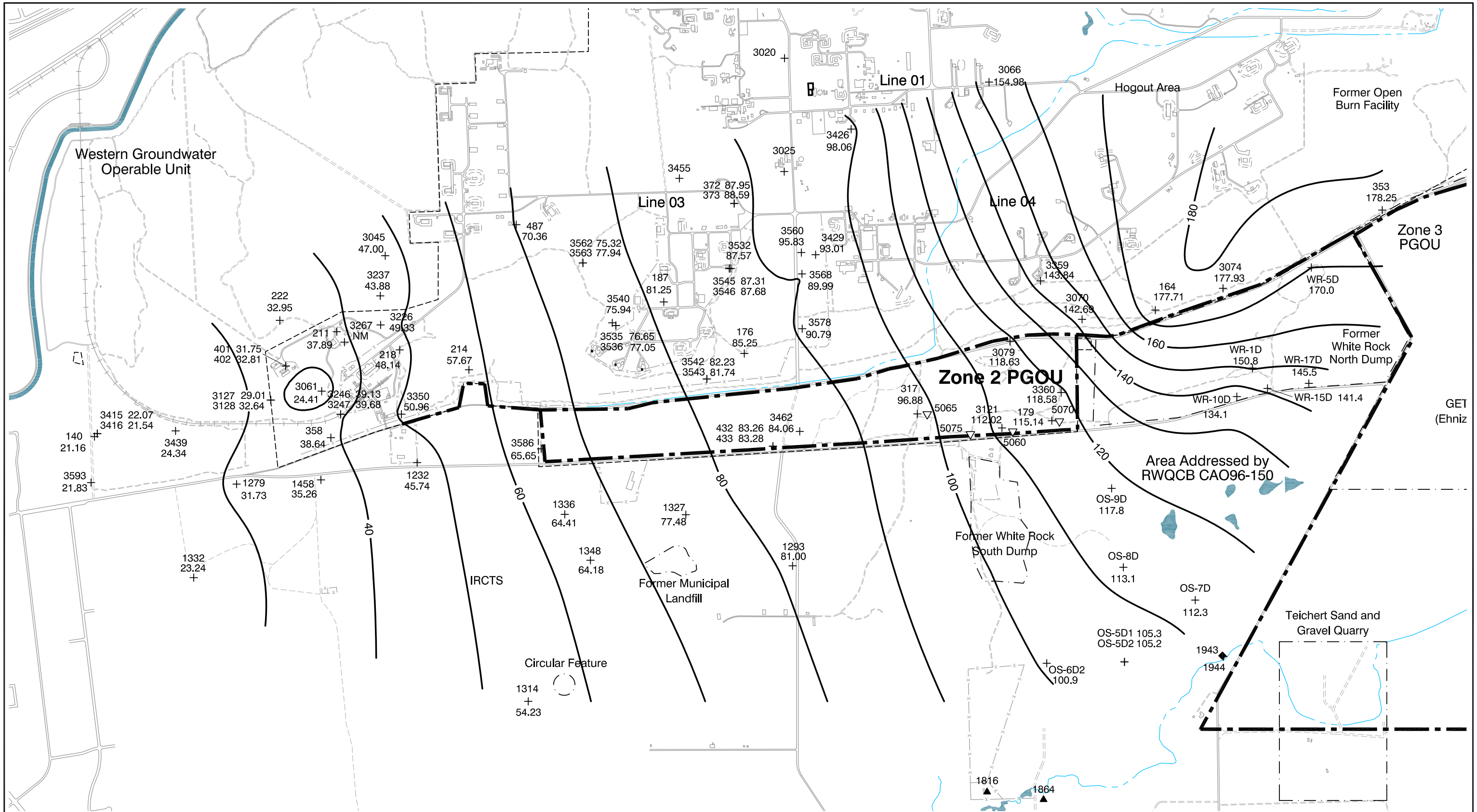


AEROJET
Environmental Remediation

FIGURE B-11

Layer C
Potentiometric Surface Map, April 2004
Zone 2 PGOU

1/21/05 kk SR10114744



EXPLANATION

KEY TO WELL SYMBOLS

Well Identification — 3431 81.18 — Water Level (feet, msl) If Blank, No Sample Taken During Time Period

+ — Well Type and Location

WELL TYPES

- + Monitor Well
- △ Extraction Well
- × State-owned Well
- ◆ Water Supply Well
- ▲ Domestic Well
- ⊗ Destroyed Well

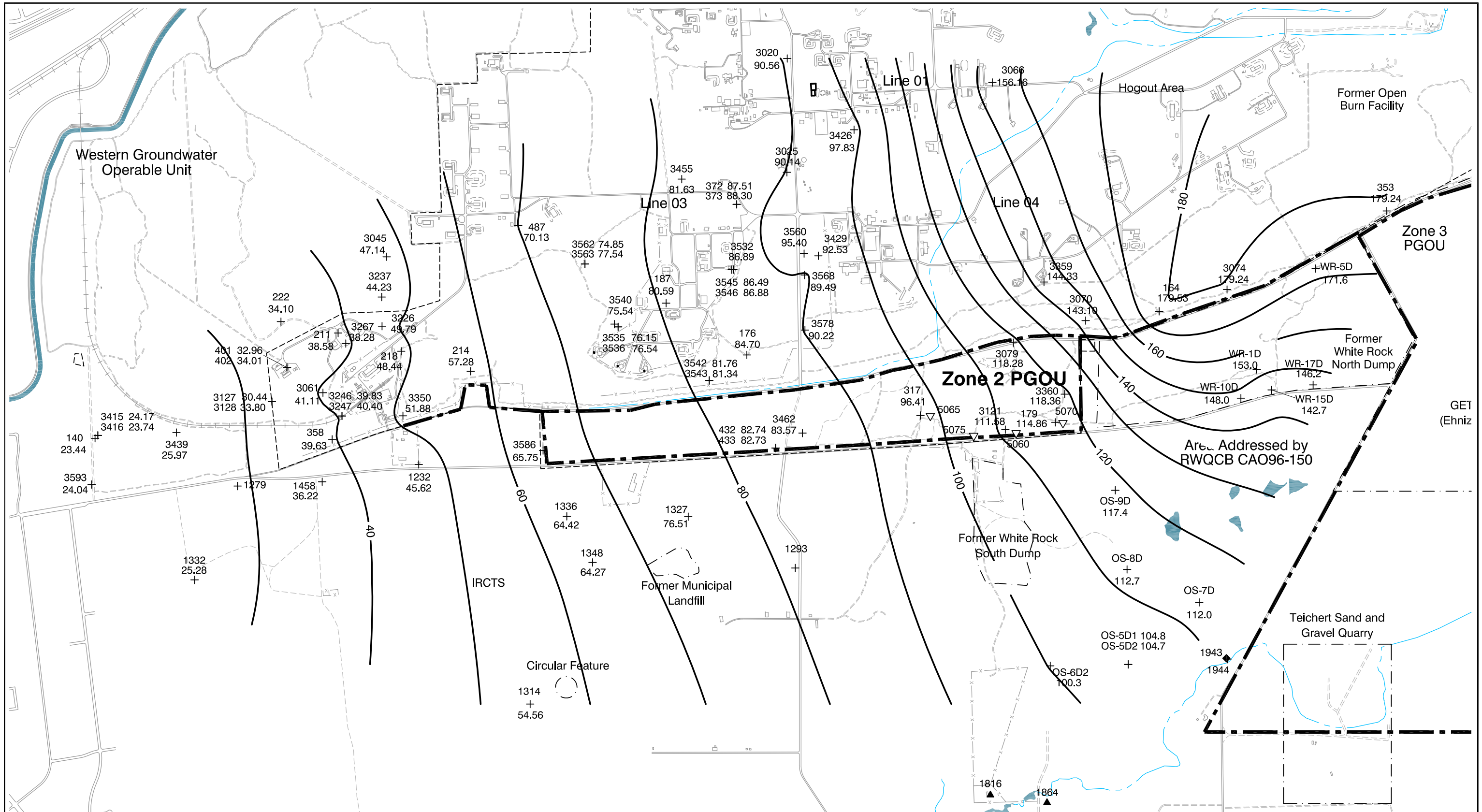
- -------- Consent Decree Boundary
- ━ - ━ Perimeter Groundwater Operable Unit
- —— 50 —— Groundwater Elevation Contour (feet, msl)

AEROJET
Environmental Remediation

FIGURE B-12

Layer D
Potentiometric Surface Map, October 2003
Zone 2 PGOU

1/21/05 kk SR10114745



EXPLANATION

KEY TO WELL SYMBOLS

Well Identification — 3431 81.18 — Water Level (feet, msl) If Blank, No Sample Taken During Time Period

+ — Well Type and Location

WELL TYPES

- + Monitor Well
- △ Extraction Well
- × State-owned Well
- ◆ Water Supply Well
- ▲ Domestic Well
- ⊗ Destroyed Well

- - - - - - - Consent Decree Boundary
- ▬ ▬ ▬ Perimeter Groundwater Operable Unit
- —— 50 —— Groundwater Elevation Contour (feet, msl)

N

Scale: 1" = 1600'

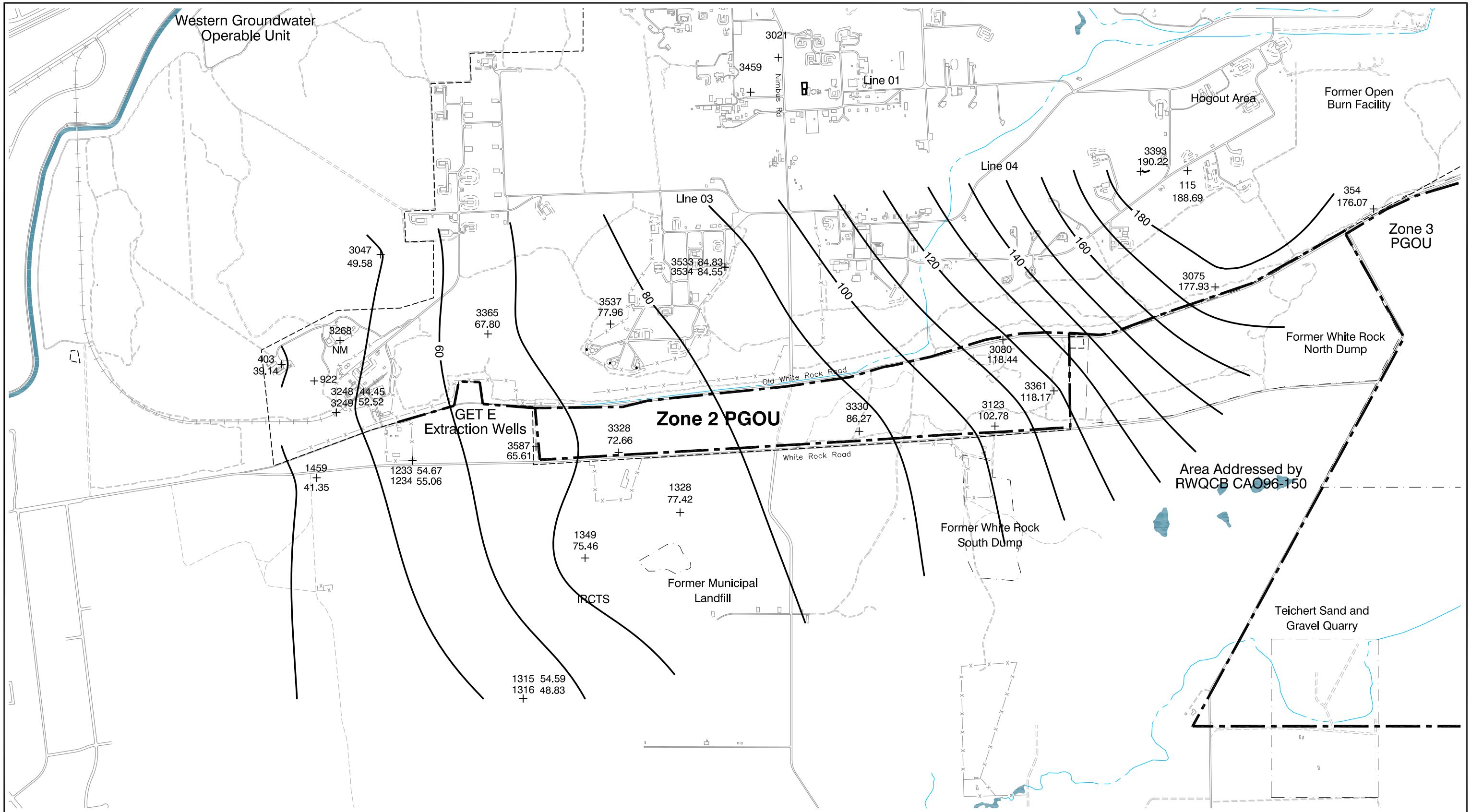
0 800 1600

AEROJET
Environmental Remediation

FIGURE B-13

Layer D
Potentiometric Surface Map, April 2004
Zone 2 PGOU

1/21/05 kk SR10114751



EXPLANATION

KEY TO WELL SYMBOLS

Well Identification — 3431 81.18 — Water Level (feet, msl) If Blank, No Sample Taken During Time Period

+ — Well Type and Location

WELL TYPES

- + Monitor Well
- △ Extraction Well
- × State-owned Well
- ◆ Water Supply Well
- ▲ Domestic Well
- ⊗ Destroyed Well

- -------- Consent Decree Boundary
- ▬ · ▬ Perimeter Groundwater Operable Unit
- —— 50 —— Groundwater Elevation Contour (feet, msl)

N

Scale: 1" = 1600'

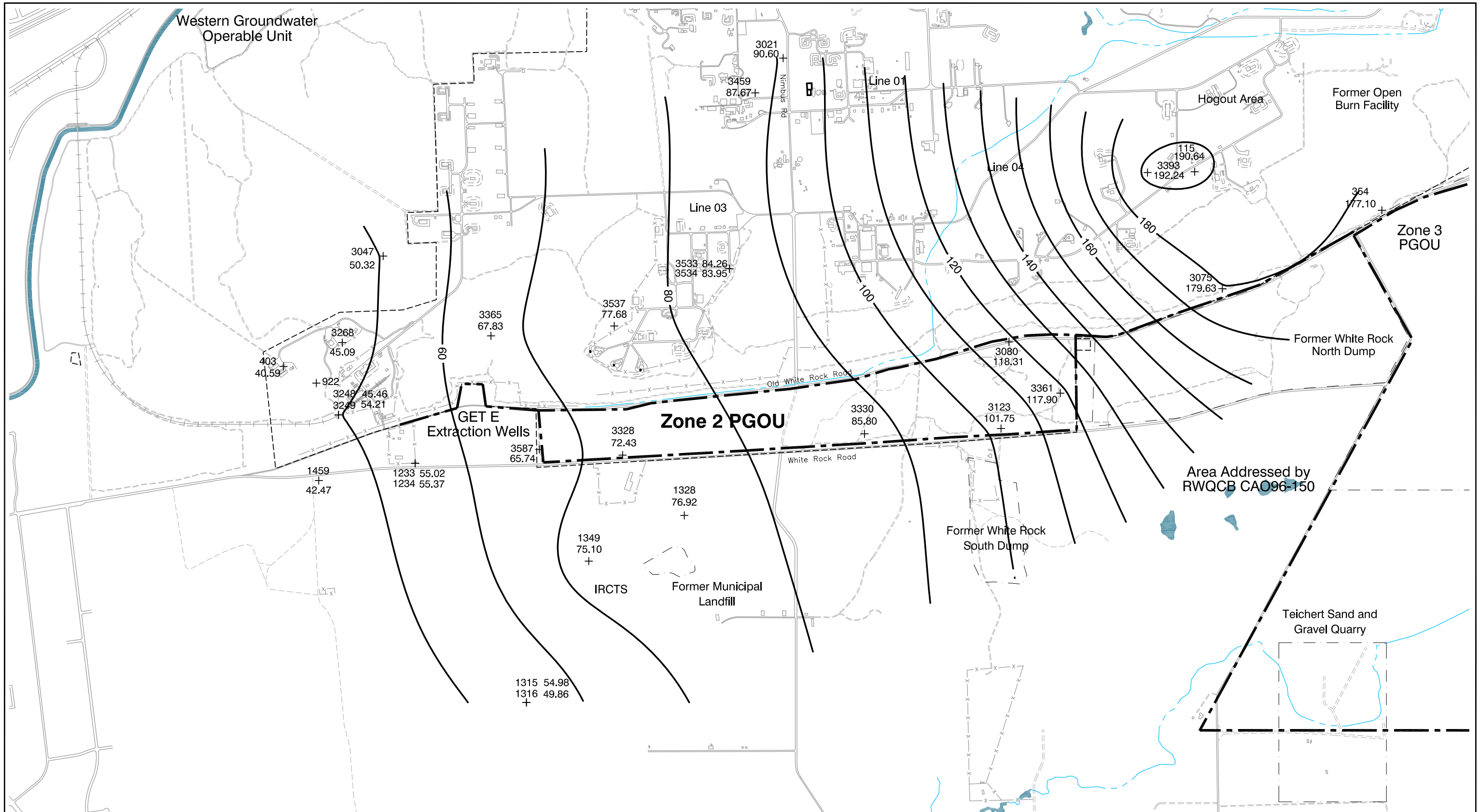
0 800 1600

AEROJET
Environmental Remediation

FIGURE B-14

Layer E
Potentiometric Surface Map, October 2003
Zone 2 PGOU

1/21/05 kk SR10114756



EXPLANATION

KEY TO WELL SYMBOLS

Well Identification — 3431 81.18 — Water Level (feet, msl) If Blank, No Sample Taken During Time Period

+ — Well Type and Location

WELL TYPES

- + Monitor Well
- △ Extraction Well
- × State-owned Well
- ◆ Water Supply Well
- ▲ Domestic Well
- ⊗ Destroyed Well

- - - - - - - Consent Decree Boundary
- — — — Perimeter Groundwater Operable Unit
- — 50 — Groundwater Elevation Contour (feet, msl)

N

Scale: 1" = 1600'

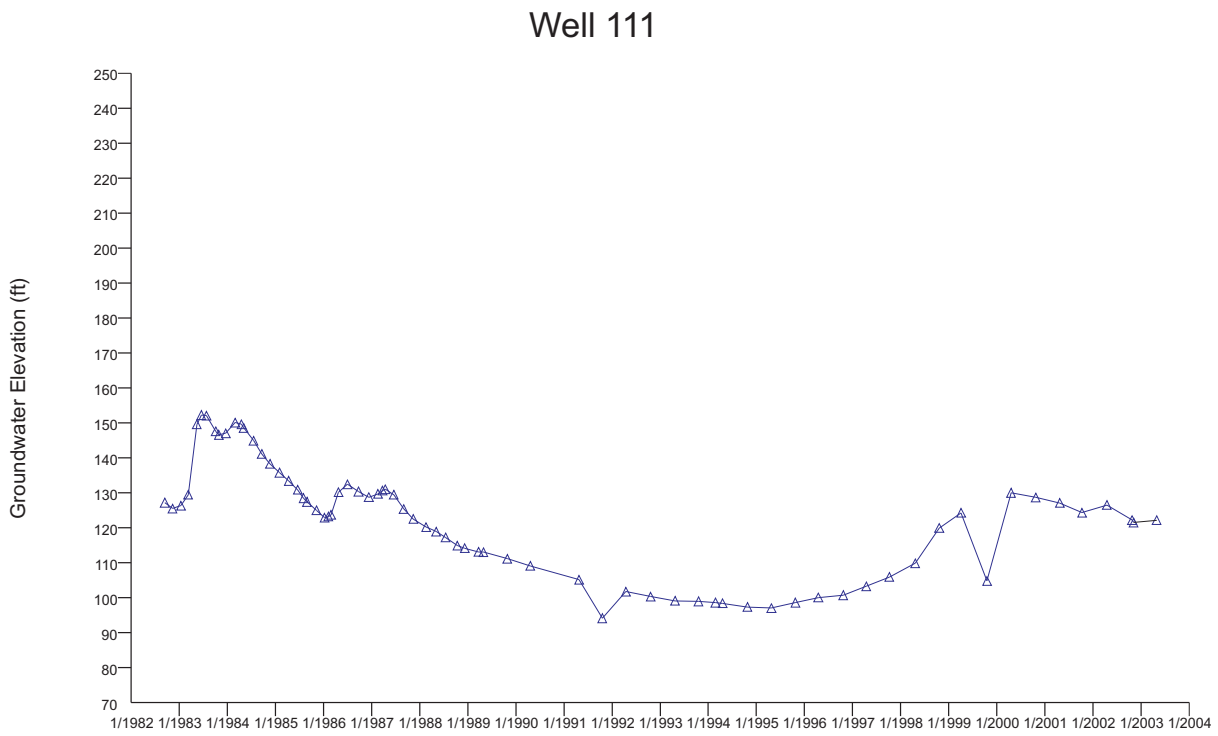
0 800 1600

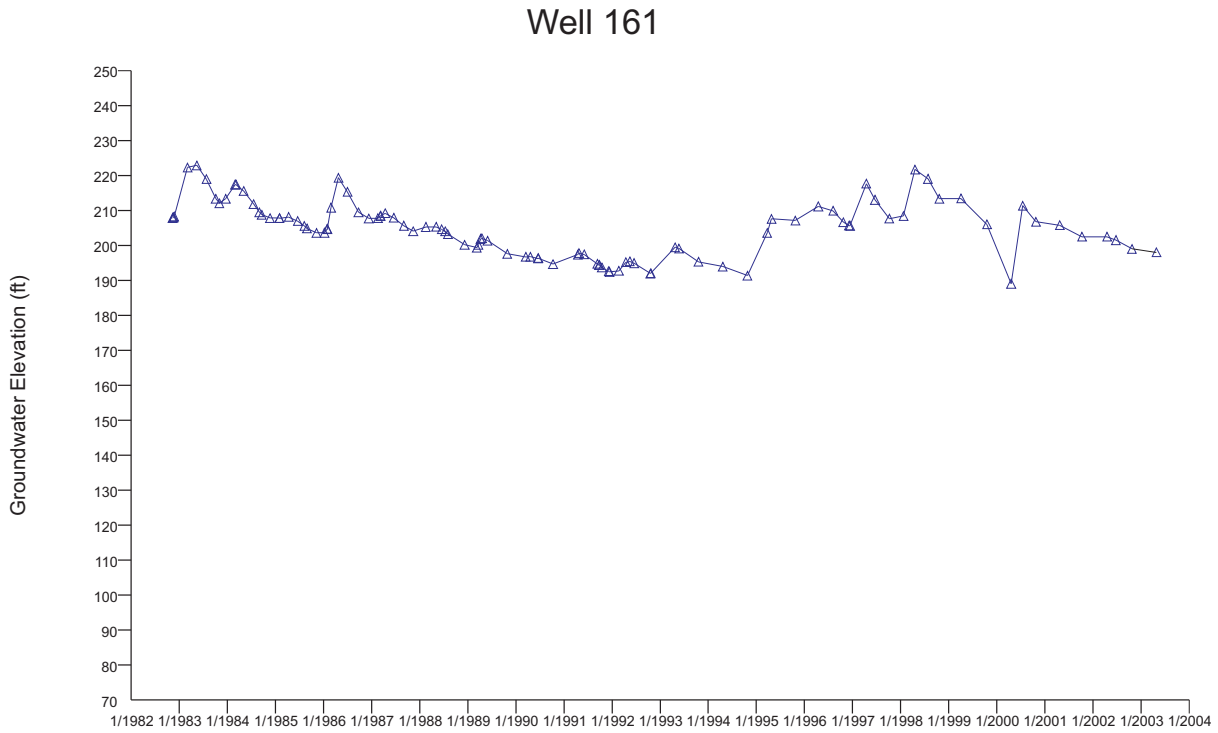
AEROJET
Environmental Remediation

FIGURE B-15

Layer E
Potentiometric Surface Map, April 2004
Zone 2 PGOU

1/21/05 kk SR10114761

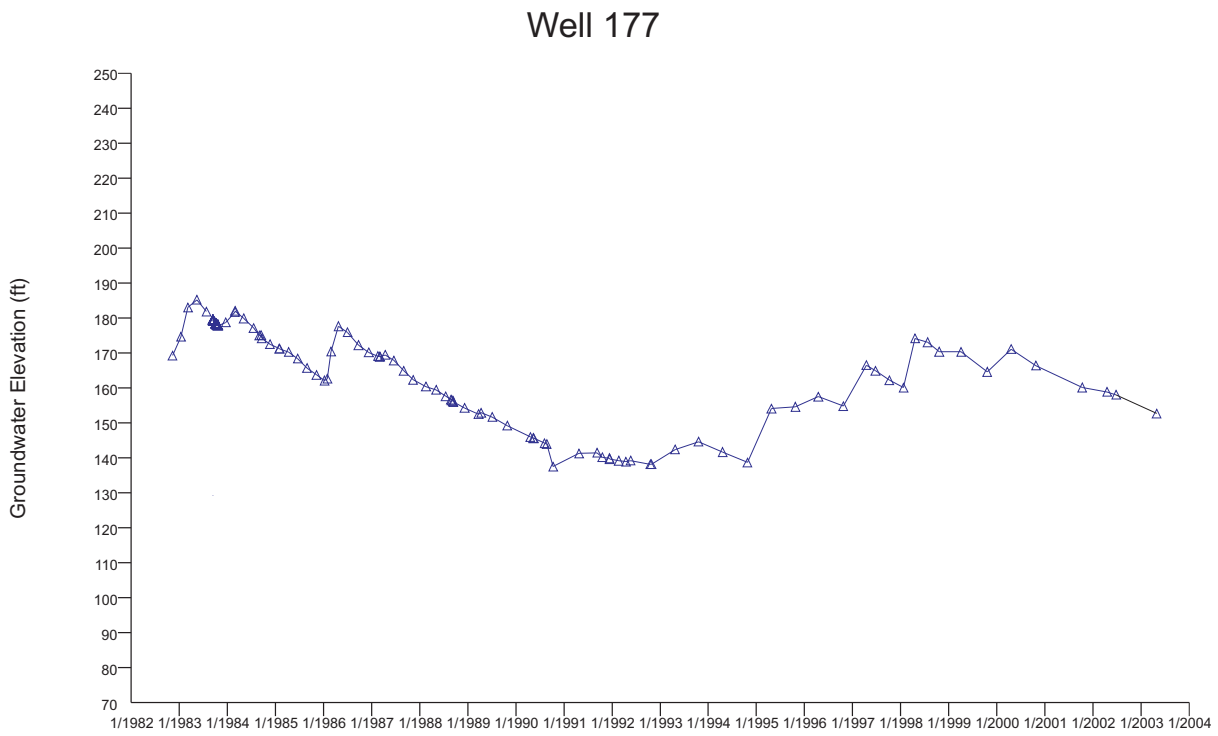


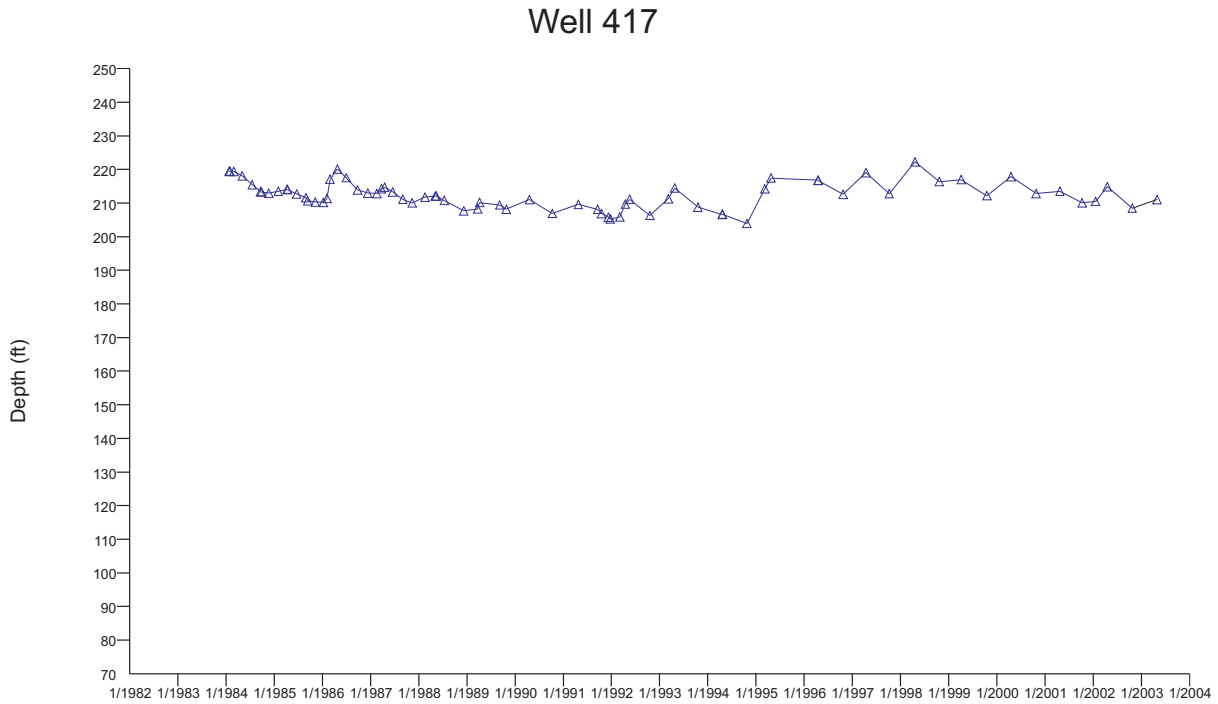


AEROJET
Environmental Remediation

FIGURE B-16
Water Level Hydrographs
Layer A Wells 111 and 161
Zone 2 PGOU

1/21/05 KK SR10114767

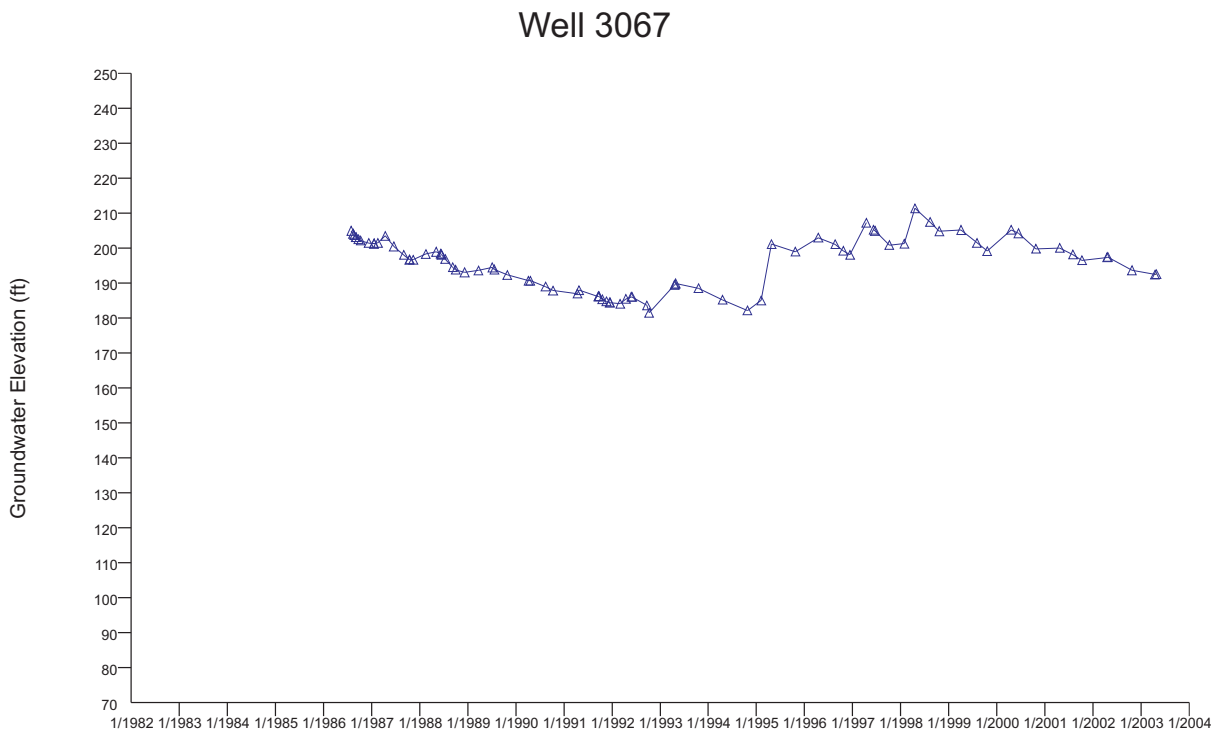




AEROJET
Environmental Remediation

FIGURE B-17
Water Level Hydrographs
Layer A Wells 177 and 417
Zone 2 PGOU

1/21/05 KK SR10114767

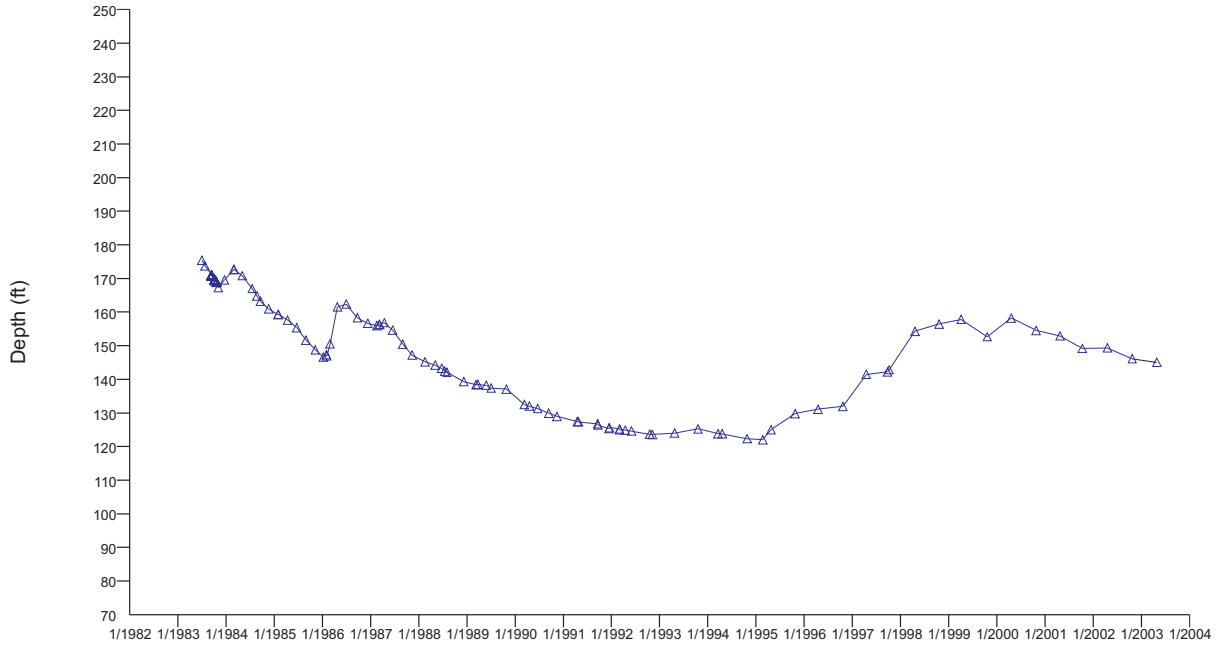


AEROJET
Environmental Remediation

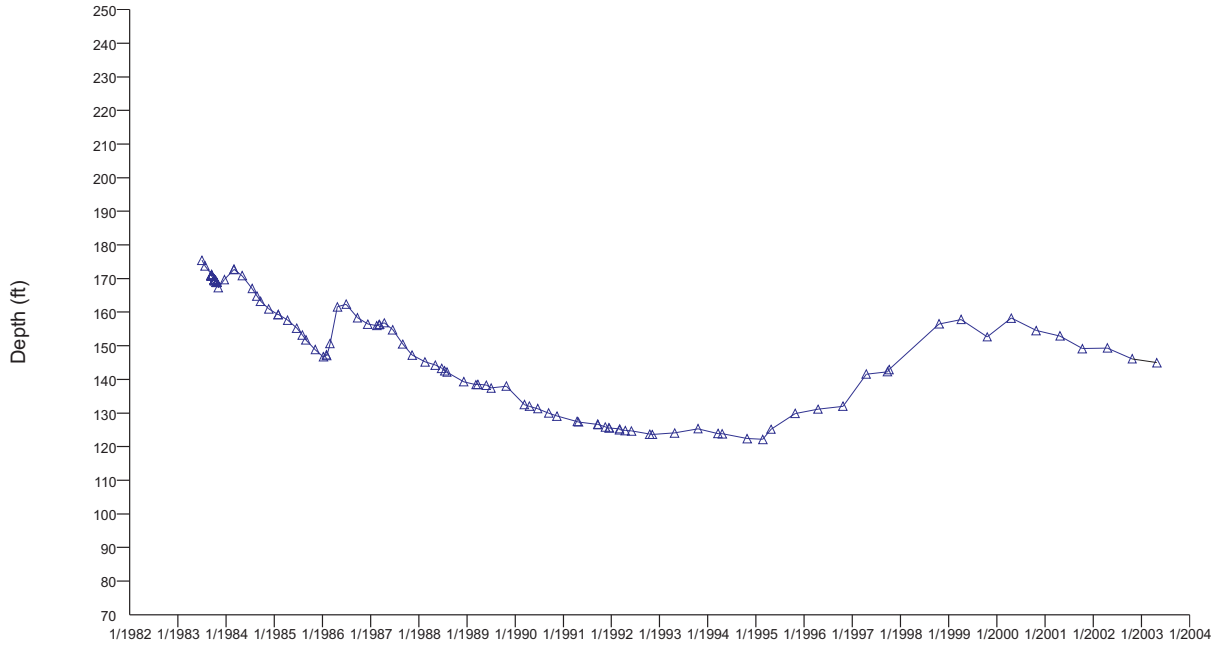
FIGURE B-18
Water Level Hydrographs
Layer A Well 3067
Zone 2 PGOU

1/21/05 KK SR10114767

Well 314



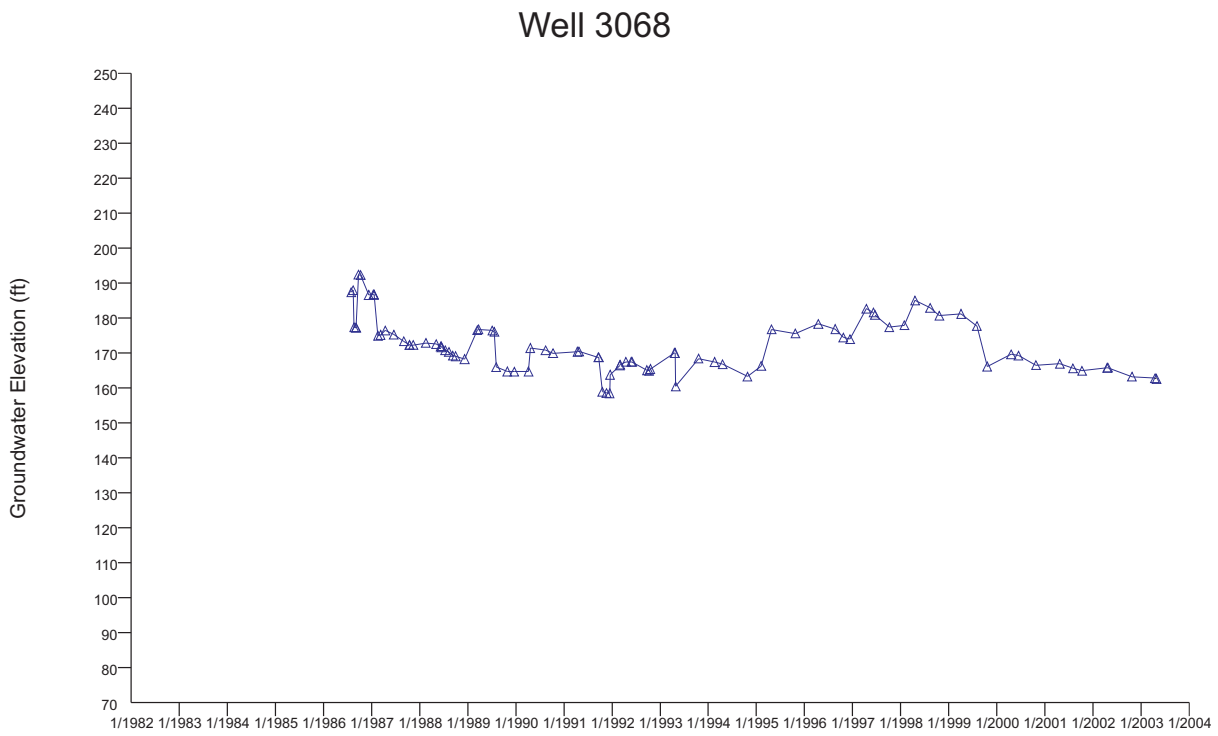
Well 315



AEROJET
Environmental Remediation

FIGURE B-19
Water Level Hydrographs
Layer B Wells 314 and 315
Zone 2 PGOU

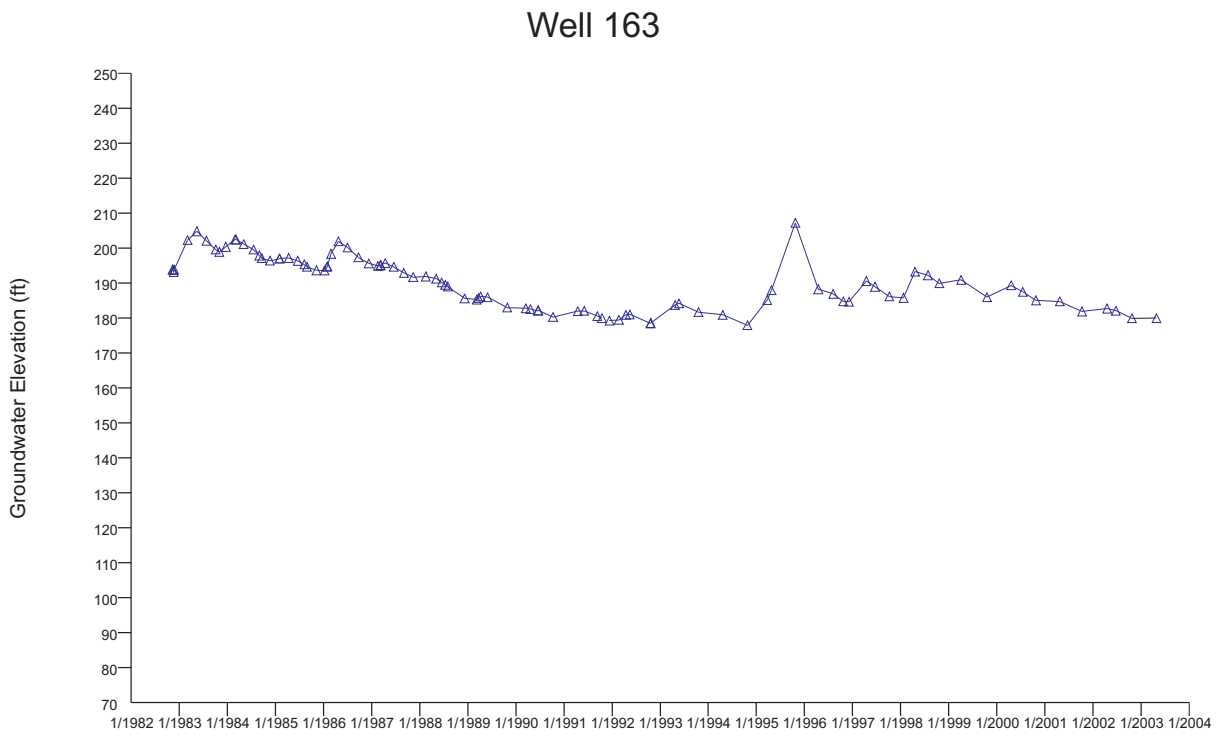
1/21/05 KK SR10114767

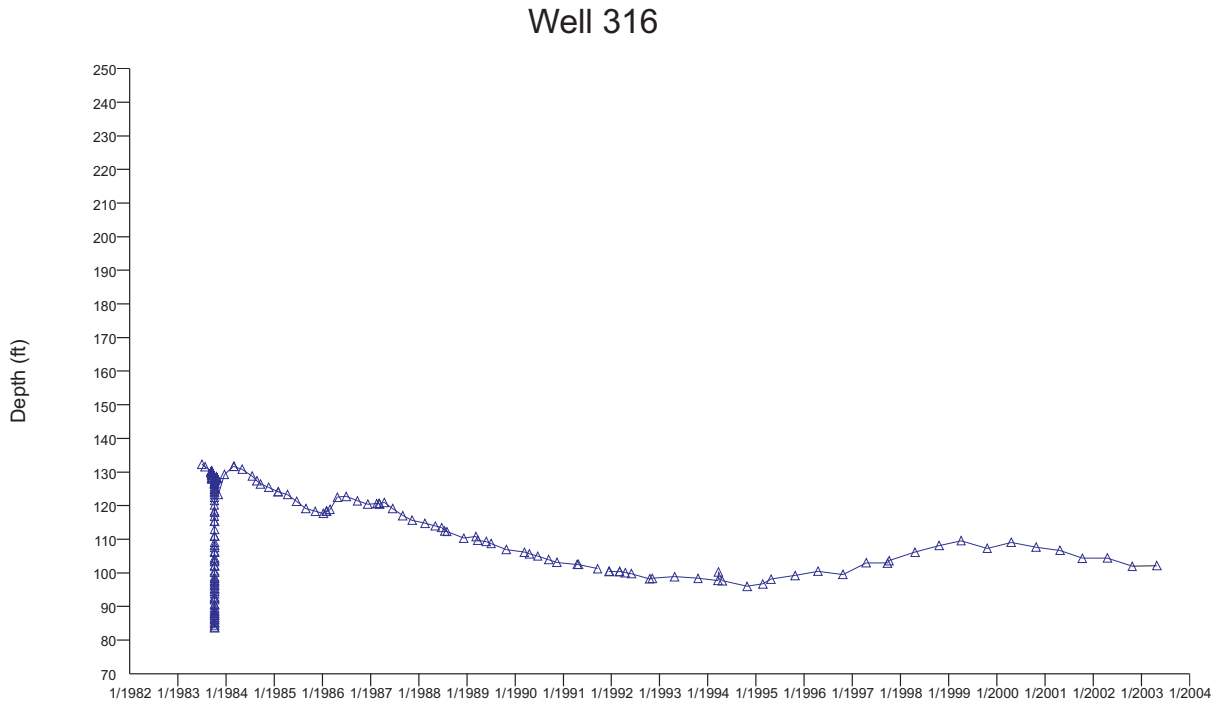


AEROJET
Environmental Remediation

FIGURE B-20
Water Level Hydrographs
Layer A Well 3068
Zone 2 PGOU

1/21/05 KK SR10114767

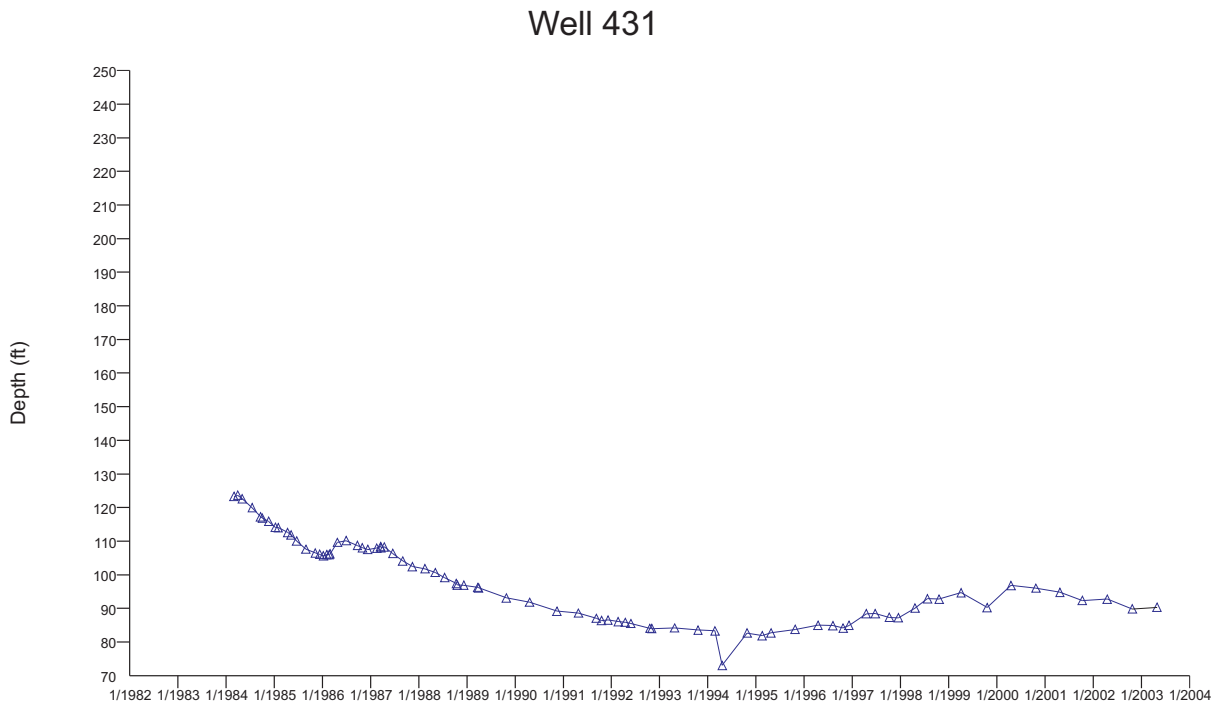


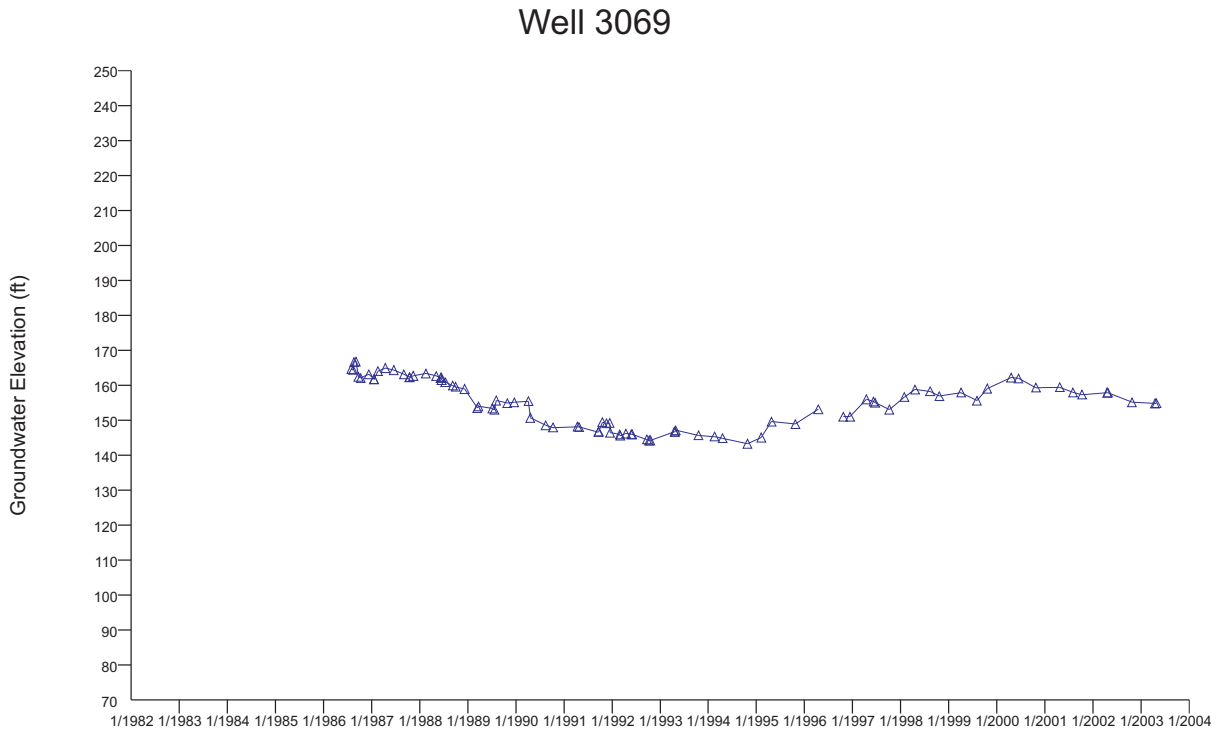


AEROJET
Environmental Remediation

FIGURE B-21
Water Level Hydrographs
Layer C Wells 163 and 316
Zone 2 PGOU

1/21/05 KK SR10114767

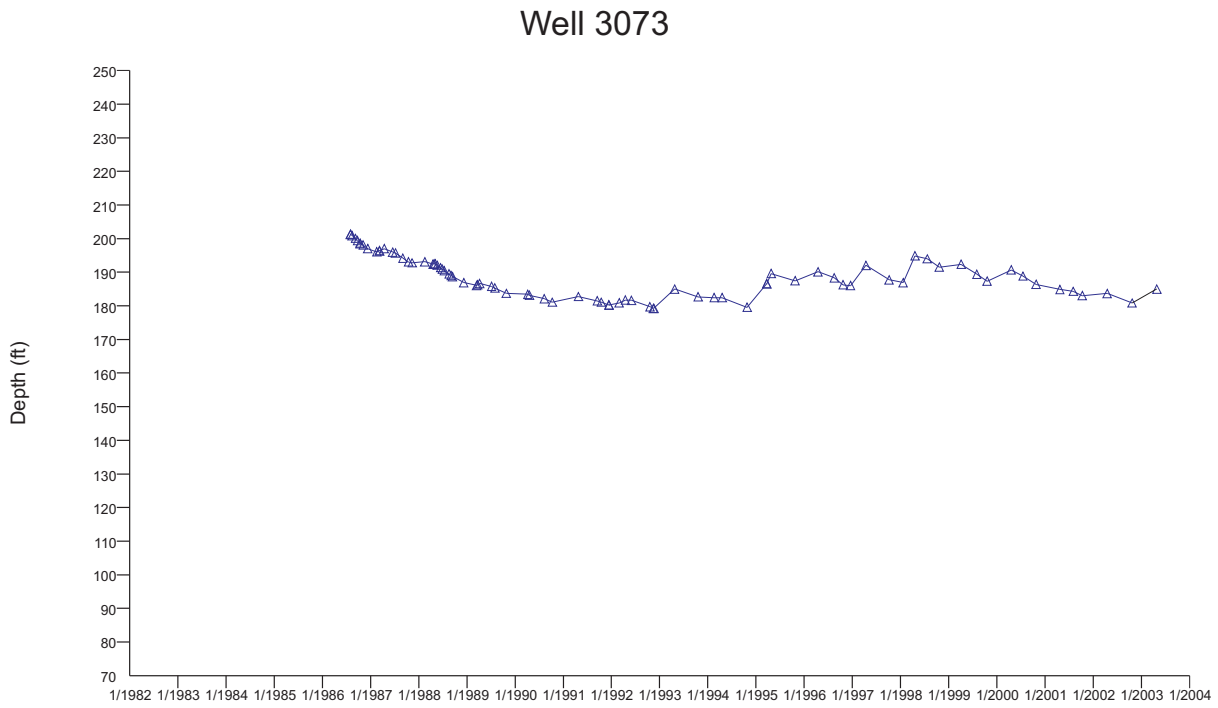


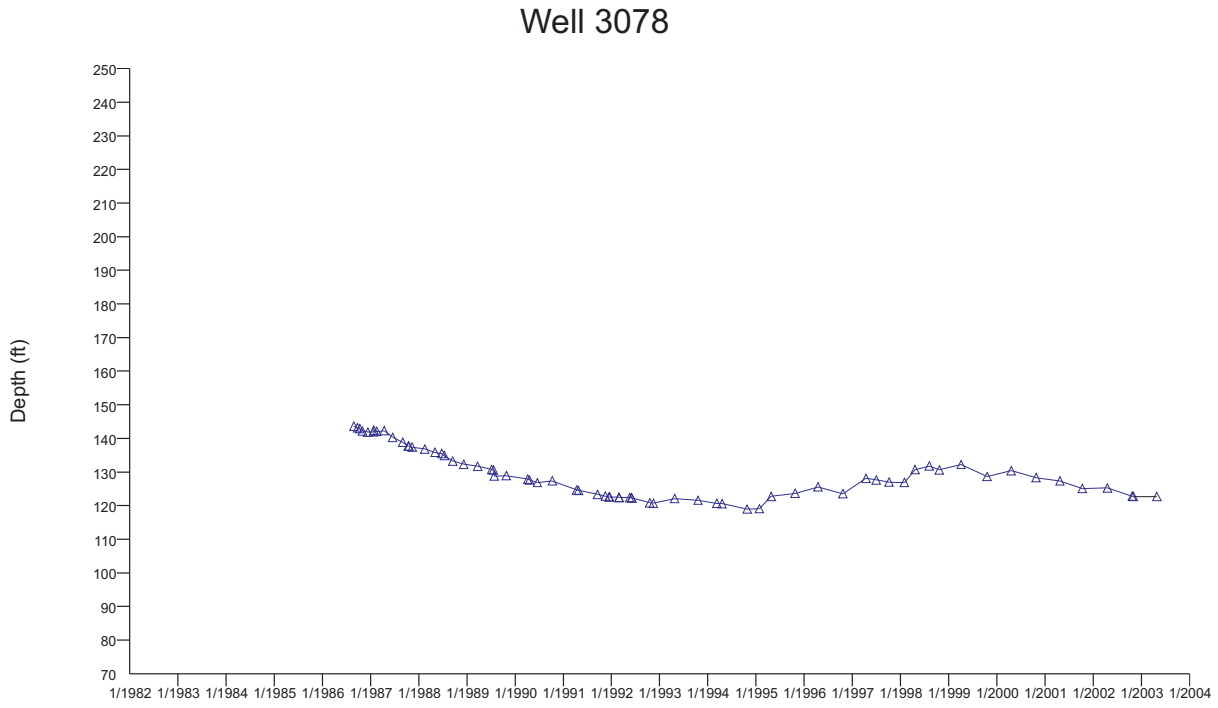


AEROJET
Environmental Remediation

FIGURE B-22
Water Level Hydrographs
Layer C Wells 431 and 3069
Zone 2 PGOU

1/21/05 KK SR10114767

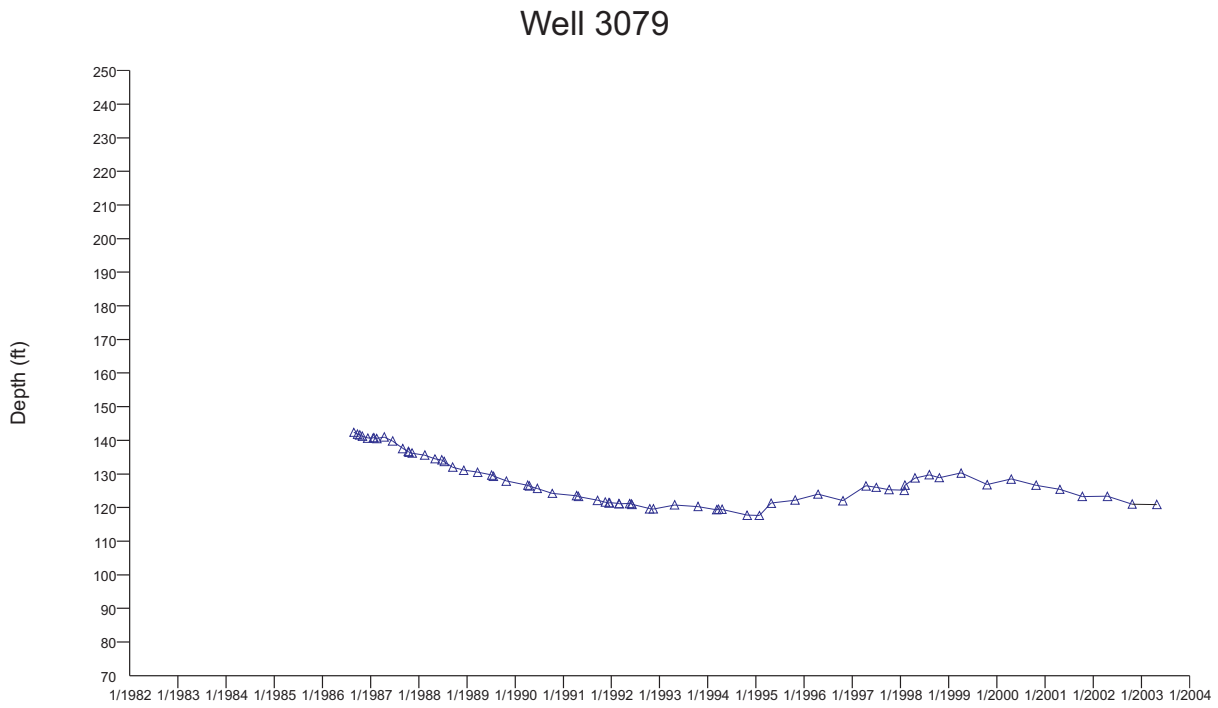




AEROJET
Environmental Remediation

FIGURE B-23
Water Level Hydrographs
Layer C Wells 3073 and 3078
Zone 2 PGOU

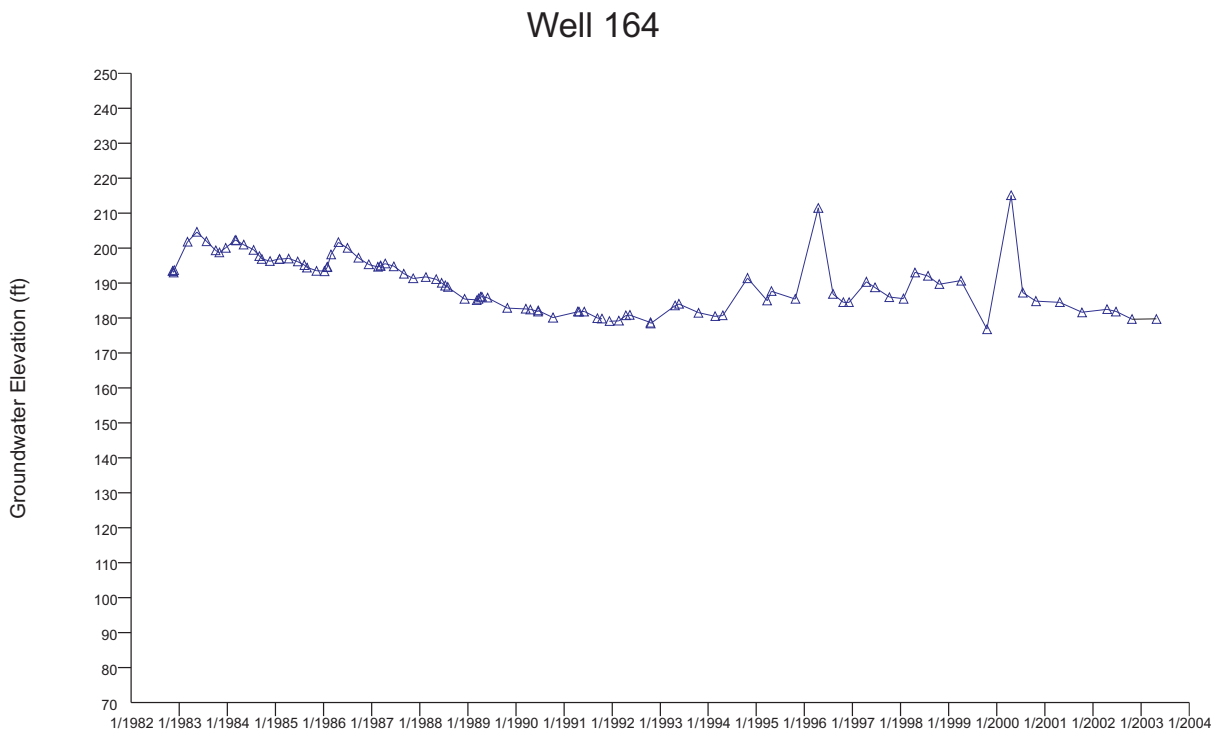
1/21/05 KK SR10114767

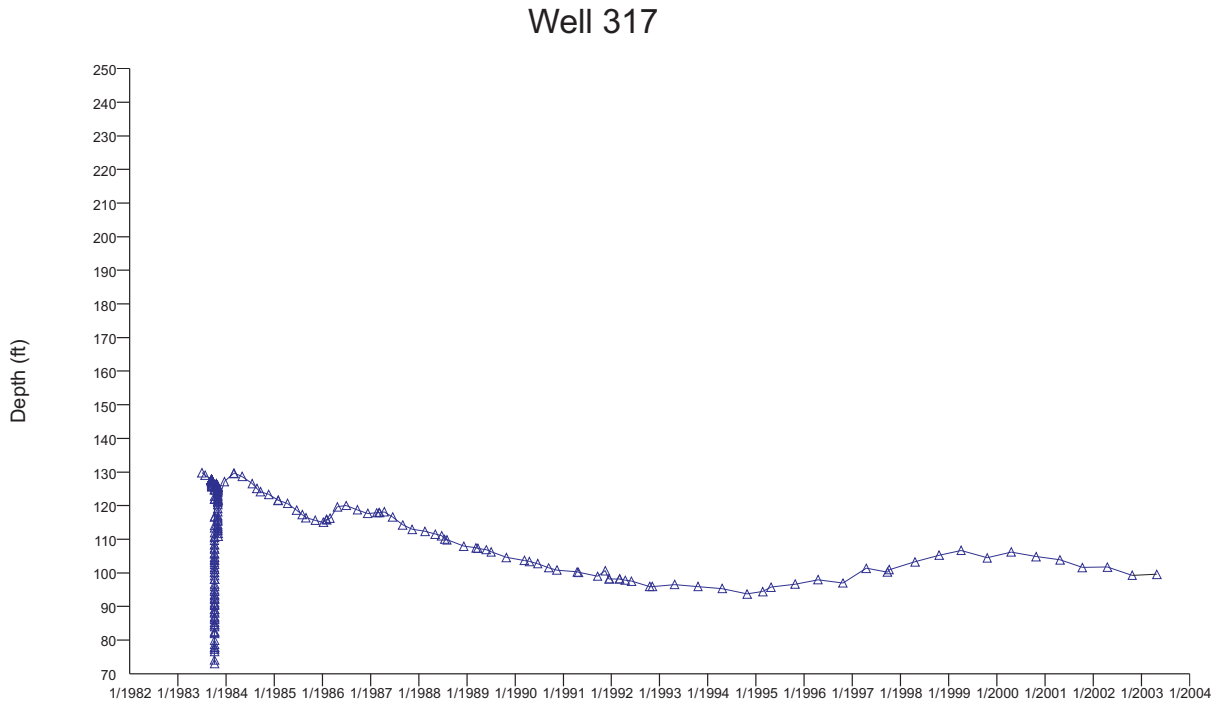


AEROJET
Environmental Remediation

FIGURE B-24
Water Level Hydrographs
Layer C Well 3079
Zone 2 PGOU

1/21/05 KK SR10114767

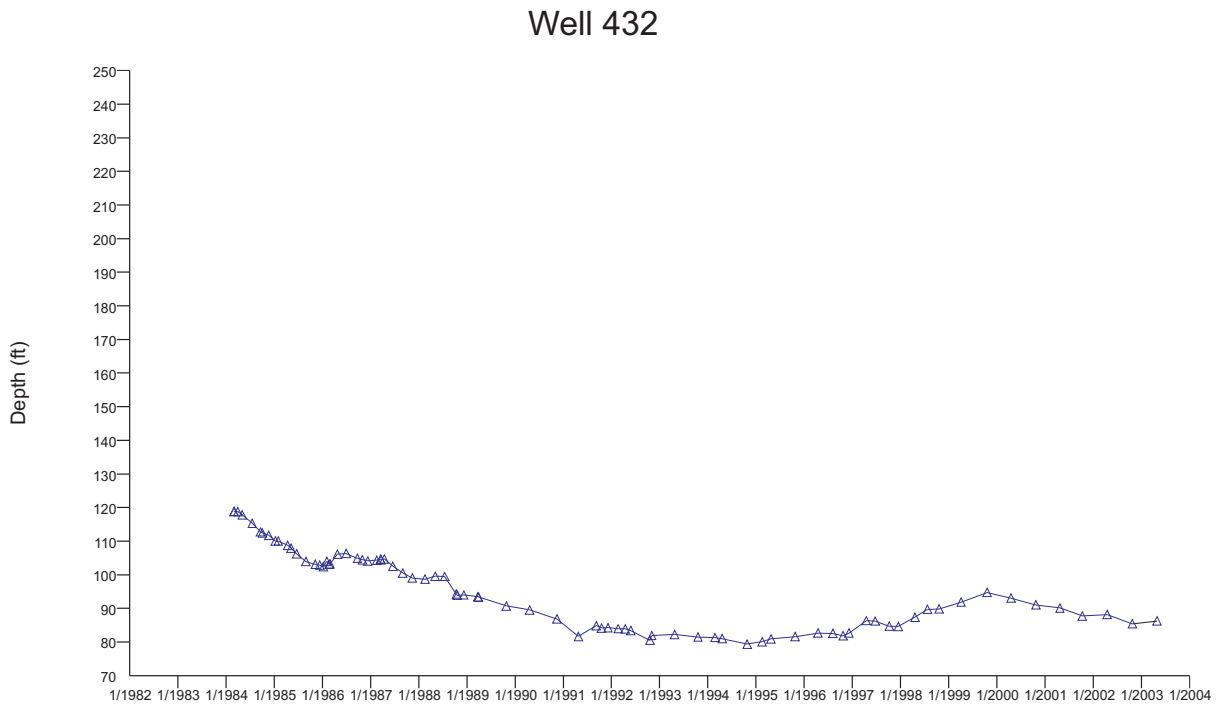


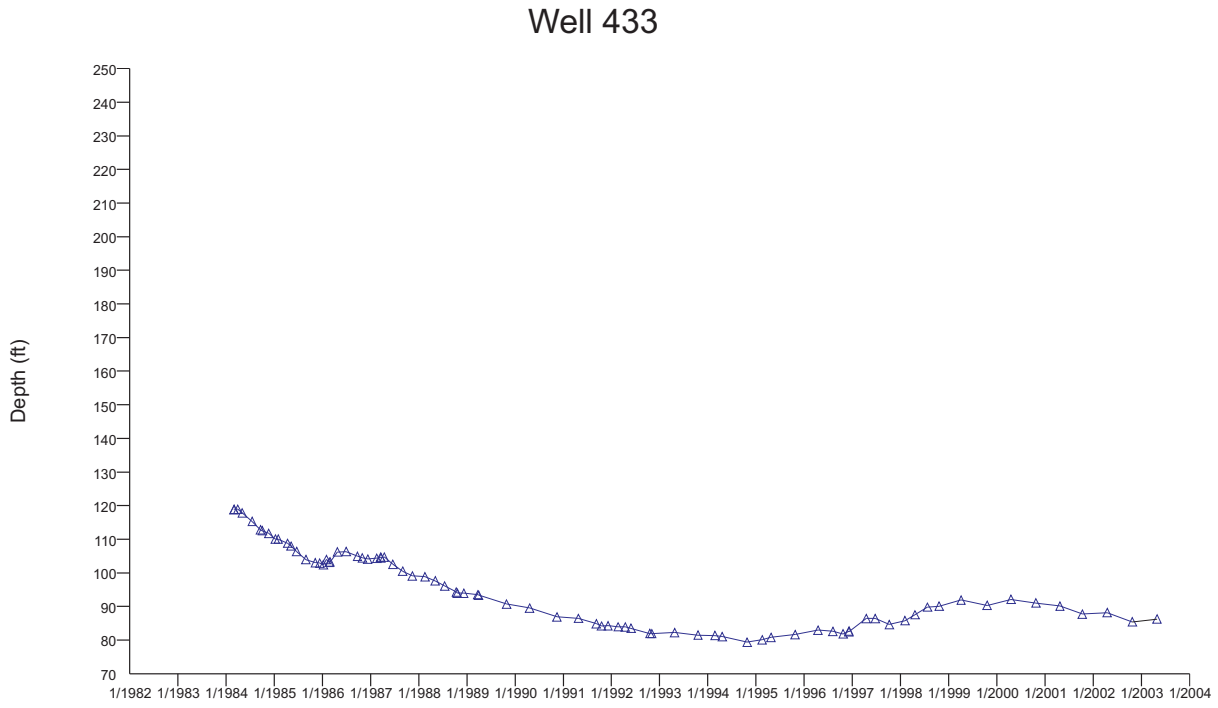


AEROJET
Environmental Remediation

FIGURE B-25
Water Level Hydrographs
Layer D Wells 164 and 317
Zone 2 PGOU

1/21/05 KK SR10114767

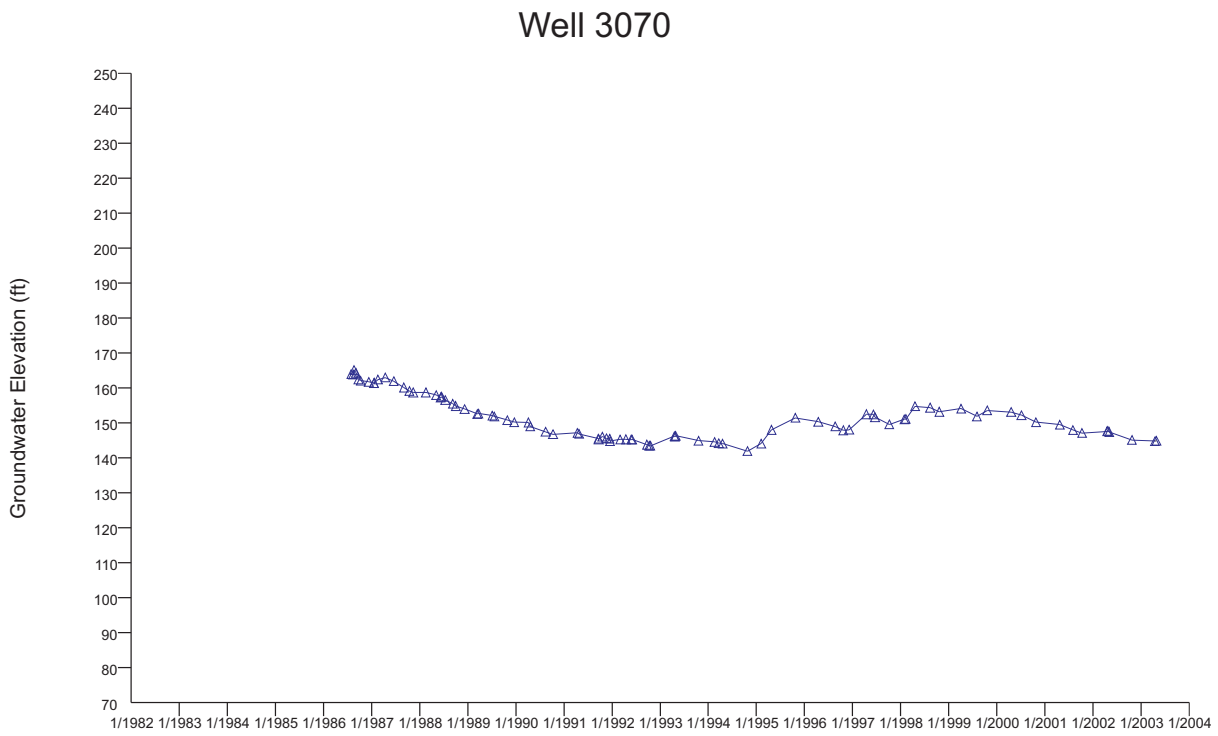


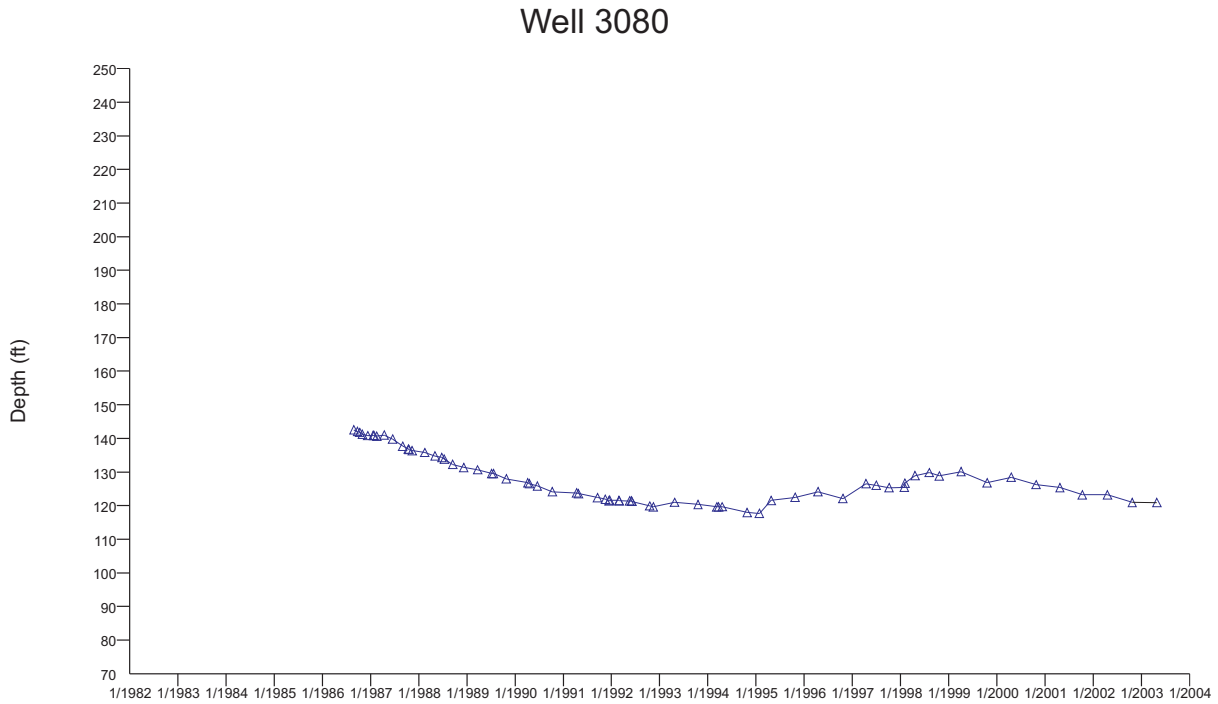


AEROJET
Environmental Remediation

FIGURE B-26
Water Level Hydrographs
Layer D Wells 432 and 433
Zone 2 PGOU

1/21/05 KK SR10114767





AEROJET
Environmental Remediation

FIGURE B-27
Water Level Hydrographs
Layer D Wells 3070 and 3080
Zone 2 PGOU

1/21/05 KK SR10114767

Former Open Burn Facility

Hogout Area

Line 01

Line 03

Line 04

Sites 8G & 9G

Zone 3 PGOU

Former White Rock North Dump

To GET F

Old White Rock Road

White Rock Road

GET E Extraction Wells

Zone 2 PGOU

Former White Rock South Dump

GET B South (Ehnizs Property)

Former Municipal Landfill

IRCTS

Circular Feature

Teichert Sand and Gravel Quarry

EXPLANATION

5 Groundwater Head Difference Contour (feet) Positive Indicates Downward Gradient

Consent Decree Boundary

Perimeter Groundwater Operable Unit

N

Scale: 1" = 1600'

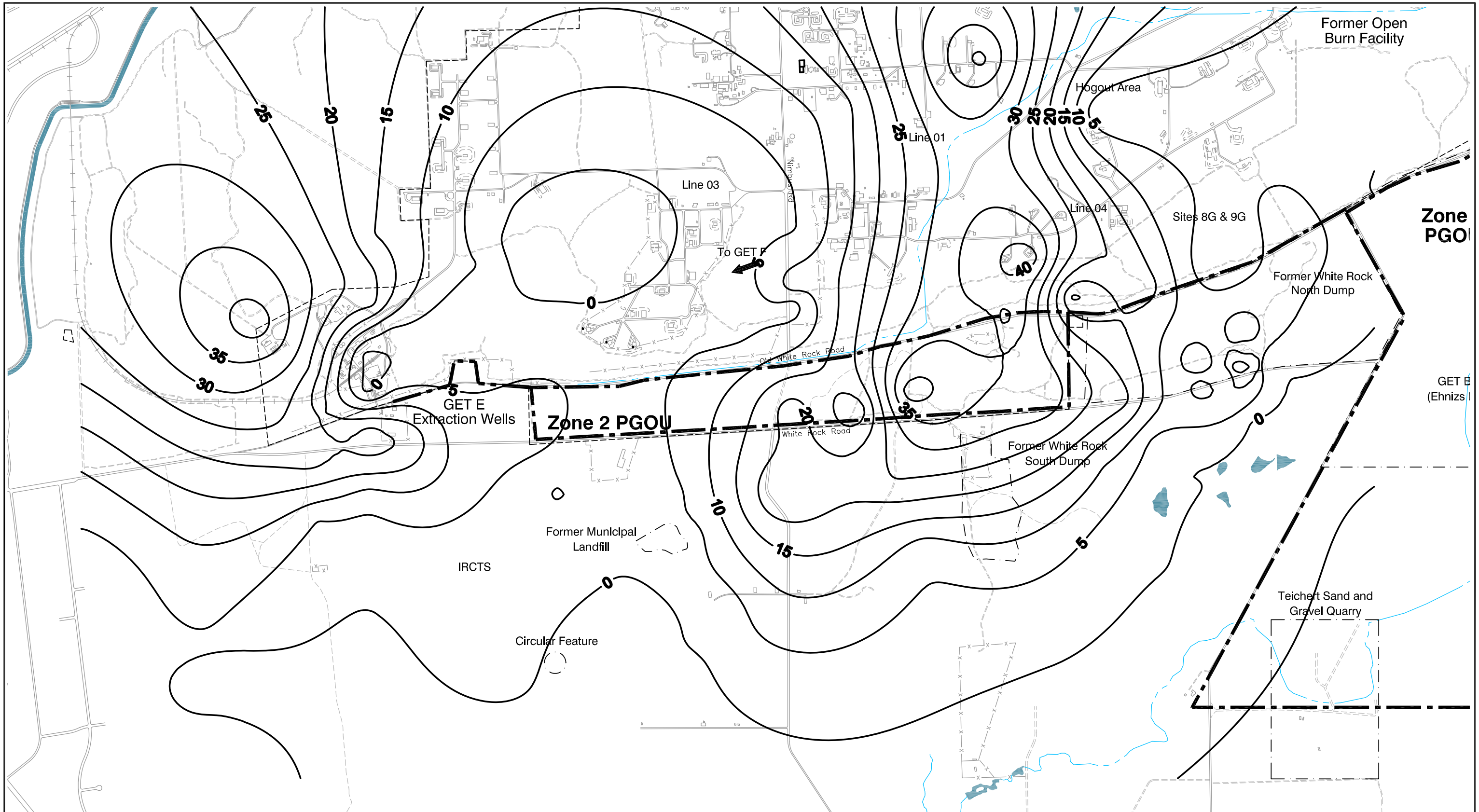
0 800 1600

AEROJET Environmental Remediation

FIGURE B-28

Head Difference Map
Layer A - Layer B, April 2004
Zone 2 PGOU

1/24/05 kk SR10114832



EXPLANATION

5 Groundwater Head Difference Contour (feet) Positive Indicates Downward Gradient

Consent Decree Boundary

Perimeter Groundwater Operable Unit

N

Scale: 1" = 1600'

0 800 1600

AEROJET Environmental Remediation

FIGURE B-29

Head DIfference Map
Layer B - Layer C, April 2004
Zone 2 PGOU

1/24/05 kk SR10114833

Former Open Burn Facility

Hogout Area

Line 01

Line 03

Nimbus Rd

Line 04

Sites 8G & 9G

Zone PGO

To GET F

Former White Rock North Dump

Old White Rock Road

GET E Extraction Wells

Zone 2 PGOU

White Rock Road

Former White Rock South Dump

GET E (Ehnizs

Former Municipal Landfill

IRCTS

Circular Feature

Teichert Sand and Gravel Quarry

EXPLANATION

5 Groundwater Head Difference Contour (feet) Positive Indicates Downward Gradient

Consent Decree Boundary

Perimeter Groundwater Operable Unit

N

Scale: 1" = 1600'

0 800 1600

AEROJET Environmental Remediation

FIGURE B-30

Head DIfference Map
Layer C - Layer D, April 2004
Zone 2 PGOU

1/24/05 kk SR10114834

Former Open Burn Facility

Hogout Area

Line 01

Line 03

Nimbus Rd

Line 04

Sites 8G & 9G

Zone PGO

To GET F

Former White Rock North Dump

Old White Rock Road

GET E Extraction Wells

Zone 2 PGOU

White Rock Road

GET E (Ehnizs

Former White Rock South Dump

Former Municipal Landfill

IRCTS

Teichert Sand and Gravel Quarry

Circular Feature

-5

0

-10

5

-15

EXPLANATION

5 Groundwater Head Difference Contour (feet) Positive Indicates Downward Gradient

Consent Decree Boundary

Perimeter Groundwater Operable Unit

N

Scale: 1" = 1600'

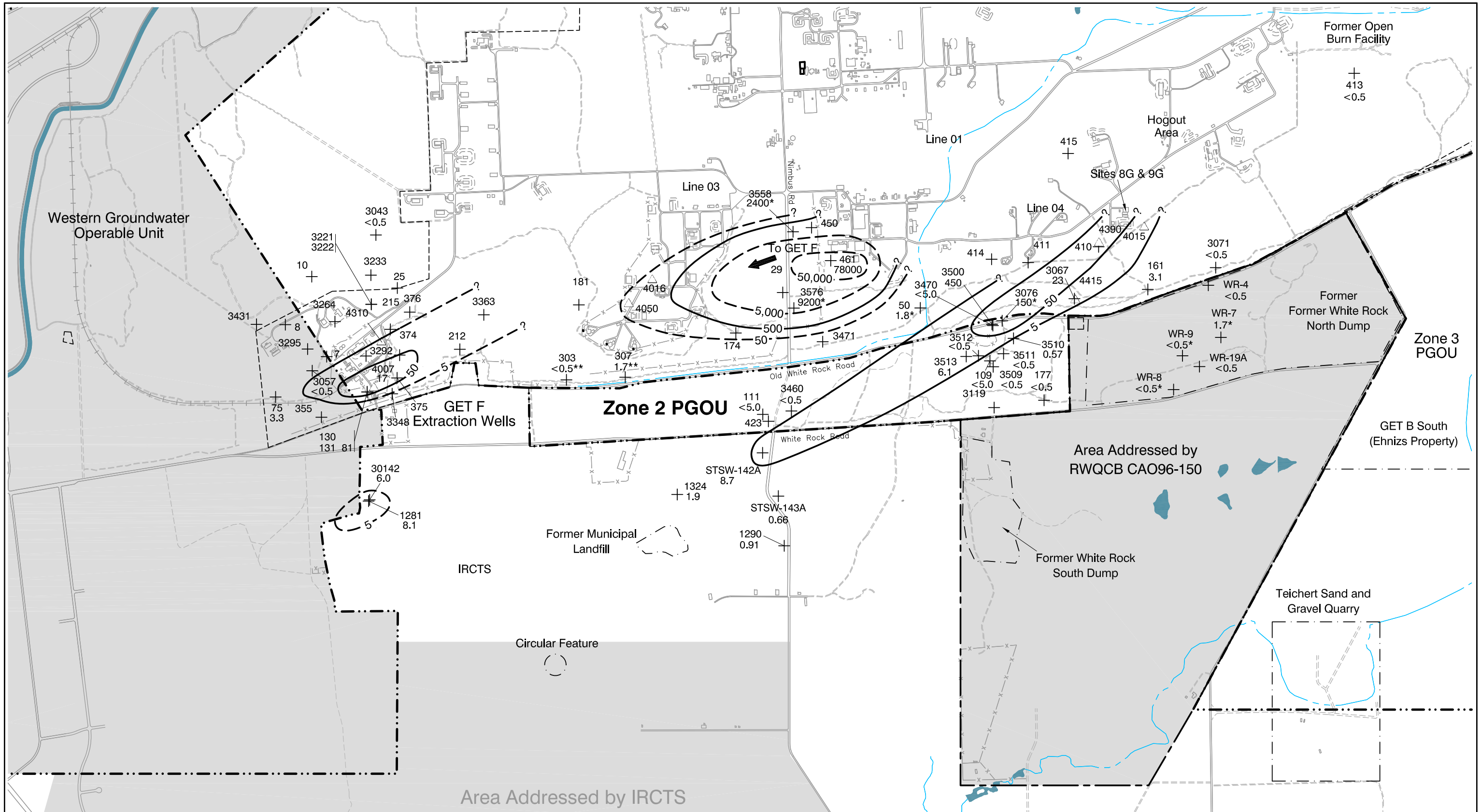
0 800 1600

AEROJET Environmental Remediation

FIGURE B-31

Head DIfference Map
Layer D - Layer E, April 2004
Zone 2 PGOU

1/24/05 kk SR10114835



EXPLANATION

KEY TO WELL SYMBOLS

Well Identification — 161 260 — TCE Concentration in Groundwater, µg/L; No Value = Not Sampled

Well Type and Location

Asterisk (*) Indicates Data Collected Prior to Sampling Period

Double Asterisk (**) Indicates Data Collected After RI Sampling Period

WELL TYPES

- Monitor Well
- Extraction Well
- State-owned Well
- Water Supply Well
- Domestic Well
- Destroyed Well

— 5 — Iso-concentration Contour in µg/L

Consent Decree Boundary

Groundwater Operable Unit Boundary

Areas Addressed by Other Agreements

N

Scale: 1" = 1600'

0 800 1600

AEROJET Environmental Remediation

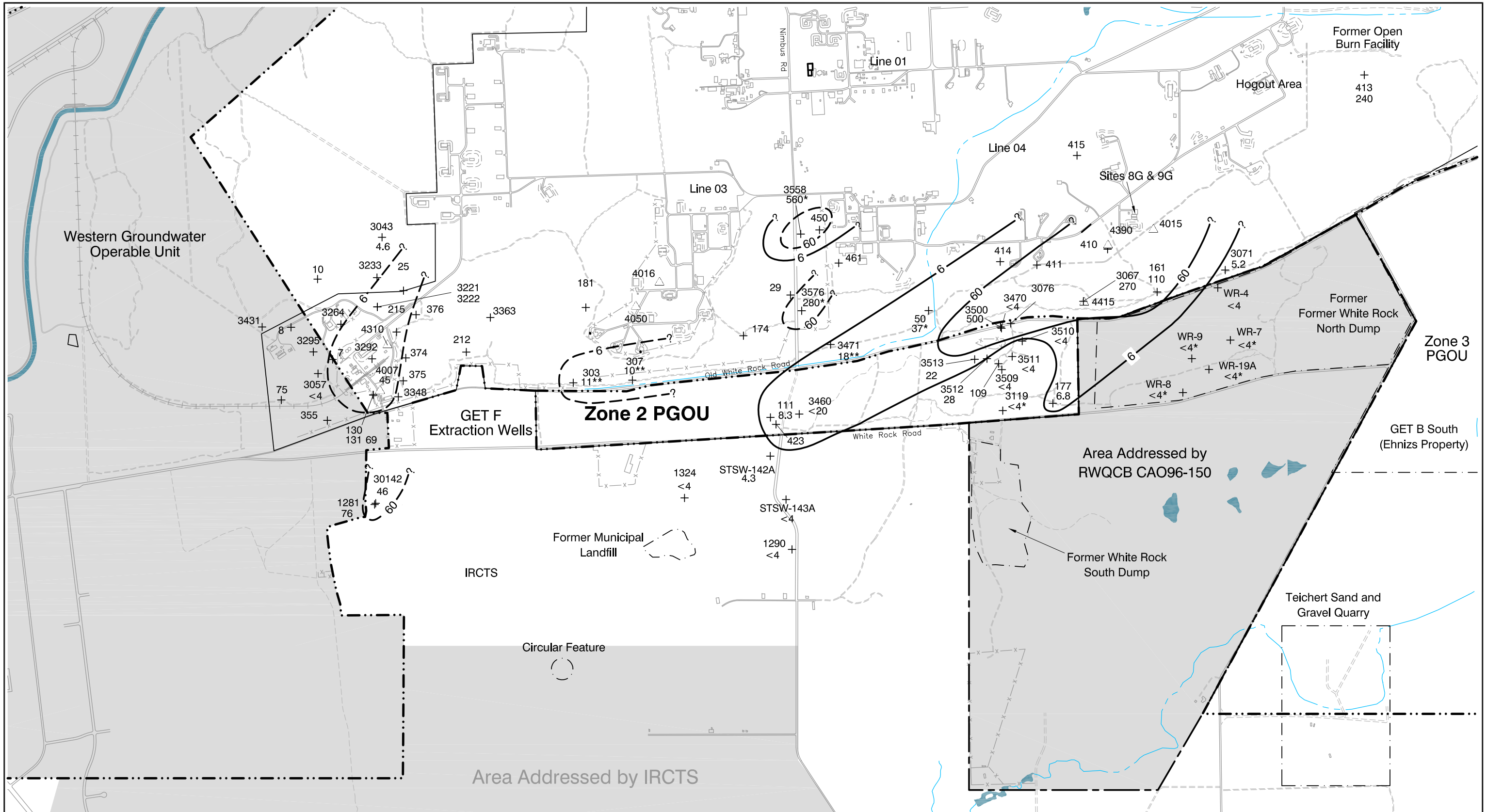
FIGURE B-32

Layer A

TCE Iso-Concentration Contours, 2000 - 2004

Zone 2 PGOU

1/24/05 kk SR10114768



EXPLANATION

KEY TO WELL SYMBOLS

Well Identification —— 161 260 —— Perchlorate Concentration in Groundwater, µg/L
No Value = Not Sampled
Well Type and Location

Asterisk (*) Indicates Data Collected Prior to Sampling Period
Double Asterisk (**) Indicates Data Collected After RI Sampling Period

WELL TYPES

- + Monitor Well
- △ Extraction Well
- × State-owned Well
- ◆ Water Supply Well
- ▲ Domestic Well
- ⊗ Destroyed Well

—— 4 —— Chemical Concentration Contour (Hg/L), Dashed Where Inferred
- - - - - - - Consent Decree Boundary
—·—·— Groundwater Operable Unit Boundary
Areas Addressed by Other Agreements

N

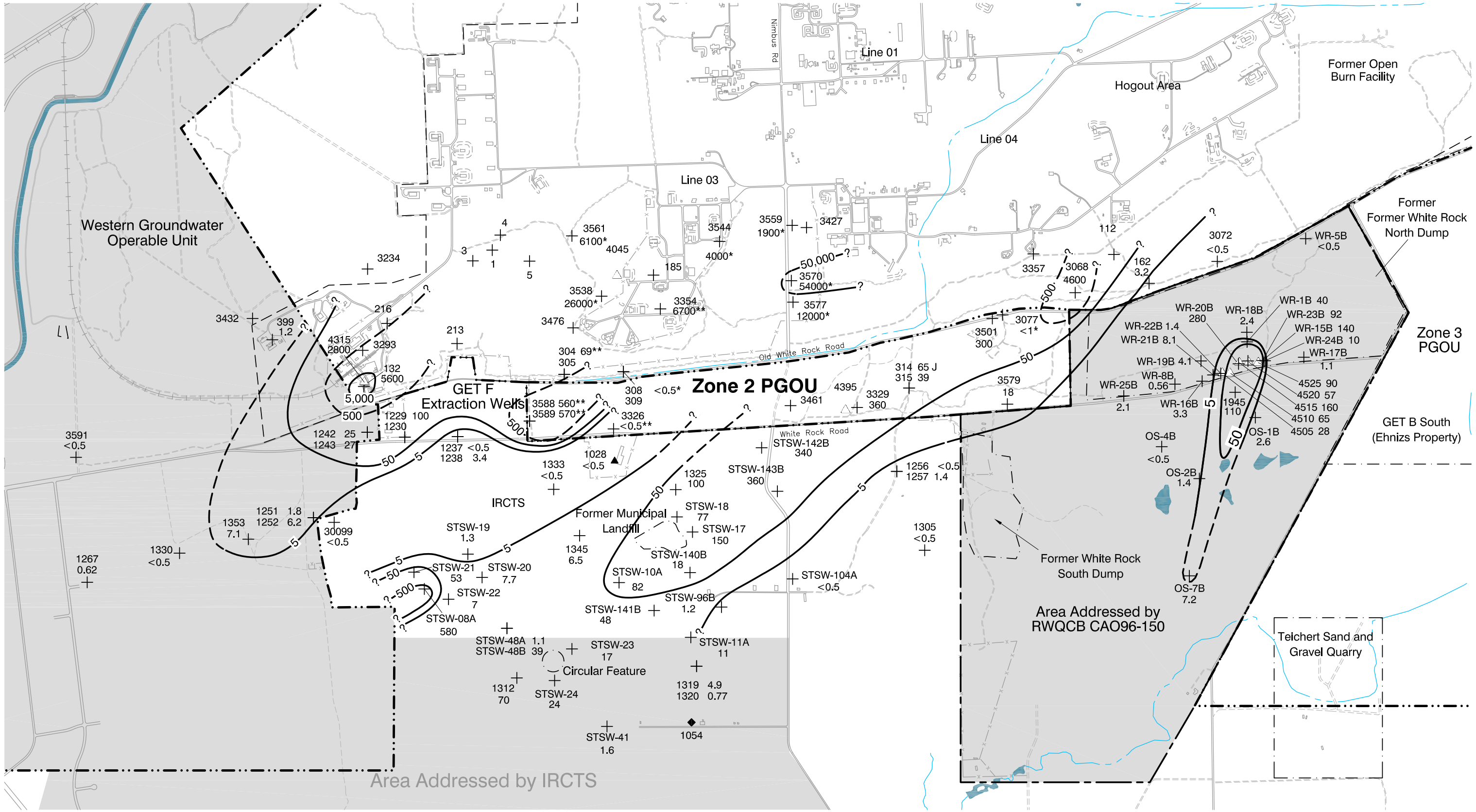
Scale: 1" = 1600'
0 800 1600

AEROJET
Environmental Remediation

FIGURE B-33

Layer A
Perchlorate Iso-Concentration Contours, 2000 - 2004
Zone 2 PGOU

1/24/05 ah SR10114771



EXPLANATION

KEY TO WELL SYMBOLS

Well Identification —— 161 260 —— TCE Concentration in Groundwater, µg/L
No Value = Not Sampled
Well Type and Location

Asterisk (*) Indicates Data Collected Prior to Sampling Period
Double Asterisk (**) Indicates Data Collected After RI Sampling Period

WELL TYPES

- Monitor Well
- Extraction Well
- State-owned Well
- Water Supply Well
- Domestic Well
- Destroyed Well

—— 5 —— Chemical Concentration Contour (µg/L), Dashed Where Inferred
- - - - - - - - Consent Decree Boundary
—·—·— Perimeter Groundwater Operable Unit
Areas Addressed by Other Agreements

N

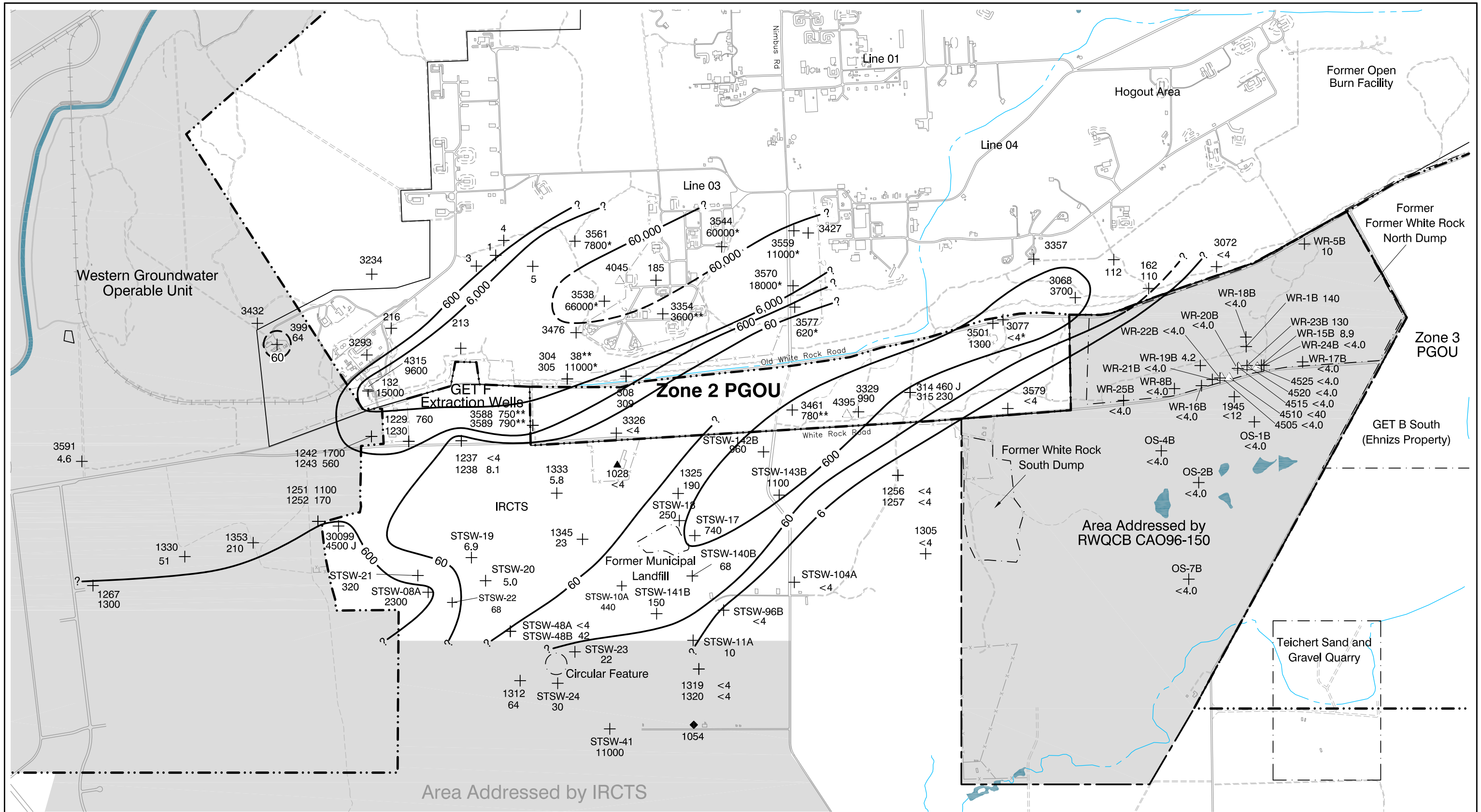
Scale: 1" = 1600'
0 800 1600

AEROJET
Environmental Remediation

FIGURE B-34

Layer B
TCE Iso-Concentration Contours 2000-2004
Zone 2 PGOU

1/24/05 KK SR10114772



EXPLANATION

KEY TO WELL SYMBOLS

Well Identification —— 161 260 —— Perchlorate Concentration in Groundwater, µg/L
No Value = Not Sampled
Well Type and Location

Asterisk (*) Indicates Data Collected Prior to Sampling Period
Double Asterisk (**) Indicates Data Collected After RI Sampling Period

WELL TYPES

- Monitor Well
- Extraction Well
- State-owned Well
- Water Supply Well
- Domestic Well
- Destroyed Well

—— 4 —— Chemical Concentration Contour (µg/L), Dashed Where Inferred
- - - - - - - Consent Decree Boundary
—·—·— Perimeter Groundwater Operable Unit
Areas Addressed by Other Agreements

N

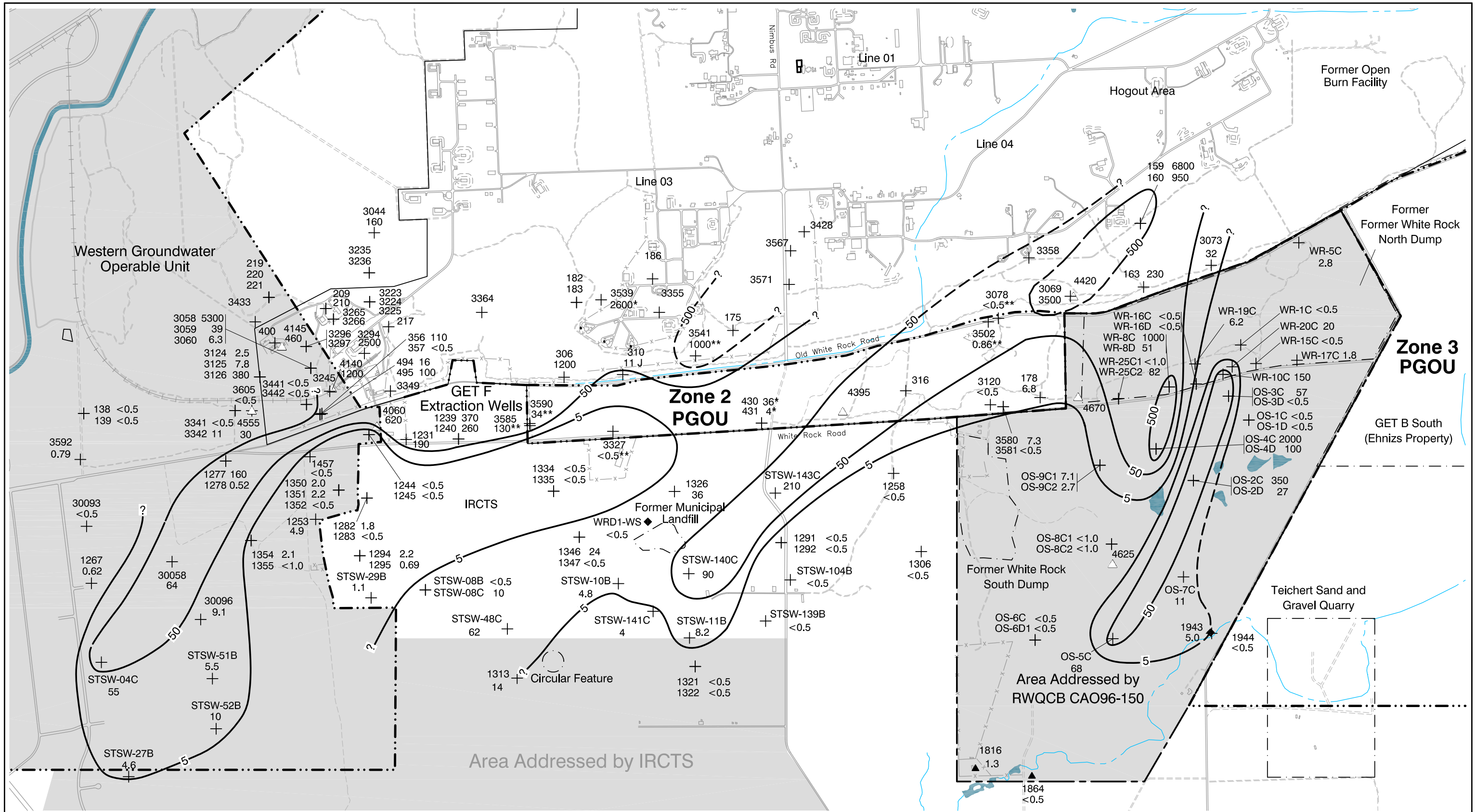
Scale: 1" = 1600'
0 800 1600

AEROJET
Environmental Remediation

FIGURE B-35

Layer B
Perchlorate Iso-Concentration Contours, 2000 - 2004
Zone 2 PGOU

1/24/05 55 SR10114773



EXPLANATION

KEY TO WELL SYMBOLS

Well Identification — 161 260 — TCE Concentration in Groundwater, µg/L
No Value = Not Sampled
Well Type and Location

Asterisk (*) Indicates Data Collected Prior to Sampling Period
Double Asterisk (**) Indicates Data Collected After RI Sampling Period

WELL TYPES

- Monitor Well
- Extraction Well
- State-owned Well
- Water Supply Well
- Domestic Well
- Destroyed Well

5 — Chemical Concentration Contour (µg/L), Dashed Where Inferred
Consent Decree Boundary
Perimeter Groundwater Operable Unit
Areas Addressed by Other Agreements

N

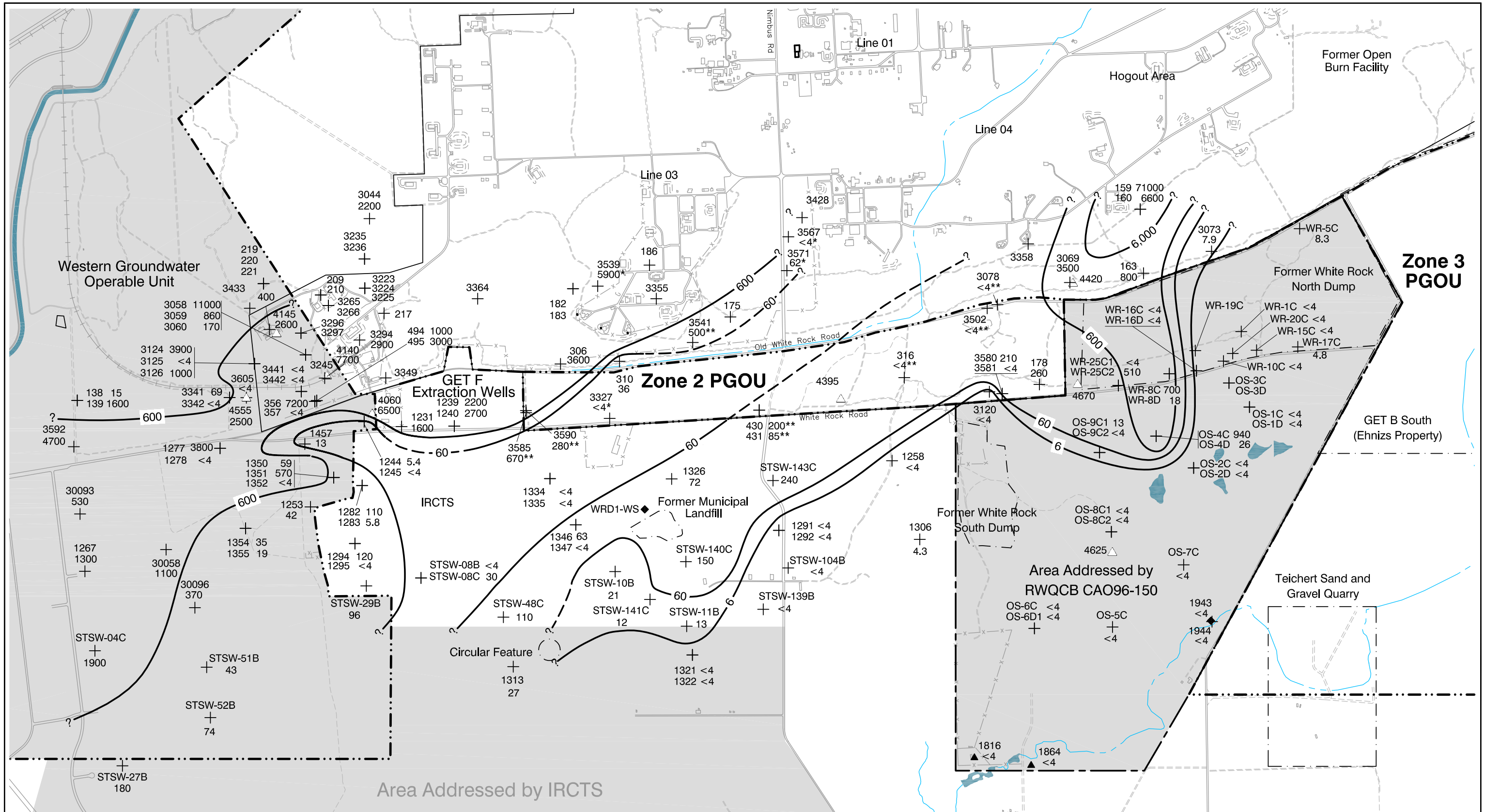
Scale: 1" = 1600'
0 800 1600

AEROJET
Environmental Remediation

FIGURE B-36

Layer C
TCE Iso-Concentration Contours 2000-2004
Zone 2 PGOU

1/24/05 kk SR10114774



EXPLANATION

KEY TO WELL SYMBOLS

Well Identification —— 161 260 —— Perchlorate Concentration in Groundwater, µg/L
No Value = Not Sampled
Well Type and Location

Asterisk (*) Indicates Data Collected Prior to Sampling Period
Double Asterisk (**) Indicates Data Collected After RI Sampling Period

WELL TYPES

- Monitor Well
- Extraction Well
- State-owned Well
- Water Supply Well
- Domestic Well
- Destroyed Well

—— 4 —— Chemical Concentration Contour (µg/L), Dashed Where Inferred
- - - - - - - Consent Decree Boundary
—·—·— Perimeter Groundwater Operable Unit
Areas Addressed by Other Agreements

N

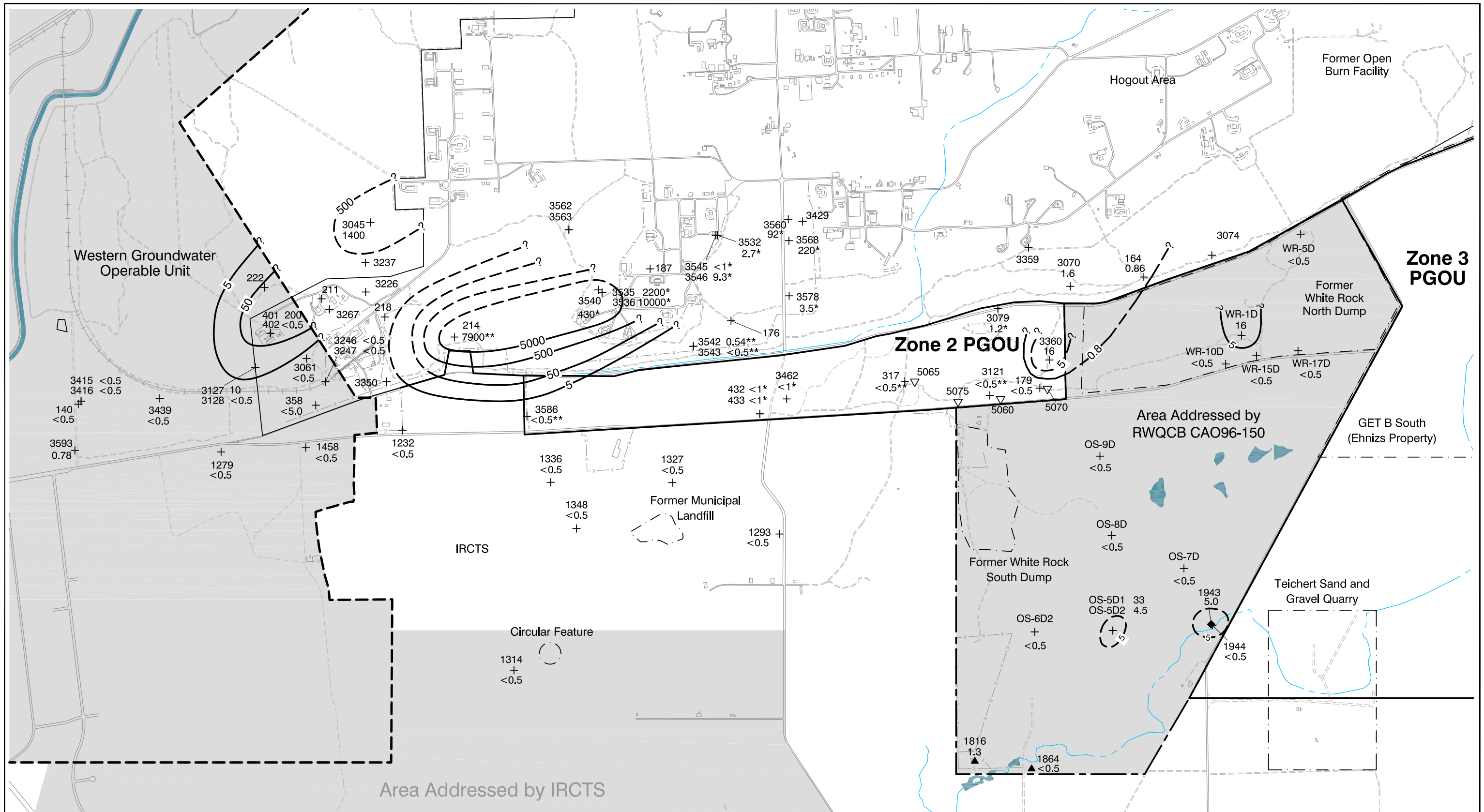
Scale: 1" = 1600'
0 800 1600

AEROJET
Environmental Remediation

FIGURE B-37

Layer C
Perchlorate Iso-Concentration Contours, 2000 - 2004
Zone 2 PGOU

1/25/05 kk SR10114775



EXPLANATION

KEY TO WELL SYMBOLS

Well Identification —— 161 260 —— TCE Concentration in Groundwater, µg/L
No Value = Not Sampled
Well Type and Location

Asterisk (*) Indicates Data Collected Prior to Sampling Period
Double Asterisk (**) Indicates Data Collected After RI Sampling Period

WELL TYPES

- + Monitor Well
- △ Extraction Well
- × State-owned Well
- ◆ Water Supply Well
- ▲ Domestic Well
- ⊗ Destroyed Well

- - - - - - - Consent Decree Boundary
- ▬ - ▬ Perimeter Groundwater Operable Unit
- —— 5 —— Chemical Concentration Contour (µg/l) Dashed where Uncertain

N

Scale: 1" = 1600'

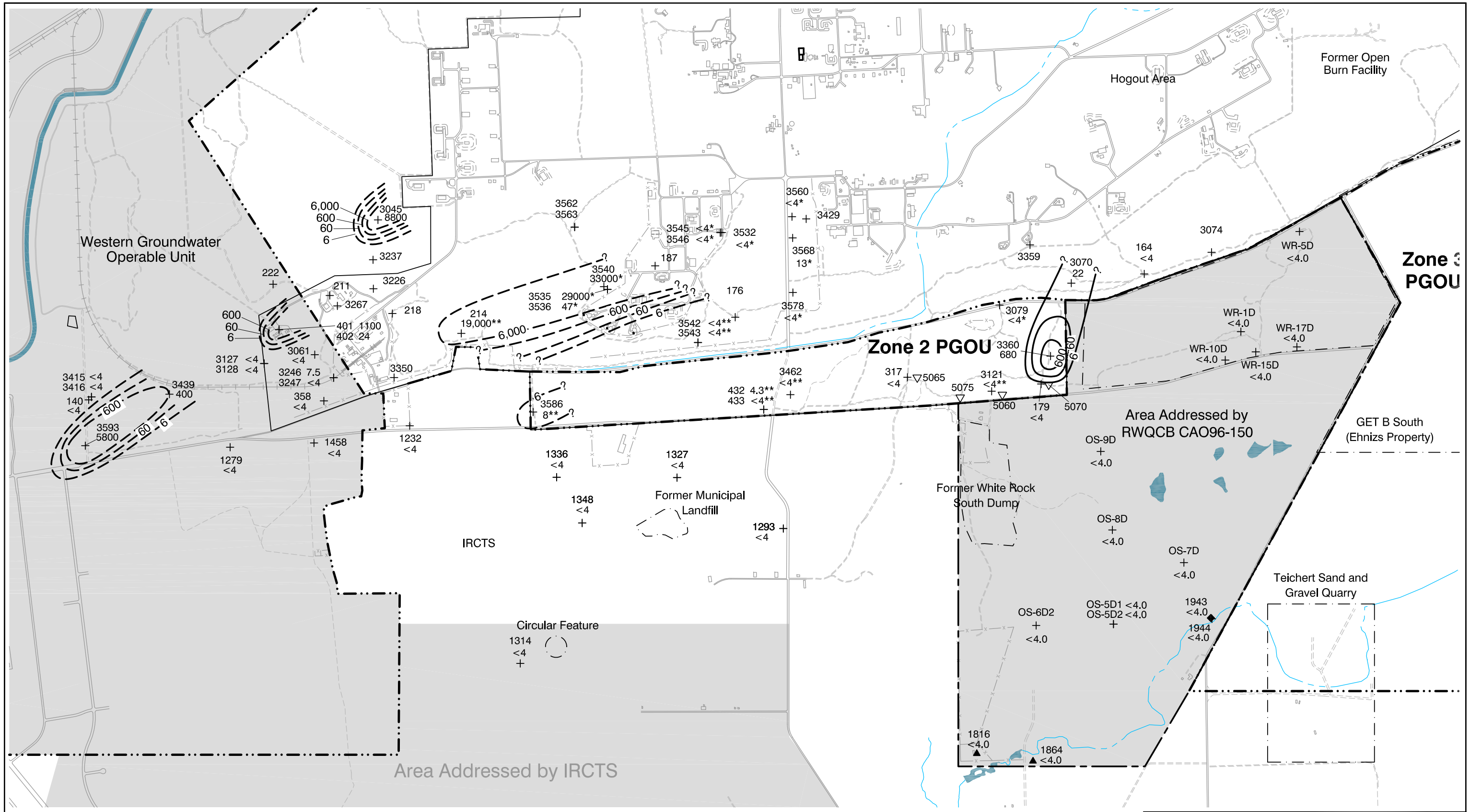
0 800 1600

AEROJET
Environmental Remediation

FIGURE B-38

Layer D
TCE Iso-Concentration Contours, 2000-2004
Zone 2 PGOU

1/4/05 kk SR10114776



EXPLANATION

KEY TO WELL SYMBOLS

Well Identification —— 161 260 —— Perchlorate Concentration in Groundwater, µg/L
No Value = Not Sampled
Well Type and Location

Asterisk (*) Indicates Data Collected Prior to Sampling Period
Double Asterisk (**) Indicates Data Collected After RI Sampling Period

WELL TYPES

- + Monitor Well
- △ Extraction Well
- × State-owned Well
- ◆ Water Supply Well
- ▲ Domestic Well
- ⊗ Destroyed Well

- - - - - - - Consent Decree Boundary
- —·—·— Perimeter Groundwater Operable Unit
- — 5 — Chemical Concentration Contour (µg/l) Dashed where Uncertain
- Areas Addressed by Other Agreements

N

Scale: 1" = 1600'

0 800 1600

AEROJET
Environmental Remediation

FIGURE B-39

Layer D
Perchlorate Iso-Concentration Contours, 2000 - 2004
Zone 2 PGOU

1/25/05 ah SR10114777

Western Groundwater Operable Unit

Zone 2 PGOU

Zone 3 PGOU

Area Addressed by RWQCB CAO96-150

Area Addressed by IRCTS

Former Municipal Landfill

IRCTS

Former White Rock North Dump

Former White Rock South Dump

Former Open Burn Facility

Hogout Area

Teichert Sand and Gravel Quarry

GET B South (Ehnizs Property)

Line 01

Line 03

Line 04

Nimbus Rd

Old White Rock Road

White Rock Road

3047 <0.5

3365

3268

403 <5.0

922 <5.0

3248 <0.5
3249 <0.5

1233 53
1234 <0.5

1459 <0.5

3587

3328 <0.5**

1328 <0.5

1349 <0.5

1315 <0.5
1316 <0.5

3533 9.7*
3534 <1*

3537 100*

50

5

0.8

3330 <1*

3123 <1*

3361 <1*

3080 <0.5**

3075

EXPLANATION

KEY TO WELL SYMBOLS

Well Identification —— 161 260 —— TCE Concentration in Groundwater, µg/L
No Value = Not Sampled
Well Type and Location

Asterisk (*) Indicates Data Collected Prior to Sampling Period
Double Asterisk (**) Indicates Data Collected After RI Sampling Period

WELL TYPES

- Monitor Well
- Extraction Well
- State-owned Well
- Water Supply Well
- Domestic Well
- Destroyed Well

—— 4 —— Chemical Concentration Contour (µg/L), Dashed Where Inferred

- - - - - - - - Consent Decree Boundary

—·—·— Perimeter Groundwater Operable Unit

Areas Addressed by Other Agreements

N

Scale: 1" = 1600'

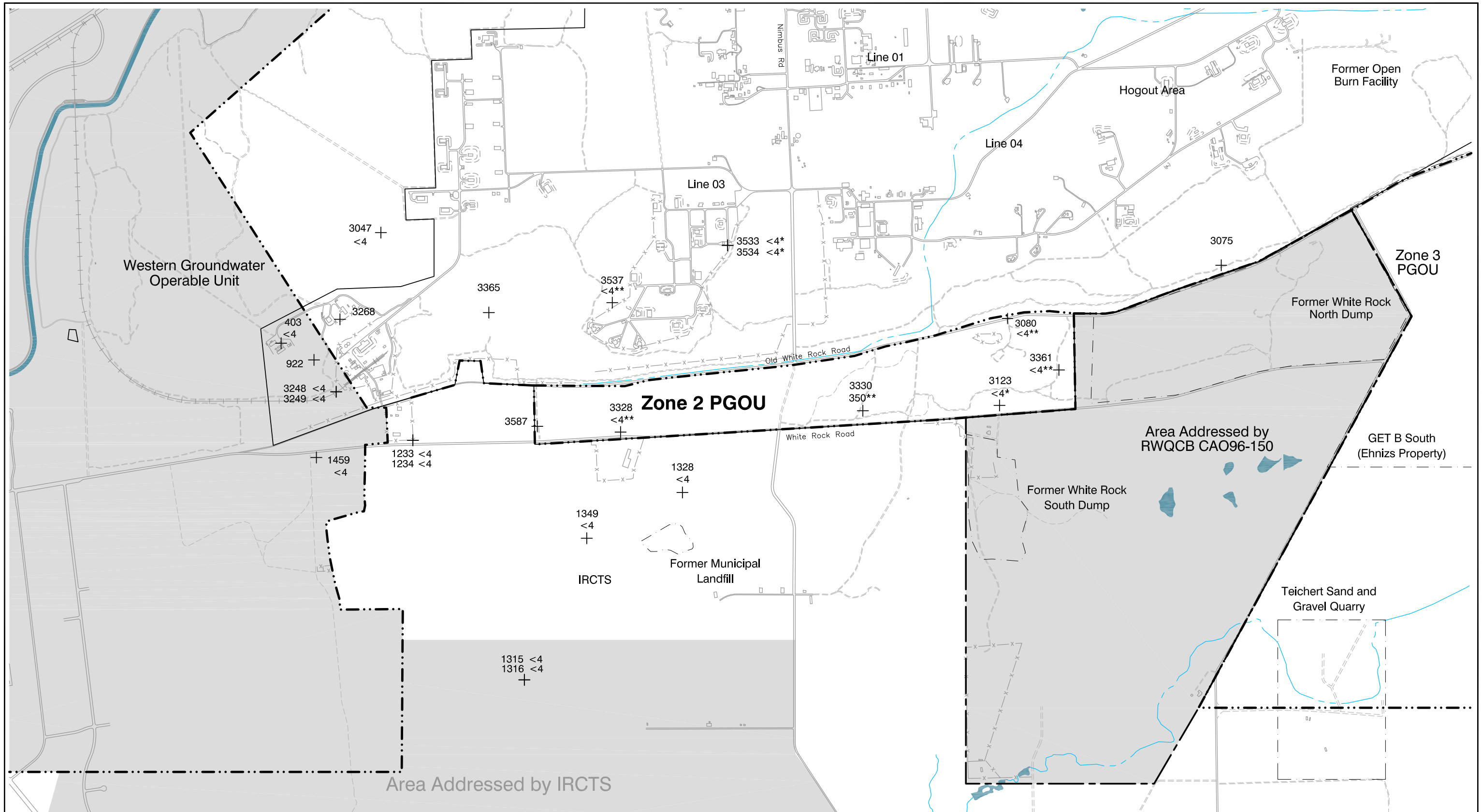
0 800 1600

AEROJET
Environmental Remediation

FIGURE B-40

Layer E
TCE Iso-Concentration Contours, 2000 - 2004
Zone 2 PGOU

1/25/05 ah SR10114778



EXPLANATION

KEY TO WELL SYMBOLS

Well Identification — 161 260 — Perchlorate Concentration in Groundwater, µg/L
No Value = Not Sampled
Well Type and Location

Asterisk (*) Indicates Data Collected Prior to Sampling Period
Double Asterisk (**) Indicates Data Collected After RI Sampling Period

WELL TYPES

- Monitor Well
- Extraction Well
- State-owned Well
- Water Supply Well
- Domestic Well
- Destroyed Well

- Consent Decree Boundary
- Perimeter Groundwater Operable Unit
- Areas Addressed by Other Agreements

N

Scale: 1" = 1600'

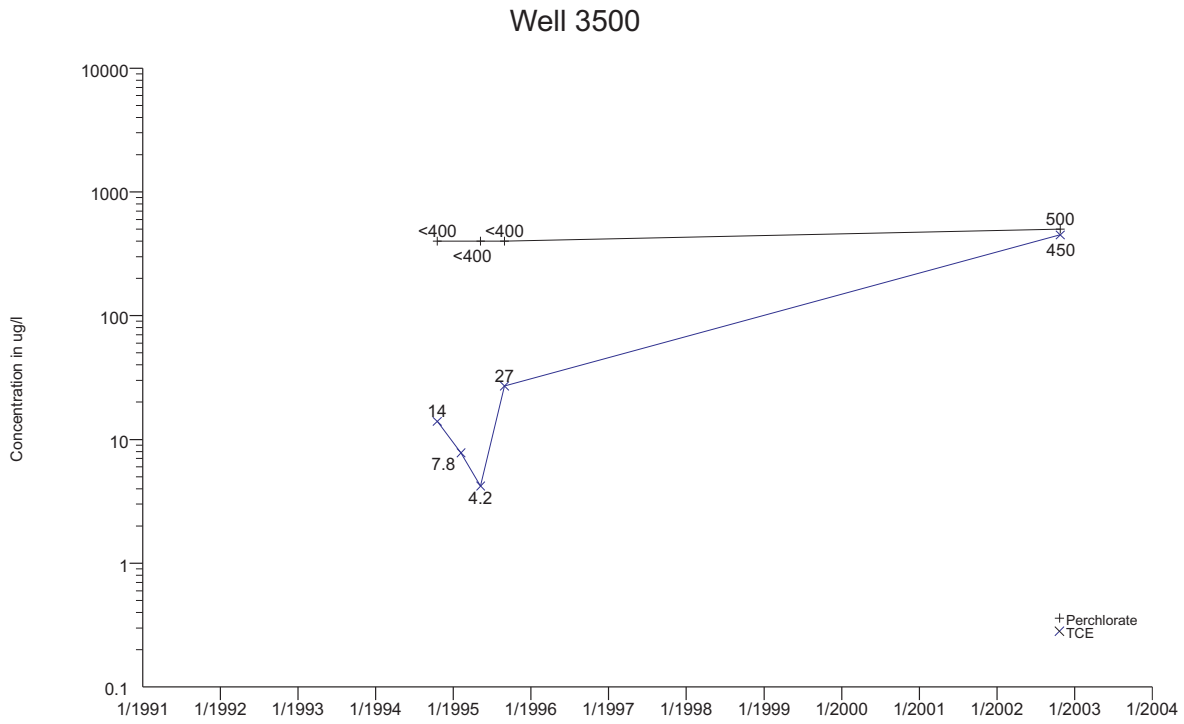
0 800 1600

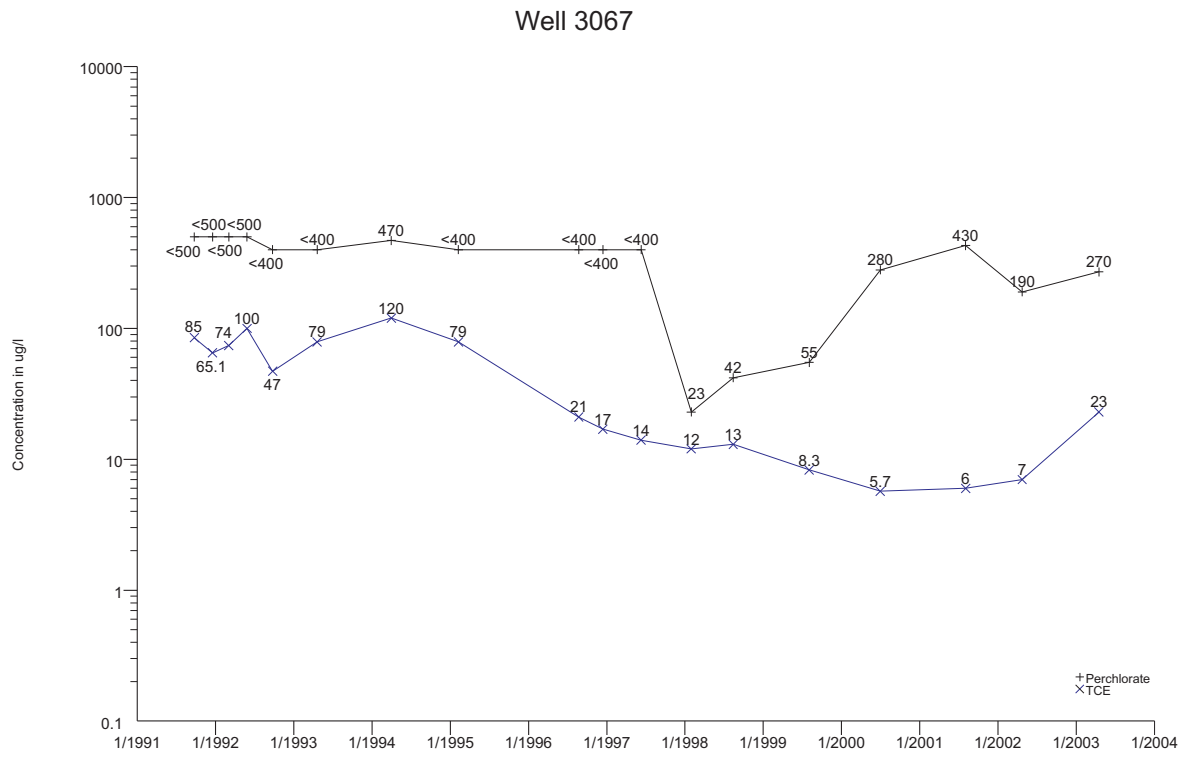
AEROJET
Environmental Remediation

FIGURE B-41

Layer E
Perchlorate Iso-Concentration Contours, 2000 - 2004
Zone 2 PGOU

1/25/05 ah SR10114780

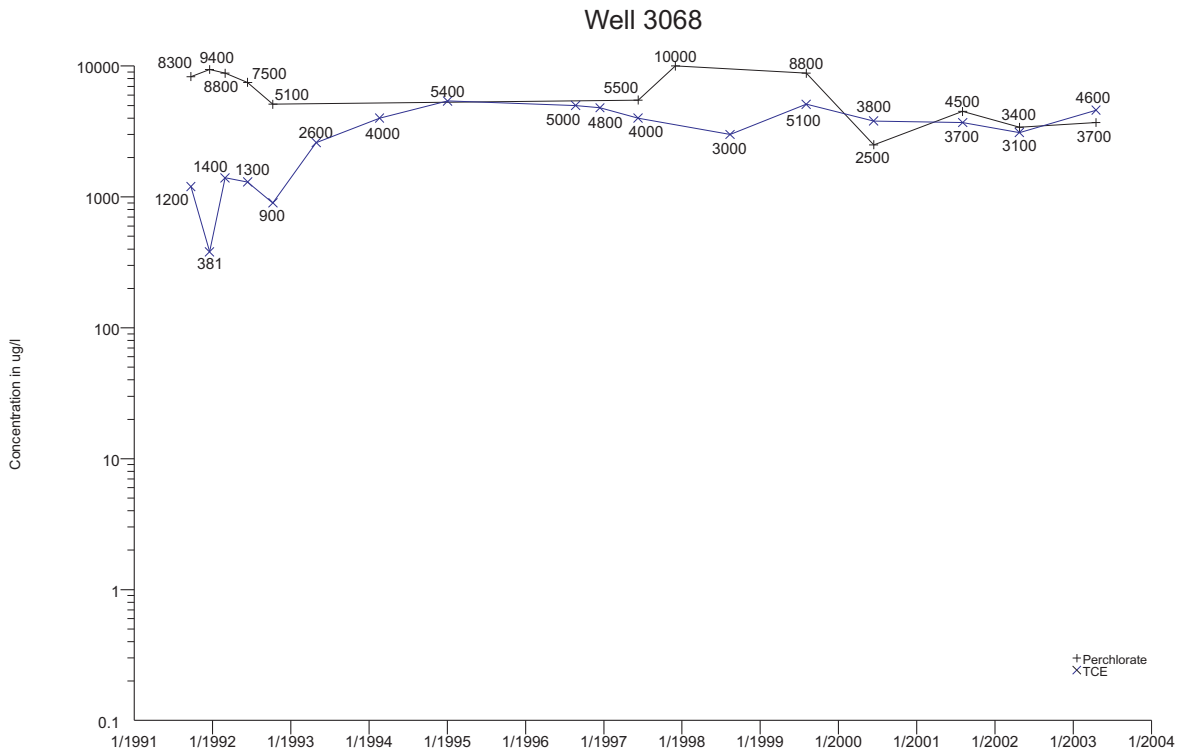


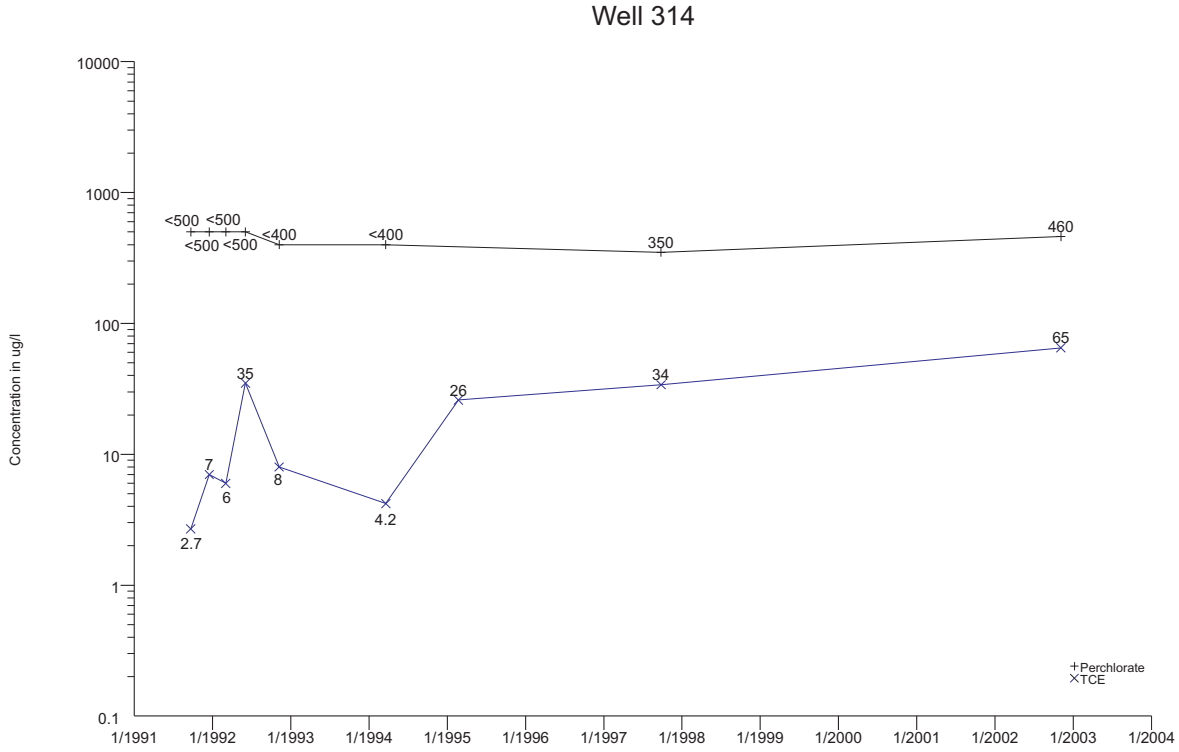


AEROJET
Environmental Remediation

FIGURE B-42
TCE and Perchlorate Concentration Trends
Layer A Wells 3500 and 3067
Zone 2 PGOU

1/25/05 KK SR10114770

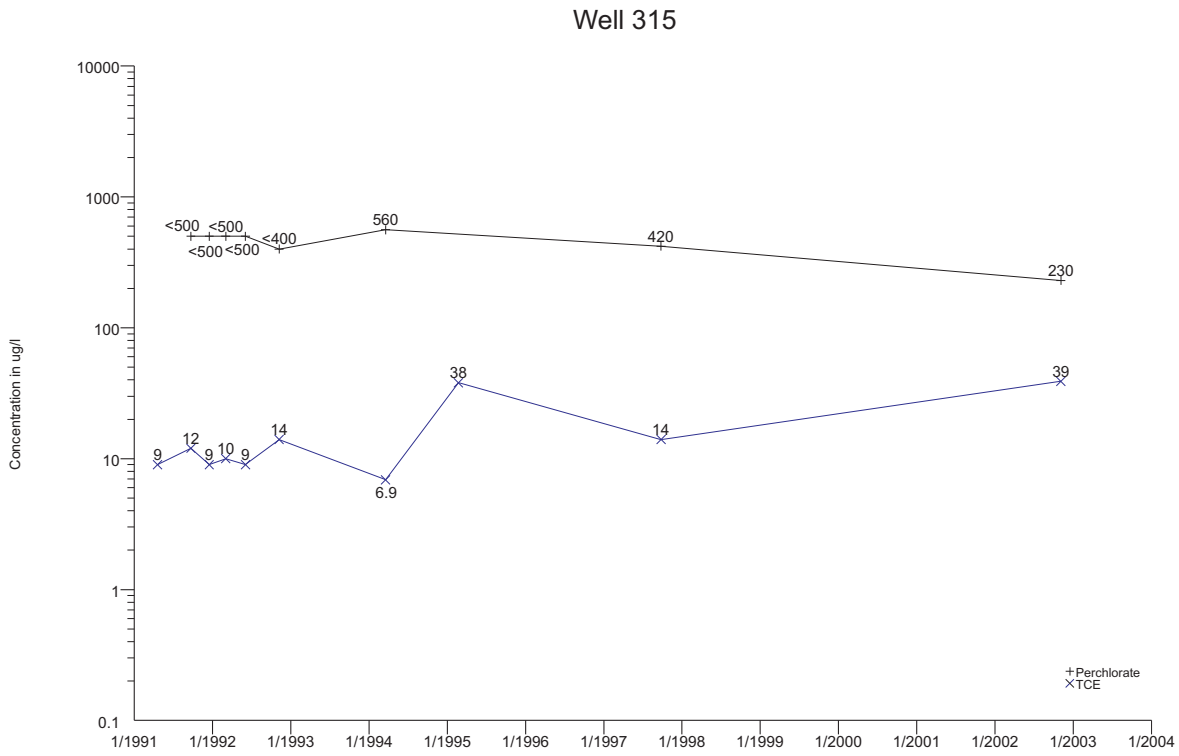


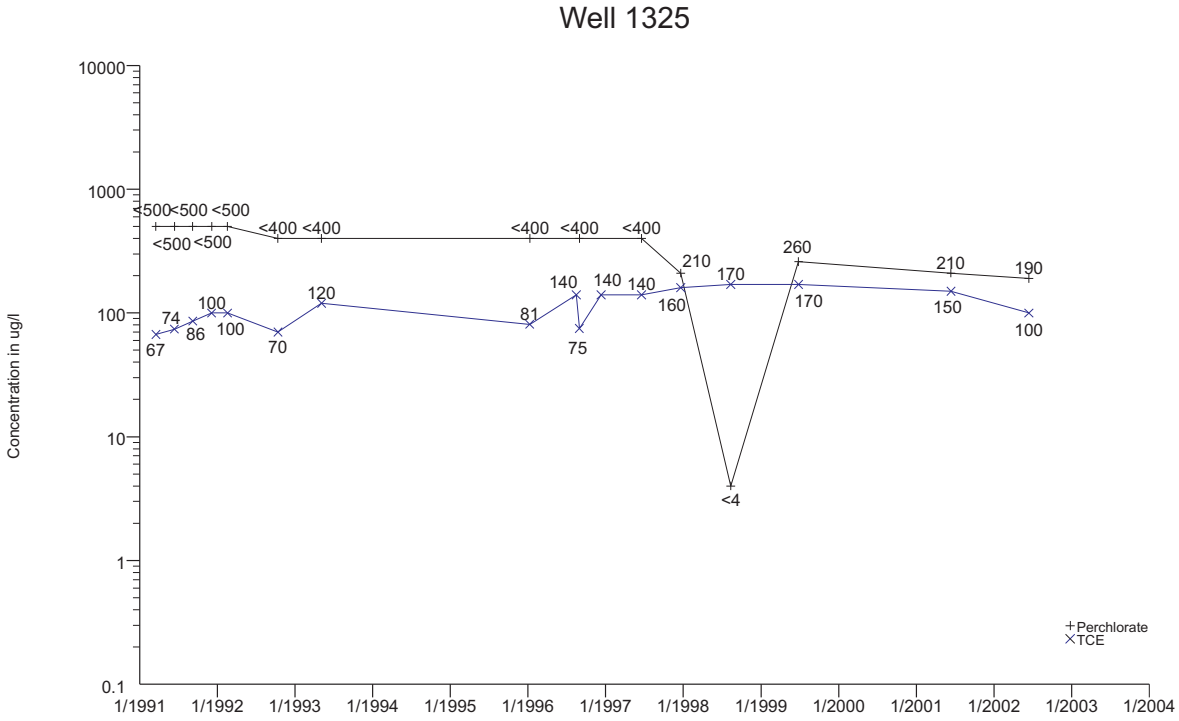


AEROJET
Environmental Remediation

FIGURE B-43
TCE and Perchlorate Concentration Trends
Layer B Wells 3068 and 314
Zone 2 PGOU

1/25/05 KK SR10114770

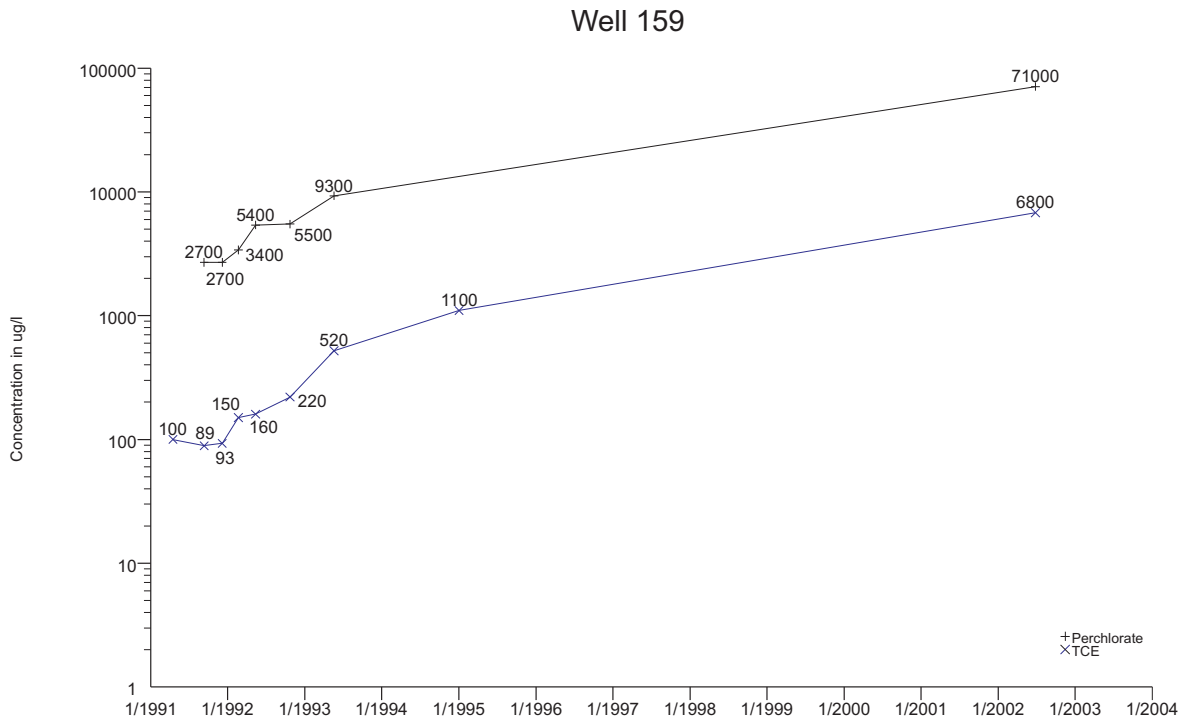


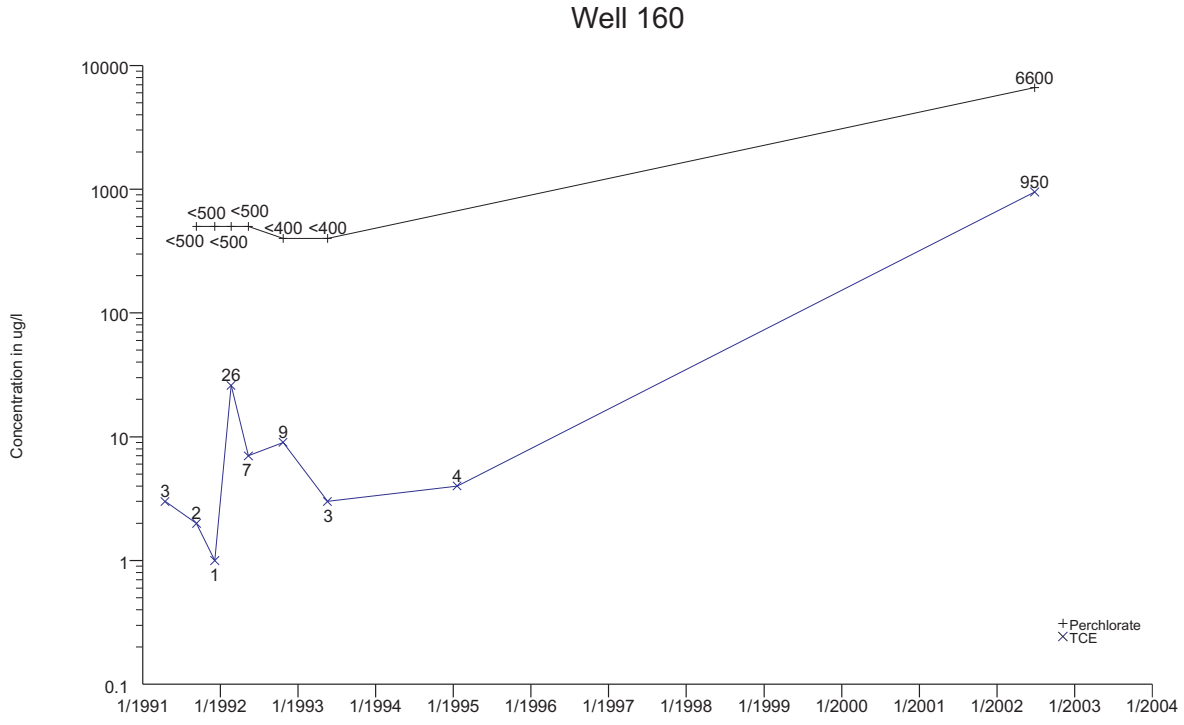


AEROJET
Environmental Remediation

FIGURE B-44
TCE and Perchlorate Concentration Trends
Layer B Wells 315 and 1325
Zone 2 PGOU

1/25/05 KK SR10114770

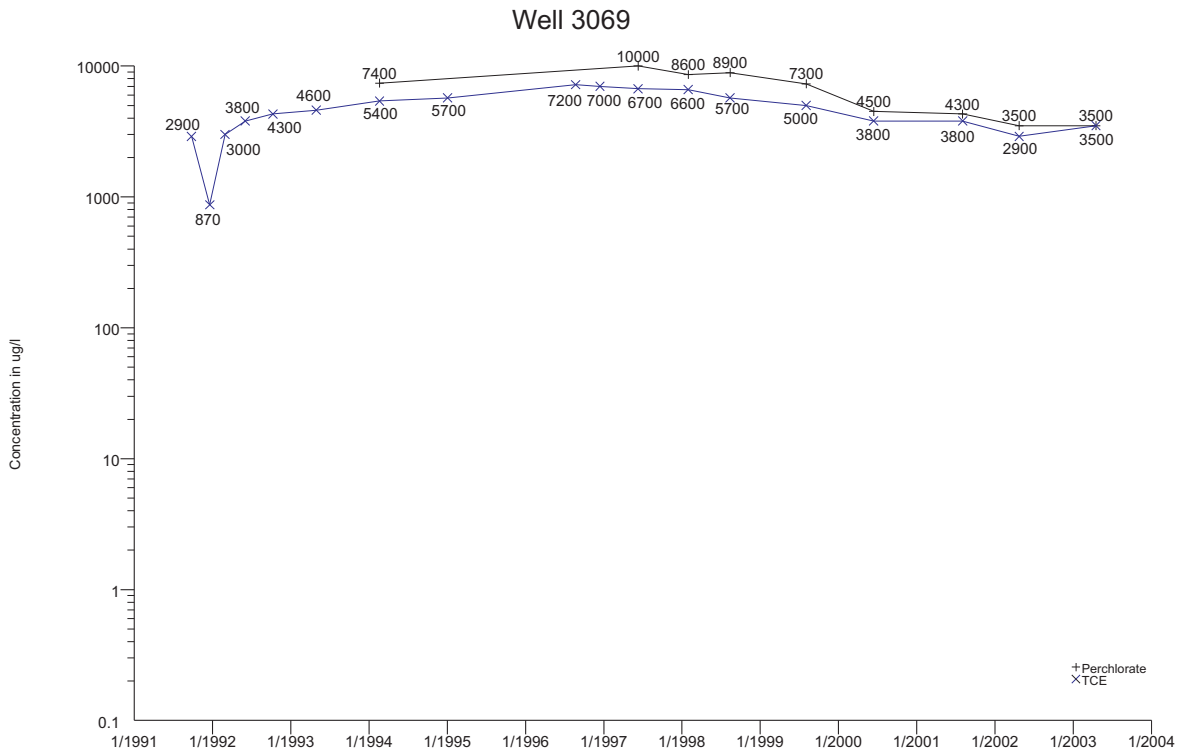


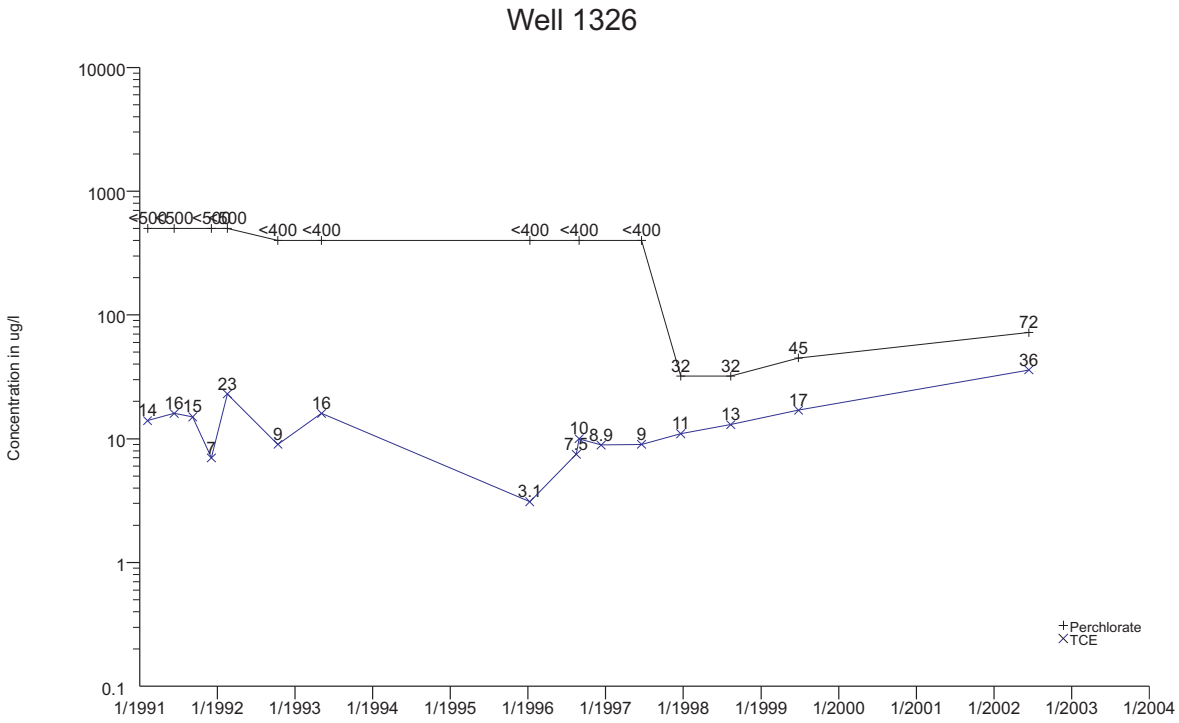


AEROJET
Environmental Remediation

FIGURE B-45
TCE and Perchlorate Concentration Trends
Layer C Wells 159 and 160
Zone 2 PGOU

1/25/05 KK SR10114770

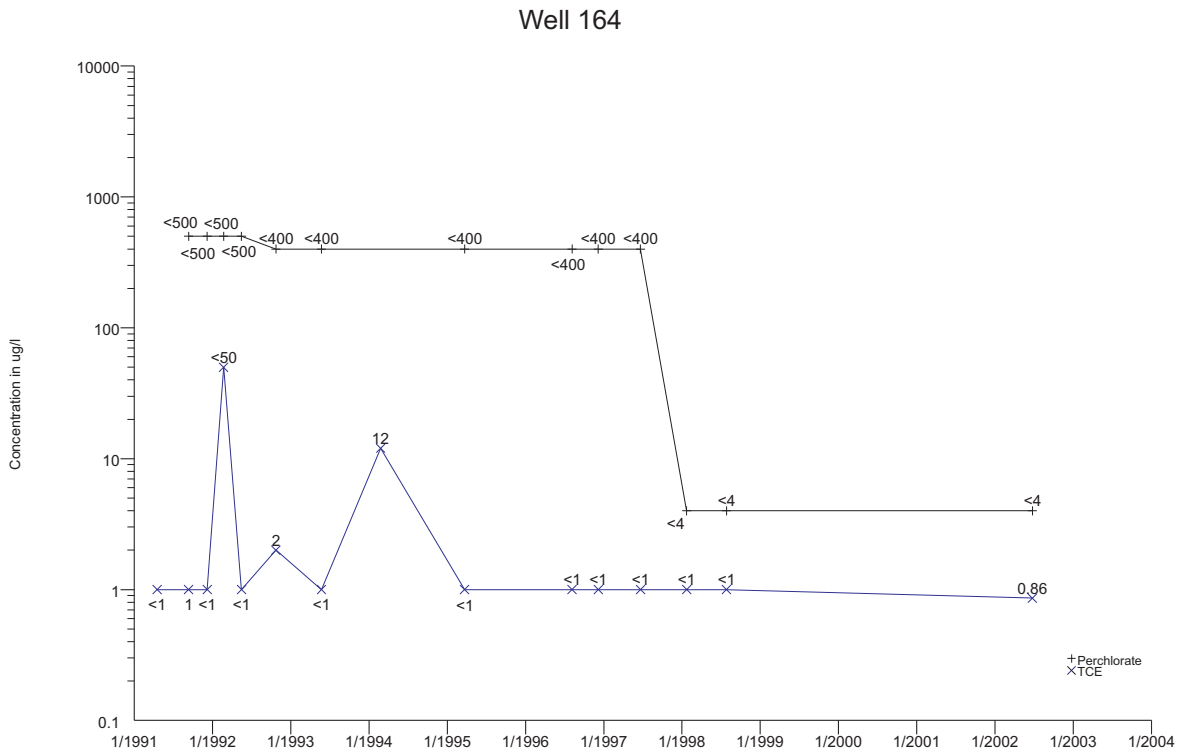


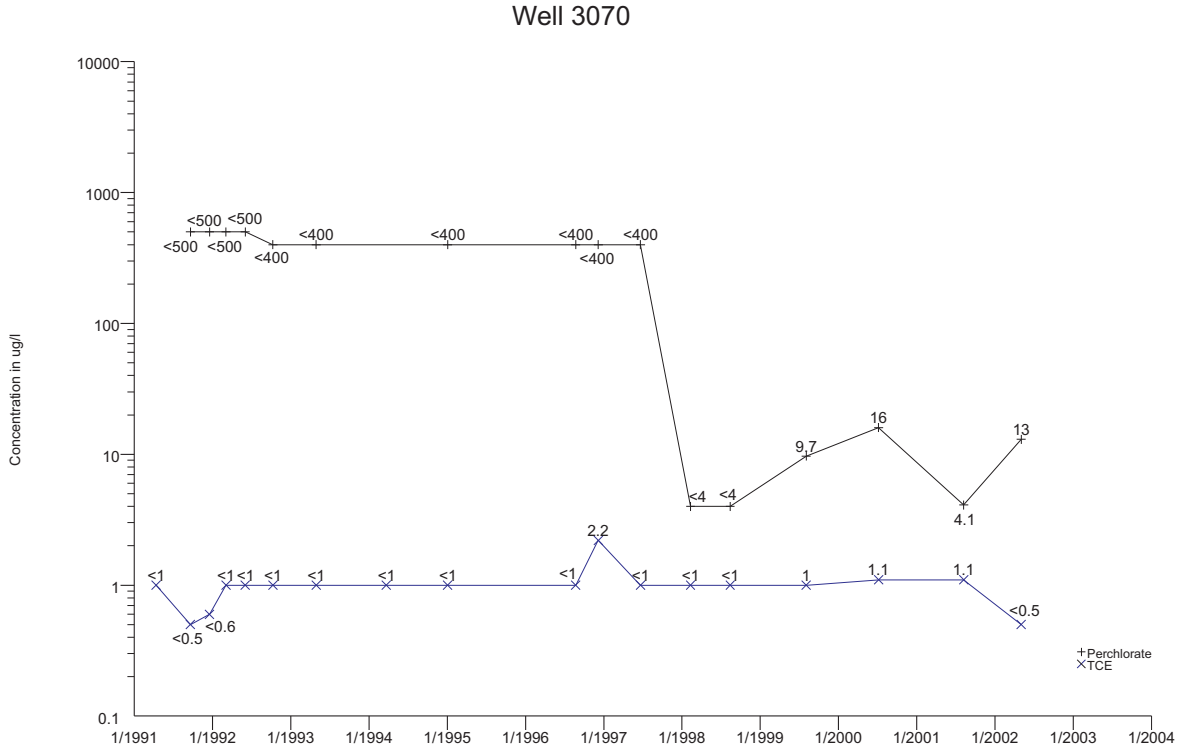


AEROJET
Environmental Remediation

FIGURE B-46
TCE and Perchlorate Concentration Trends
Layer C Wells 3069 and 1326
Zone 2 PGOU

1/25/05 KK SR10114770





AEROJET
Environmental Remediation

FIGURE B-47
TCE and Perchlorate Concentration Trends
Layer D Wells 164 and 3070
Zone 2 PGOU

1/25/05 KK SR10114770

TABLE B-1: Summary of Non-Volatile Organic Compounds Detected in Soil and Groundwater
Stage 1 Remedial Investigation
Zone 2 Perimeter Groundwater Operable Unit

CLASS / Compound	Detected in Soils [1]	Potential Source Site(s) Detected [2]	Detected in Groundwater [3]	Hydrostratigraphic Layer Detected	Comments	Potential Study Area Analyte
Central and Eastern Line 04						
SVOCs						
Di-n-butyl phthalate	Yes	3G, 4G, 9G, & 10G	Yes	A	Suspected laboratory contaminant.[4]	No
NON-VOCs						
Perchlorate	Yes	11G, 50F, 51F, & 9G	Yes	A, B, C		Yes
N-Nitrosodimethylamine	No	Not applicable	No	Not Applicable	Screening recommended.	Yes
Nitrate	No	Not applicable	Yes	A,B,C		Yes
Dioxin/Furans	Yes	4G	Not Analyzed	Not Applicable	Soil concentrations did not exceed residential PRGs.	No
HMX	Yes	G(a)	Not Analyzed	Not Applicable		Yes
Oil & Grease	Yes	9G	Not Analyzed	Not Applicable	Not detected downgradient.	No
Diesel	Yes	50F	No	Not Applicable	Not detected downgradient.	No
Total Petroleum Hydrocarbons	Yes	44F, 50F, & 53F	Yes	A	Not detected downgradient.	No
METALS						
Aluminum	No	Not applicable	Yes	A		Yes
Antimony	Yes	4G	No [5]	Not Applicable		Yes
Arsenic	Yes	9G & 11G	No [5]	Not Applicable		Yes
Barium	No	Not applicable	Yes	A		Yes
Beryllium	Yes	4G	No [5]	Not Applicable		Yes
Cadmium	Yes	42F, 44F, 53F, 2G, 8G & 9G	Yes	A	Not analyzed down gradient of 44F/53F.	Yes
Chromium (total)	Yes	11G	Yes	A	Sample not filtered.	Yes
Hexavalent Chromium	No	Not applicable	Yes	A	No known use in Zone 2 Study Area	Yes
Cobalt	Yes	42F, 3G	No	Not Applicable		No
Copper	Yes	9G & 11G	No	Not Applicable		No
Lead	Yes	42F, 2G, 4G, 9G, & 11G	Yes	A		Yes
Manganese	Yes	42F, 3G	No	Not Applicable		No
Mercury	Yes	2G & 4G	No [5]	Not Applicable		Yes
Nickel	Yes	3G & 11G	No	Not Applicable		No
Selenium	Yes	9G & 11G	No [5]	Not Applicable		Yes
Silver	Yes	44F & 53F, 8G	No	Not Applicable		No
Thallium	Yes	8G & 9G	No [5]	Not Applicable		Yes

Notes:
1. Metals reported if above presumed site background levels, Borch, 1994.
2. Source: Stage 1 Report - Zone 1, ICF Kaiser Engineers, 1993.
3. Metals reported if above 1991 Primary or Secondary MCLs.
4. Aerojet, Special Contaminant Investigation, 1994.
5. Stage 1 reporting limits above current primary MCLs and/or PHGs.

TABLE B-2: **Summary of Well Construction Details**
Zone 2 Perimeter Groundwater Operable Unit

WELL NUMBER	AQUIFER LAYER	WELL LOCATION: Easting (feet)	WELL LOCATION: Northing (feet)	WELL TYPE	GSE (ft, msl)	DEPTH TO: Top of Casing (ft, msl)	DEPTH TO: Top of Filter (feet)	DEPTH TO: Top of Screen (feet)	DEPTH TO: Bottom of Screen (feet)	DEPTH TO: Bottom of Filter (feet)	Borehole Depth (feet)	Well Depth (feet)
1	B	2220268.0	341340.7	MW	155.80	157.10	99	91	111	112	111	125
3	B	2219934.0	341155.0	MW	158.60	159.80	101	104	114.5	114	114.5	114.5
4	B	2220407.0	341597.7	MW	155.10	155.90	86	90	130	130	130	140
5	B	2220906.0	341151.0	MW	187.30	188.30	105	105	135	135	135	135
10	perched, A	2217109.0	340991.6	MW	142.84	143.02	60	60	100	100	100	100
25	A	2218585.0	340793.4	MW	150.27	151.43		80	95		102	95
29	perched, A	2225234.0	340717.3	MW	191.20	192.90		70	100		100	100
50	A	2227607.0	340449.9	MW	201.10	203.08		31	64		74	74
109	A	2228809.0	339536.6	MW	205.10	208.26		33	50		61	61
111	A	2224890.0	338613.5	MW	190.90	194.07	85	112	131	121	140	140
112	B	2230930.0	341266.2	MW	246.20	249.13	107	107	120	120	120	120
130	A	2218065.0	339001.0	MW	174.73	177.22	87	95	105	111	105	264
131	A	2218065.0	339001.0	MW	174.73	177.22	119	124	130	135	130	264
132	B	2218065.0	339001.0	MW	174.73	177.22	155	160	180	190	180	264
159	C	2231477.0	341871.5	MW	242.08	244.14	155	160	180	180	180	255
160	C	2231477.0	341871.5	MW	242.08	244.14	201	206	243	255	243	255
161	A	2231533.0	340770.3	MW	252.04	255.93	60	65	75	88	264	75
162	B	2231533.0	340770.3	MW	252.04	255.93	94	100	110	126	264	110
163	C	2231533.0	340770.3	MW	252.04	255.93	200	205	215	220	264	215
164	D	2231533.0	340770.3	MW	252.04	255.93	246	250	261	264	264	261
174	A	2224425.0	340018.1	MW	190.78	194.34	91	103	110	110	270	110
175	C	2224425.0	340018.1	MW	190.78	194.34	137	167	175	175	270	175
176	D	2224425.0	340018.1	MW	190.78	194.34	225	230	266	270	270	266
177	A	2229742.0	338856.4	MW	238.67	240.49	90	95	115	137	306	115
178	C	2229742.0	338856.4	MW	238.67	240.49	198	205	215	217	306	215
179	D	2229742.0	338856.4	MW	238.67	240.49	270	275	285	306	306	285
181	A	2221717.0	340502.8	MW	192.01	194.56	90	95	112	115	301	112
182	C	2221717.0	340502.8	MW	192.01	194.56	203	212	216	216	301	216
183	C	2221717.0	340502.8	MW	192.01	194.56	258	267	277	278	301	277
185	B	2223033.0	340910.7	MW	188.67	192.60	109	120	141	142	300	141
186	C	2223033.0	340910.7	MW	188.67	192.60	179	185	206	222	300	206
187	D	2223033.0	340910.7	MW	188.67	192.60	267	275	296	296	300	296

TABLE B-2: **Summary of Well Construction Details**
Zone 2 Perimeter Groundwater Operable Unit

WELL NUMBER	AQUIFER LAYER	WELL LOCATION: Easting (feet)	WELL LOCATION: Northing (feet)	WELL TYPE	GSE (ft, msl)	DEPTH TO: Top of Casing (ft, msl)	DEPTH TO: Top of Filter (feet)	DEPTH TO: Top of Screen (feet)	DEPTH TO: Bottom of Screen (feet)	DEPTH TO: Bottom of Filter (feet)	Borehole Depth (feet)	Well Depth (feet)
209	C	2217378.0	340396.0	MW	143.26	145.66	129	135	143	143	300	143
210	C	2217378.0	340396.0	MW	143.26	145.66	157	166	169	169	300	169
211	D	2217378.0	340396.0	MW	143.26	145.66	230	235	240	300	300	240
212	A	2219664.0	339736.8	MW	181.30	184.10	85	90	120	122	296	120
213	B	2219664.0	339736.8	MW	181.30	184.10	157	164	185	185	296	185
214	D	2219664.0	339736.8	MW	181.30	184.10	229	234	255	296	296	255
215	A	2218466.0	340081.4	MW	179.07	181.95	110	114	126	132	312	126
216	B	2218466.0	340081.4	MW	179.07	181.95	145	152	166	171	312	166
217	C	2218466.0	340081.4	MW	179.07	181.95	180	186	196	199	312	196
218	D	2218466.0	340081.4	MW	179.07	181.95	234	254	270		312	270
303	A	2221502.0	339209.1	MW	181.91	185.36	85	90	100	106	250	100
304	B	2221502.0	339209.1	MW	181.91	185.36	116	120	126	126	126	250
305	B	2221502.0	339209.1	MW	181.91	185.36	146	150	160	160	160	250
306	C	2221502.0	339209.1	MW	181.91	185.36	210	214	224	230	224	250
307	A	2222517.0	339254.2	MW	186.45	189.94	80	85	106	110	223	106
308	B	2222517.0	339254.2	MW	186.45	189.94	122	126	147	152	223	147
309	B	2222517.0	339254.2	MW	186.45	189.94	167	170	180	182	223	180
310	C	2222517.0	339254.2	MW	186.45	189.94	198	198	208	223	223	208
314	B	2227417.0	338973.8	MW	194.46	194.46	73	78	88	95	294	88
315	B	2227417.0	338973.8	MW	194.46	194.46	105	109	119	131	294	119
316	C	2227417.0	338973.8	MW	194.46	194.46	194	200	210	215	294	210
317	D	2227417.0	338973.8	MW	194.46	194.46	256	260	280	294	294	280
374	A	2218625.0	339636.2	MW	178.43	181.11	66	78	120	125	160	120
375	A	2218581.0	339242.9	MW	178.52	180.53	68	73	115	118	118	118
376	A	2218800.0	340378.6	MW	172.71	176.01	49	60	98	103	120	98
410	A	2230683.0	341505.7	MW	252.29	254.14		38	68		70	70
411	A	2229468.0	341234.1	MW	243.26	245.14		34	67		70	67
414	A	2228837.0	341291.1	MW	234.79	236.55		23	68		70	68
423	perched, A	2224986.0	338494.2	MW	191.17	192.62		22	45		47	45
430	C	2224921.0	338414.0	MW	192.06	194.64	160	165	175	177	345	175
431	C	2224921.0	338414.0	MW	192.06	194.64	199	206	221	228	221	345
432	D	2224921.0	338414.0	MW	192.06	194.64	248	256	271	272	345	271

TABLE B-2: **Summary of Well Construction Details**
Zone 2 Perimeter Groundwater Operable Unit

WELL NUMBER	AQUIFER LAYER	WELL LOCATION: Easting (feet)	WELL LOCATION: Northing (feet)	WELL TYPE	GSE (ft, msl)	DEPTH TO: Top of Casing (ft, msl)	DEPTH TO: Top of Filter (feet)	DEPTH TO: Top of Screen (feet)	DEPTH TO: Bottom of Screen (feet)	DEPTH TO: Bottom of Filter (feet)	Borehole Depth (feet)	Well Depth (feet)
433	D	2224921.0	338414.0	MW	192.06	194.64	289	293	303	308	345	303
450	A	2225732.0	341836.8	MW	193.84	196.75		19	64		75	64
461	A	2226062.0	341267.2	MW	194.55	197.45		32	64		72	67
1028	B	2222366.0	337720.7	DW	182.00	182.47						
1054	B	2223685.0	333237.5	WS	175.40	176.48						175
1229	B	2218768.0	338130.3	MW	178.80	178.80	121	126	146	154	484	147
1230	B	2218768.0	338130.3	MW	178.80	178.80	166	169	179	194	484	179
1231	C	2218768.0	338130.3	MW	178.80	178.80	229	234	254	265	484	254
1232	D	2218768.0	338130.3	MW	178.80	178.80	311	316	336	344	484	336
1233	E	2218768.0	338130.3	MW	178.80	178.80	363	370	378	378	484	378
1234	E	2218768.0	338130.3	MW	178.80	178.80	420	425	445	448	484	445
1237	B	2219675.0	338139.2	MW	178.98	178.98	99	104	125	129	254	125
1238	B	2219675.0	338139.2	MW	178.98	178.98	142	147	157	158	254	157
1239	C	2219675.0	338139.2	MW	178.98	178.98	173	178	188	189	254	188
1240	C	2219675.0	338139.2	MW	178.98	178.98	214	220	230	254	254	230
1256	B	2227206.0	337543.8	MW	194.75	194.75	73	79	102	102	314	102
1257	B	2227206.0	337543.8	MW	194.75	194.75	116	122	132	142	314	132
1258	C	2227206.0	337543.8	MW	194.75	194.75	200	206	216	223	314	216
1281	A	2218089.0	337117.2	MW	189.73	192.03	114	120	141	158	595	141
1282	C	2218089.0	337117.2	MW	189.73	192.03	188	194	215	222	595	215
1283	C	2218089.0	337117.2	MW	189.73	192.03	246	253	263	268	595	263
1290	A	2225260.0	336344.8	MW	188.10	190.20	90	108	118	139	386.5	118
1291	C	2225260.0	336344.8	MW	188.10	190.20	209	216	226	230	386.5	226
1292	C	2225260.0	336344.8	MW	188.10	190.20	269	274	295	305	386.5	295
1293	D	2225260.0	336344.8	MW	188.10	190.20	325	330	340	354	386.5	340
1294	C	2217965.0	336117.9	MW	183.80	187.03	173	184	204	204	370	204
1295	C	2217965.0	336117.9	MW	183.80	187.03	228	234	255	268	370	255
1305	B	2227684.0	336190.0	MW	227.40	230.10	158	164	174	189	346	174
1306	C	2227684.0	336190.0	MW	227.40	230.10	221	229	239	239	346	239
1313	C	2220689.0	333999.7	MW	179.32	182.29	229	236	246	257	484	246
1314	D	2220689.0	333999.7	MW	179.32	182.29	294	306	316	312	484	316
1315	E	2220689.0	333999.7	MW	179.32	182.29	375	392	402	407	484	402

TABLE B-2: **Summary of Well Construction Details**
Zone 2 Perimeter Groundwater Operable Unit

WELL NUMBER	AQUIFER LAYER	WELL LOCATION: Easting (feet)	WELL LOCATION: Northing (feet)	WELL TYPE	GSE (ft, msl)	DEPTH TO: Top of Casing (ft, msl)	DEPTH TO: Top of Filter (feet)	DEPTH TO: Top of Screen (feet)	DEPTH TO: Bottom of Screen (feet)	DEPTH TO: Bottom of Filter (feet)	Borehole Depth (feet)	Well Depth (feet)
1316	E	2220689.0	333999.7	MW	179.32	182.29	446	452	462	484	484	462
1321	C	2223772.0	334201.7	MW	177.90	181.55	217	223	233	243	409	233
1322	C	2223772.0	334201.7	MW	177.90	181.55	273	284	294	304	409	294
1324	A	2223414.0	337229.9	MW	180.90	183.82	98	103	113	114	384	113
1325	B	2223414.0	337229.9	MW	180.90	183.82	135	141	151	158	384	151
1326	C	2223414.0	337229.9	MW	180.90	183.82	186	191	218	221	384	218
1327	D	2223414.0	337229.9	MW	180.90	183.82	263	271	281	282	384	281
1328	E	2223414.0	337229.9	MW	180.90	183.82	337	345	355	360	384	355
1333	B	2221321.0	337235.8	MW	183.17	185.61	160	165	175	179	350	175
1334	C	2221321.0	337235.8	MW	183.17	185.61	226	231	241	246	350	241
1335	C	2221321.0	337235.8	MW	183.17	185.61	260	266	276	280	350	276
1336	D	2221321.0	337235.8	MW	183.17	185.61	301	306	316	350	350	316
1345	B	2221765.0	336441.0	MW	180.91	183.23	150	155	165	172	436	165
1346	C	2221765.0	336441.0	MW	180.91	183.23	194	199	214	216	436	214
1347	C	2221765.0	336441.0	MW	180.91	183.23	247	257	267	267	436	267
1348	D	2221765.0	336441.0	MW	180.91	183.23	315	323	330	330	436	330
1349	E	2221765.0	336441.0	MW	180.91	183.23	405	422	432	436	436	432
3043	A	2218216.0	341710.0	MW	149.26	152.31	69	76	86	90	404	86
3044	C	2218216.0	341710.0	MW	149.26	152.31	118	124	134	141	404	134
3045	D	2218216.0	341710.0	MW	149.26	152.31	210	216	226	235	404	226
3047	E	2218216.0	341710.0	MW	149.26	152.31	385	390	400	405	404	400
3067	A	2230265.9	340610.2	MW	247.60	250.38	55	61	76	81	296	76
3068	B	2230265.9	340610.2	MW	247.60	250.38	104	113	134	142	296	134
3069	C	2230265.9	340610.2	MW	247.60	250.38	194	200	230	234	296	230
3070	D	2230265.9	340610.2	MW	247.60	250.38	250	256	266	271	296	266
3071	A	2232703.0	341146.5	MW	257.74	260.63	55	60	81	89	370	81
3072	B	2232703.0	341146.5	MW	257.74	260.63	129	134	155	156	370	155
3073	C	2232703.0	341146.5	MW	257.74	260.63	181	186	214	228	370	214
3074	D	2232703.0	341146.5	MW	257.74	260.63	265	270	290	291	370	290
3075	E	2232703.0	341146.5	MW	257.74	260.63	315	320	340	347	370	340
3076	A	2229019.0	340228.7	MW	214.01	214.23	63	68	78	87	304	78
3077	B	2229019.0	340228.7	MW	214.01	214.23	107	112	133	136	304	133

TABLE B-2: **Summary of Well Construction Details**
Zone 2 Perimeter Groundwater Operable Unit

WELL NUMBER	AQUIFER LAYER	WELL LOCATION: Easting (feet)	WELL LOCATION: Northing (feet)	WELL TYPE	GSE (ft, msl)	DEPTH TO: Top of Casing (ft, msl)	DEPTH TO: Top of Filter (feet)	DEPTH TO: Top of Screen (feet)	DEPTH TO: Bottom of Screen (feet)	DEPTH TO: Bottom of Filter (feet)	Borehole Depth (feet)	Well Depth (feet)
3078	C	2229019.0	340228.7	MW	214.01	214.23	164	170	191	196	304	191
3079	D	2229019.0	340228.7	MW	214.01	214.23	219	223	233	234	304	233
3080	E	2229019.0	340228.7	MW	214.01	214.23	254	260	270	272	304	270
3119	A	2228881.0	338730.8	MW	230.99	233.74	65	70	83	83	444	83
3120	C	2228881.0	338730.8	MW	230.99	233.74	213	220	241	243	444	241
3121	D	2228881.0	338730.8	MW	230.99	233.74	283	288	302	305	444	302
3123	E	2228881.0	338730.8	MW	230.99	233.74	371	376	396	402	444	396
3221	A	2218136.0	340513.3	MW	145.30	148.35	43	53	74	76	325	74
3222	A	2218136.0	340513.3	MW	145.30	148.35	87	94	104	108	325	104
3223	C	2218136.0	340513.3	MW	145.30	148.35	118	124	134	137	325	134
3224	C	2218136.0	340513.3	MW	145.30	148.35	148	154	158	158	325	158
3225	C	2218136.0	340513.3	MW	145.30	148.35	207	214	219	219	325	219
3226	D	2218136.0	340513.3	MW	145.30	148.35	291	300	310	311	325	310
3233	A	2218130.0	341016.3	MW	145.19	148.08	58	71	86	88	320	86
3234	B	2218130.0	341016.3	MW	145.19	148.08	110	117	122	123	320	122
3235	C	2218130.0	341016.3	MW	145.19	148.08	137	146	156	156	320	156
3236	C	2218130.0	341016.3	MW	145.19	148.08	188	195	200	199	320	200
3237	D	2218130.0	341016.3	MW	145.19	148.08	210	222	232	237	320	232
3264	A	2217510.0	340214.6	MW	142.96	145.74	64	75	96	101	320	96
3265	C	2217510.0	340214.6	MW	142.96	145.74	120	130	144	144	320	144
3266	C	2217510.0	340214.6	MW	142.96	145.74	164	174	184	184	320	184
3267	D	2217510.0	340214.6	MW	142.96	145.74	227	238	248	253	320	248
3268	E	2217510.0	340214.6	MW	142.96	145.74	301	310	315	315	320	315
3292	A	2218045.0	339620.4	MW	177.55	180.45	87	98	119	127	119	235
3293	B	2218045.0	339620.4	MW	177.55	180.45	153	163	168	172	235	168
3294	C	2218045.0	339620.4	MW	177.55	180.45	199	210	226	235	235	226
3326	B	2222348.0	338271.6	MW	182.80	186.59	132	136	157	157	370	157
3327	C	2222348.0	338271.6	MW	182.80	186.59	241	246	267	270	370	267
3328	E	2222348.0	338271.6	MW	182.80	186.59	337	342	352	357	370	352
3329	B	2226525.0	338638.9	MW	191.40	194.82	132	137	147	153	510	147
3330	E	2226525.0	338638.9	MW	191.40	194.82	317	325	357	343	510	357
3348	A	2218496.0	338968.8	MW	176.40	179.60	80	90	124	131	415	124

TABLE B-2: **Summary of Well Construction Details**
Zone 2 Perimeter Groundwater Operable Unit

WELL NUMBER	AQUIFER LAYER	WELL LOCATION: Easting (feet)	WELL LOCATION: Northing (feet)	WELL TYPE	GSE (ft, msl)	DEPTH TO: Top of Casing (ft, msl)	DEPTH TO: Top of Filter (feet)	DEPTH TO: Top of Screen (feet)	DEPTH TO: Bottom of Screen (feet)	DEPTH TO: Bottom of Filter (feet)	Borehole Depth (feet)	Well Depth (feet)
3349	C	2218496.0	338968.8	MW	176.40	179.60	225	235	265	271	415	265
3350	D	2218496.0	338968.8	MW	176.40	179.60	351	363	384	386	415	384
3354	B	2223150.0	340331.1	MW	184.80	187.05	104	116	126	134	483	126
3355	C	2223150.0	340331.1	MW	184.80	187.05	237	250	270	274	483	270
3357	B	2229548.0	341274.8	MW	244.83	247.58	107	114	124	133	315	124
3358	C	2229547.7	341274.8	MW	244.83	247.58	182	192	232	233	315	232
3359	D	2229548.0	341274.8	MW	244.83	247.58	263	272	282	285	315	282
3360	D	2229905.0	339342.1	MW	235.77	238.20	242	254	268	270	525	268
3361	E	2229905.0	339342.1	MW	235.77	238.20	309	322	364	384	525	364
3363	A	2220077.0	340331.2	MW	179.10	181.70	78	89	99	101	425	99
3364	C	2220077.0	340331.2	MW	179.10	181.70	213	220	237	243	425	237
3365	E	2220077.0	340331.2	MW	179.10	181.68	374	390	400	406	425	400
3427	B	2225658.0	341727.1	MW	195.00	196.84	128	136	146	150	340	146
3428	C	2225658.0	341727.1	MW	195.00	196.84	206	212	217	219	340	217
3429	D	2225658.0	341727.1	MW	195.00	196.84	285	300	308	310	340	308
3460	A	2225384.0	338671.0	MW	198.00	200.44	98	87	97	119	354	97
3461	B	2225384.0	338671.0	MW	198.00	200.44	259	146	156	280	354	156
3462	D	2225384.0	338671.0	MW	198.00	200.44	332	284	298	347	354	298
3470	A	2228859.0	340146.0	MW	208.00	211.80	54	60	70	70	70	70
3471	A	2225923.0	339867.0	MW	193.00	196.40	73.5	76	96	96	96	96
3476	B	2221654.0	340006.0	MW	186.00	188.20	114	117.5	137.5	137.5	137.5	137.5
3500	A	2228844.0	340167.5	MW	211.00	213.61	72	76	88	88		88
3501	B	2228844.0	340167.5	MW	211.00	213.61	107	110	118	122		118
3502	C	2228844.0	340167.5	MW	211.00	213.61	138	142	147	151		147
3509	A	2228865.0	339435.3	MW	209.00	212.08	33	35	65	65	65	65
3510	A	2229216.0	339925.5	MW	197.20	200.83	14	16	46	53	53	46
3511	A	2229043.0	339661.1	MW	211.00	213.48	78	40	80.5	80.5	80.5	80.5
3512	A	2228610.0	339623.2	MW	190.00	192.61	56.5	58.5	73.5	73.5	73.5	73.5
3513	A	2228399.0	339612.3	MW	190.00	193.54	62	64	85	85	85	85
3532	D	2224193.0	341489.6	MW	193.00	195.83	321	326	336	341	500	336
3533	E	2224193.0	341489.6	MW	193.00	195.83	414	420	440	448	500	440
3534	E	2224193.0	341489.6	MW	193.00	195.83	469	482	492	500	500	492

TABLE B-2: **Summary of Well Construction Details**
Zone 2 Perimeter Groundwater Operable Unit

WELL NUMBER	AQUIFER LAYER	WELL LOCATION: Easting (feet)	WELL LOCATION: Northing (feet)	WELL TYPE	GSE (ft, msl)	DEPTH TO: Top of Casing (ft, msl)	DEPTH TO: Top of Filter (feet)	DEPTH TO: Top of Screen (feet)	DEPTH TO: Bottom of Screen (feet)	DEPTH TO: Bottom of Filter (feet)	Borehole Depth (feet)	Well Depth (feet)
3535	D	2222205.0	340502.1	MW	183.00	185.78	264	268	284	291	377	284
3536	D	2222205.0	340502.1	MW	183.00	185.78	307	313	326	330	377	326
3537	E	2222205.0	340502.1	MW	183.00	185.78	348	362	370	377	377	370
3538	B	2222143.0	340549.5	MW	183.00	186.12	126	130	140	144	400	140
3539	C	2222142.3	340549.3	MW	183.10	186.12	188	192	202	211	400	202
3540	D	2222142.3	340549.3	MW	183.10	186.12	246	246	260	264	400	260
3541	C	2223777.0	339578.0	MW	190.50	193.56	235	244	274	277	405	274
3542	D	2223777.0	339578.0	MW	190.50	193.56	293	300	308	309	405	308
3543	D	2223777.0	339578.0	MW	190.50	193.56	320	328	334	338	405	334
3544	B	2224166.0	341488.1	MW	192.40	195.58	156.4	160	168	172	325	168
3545	D	2224166.0	341488.1	MW	192.40	195.58	223	230	240	240.3	325	240
3546	D	2224166.0	341488.1	MW	192.40	195.58	300.8	304	313	313	325	313
3558	A	2225411.2	341765.0	MW	194.00	196.10	103	105	113	118	342	113
3559	B	2225411.2	341765.0	MW	194.00	196.10	177	179	189	193	342	189
3560	D	2225411.2	341765.0	MW	194.00	196.10	269	271	281	285	342	281
3561	B	2221634.0	341584.9	MW	179.30	181.62	117	129	135	139	400	135
3562	D	2221634.0	341584.9	MW	179.30	181.62	246	251	261	264	400	261
3563	D	2221634.0	341584.9	MW	179.30	181.62	343	345	355	356	400	355
3567	C	2225422.4	341396.1	MW	194.90	197.67	229	232	242	244	410	242
3568	D	2225422.4	341396.1	MW	194.90	197.67	319	322	338	339	410	338
3569	F	2225422.4	341396.1	MW	194.90	197.67	392	394	404	408	410	404
3570	B	2225396.8	340814.9	MW	192.90	195.57	139	142	150	156	400	150
3571	C	2225396.8	340814.9	MW	192.90	195.57	219	220	228	230	400	228
3572	F	2225396.8	340814.9	MW	192.90	195.57	382	384	394	400	400	394
3576	A	2225426.7	340447.2	MW	191.60	194.19	101	102	120	123	273	120
3577	B	2225426.7	340447.2	MW	191.60	194.19	140	142	158	161	273	158
3578	D	2225426.7	340447.2	MW	191.60	194.19	233	236	254	260	273	254
3579	B	2229101.8	338696.4	MW	228.20	230.94	102	106	124	126.5	241	124
3580	C	2229101.8	338696.4	MW	228.20	230.94	174	176	190	192	241	190
3581	C	2229101.8	338696.4	MW	228.20	230.94	220	222	238	241	241	238
3585	C	2220911.4	338369.6	MW	177.60	180.13	222	224	244	244.5	365	244
3586	D	2220911.4	338369.6	MW	177.60	180.13	307	309	330	331	365	330

TABLE B-2: **Summary of Well Construction Details**
Zone 2 Perimeter Groundwater Operable Unit

WELL NUMBER	AQUIFER LAYER	WELL LOCATION: Easting (feet)	WELL LOCATION: Northing (feet)	WELL TYPE	GSE (ft, msl)	DEPTH TO: Top of Casing (ft, msl)	DEPTH TO: Top of Filter (feet)	DEPTH TO: Top of Screen (feet)	DEPTH TO: Bottom of Screen (feet)	DEPTH TO: Bottom of Filter (feet)	Borehole Depth (feet)	Well Depth (feet)
3587	E	2220911.4	338369.6	MW	177.60	180.13	351.5	354	364	365	365	364
3588	B	2220907.2	338407.2	MW	178.60	181.27	149	151	172	172	297.5	172
3589	B	2220907.2	338407.2	MW	178.60	181.27	189	192	202	204	297.5	202
3590	C	2220907.2	338407.2	MW	178.60	181.27	281	284.29	294	297.5	297.5	294
4007	A	2218183.0	339069.4	EW	177.80	179.26		75	122			129
4015	A	2231469.0	341840.0	EW	241.46	242.56	75	80	100	127	145	120
4016	A	2222984.0	340930.6	EW	189.46	189.46	103	108	128	140	153	133
4045	B	2222408.0	340902.4	EW	189.64	189.64	102	120	140	150	184	145
4050	A	2222578.0	340519.3	EW	183.24	185.45	104	114	134	142	196	144
4310	A	2218310.0	339856.7	EW	178.00	180.99	76	100	125	128	167	145
4315	B	2218073.0	339072.5	EW	174.00	178.60	147	162	167	180	197	0
4390	A	2230690.0	341569.7	EW	253.00	255.10	50	60	83	86	103	93
4395	B, C	2226326.0	338596.2	EW	253.00	193.80	105	125	160	175	175	170
4415	A	2230281.0	340586.9	EW	248.00	249.80	83	95	117	117	137	127
4420	C	2230320.0	340591.1	EW	248.00	250.40	175	195	235	235	255	245
5060	D	2229067.0	338670.8	RW	228.45	229.05						
5065	D	2227588.0	338969.5	RW	192.49	194.30						
5070	D	2229874.0	338845.6	RW	244.77	245.21						
5075	D	2228335.0	338624.0	RW	224.55	226.22						
30099	B	2217556.5	336668.6	MW	174.40	177.31	115	117	137	137	137	137
30142	A	2218107.7	337138.8	MW	189.40	192.49	121.5	124	144	148	148	144

Notes:
1. Some well construction depths were not available; in these cases, the well information is left blank.

Abbreviations:
GSE = Ground surface elevation
DW = Domestic well
EW = Extaction well
MW = Monitor well
RW = Recharge well
WS = Water supply well
msl = mean sea level

TABLE B-3: Summary of Detects - Volatile Organic Compounds
January 2000 through June 2004
Zone 2 Perimeter Groundwater Operable Unit

WELL NUMBER	SAMPLE DATE	1,1,1-TCA (µg/l)	1,1,2-TCA (µg/l)	1,1-DCA (µg/l)	1,1-DCE (µg/l)	1,2-DCA (µg/l)	cis-1,2-DCE (µg/l)	cis/trans-1,2-DCE (µg/l)	Chloroform (µg/l)	Methylene Chloride (µg/l)	PCE (µg/l)	TCE (µg/l)	Vinyl Chloride (µg/l)
	MCL[1]:	**200**	**5**	**5**	**6**	**0.5**	**6**	**10**	**80**	**5**	**5**	**5**	**0.5**
Layer A Wells													
109	05/01/00	<5.0	<5.0	<5.0	<5.0	<5.0	NA	<5.0	<5.0	<5.0	<5.0	<5.0	<10
	10/10/00	<5.0	<5.0	<5.0	<5.0	<5.0	NA	<5.0	<5.0	<5.0	<5.0	<5.0	<10
	04/09/01	<5.0	<5.0	<5.0	<5.0	<5.0	NA	<5.0	<5.0	<5.0	<5.0	<5.0	<10
	10/16/01	<5.0	<5.0	<5.0	<5.0	<5.0	NA	<5.0	<5.0	<5.0	<5.0	<5.0	<10
	04/24/02	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	NA	<5.0	<5.0	<5.0	<5.0	<10
	10/08/02	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	NA	<5.0	<5.0	<5.0	<5.0	<10
	04/04/03	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	NA	<5.0	<5.0	<5.0	<5.0	<10
	10/13/03	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	NA	<5.0	<5.0	<5.0	<5.0	<10
	10/13/03	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	NA	<5.0	<5.0	<5.0	<5.0	<10
	04/20/04	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	NA	<5.0	<5.0	<5.0	<5.0	<10
111	11/05/02	<5.0	<5.0	<5.0	<5.0	<5.0	NA	<5.0	<5.0	<5.0	<5.0	<5.0	<10
161	06/25/02	<0.50	<0.50	<0.50	<0.50	<0.50	NA	0.67	<0.50	<0.50	<0.50	3.1	<0.50
177	06/26/02	<0.50	<0.50	<0.50	<0.50	<0.50	NA	<0.50	<0.50	<0.50	0.59	<0.50	<0.50
413	11/03/00	<0.50	<0.50	<0.50	<0.50	<0.50	NA	NA	<0.50	<0.50	<0.50	<0.50	<0.50
	10/29/01	<0.50	<0.50	<0.50	<0.50	<0.50	NA	NA	<0.50	<0.50	<0.50	<0.50	<0.50
	10/15/02	<0.50	<0.50	<0.50	<0.50	<0.50	NA	NA	<0.50	<0.50	<0.50	<0.50	<0.50
461	05/04/01	**920**	<500	<500	<500	<500	NA	<500	<500	<500	<500	**74000**	<500
	05/04/01	**570**	<100	<100	**180**	<100	NA	**140**	<100	<100	<100	**78000**	<100
1281	06/09/00	<0.50	<0.50	<0.50	<0.50	**54**	NA	<0.50	2.6	<0.50	<0.50	0.77	<0.50
	07/10/01	<2.5	<2.5	<2.5	<2.5	**710**	NA	<2.5	4	<2.5	<2.5	2.6	<2.5
	07/10/01	<0.50	<0.50	<0.50	<0.50	NA	NA	<0.50	4.9	0.87	<0.50	3.2	<0.50
	04/03/02	<5.0	<5.0	<5.0	<5.0	NA	NA	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
	04/03/02	<0.50	<0.50	<0.50	<0.50	**880**	NA	<0.50	6.2	1.7	<0.50	3.4	<0.50
	04/15/03	<0.50	<0.50	<0.50	<0.50	**66**	NA	0.81	6	0.84	<0.50	**5.5**	<0.50
	05/14/04	<0.50	<0.50	<0.50	<0.50	**20**	2.1	NA	9.5	<0.50	<0.50	**8.1**	<0.50
1290	07/12/02	<0.50	<0.50	<0.50	<0.50	<0.50	NA	<0.50	<0.50	<0.50	1.3	0.91	<0.50
1324	06/13/02	<0.50	<0.50	<0.50	<0.50	<0.50	NA	<0.50	<0.50	<0.50	<0.50	1.9	<0.50
3043	07/09/02	<0.50	<0.50	<0.50	<0.50	<0.50	NA	<0.50	<0.50	1.7	<0.50	<0.50	<0.50
3067	06/30/00	<0.50	<0.50	<0.50	<0.50	<0.50	NA	2.4	<0.50	<0.50	<0.50	**5.7**	<0.50
	06/30/00	<0.50	<0.50	<0.50	<0.50	<0.50	NA	2.4 J	<0.50	<0.50	<0.50	**5.4 J**	<0.50
	08/02/01	<0.50	<0.50	<0.50	<0.50	<0.50	NA	1.8	<0.50	<0.50	<0.50	**6**	<0.50
	04/23/02	<0.50	<0.50	<0.50	<0.50	<0.50	NA	2.3	<0.50	<0.50	<0.50	**7**	<0.50
	04/16/03	<0.50	<0.50	<0.50	<0.50	<0.50	NA	**14**	<0.50	<0.50	<0.50	**23**	<0.50
3071	08/02/01	<0.50	<0.50	<0.50	<0.50	<0.50	NA	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
3460	10/25/02	<0.50 *	<0.50 *	<0.50 *	<0.50 *	<0.50 *	NA	<0.50 *	<0.50 *	<0.50 *	<0.50 *	<0.50 *	<0.50 *
3470	10/25/02	<5.0	<5.0	<5.0	<5.0	<5.0	NA	<5.0	<5.0	<5.0	<5.0	<5.0	<10
3500	10/25/02	<25	<25	<25	<25	<25	NA	**51**	<25	<25	<25	**440**	<50
	10/25/02	<5.0	<5.0	<5.0	<5.0	<5.0	NA	**53**	<5.0	<5.0	<5.0	**450**	<10
3509	11/04/02	<0.50 *	<0.50 *	<0.50 *	<0.50 *	<0.50 *	NA	<0.50 *	<0.50 *	<0.50 *	<0.50 *	<0.50 *	<0.50 *
3510	11/04/02	<0.50 *	<0.50 *	<0.50 *	<0.50 *	<0.50 *	NA	<0.50 *	<0.50 *	<0.50 *	<0.50 *	0.57 *	<0.50 *
3511	11/04/02	<0.50 *	<0.50 *	<0.50 *	<0.50 *	<0.50 *	NA	<0.50 *	<0.50 *	<0.50 *	<0.50 *	<0.50 *	<0.50 *
3512	11/04/02	<0.50 *	<0.50 *	<0.50 *	<0.50 *	**3.9 ***	NA	<0.50 *	<0.50 *	<0.50 *	<0.50 *	<0.50 *	<0.50 *
3513	11/04/02	<0.50 *	<0.50 *	<0.50 *	<0.50 *	<0.50 *	NA	<0.50 *	<0.50 *	<0.50 *	<0.50 *	**6.1 ***	<0.50 *

TABLE B-3: Summary of Detects - Volatile Organic Compounds
January 2000 through June 2004
Zone 2 Perimeter Groundwater Operable Unit

WELL NUMBER	SAMPLE DATE	1,1,1-TCA (µg/l)	1,1,2-TCA (µg/l)	1,1-DCA (µg/l)	1,1-DCE (µg/l)	1,2-DCA (µg/l)	cis-1,2-DCE (µg/l)	cis/trans-1,2-DCE (µg/l)	Chloroform (µg/l)	Methylene Chloride (µg/l)	PCE (µg/l)	TCE (µg/l)	Vinyl Chloride (µg/l)
	MCL[1]:	200	5	5	6	0.5	6	10	80	5	5	5	0.5
Layer A Wells													
4007	02/04/00	<0.50	0.86	<0.50	<0.50	**18**	NA	1.7	2.2	<0.50	<0.50	**43**	<0.50
	04/16/00	<0.50	1.3	<0.50	<0.50	**13**	NA	1.8	2.4	<0.50	<0.50	**44**	<0.50
	08/02/00	<0.5	1.2	<0.5	<0.5	**6.6**	NA	1.8	2.4	<0.5	<0.5	**39**	<0.5
	08/02/00	<0.5	1.1 J	<0.5	<0.5	**6.2 J**	NA	1.8 J	2.3 J	<0.5	<0.5	**38 J**	<0.5
	10/22/00	<0.50	0.65	<0.50	<0.50	**5.2**	NA	2.4	2.3	<0.50	<0.50	**44**	<0.50
	10/22/00	<0.50	0.68 J	<0.50	<0.50	**5.1 J**	NA	2.4 J	2.4 J	<0.50	<0.50	**45 J**	<0.50
	01/25/01	<0.50	0.62	<0.50	<0.50	**3.3**	NA	2.7	2.4	<0.50	<0.50	**45**	<0.50
	01/25/01	<0.50	0.63 J	<0.50	<0.50	**3.4 J**	NA	2.7 J	2.5 J	<0.50	<0.50	**46 J**	<0.50
	05/05/01	<0.50	0.58	<0.50	<0.50	**1.7**	NA	2.4	2.2	<0.50	<0.50	**43**	<0.50
	09/19/01	<0.50	0.71	<0.50	<0.50	**0.89**	NA	2.7	2	<0.50	<0.50	**40**	<0.50
	11/14/01	<0.50	0.72	<0.50	<0.50	**0.91**	NA	3.2	2.3	<0.50	<0.50	**42**	<0.50
	02/18/02	<0.50	1.4	<0.50	<0.50	**0.78**	NA	1.9	2.4	<0.50	<0.50	**26**	<0.50
	05/16/02	<0.50	0.98	<0.50	<0.50	**0.66**	NA	2.5	2.7	<0.50	<0.50	**24**	<0.50
	08/08/02	<0.50	1.7	<0.50	<0.50	<0.50	NA	3	4.2	<0.50	<0.50	**26**	<0.50
	08/08/02	<0.50	1.6 J	<0.50	<0.50	<0.50	NA	3.0 J	4.2 J	<0.50	<0.50	**26 J**	<0.50
	11/19/02	<0.50	1.8	<0.50	<0.50	**0.55**	NA	3.7	4.9	<0.50	<0.50	**28**	<0.50
	01/22/03	<0.50	2.4	<0.50	<0.50	**0.61**	NA	4.1	6.3	<0.50	<0.50	**31**	<0.50
	01/22/03	<0.50	2.4 J	<0.50	<0.50	**0.58 J**	NA	4.1 J	6.4 J	<0.50	<0.50	**30 J**	<0.50
	04/14/03	<0.50	2.4	<0.50	<0.50	**1**	NA	4.4	8	<0.50	<0.50	**29**	<0.50
	08/25/03	<0.50	3.6	<0.50	<0.50	**0.65**	NA	4.1	10	<0.50	<0.50	**29**	<0.50
	10/08/03	<0.50	3.8	<0.50	<0.50	**0.57**	NA	3.6	9.7	<0.50	<0.50	**28**	<0.50
	10/24/03	<0.50	3.3	<0.50	<0.50	<0.50	NA	3.6	9.9	<0.50	<0.50	**26**	<0.50
	12/10/03	<0.50	3.8	<0.50	<0.50	**0.65**	NA	3.3	10	<0.50	<0.50	**25**	<0.50
	05/12/04	<0.50	2.6	<0.50	<0.50	<0.50	3.1	NA	8.2	<0.50	<0.50	**17**	<0.50
30142	08/30/00	<25	<25	<25	<25	**630**	NA	<25	29	<25	<25	<25	<50
	08/30/00	<5.0	<5.0	<5.0	<5.0	**560**	NA	<5.0	28	<5.0	<5.0	**8.4**	<10
	12/14/00	<2.5	<2.5	<2.5	<2.5	**400**	NA	<2.5	19	<2.5	<2.5	**7.5**	<2.5
	12/14/00	<0.50	1	<0.50	<0.50	**330**	NA	<0.50	22	<0.50	<0.50	**11**	<0.50
	02/12/01	<2.5	<2.5	<2.5	<2.5	**400**	NA	<2.5	17	<2.5	<2.5	**7.8**	<2.5
	02/12/01	<0.50	1.1	<0.50	<0.50	**320**	NA	<0.50	18	<0.50	<0.50	**7.2**	<0.50
	05/29/01	<2.5	<2.5	<2.5	<2.5	**650**	NA	<2.5	24	<2.5	<2.5	4.4	<2.5
	05/29/01	<0.50	1.5	<0.50	<0.50	**400**	NA	<0.50	24	<0.50	<0.50	**6**	<0.50
Layer B Wells													
132	07/14/00	<10	<10	<10	**12**	<10	NA	**120**	**170**	<10	<10	**3600**	<10
	07/14/00	<1.0	3.2	<1.0	**13**	**2.3**	NA	**98**	**130**	<1.0	3.1	**1900**	<1.0
	08/01/01	<25	<25	<25	<25	<25	NA	**130**	64	<25	<25	**5600**	<25
	08/01/01	<1.0	<1.0	<1.0	**27**	**14**	NA	**120**	54	<1.0	<1.0	NA	<1.0
162	06/25/02	<0.50	<0.50	<0.50	<0.50	<0.50	NA	0.94	<0.50	<0.50	<0.50	3.2	**0.86**
314	11/04/02	<5.0	<5.0	<5.0	<5.0	<5.0	NA	<5.0	<5.0	<5.0	<5.0	**63**	<10
	11/04/02	<5.0	<5.0	<5.0	<5.0	<5.0	NA	<5.0	<5.0	<5.0	<5.0	**65 J**	<10
315	11/04/02	<5.0	<5.0	<5.0	<5.0	<5.0	NA	<5.0	<5.0	<5.0	<5.0	**39**	<10
1028	06/28/02	<0.50	<0.50	<0.50	<0.50	<0.50	NA	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
1229	04/05/00	<0.50	<0.50	<0.50	<0.50	<0.50	NA	1.1	4.6	<0.50	<0.50	**79**	<0.50
	04/05/00	<0.50	<0.50	<0.50	<0.50	<0.50	NA	1.1 J	4.6 J	<0.50	<0.50	**79 J**	<0.50
	07/05/01	<0.50	<0.50	<0.50	<0.50	<0.50	NA	0.99	4	<0.50	<0.50	**83**	<0.50
	04/04/02	<0.50	<0.50	<0.50	<0.50	<0.50	NA	1	4.6	<0.50	<0.50	**89**	<0.50
	04/25/03	<0.50	<0.50	<0.50	0.5	**1**	NA	1.7	4.6	<0.50	<0.50	**100**	<0.50

TABLE B-3: Summary of Detects - Volatile Organic Compounds
January 2000 through June 2004
Zone 2 Perimeter Groundwater Operable Unit

WELL NUMBER	SAMPLE DATE	1,1,1-TCA (µg/l)	1,1,2-TCA (µg/l)	1,1-DCA (µg/l)	1,1-DCE (µg/l)	1,2-DCA (µg/l)	cis-1,2-DCE (µg/l)	cis/trans-1,2-DCE (µg/l)	Chloroform (µg/l)	Methylene Chloride (µg/l)	PCE (µg/l)	TCE (µg/l)	Vinyl Chloride (µg/l)
	MCL[1]:	**200**	**5**	**5**	**6**	**0.5**	**6**	**10**	**80**	**5**	**5**	**5**	**0.5**
Layer B Wells													
1237	03/29/00	<0.50	<0.50	<0.50	<0.50	<0.50	NA	<0.50	<0.50	<0.50	<0.50	4.3	<0.50
	06/26/01	<0.50	<0.50	<0.50	<0.50	<0.50	NA	<0.50	<0.50	<0.50	<0.50	**5.5**	<0.50
	04/01/02	<0.50	<0.50	<0.50	<0.50	<0.50	NA	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
	04/10/03	<0.50	<0.50	<0.50	<0.50	<0.50	NA	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
1238	03/29/00	<0.50	<0.50	<0.50	<0.50	<0.50	NA	<0.50	<0.50	<0.50	<0.50	**15**	<0.50
	06/26/01	<0.50	<0.50	<0.50	<0.50	<0.50	NA	<0.50	<0.50	<0.50	<0.50	**6.8**	<0.50
	04/01/02	<0.50	<0.50	<0.50	<0.50	<0.50	NA	<0.50	<0.50	<0.50	<0.50	**6.7**	<0.50
	04/10/03	<0.50	<0.50	<0.50	<0.50	<0.50	NA	<0.50	<0.50	<0.50	<0.50	3.1	<0.50
	06/04/04	<0.50	<0.50	<0.50	<0.50	<0.50	NA	<0.50	<0.50	<0.50	<0.50	3.4	<0.50
1256	06/07/02	<0.50	<0.50	<0.50	<0.50	<0.50	NA	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
1257	06/07/02	<0.50	<0.50	<0.50	<0.50	<0.50	NA	<0.50	<0.50	<0.50	<0.50	1.4	<0.50
1305	07/03/02	<0.50	<0.50	<0.50	<0.50	<0.50	NA	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
1312	07/08/02	<0.50	<0.50	<0.50	3.1	**5.6**	NA	3.9	<0.50	<0.50	<0.50	**70**	<0.50
1319	06/12/02	<0.50	<0.50	<0.50	<0.50	<0.50	NA	<0.50	<0.50	<0.50	1.5	4.9	<0.50
1320	06/12/02	<0.50	<0.50	<0.50	<0.50	<0.50	NA	<0.50	<0.50	<0.50	1.2	0.77	<0.50
1325	06/12/01	<0.50	<0.50	<0.50	0.6	<0.50	NA	7.7	<0.50	<0.50	<0.50	**150**	<0.50
	06/13/02	<0.50	<0.50	<0.50	0.87	<0.50	NA	5.9	<0.50	<0.50	<0.50	**100**	<0.50
1333	06/06/00	<0.50	<0.50	<0.50	<0.50	<0.50	NA	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
	08/06/01	<0.50	<0.50	<0.50	<0.50	<0.50	NA	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
	04/19/02	<0.50	<0.50	<0.50	<0.50	<0.50	NA	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
	04/11/03	<0.50	<0.50	<0.50	<0.50	<0.50	NA	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
	04/15/04	<0.50	<0.50	<0.50	<0.50	<0.50	NA	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
1345	06/17/02	<0.50	<0.50	<0.50	<0.50	<0.50	NA	<0.50	<0.50	<0.50	<0.50	**6.5**	<0.50
	06/17/02	<0.50	<0.50	<0.50	<0.50	<0.50	NA	<0.50	<0.50	<0.50	<0.50	**6.3 J**	<0.50
3068	06/13/00	<25	<25	<25	<25	<25	NA	**74**	<25	<25	<25	**3800**	<25
	06/13/00	<2.5	<2.5	<2.5	<2.5	<2.5	NA	**60**	3.7	<2.5	<2.5	**1700**	<2.5
	08/02/01	<10	<10	<10	<10	<10	NA	**61**	<10	<10	<10	**3700**	<10
	08/02/01	<1.0	<1.0	<1.0	1.1	<1.0	NA	**80**	7.8	<1.0	<1.0	NA	<1.0
	04/24/02	<10	<10	<10	<10	<10	NA	**82**	<10	<10	<10	**3100**	<10
	04/24/02	<0.50	0.6	<0.50	1.9	<0.50	NA	**91**	3.7	<0.50	0.83	**1500**	**0.52**
	04/17/03	<25	<25	<25	<25	<25	NA	**81**	<25	<25	<25	**4600**	<25
	04/17/03	<2.5	<2.5	<2.5	2.6	<2.5	NA	**99**	3.3	<2.5	<2.5	**3100**	<2.5
3072	08/02/01	<0.50	<0.50	<0.50	<0.50	<0.50	NA	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
	08/02/01	<0.50	<0.50	<0.50	<0.50	<0.50	NA	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
3329	11/05/02	<25	<25	<25	<25	<25	NA	<25	<25	<25	<25	**360**	<50
	11/05/02	<5.0	<5.0	<5.0	<5.0	<5.0	NA	**16**	<5.0	<5.0	<5.0	**350**	<10
3501	11/05/02	<10	<10	<10	<10	<10	NA	**17**	<10	<10	<10	**280**	<20
	11/05/02	<5.0	<5.0	<5.0	<5.0	<5.0	NA	**18**	<5.0	<5.0	<5.0	**300**	<10
3579	06/25/02	<0.50	<0.50	<0.50	<0.50	<0.50	NA	0.61	<0.50	<0.50	<0.50	**18**	<0.50
30099	06/12/01	<0.50	<0.50	<0.50	<0.50	<0.50	NA	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
	07/16/02	<0.50	<0.50	<0.50	<0.50	<0.50	NA	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
	07/16/02	<0.50	<0.50	<0.50	<0.50	<0.50	NA	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50

TABLE B-3: Summary of Detects - Volatile Organic Compounds
January 2000 through June 2004
Zone 2 Perimeter Groundwater Operable Unit

WELL NUMBER	SAMPLE DATE	1,1,1-TCA (µg/l)	1,1,2-TCA (µg/l)	1,1-DCA (µg/l)	1,1-DCE (µg/l)	1,2-DCA (µg/l)	cis-1,2-DCE (µg/l)	cis/trans-1,2-DCE (µg/l)	Chloroform (µg/l)	Methylene Chloride (µg/l)	PCE (µg/l)	TCE (µg/l)	Vinyl Chloride (µg/l)
	MCL[1]:	**200**	**5**	**5**	**6**	**0.5**	**6**	**10**	**80**	**5**	**5**	**5**	**0.5**
Layer C Wells													
159	06/26/02	<25	<25	<25	<25	<25	NA	<25	<25	<25	<25	**6800**	<25
	06/26/02	<0.50	<0.50	<0.50	2.5	<0.50	NA	4	4.7	<0.50	1.1	NA	<0.50
160	06/26/02	<2.5	<2.5	<2.5	<2.5	<2.5	NA	<2.5	<2.5	<2.5	<2.5	**950**	<2.5
	06/26/02	<0.50	<0.50	<0.50	<0.50	<0.50	NA	<0.50	<0.50	<0.50	<0.50	NA	<0.50
163	06/25/02	<0.50	<0.50	<0.50	1.7	<0.50	NA	1.3	0.5	<0.50	<0.50	**230**	<0.50
178	06/26/02	<0.50	<0.50	<0.50	<0.50	<0.50	NA	<0.50	<0.50	<0.50	<0.50	**6.8**	<0.50
306	04/18/00	<5.0	<5.0	<5.0	5	<5.0	NA	<5.0	<5.0	<5.0	<5.0	**1200**	<5.0
	04/18/00	<0.50	<0.50	<0.50	4.3	**0.77**	NA	0.66	<0.50	<0.50	<0.50	**400**	<0.50
310	04/13/00	<0.50	<0.50	<0.50	<0.50	<0.50	NA	<0.50	<0.50	<0.50	<0.50	**10**	<0.50
	04/13/00	<0.50	<0.50	<0.50	<0.50	<0.50	NA	<0.50	<0.50	<0.50	<0.50	**11 J**	<0.50
1231	04/05/00	<0.50	<0.50	<0.50	<0.50	<0.50	NA	<0.50	<0.50	<0.50	<0.50	**100**	<0.50
	07/05/01	<2.5	<2.5	<2.5	<2.5	<2.5	NA	<2.5	<2.5	<2.5	<2.5	NA	<2.5
	07/05/01	<0.50	<0.50	<0.50	<0.50	<0.50	NA	<0.50	<0.50	<0.50	<0.50	**200**	<0.50
	07/05/01	<2.5	<2.5	<2.5	<2.5	<2.5	NA	<2.5	<2.5	<2.5	<2.5	NA	<2.5
	07/05/01	<0.5	<0.5	<0.5	<0.5	<0.5	NA	<0.5	<0.5	<0.5	<0.5	**210 J**	<0.5
	04/04/02	<0.50	<0.50	<0.50	<0.50	<0.50	NA	<0.50	<0.50	<0.50	<0.50	**200**	<0.50
	04/04/02	<2.5	<2.5	<2.5	<2.5	<2.5	NA	<2.5	<2.5	<2.5	<2.5	**250 J**	<2.5
	04/04/02	<0.50	<0.50	<0.50	0.52 J	<0.50	NA	<0.50	<0.50	<0.50	<0.50	**230 J**	<0.50
	04/11/03	<0.50	<0.50	<0.50	<0.50	<0.50	NA	0.52	<0.50	<0.50	<0.50	**190**	<0.50
1239	03/29/00	<0.50	<0.50	<0.50	<0.50	<0.50	NA	<0.50	<0.50	<0.50	<0.50	**240**	<0.50
	06/25/01	<5.0	<5.0	<5.0	<5.0	<5.0	NA	<5.0	<5.0	<5.0	<5.0	**410**	<5.0
	06/25/01	<0.50	<0.50	<0.50	2	<0.50	NA	1.1	<0.50	<0.50	<0.50	NA	<0.50
	04/19/02	<2.5	<2.5	<2.5	<2.5	<2.5	NA	<2.5	<2.5	<2.5	<2.5	**260**	<2.5
	04/19/02	<0.50	<0.50	<0.50	<0.50	<0.50	NA	<0.50	<0.50	<0.50	<0.50	**240**	<0.50
	05/09/03	<2.5	<2.5	<2.5	<2.5	<2.5	NA	<2.5	<2.5	<2.5	<2.5	**360**	<2.5
	05/09/03	<0.50	<0.50	<0.50	0.99	<0.50	NA	0.75	<0.50	<0.50	<0.50	NA	<0.50
	06/04/04	<2.5	<2.5	<2.5	<2.5	<2.5	NA	<2.5	<2.5	2.8	<2.5	**370**	<2.5
	06/04/04	<0.50	<0.50	<0.50	1.7	<0.50	NA	1.3	<0.50	0.54	<0.50	**280**	<0.50
1240	03/29/00	<0.50	<0.50	<0.50	<0.50	<0.50	NA	<0.50	<0.50	<0.50	<0.50	**55**	<0.50
	06/25/01	<0.50	<0.50	<0.50	<0.50	<0.50	NA	<0.50	<0.50	<0.50	<0.50	**190**	<0.50
	04/19/02	<2.5	<2.5	<2.5	<2.5	<2.5	NA	<2.5	<2.5	<2.5	<2.5	**220**	<2.5
	04/19/02	<0.50	<0.50	<0.50	<0.50	<0.50	NA	<0.50	<0.50	<0.50	<0.50	**210**	<0.50
	10/02/03	<5.0	<5.0	<5.0	<5.0	<5.0	NA	<5.0	<5.0	<5.0	<5.0	**330**	<5.0
	10/02/03	<0.50	<0.50	<0.50	0.89	<0.50	NA	<0.50	<0.50	<0.50	<0.50	**260**	<0.50
	06/04/04	<2.5	<2.5	<2.5	<2.5	<2.5	NA	<2.5	<2.5	<2.5	<2.5	**260**	<2.5
	06/04/04	<0.50	<0.50	<0.50	0.86	<0.50	NA	<0.50	<0.50	<0.50	<0.50	**190**	<0.50
1258	06/07/02	<0.50	<0.50	<0.50	<0.50	<0.50	NA	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
1282	06/09/00	<0.50	<0.50	<0.50	<0.50	<0.50	NA	<0.50	<0.50	<0.50	<0.50	2.2	<0.50
	07/10/01	<0.50	<0.50	<0.50	<0.50	<0.50	NA	<0.50	<0.50	<0.50	<0.50	0.96	<0.50
	04/03/02	<0.50	<0.50	<0.50	<0.50	<0.50	NA	<0.50	<0.50	<0.50	<0.50	0.86	<0.50
	04/15/03	<0.50	<0.50	<0.50	<0.50	<0.50	NA	<0.50	<0.50	<0.50	<0.50	1.8	<0.50
1283	06/07/00	<0.50	<0.50	<0.50	<0.50	<0.50	NA	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
	07/10/01	<0.50	<0.50	<0.50	<0.50	<0.50	NA	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
	04/05/02	<0.50	<0.50	<0.50	<0.50	<0.50	NA	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
	07/07/03	<0.50	<0.50	<0.50	<0.50	<0.50	NA	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
1291	07/12/02	<0.50	<0.50	<0.50	<0.50	**0.53**	NA	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
1292	07/12/02	<0.50	<0.50	<0.50	<0.50	<0.50	NA	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
	07/12/02	<0.50	<0.50	<0.50	<0.50	<0.50	NA	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50

TABLE B-3: Summary of Detects - Volatile Organic Compounds
January 2000 through June 2004
Zone 2 Perimeter Groundwater Operable Unit

WELL NUMBER	SAMPLE DATE	1,1,1-TCA (µg/l)	1,1,2-TCA (µg/l)	1,1-DCA (µg/l)	1,1-DCE (µg/l)	1,2-DCA (µg/l)	cis-1,2-DCE (µg/l)	cis/trans-1,2-DCE (µg/l)	Chloroform (µg/l)	Methylene Chloride (µg/l)	PCE (µg/l)	TCE (µg/l)	Vinyl Chloride (µg/l)
	MCL[1]:	**200**	**5**	**5**	**6**	**0.5**	**6**	**10**	**80**	**5**	**5**	**5**	**0.5**
Layer C Wells													
1294	05/24/00	<0.50	<0.50	<0.50	<0.50	<0.50	NA	<0.50	<0.50	<0.50	<0.50	1	<0.50
	07/19/02	<0.50	<0.50	<0.50	<0.50	<0.50	NA	<0.50	<0.50	<0.50	<0.50	2.2	<0.50
1295	05/24/00	<0.50	<0.50	<0.50	<0.50	<0.50	NA	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
	07/18/02	<0.50	<0.50	<0.50	<0.50	<0.50	NA	<0.50	<0.50	<0.50	<0.50	0.69	<0.50
1306	07/03/02	<0.50	<0.50	<0.50	<0.50	<0.50	NA	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
1313	07/08/02	<0.50	<0.50	<0.50	<0.50	<0.50	NA	<0.50	<0.50	<0.50	<0.50	**14**	<0.50
1321	06/12/02	<0.50	<0.50	<0.50	<0.50	<0.50	NA	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
1322	07/18/02	<0.50	<0.50	<0.50	<0.50	<0.50	NA	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
1326	06/13/02	<0.50	<0.50	<0.50	1.1	<0.50	NA	1.8	<0.50	<0.50	<0.50	**36**	<0.50
1334	06/06/00	<0.50	<0.50	<0.50	<0.50	<0.50	NA	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
	08/06/01	<0.50	<0.50	<0.50	<0.50	<0.50	NA	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
	04/19/02	<0.50	<0.50	<0.50	<0.50	<0.50	NA	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
	04/10/03	<0.50	<0.50	<0.50	<0.50	<0.50	NA	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
	04/15/04	<0.50	<0.50	<0.50	<0.50	<0.50	NA	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
1335	06/06/00	<0.50	<0.50	<0.50	<0.50	<0.50	NA	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
	08/06/01	<0.50	<0.50	<0.50	<0.50	<0.50	NA	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
	04/19/02	<0.50	<0.50	<0.50	<0.50	<0.50	NA	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
	04/10/03	<0.50	<0.50	<0.50	<0.50	<0.50	NA	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
	04/15/04	<0.50	<0.50	<0.50	<0.50	<0.50	NA	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
1346	06/17/02	<0.50	<0.50	<0.50	3	<0.50	NA	1.1	<0.50	<0.50	<0.50	**24**	<0.50
1347	06/17/02	<0.50	<0.50	<0.50	<0.50	<0.50	NA	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
3044	07/09/02	<0.50	<0.50	<0.50	2.2	**1.8**	NA	2.2	**130**	1.9	<0.50	**190**	<0.50
	07/09/02	<0.50	<0.50	<0.50	<0.50	**1.8 J**	NA	<0.50	**120 J**	1.8 J	<0.50	**180 J**	<0.50
	10/22/03	<0.50	<0.50	<0.50	<0.50	<0.50	NA	<0.50	**120**	<0.50	<0.50	**160**	<0.50
3069	06/13/00	<25	<25	<25	<25	<25	NA	**75**	<25	<25	<25	**3800**	<25
	06/13/00	<0.50	<0.50	<0.50	1.2	<0.50	NA	**63**	4.1	<0.50	<0.50	**1700**	<0.50
	08/02/01	<10	<10	<10	<10	<10	NA	**71**	<10	<10	<10	**3800**	<10
	08/02/01	<1.0	<1.0	<1.0	1.4	<1.0	NA	**77**	4.8	<1.0	<1.0	NA	<1.0
	04/23/02	<10	<10	<10	<10	<10	NA	**85**	<10	<10	<10	**2900**	<10
	04/23/02	<0.50	0.67	<0.50	1.9	<0.50	NA	**93**	4.1	<0.50	0.91	**1400**	<0.50
	04/17/03	<25	<25	<25	<25	<25	NA	**85**	<25	<25	<25	**3500**	<25
	04/17/03	<2.5	<2.5	<2.5	<2.5	<2.5	NA	**100**	3.2	<2.5	<2.5	**2400**	<2.5
3073	08/02/01	<0.50	<0.50	<0.50	4.6	<0.50	NA	0.54	1.6	<0.50	<0.50	**32**	<0.50
3120	06/24/02	<0.50	<0.50	<0.50	<0.50	<0.50	NA	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
3294	05/31/00	<5.0	<5.0	<5.0	**17**	<5.0	NA	**31**	**450**	<5.0	**6.1**	**2500**	<5.0
	05/31/00	<0.50	3.8	1.9	**16**	**2.7**	NA	**26**	**270**	<0.50	**6.1**	**1100**	<0.50
3580	06/25/02	<0.50	<0.50	<0.50	<0.50	<0.50	NA	<0.50	<0.50	<0.50	<0.50	**7.3**	<0.50
3581	06/25/02	<0.50	<0.50	<0.50	<0.50	<0.50	NA	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50

TABLE B-3: Summary of Detects - Volatile Organic Compounds
January 2000 through June 2004
Zone 2 Perimeter Groundwater Operable Unit

WELL NUMBER	SAMPLE DATE	1,1,1-TCA (µg/l)	1,1,2-TCA (µg/l)	1,1-DCA (µg/l)	1,1-DCE (µg/l)	1,2-DCA (µg/l)	cis-1,2-DCE (µg/l)	cis/trans-1,2-DCE (µg/l)	Chloroform (µg/l)	Methylene Chloride (µg/l)	PCE (µg/l)	TCE (µg/l)	Vinyl Chloride (µg/l)
	MCL[1]:	200	5	5	6	0.5	6	10	80	5	5	5	0.5
Layer D Wells													
164	06/24/02	<0.50	<0.50	<0.50	<0.50	<0.50	NA	<0.50	<0.50	<0.50	<0.50	0.86	<0.50
179	06/26/02	<0.50	<0.50	<0.50	<0.50	<0.50	NA	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
1232	04/05/00	<0.50	<0.50	<0.50	<0.50	<0.50	NA	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
	07/05/01	<0.50	<0.50	<0.50	<0.50	<0.50	NA	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
	04/04/02	<0.50	<0.50	<0.50	<0.50	<0.50	NA	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
	04/11/03	<0.50	<0.50	<0.50	<0.50	<0.50	NA	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
1293	07/18/02	<0.50	<0.50	<0.50	<0.50	<0.50	NA	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
1314	07/08/02	<0.50	<0.50	<0.50	<0.50	<0.50	NA	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
1327	07/30/02	<0.50	<0.50	<0.50	<0.50	<0.50	NA	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
1336	06/06/00	<0.50	<0.50	<0.50	<0.50	<0.50	NA	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
	08/06/01	<0.50	<0.50	<0.50	<0.50	<0.50	NA	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
	04/19/02	<0.50	<0.50	<0.50	<0.50	<0.50	NA	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
	07/09/03	<0.50	<0.50	<0.50	<0.50	<0.50	NA	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
1348	07/19/02	<0.50	<0.50	<0.50	<0.50	<0.50	NA	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
3045	07/09/02	<5.0	<5.0	<5.0	<5.0	<5.0	NA	**25**	7.3	**250**	<5.0	**430**	<5.0
	07/09/02	<0.50	<0.50	<0.50	<0.50	**0.92**	NA	9.7	8.6	**240**	<0.50	**400**	<0.50
	10/22/03	<5.0	<5.0	<5.0	<5.0	<5.0	NA	5.2	**730**	<5.0	<5.0	**1400**	<5.0
	10/22/03	<0.50	2.7	<0.50	1.7	<0.50	NA	8	**520**	<0.50	4.3	**980**	<0.50
3070	07/06/00	<0.50	<0.50	<0.50	<0.50	<0.50	NA	<0.50	<0.50	<0.50	<0.50	1.1	<0.50
	08/07/01	<0.50	<0.50	<0.50	<0.50	<0.50	NA	0.57	<0.50	<0.50	<0.50	1.1	<0.50
	05/03/02	<0.50	<0.50	<0.50	<0.50	<0.50	NA	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
	10/02/03	<0.50	<0.50	<0.50	<0.50	<0.50	NA	<0.50	<0.50	<0.50	<0.50	1.6	<0.50
	10/02/03	<0.50	<0.50	<0.50	<0.50	<0.50	NA	<0.50	<0.50	<0.50	<0.50	1.4	<0.50
3360	06/24/02	<0.50	<0.50	<0.50	<0.50	<0.50	NA	<0.50	<0.50	<0.50	<0.50	**16**	<0.50
Layer E Wells													
1233	04/05/00	<0.50	<0.50	<0.50	<0.50	<0.50	NA	0.5	<0.50	<0.50	<0.50	**8**	<0.50
	07/05/01	<0.50	<0.50	<0.50	<0.50	<0.50	NA	1.8	<0.50	<0.50	<0.50	**30**	<0.50
	04/04/02	<0.50	<0.50	<0.50	<0.50	<0.50	NA	2.8	<0.50	<0.50	<0.50	**43**	<0.50
	04/11/03	<0.50	<0.50	<0.50	<0.50	<0.50	NA	3	<0.50	<0.50	<0.50	**41**	<0.50
	06/10/04	<0.50	<0.50	<0.50	<0.50	<0.50	**6.1**	NA	<0.50	<0.50	<0.50	**53**	<0.50
1234	04/05/00	<0.50	<0.50	<0.50	<0.50	<0.50	NA	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
	07/05/01	<0.50	<0.50	<0.50	<0.50	<0.50	NA	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
	04/04/02	<0.50	<0.50	<0.50	<0.50	<0.50	NA	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
	04/11/03	<0.50	<0.50	<0.50	<0.50	<0.50	NA	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
	04/11/03	<0.50	<0.50	<0.50	<0.50	<0.50	NA	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
	06/10/04	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	NA	<0.50	<0.50	<0.50	<0.50	<0.50
1315	07/08/02	<0.50	<0.50	<0.50	<0.50	<0.50	NA	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
1316	07/08/02	<0.50	<0.50	<0.50	<0.50	<0.50	NA	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
1328	07/30/02	<0.50	<0.50	<0.50	<0.50	<0.50	NA	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
1349	07/19/02	<0.50	<0.50	<0.50	<0.50	<0.50	NA	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
3047	07/09/02	<0.50	<0.50	<0.50	<0.50	<0.50	NA	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
	10/22/03	<0.50	<0.50	<0.50	<0.50	<0.50	NA	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50

TABLE B-3: Summary of Detects - Volatile Organic Compounds
January 2000 through June 2004
Zone 2 Perimeter Groundwater Operable Unit

WELL NUMBER	SAMPLE DATE	1,1,1-TCA (µg/l)	1,1,2-TCA (µg/l)	1,1-DCA (µg/l)	1,1-DCE (µg/l)	1,2-DCA (µg/l)	cis-1,2-DCE (µg/l)	cis/trans-1,2-DCE (µg/l)	Chloroform (µg/l)	Methylene Chloride (µg/l)	PCE (µg/l)	TCE (µg/l)	Vinyl Chloride (µg/l)
	MCL[1]:	**200**	**5**	**5**	**6**	**0.5**	**6**	**10**	**80**	**5**	**5**	**5**	**0.5**

Notes:
1. California Department of Health Services (DHS) Primary Maximum Contaminant Level (MCL).
Results shown in bold exceed the Primary MCL.
VOCs not detected in any wells during the RI Sampling Period are not included in table.

Abbreviations:
MCL = Maximum Contaminant Level
1,1,1-TCA = 1,1,1-Trichloroethane
1,1,2-TCA = 1,1,2-Trichloroethane
1,1-DCA = 1,1-Dichloroethane
1,1-DCE = 1,1-Dichloroethylene
1,2-DCA = 1,2-Dichloroethane
1,2-DCE = 1,2-Dichloroethene
PCE = Tetrachloroethylene
TCE = Trichloroethylene
µg/l = micrograms per liter
< = less than
NA = Not analyzed
J = Estimated concentration
* = multiple sample results, highest concentrations shown

TABLE B-3a: Summary of Detects - Volatile Organic Compounds (selected IRCTS wells)
January 2000 through June 2004
Zone 2 Perimeter Groundwater Operable Unit

WELL NUMBER	SAMPLE DATE	1,1,1-TCA (µg/l)	1,1-DCA (µg/l)	1,1-DCE (µg/l)	1,2-DCA (µg/l)	1,2-DCE (µg/l)	cis-1,2-DC E (µg/l)	trans-1,2-DCE (µg/l)	1,2-Dichloro propane (µg/l)	2-Chloroethyl vinyl ether	BDCM (µg/l)	Bromofluoro benzene (µg/l)	Carbon Tetrachloride	Chloroform (µg/l)	Dibromofluoro methane (µg/l)	m-DCB (µg/l)	o-DCB (µg/l)	p-DCB (µg/l)	Freon-12 (µg/l)	Freon-113 (µg/l)	Methyl Bromide (µg/l)	Methyl Chloride (µg/l)	Methylene Chloride (µg/l)	PCE (µg/l)	TCE (µg/l)
	MCL[1]:	200	5	6	0.5	6	6	10	5	none	80	none	0.5	80	none	600[2]	600	5	1,000[2]	1,200	9.8[3]	3[4]	5	5	5
Layer A Wells																									
STSW-142A	08/26/02	<0.50	<0.50	<0.50	<0.50	NA	0.52	<0.50	<0.50	<5.0	<0.50	NA	<0.50	<0.50	NA	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	**11**
	12/12/02	<0.50	<0.50	<0.50	<0.50	NA	<0.50	<0.50	<0.50	<5.0	<0.50	NA	<0.50	<0.50	NA	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	**12**
	03/18/03	<0.500	<0.500	<0.500	<0.500	NA	<0.500	<0.500	<0.500	<5.00	<0.500	NA	<0.500	<0.500	NA	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	**6.96**
	06/25/03	<0.50	<0.50	<0.50	<0.50	NA	<0.50	<0.50	<0.50	NA	<0.50	NA	<0.50	<0.50	NA	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	**8.7**
STSW-143A	08/26/02	<0.50	<0.50	<0.50	<0.50	NA	<0.50	<0.50	<0.50	<5.0	<0.50	NA	<0.50	<0.50	NA	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
	12/27/02	<0.50	<0.50	<0.50	<0.50	NA	<0.50	<0.50	<0.50	<5.0	<0.50	NA	<0.50	<0.50	NA	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
	03/21/03	<0.50	<0.50	<0.50	<0.50	NA	<0.50	<0.50	<0.50	NA	<0.50	NA	<0.50	<0.50	NA	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	0.5
	06/24/03	<0.50	<0.50	<0.50	<0.50	NA	<0.50	<0.50	<0.50	NA	<0.50	NA	<0.50	<0.50	NA	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	0.66	<0.50	<0.50	<0.50
Layer B Wells																									
STSW-08A	05/09/02	<12	<12	<12	<12	NA	<12	<12	<12	<120	<12	NA	<12	43	NA	<12	<12	<12	<12	<12	<12	<12	<12	<12	**920**
	08/14/02	<0.50	<0.50	<0.50	**0.9**	1.4	NA	NA	<0.50	NA	<0.50	NA	<0.50	57	NA	NA	NA	NA	<0.50	<0.50	NA	NA	<0.50	3.7	NA
	08/14/02	<5.0	<5.0	<5.0	<5.0	<5.0	NA	NA	<5.0	NA	<5.0	NA	<5.0	58	NA	NA	NA	NA	<5.0	<5.0	NA	NA	<5.0	**18**	**1300**
	03/28/03	<5.0	<5.0	<5.0	<5.0	NA	<5.0	<5.0	<5.0	NA	<5.0	46.9	<5.0	17	56.6	NA	NA	NA	<10	<5.0	<10	<10	<5.0	<5.0	**380**
	03/28/03	<10	<10	<10	<10	NA	<10	<10	<10	NA	<10	48.2	<10	17	56.1	NA	NA	NA	<20	<10	<20	<20	<10	<10	**370**
	10/09/03	<0.50	<0.50	<0.50	<0.50	0.81	NA	NA	<0.50	NA	<0.50	NA	<0.50	38	NA	NA	NA	NA	<0.50	<0.50	NA	NA	<0.50	1.9	**510**
	10/09/03	<5.0	<5.0	<5.0	<5.0	<5.0	NA	NA	<5.0	NA	<5.0	NA	<5.0	39	NA	NA	NA	NA	<5.0	<5.0	NA	NA	<5.0	<5.0	**750**
	03/24/04	<0.50	<0.50	<0.50	<0.50	1.5	NA	NA	<0.50	NA	<0.50	NA	<0.50	24	NA	NA	NA	NA	<0.50	<0.50	NA	NA	<0.50	<0.50	**420**
	03/24/04	<2.5	<2.5	<2.5	<2.5	<2.5	NA	NA	<2.5	NA	<2.5	NA	<2.5	27	NA	NA	NA	NA	<2.5	<2.5	NA	NA	<2.5	<2.5	**580**
STSW-104A	12/19/00	<0.150	<0.120	<0.180	<0.0900	NA	0.152	<0.140	<0.120	<0.130	<0.110	NA	<0.150	<0.130	NA	<0.0700	<0.170	<0.110	0.399	<0.150	<0.160	<0.340	0.201	1.64	0.443
	02/06/01	<0.150	<0.120	<0.180	<0.0900	NA	0.169	<0.140	<0.120	0.952	<0.110	NA	<0.150	<0.130	NA	0.246	<0.170	<0.110	0.162	0.358	<0.160	<0.340	0.286	1.75	<0.160
	05/25/01	<0.15	<0.12	<0.18	<0.090	NA	0.15	<0.14	<0.12	1.3	<0.11	NA	<0.15	<0.13	NA	0.14	0.21	0.21	0.26	<0.15	0.18	<0.34	0.16	1.6	0.47
	08/22/01	<0.15	<0.12	<0.18	<0.090	NA	0.13	<0.14	<0.12	<0.13	<0.11	NA	<0.15	<0.13	NA	<0.070	<0.17	<0.11	0.21	<0.15	<0.16	0.45	<0.13	1.3	0.38
	05/02/02	<0.50	<0.50	<0.50	<0.50	NA	<0.50	<0.50	<0.50	<5.0	<0.50	NA	<0.50	<0.50	NA	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	1.1	<0.50
STSW-10A	05/03/02	<2.5	<2.5	<2.5	<2.5	NA	**6**	<2.5	<2.5	<25	<2.5	NA	<2.5	<2.5	NA	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	**90**
	05/06/04	<2.5	<2.5	<2.5	**3.3**	NA	5.2	<2.5	<2.5	NA	<2.5	NA	<2.5	<2.5	NA	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	**82**
STSW-11A	05/03/02	<0.50	<0.50	<0.50	**2.1**	NA	<0.50	<0.50	<0.50	<5.0	<0.50	NA	<0.50	<0.50	NA	<0.50	<0.50	<0.50	<0.50	0.92	<0.50	<0.50	<0.50	1.1	**11**
STSW-140B	06/11/02	<0.50	1.3	**9.6**	**47**	NA	5.1	<0.50	<0.50	<5.0	<0.50	NA	<0.50	<0.50	NA	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	**93**
	06/11/02	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	**67**
	12/06/02	<2.5	<2.5	**6.3**	**43**	NA	3.6	<2.5	<2.5	<25	<2.5	NA	<2.5	<2.5	NA	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	**84**
	03/19/03	<0.500	1.22	**6.9**	**39.2**	NA	4.33	<0.500	<0.500	<5.00	<0.500	NA	<0.500	<0.500	NA	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	**84**
	03/19/03	<2.00	<2.00	5.92	**39.1**	NA	4.43	<2.00	<2.00	<20.0	<2.00	NA	<2.00	<2.00	NA	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	**89**
	06/24/03	<0.50	<0.50	0.95	**4.7**	NA	1.3	<0.50	<0.50	NA	<0.50	NA	<0.50	<0.50	NA	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	**18**
Layer B Wells																									
STSW-141B	06/12/02	<0.50	0.78	3	**18**	NA	2.7	<0.50	<0.50	<5.0	<0.50	NA	<0.50	<0.50	NA	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	**47**
	12/04/02	<1.0	<1.0	5.6	**21**	NA	2.3	<1.0	<1.0	<10	<1.0	NA	<1.0	<1.0	NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	**46**
	03/19/03	<0.500	<0.500	1.79	**8.17**	NA	0.974	<0.500	<0.500	<5.00	<0.500	NA	<0.500	<0.500	NA	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	**18.6**
	06/24/03	<0.50	0.81	**6.8**	**22**	NA	2.8	<0.50	<0.50	NA	<0.50	NA	<0.50	<0.50	NA	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	**48**
STSW-142B	08/26/02	<10	<10	<10	<10	NA	**15**	<10	<10	<100	<10	NA	<10	<10	NA	<10	<10	<10	<10	<10	<10	<10	<10	<10	**270**

TABLE B-3a: Summary of Detects - Volatile Organic Compounds (selected IRCTS wells)
January 2000 through June 2004
Zone 2 Perimeter Groundwater Operable Unit

WELL NUMBER	SAMPLE DATE	1,1,1-TCA (µg/l)	1,1-DCA (µg/l)	1,1-DCE (µg/l)	1,2-DCA (µg/l)	1,2-DCE (µg/l)	cis-1,2-DC E (µg/l)	trans-1,2-DCE (µg/l)	1,2-Dichloro propane (µg/l)	2-Chloroethyl vinyl ether	BDCM (µg/l)	Bromofluoro benzene (µg/l)	Carbon Tetrachloride	Chloroform (µg/l)	Dibromofluoro methane (µg/l)	m-DCB (µg/l)	o-DCB (µg/l)	p-DCB (µg/l)	Freon-12 (µg/l)	Freon-113 (µg/l)	Methyl Bromide (µg/l)	Methyl Chloride (µg/l)	Methylene Chloride (µg/l)	PCE (µg/l)	TCE (µg/l)
	MCL[1]:	**200**	**5**	**6**	**0.5**	**6**	**6**	**10**	**5**	**none**	**80**	**none**	**0.5**	**80**	**none**	**600[2]**	**600**	**5**	**1,000[2]**	**1,200**	**9.8[3]**	**3[4]**	**5**	**5**	**5**
	12/12/02	<5.0	<5.0	<5.0	<5.0	NA	**14**	<5.0	<5.0	<50	<5.0	NA	<5.0	<5.0	NA	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	**440**
	03/18/03	<0.500	<0.500	<0.500	<0.500	NA	**15.8**	0.965	<0.500	<5.00	<0.500	NA	<0.500	0.573	NA	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	**265**
	03/18/03	<8.00	<8.00	<8.00	<8.00	NA	**14.8**	<8.00	<8.00	<40.0	<8.00	NA	<8.00	<8.00	NA	<8.00	<8.00	<8.00	<8.00	<8.00	<16.0	<40.0	<40.0	<8.00	**274**
	06/25/03	<5.0	<5.0	<5.0	<5.0	NA	**20**	<5.0	<5.0	NA	<5.0	NA	<5.0	<5.0	NA	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	**340**
STSW-143B	08/26/02	<25	<25	<25	<25	NA	<25	<25	<25	<250	<25	NA	<25	<25	NA	<25	<25	<25	<25	<25	<25	<25	<25	<25	**440**
	12/27/02	<12	<12	<12	<12	NA	**17**	<12	<12	<120	<12	NA	<12	<12	NA	<12	<12	<12	<12	<12	<12	<12	<12	<12	**450**
	03/21/03	<10	<10	<10	<10	NA	**13**	<10	<10	NA	<10	NA	<10	<10	NA	<10	<10	<10	<10	<10	<10	<10	<10	<10	**420**
	06/24/03	<10	<10	<10	<10	NA	**15**	<10	<10	NA	<10	NA	<10	<10	NA	<10	<10	<10	<10	<10	<10	<10	<10	<10	**360**
STSW-17	05/02/02	<2.5	<2.5	<2.5	<2.5	NA	4.9	<2.5	<2.5	<25	<2.5	NA	<2.5	<2.5	NA	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	**150**
STSW-18	05/02/02	<1.0	<1.0	<1.0	<1.0	NA	2.7	<1.0	<1.0	<10	<1.0	NA	<1.0	<1.0	NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	**77**
STSW-19	05/07/02	<0.50	<0.50	<0.50	<0.50	NA	<0.50	<0.50	<0.50	<5.0	<0.50	NA	<0.50	<0.50	NA	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
	08/14/02	<0.50	<0.50	<0.50	<0.50	<0.50	NA	NA	<0.50	NA	<0.50	NA	<0.50	<0.50	NA	NA	NA	NA	<0.50	<0.50	NA	NA	<0.50	<0.50	0.51
	10/09/03	<0.50	<0.50	<0.50	<0.50	<0.50	NA	NA	<0.50	NA	<0.50	NA	<0.50	<0.50	NA	NA	NA	NA	<0.50	<0.50	NA	NA	<0.50	<0.50	0.51
	03/24/04	<0.50	<0.50	<0.50	<0.50	<0.50	NA	NA	<0.50	NA	<0.50	NA	<0.50	<0.50	NA	NA	NA	NA	<0.50	<0.50	NA	NA	<0.50	<0.50	1.3
STSW-20	05/07/02	<0.50	<0.50	<0.50	<0.50	NA	<0.50	<0.50	<0.50	<5.0	<0.50	NA	<0.50	<0.50	NA	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	**7.7**
STSW-21	05/23/02	<0.50	<0.50	<0.50	<0.50	NA	<0.50	<0.50	<0.50	<5.0	<0.50	NA	<0.50	13	NA	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	**34**
	08/14/02	<0.50	<0.50	<0.50	<0.50	<0.50	NA	NA	<0.50	NA	<0.50	NA	<0.50	18	NA	NA	NA	NA	<0.50	<0.50	NA	NA	<0.50	<0.50	**41**
	10/09/03	<0.50	<0.50	<0.50	<0.50	<0.50	NA	NA	<0.50	NA	<0.50	NA	<0.50	24	NA	NA	NA	NA	<0.50	<0.50	NA	NA	<0.50	<0.50	**51**
	03/24/04	<0.50	<0.50	<0.50	<0.50	<0.50	NA	NA	<0.50	NA	<0.50	NA	<0.50	23	NA	NA	NA	NA	<0.50	<0.50	NA	NA	<0.50	<0.50	**53**
STSW-22	05/09/02	<0.50	<0.50	<0.50	<0.50	NA	<0.50	<0.50	<0.50	<5.0	<0.50	NA	<0.50	3.6	NA	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	**7**
STSW-23	05/03/02	<0.50	<0.50	<0.50	<0.50	NA	0.73	<0.50	<0.50	<5.0	<0.50	NA	<0.50	<0.50	NA	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	**17**
STSW-24	05/06/02	<0.50	<0.50	0.58	**0.71**	NA	1.3	<0.50	<0.50	<5.0	<0.50	NA	<0.50	<0.50	NA	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	**24**
STSW-41	06/12/01	<0.15	<0.12	<0.18	<0.090	NA	<0.11	<0.14	<0.12	<0.13	<0.11	NA	<0.15	<0.13	NA	<0.070	<0.17	<0.11	<0.13	<0.15	0.21	<0.34	<0.13	<0.12	2.3
	05/06/02	<0.50	<0.50	<0.50	<0.50	NA	<0.50	<0.50	<0.50	<5.0	<0.50	NA	<0.50	<0.50	NA	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	1.6
STSW-48A	05/07/02	<0.50	<0.50	<0.50	<0.50	NA	<0.50	<0.50	<0.50	<5.0	<0.50	NA	<0.50	<0.50	NA	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	1.1
STSW-48B	05/07/02	<0.50	<0.50	<0.50	<0.50	NA	2.2	<0.50	<0.50	<5.0	<0.50	NA	<0.50	<0.50	NA	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	**39**

TABLE B-3a: Summary of Detects - Volatile Organic Compounds (selected IRCTS wells)
January 2000 through June 2004
Zone 2 Perimeter Groundwater Operable Unit

WELL NUMBER	SAMPLE DATE	1,1,1-TCA (µg/l)	1,1-DCA (µg/l)	1,1-DCE (µg/l)	1,2-DCA (µg/l)	1,2-DCE (µg/l)	cis-1,2-DC E (µg/l)	trans-1,2-DCE (µg/l)	1,2-Dichloro propane (µg/l)	2-Chloroethyl vinyl ether	BDCM (µg/l)	Bromofluoro benzene (µg/l)	Carbon Tetrachloride	Chloroform (µg/l)	Dibromofluoro methane (µg/l)	m-DCB (µg/l)	o-DCB (µg/l)	p-DCB (µg/l)	Freon-12 (µg/l)	Freon-113 (µg/l)	Methyl Bromide (µg/l)	Methyl Chloride (µg/l)	Methylene Chloride (µg/l)	PCE (µg/l)	TCE (µg/l)
	MCL[1]:	**200**	**5**	**6**	**0.5**	**6**	**6**	**10**	**5**	**none**	**80**	**none**	**0.5**	**80**	**none**	**600[2]**	**600**	**5**	**1,000[2]**	**1,200**	**9.8[3]**	**3[4]**	**5**	**5**	**5**
Layer B Wells																									
STSW-96B	10/05/00	<0.0600	<0.0500	<0.0700	<0.130	NA	0.0882	<0.0600	<0.100	<0.160	<0.0900	NA	<0.100	<0.190	NA	<0.130	<0.210	<0.180	<0.200	<0.0900	<0.150	<0.230	<0.190	1.23	0.543
	03/16/01	<0.150	<0.120	<0.180	0.109	NA	0.165	<0.140	<0.120	1.15	<0.110	NA	<0.150	<0.130	NA	0.121	<0.170	<0.110	0.291	0.41	<0.160	<0.340	0.279	1.51	0.902
	05/25/01	<0.15	<0.12	<0.18	0.12	NA	0.16	<0.14	<0.12	1	<0.11	NA	<0.15	<0.13	NA	<0.070	<0.17	<0.11	0.18	<0.15	<0.16	<0.34	<0.13	1.6	0.85
	08/22/01	<0.15	<0.12	<0.18	0.13	NA	0.19	<0.14	<0.12	<0.13	<0.11	NA	<0.15	<0.13	NA	<0.070	<0.17	<0.11	0.25	<0.15	<0.16	<0.34	<0.13	1.6	0.95
	05/02/02	<0.50	<0.50	<0.50	<0.50	NA	<0.50	<0.50	<0.50	<5.0	<0.50	NA	<0.50	<0.50	NA	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	1.6	1.2
Layer C Wells																									
STSW-04C	06/12/00	<0.120	<0.100	0.328	<0.260	NA	<0.140	<0.120	<0.200	<0.320	<0.180	NA	0.26	14.2	NA	<0.260	<0.420	<0.360	<0.400	<0.180	<0.300	<0.460	<0.380	<0.200	**33.3**
	11/16/00	<0.300	<0.240	0.464	**0.8**	NA	<0.220	<0.280	0.51	<0.260	<0.220	NA	<0.300	17.6	NA	<0.140	<0.340	<0.220	<0.260	<0.300	0.544	<0.680	<0.260	<0.240	**35.7**
	06/20/01	<0.15	<0.12	0.36	0.38	NA	<0.11	<0.14	<0.12	0.72	<0.11	NA	<0.15	13	NA	<0.070	<0.17	<0.11	<0.13	<0.15	<0.16	<0.34	<0.13	<0.12	**25**
	10/18/01	<0.50	<0.50	<0.50	<0.50	NA	<0.50	<0.50	<0.50	<5.0	<0.50	NA	<0.50	14	NA	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	**31**
	04/05/02	<0.50	<0.50	<0.50	<0.50	NA	<0.50	<0.50	<0.50	<5.0	0.56	NA	<0.50	14	NA	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	**46**
	12/11/02	<1.0	<1.0	<1.0	<1.0	NA	<1.0	<1.0	<1.0	<10	<1.0	NA	<1.0	9.4	NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	**31**
	12/11/02	<0.50	<0.50	0.5	<0.50	NA	<0.50	<0.50	<0.50	<5.0	<0.50	NA	<0.50	13	NA	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	**51**
	05/20/03	<1.0	<1.0	<1.0	<1.0	NA	<1.0	<1.0	<1.0	<10	<1.0	NA	<1.0	13	NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	**41**
	10/23/03	<0.50	<0.50	<0.50	<0.50	NA	<0.50	<0.50	<0.50	NA	<0.50	NA	<0.50	11	NA	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	**51**
	05/13/04	<2.5	<2.5	<2.5	<2.5	NA	<2.5	<2.5	<2.5	NA	<2.5	NA	<2.5	9.9	NA	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	**55**
STSW-08B	05/09/02	<0.50	<0.50	<0.50	<0.50	NA	<0.50	<0.50	<0.50	<5.0	<0.50	NA	<0.50	<0.50	NA	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
STSW-08C	05/09/02	<0.50	<0.50	<0.50	<0.50	NA	<0.50	<0.50	<0.50	<5.0	<0.50	NA	<0.50	<0.50	NA	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	**10**
STSW-104B	12/19/00	<0.150	<0.120	<0.180	<0.0900	NA	<0.110	<0.140	<0.120	<0.130	<0.110	NA	<0.150	<0.130	NA	<0.0700	<0.170	<0.110	<0.130	<0.150	<0.160	<0.340	0.138	<0.120	<0.160
	02/06/01	<0.150	<0.120	<0.180	<0.0900	NA	<0.110	<0.140	<0.120	0.999	<0.110	NA	<0.150	<0.130	NA	0.261	<0.170	0.439	<0.130	0.361	0.176	<0.340	0.291	<0.120	<0.160
	05/25/01	<0.15	<0.12	<0.18	<0.090	NA	<0.11	<0.14	<0.12	0.93	<0.11	NA	<0.15	<0.13	NA	<0.070	<0.17	<0.11	<0.13	<0.15	<0.16	<0.34	<0.13	<0.12	<0.16
	08/22/01	<0.15	<0.12	<0.18	<0.090	NA	<0.11	<0.14	<0.12	<0.13	<0.11	NA	<0.15	<0.13	NA	<0.070	<0.17	<0.11	<0.13	<0.15	<0.16	<0.34	<0.13	<0.12	<0.16
	05/02/02	<0.50	<0.50	<0.50	<0.50	NA	<0.50	<0.50	<0.50	<5.0	<0.50	NA	<0.50	<0.50	NA	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
STSW-10B	05/03/02	<0.50	<0.50	<0.50	<0.50	NA	<0.50	<0.50	<0.50	<5.0	<0.50	NA	<0.50	<0.50	NA	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	**5.5**
	05/06/04	<0.50	<0.50	<0.50	<0.50	NA	<0.50	<0.50	<0.50	NA	<0.50	NA	<0.50	<0.50	NA	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	4.8
STSW-11B	05/03/02	<0.50	<0.50	<0.50	<0.50	NA	<0.50	<0.50	<0.50	<5.0	<0.50	NA	<0.50	<0.50	NA	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	**8.2**
STSW-139B	06/11/02	<0.50	<0.50	<0.50	<0.50	NA	<0.50	<0.50	<0.50	<5.0	<0.50	NA	<0.50	<0.50	NA	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
	12/04/02	<0.50	<0.50	<0.50	<0.50	NA	<0.50	<0.50	<0.50	<5.0	<0.50	NA	<0.50	<0.50	NA	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
	03/21/03	<0.50	<0.50	<0.50	<0.50	NA	<0.50	<0.50	<0.50	NA	<0.50	NA	<0.50	<0.50	NA	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
	06/25/03	<0.50	<0.50	<0.50	<0.50	NA	<0.50	<0.50	<0.50	NA	<0.50	NA	<0.50	<0.50	NA	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50

TABLE B-3a: Summary of Detects - Volatile Organic Compounds (selected IRCTS wells)
January 2000 through June 2004
Zone 2 Perimeter Groundwater Operable Unit

WELL NUMBER	SAMPLE DATE	1,1,1-TCA (µg/l)	1,1-DCA (µg/l)	1,1-DCE (µg/l)	1,2-DCA (µg/l)	1,2-DCE (µg/l)	cis-1,2-DC E (µg/l)	trans-1,2-DCE (µg/l)	1,2-Dichloro propane (µg/l)	2-Chloroethyl vinyl ether	BDCM (µg/l)	Bromofluoro benzene (µg/l)	Carbon Tetrachloride	Chloroform (µg/l)	Dibromofluoro methane (µg/l)	m-DCB (µg/l)	o-DCB (µg/l)	p-DCB (µg/l)	Freon-12 (µg/l)	Freon-113 (µg/l)	Methyl Bromide (µg/l)	Methyl Chloride (µg/l)	Methylene Chloride (µg/l)	PCE (µg/l)	TCE (µg/l)
	MCL[1]:	**200**	**5**	**6**	**0.5**	**6**	**6**	**10**	**5**	**none**	**80**	**none**	**0.5**	**80**	**none**	**600[2]**	**600**	**5**	**1,000[2]**	**1,200**	**9.8[3]**	**3[4]**	**5**	**5**	**5**
Layer C Wells																									
STSW-140C	06/11/02	<0.50	<0.50	1.4	<0.50	NA	4.1	<0.50	<0.50	<5.0	<0.50	NA	<0.50	<0.50	NA	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	**89**
	06/11/02	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	**62**
	12/06/02	<2.5	<2.5	<2.5	<2.5	NA	3.3	<2.5	<2.5	<25	<2.5	NA	<2.5	<2.5	NA	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	**76**
	03/19/03	<0.500	<0.500	1.47	<0.500	NA	3.85	<0.500	<0.500	<5.00	<0.500	NA	<0.500	<0.500	NA	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	**75.3**
	03/19/03	<2.00	<2.00	<2.00	<2.00	NA	3.53	<2.00	<2.00	<20.0	<2.00	NA	<2.00	<2.00	NA	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	**73.9**
	06/24/03	<0.50	<0.50	1.9	<0.50	NA	4.2	<0.50	<0.50	NA	<0.50	NA	<0.50	<0.50	NA	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	**90**
	06/24/03	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	**69**
STSW-141C	06/12/02	<0.50	<0.50	<0.50	<0.50	NA	<0.50	<0.50	<0.50	<5.0	<0.50	NA	<0.50	<0.50	NA	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	3.6
	12/04/02	<0.50	<0.50	<0.50	<0.50	NA	<0.50	<0.50	<0.50	<5.0	<0.50	NA	<0.50	<0.50	NA	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	3.6
	03/19/03	<0.500	<0.500	<0.500	<0.500	NA	<0.500	<0.500	<0.500	<5.00	<0.500	NA	<0.500	<0.500	NA	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	3.68
	06/24/03	<0.50	<0.50	<0.50	<0.50	NA	<0.50	<0.50	<0.50	NA	<0.50	NA	<0.50	<0.50	NA	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	4
STSW-143C	08/26/02	<5.0	<5.0	<5.0	<5.0	NA	**16**	<5.0	<5.0	<50	<5.0	NA	<5.0	<5.0	NA	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	**360**
	12/27/02	<2.5	<2.5	<2.5	<2.5	NA	4	<2.5	<2.5	<25	<2.5	NA	<2.5	<2.5	NA	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	**110**
	03/19/03	<0.500	<0.500	1.78	**1.43**	NA	**9.33**	<0.500	<0.500	<5.00	<0.500	NA	<0.500	<0.500	NA	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	**205**
	03/19/03	<5.00	<5.00	<5.00	<5.00	NA	**9.63**	<5.00	<5.00	<50.0	<5.00	NA	<5.00	<5.00	NA	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	**239**
	06/24/03	<5.0	<5.0	<5.0	<5.0	NA	**8.7**	<5.0	<5.0	NA	<5.0	NA	<5.0	<5.0	NA	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	**210**
STSW-27B	06/14/00	<0.0600	<0.0500	<0.0700	<0.130	NA	<0.0700	<0.0600	<0.100	<0.160	<0.0900	NA	<0.100	1.04	NA	<0.130	<0.210	<0.180	<0.200	<0.0900	<0.150	<0.230	<0.190	<0.100	3.91
	11/17/00	0.432	<0.120	<0.180	0.211	NA	<0.110	<0.140	<0.120	<0.130	<0.110	NA	<0.150	1.87	NA	<0.0700	<0.170	<0.110	<0.130	<0.150	<0.160	0.342	<0.130	<0.120	3.1
	06/21/01	<0.15	<0.12	<0.18	0.1	NA	<0.11	<0.14	<0.12	0.55	<0.11	NA	<0.15	2.1	NA	<0.070	<0.17	<0.11	<0.13	<0.15	<0.16	<0.34	<0.13	<0.12	3.6
	10/19/01	<0.50	<0.50	<0.50	<0.50	NA	<0.50	<0.50	<0.50	<5.0	<0.50	NA	<0.50	2.5	NA	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	3.5
	04/04/02	<0.50	<0.50	<0.50	<0.50	NA	<0.50	<0.50	<0.50	<5.0	<0.50	NA	<0.50	1.3	NA	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	4.7
	12/19/02	<0.50	<0.50	<0.50	<0.50	NA	<0.50	<0.50	<0.50	<5.0	<0.50	NA	<0.50	1.5	NA	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	0.85	<0.50	<0.50	**5**
	05/19/03	<0.50	<0.50	<0.50	<0.50	NA	<0.50	<0.50	<0.50	NA	<0.50	NA	<0.50	1.9	NA	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	**7.4**
	10/22/03	<0.50	<0.50	<0.50	<0.50	NA	<0.50	<0.50	<0.50	NA	<0.50	NA	<0.50	1.4	NA	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	4.3
	05/12/04	<0.50	<0.50	<0.50	<0.50	NA	<0.50	<0.50	<0.50	NA	<0.50	NA	<0.50	1.4	NA	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	4.6
STSW-29B	05/23/02	<0.50	<0.50	<0.50	<0.50	NA	<0.50	<0.50	<0.50	<5.0	<0.50	NA	<0.50	<0.50	NA	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	1.1
STSW-48C	05/07/02	<1.0	<1.0	<1.0	<1.0	NA	2.3	<1.0	<1.0	<10	<1.0	NA	<1.0	<1.0	NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	**62**

TABLE B-3a: Summary of Detects - Volatile Organic Compounds (selected IRCTS wells)
January 2000 through June 2004
Zone 2 Perimeter Groundwater Operable Unit

WELL NUMBER	SAMPLE DATE	1,1,1-TCA (µg/l)	1,1-DCA (µg/l)	1,1-DCE (µg/l)	1,2-DCA (µg/l)	1,2-DCE (µg/l)	cis-1,2-DC E (µg/l)	trans-1,2-DCE (µg/l)	1,2-Dichloro propane (µg/l)	2-Chloroethyl vinyl ether	BDCM (µg/l)	Bromofluoro benzene (µg/l)	Carbon Tetrachloride	Chloroform (µg/l)	Dibromofluoro methane (µg/l)	m-DCB (µg/l)	o-DCB (µg/l)	p-DCB (µg/l)	Freon-12 (µg/l)	Freon-113 (µg/l)	Methyl Bromide (µg/l)	Methyl Chloride (µg/l)	Methylene Chloride (µg/l)	PCE (µg/l)	TCE (µg/l)
	MCL[1]:	**200**	**5**	**6**	**0.5**	**6**	**6**	**10**	**5**	**none**	**80**	**none**	**0.5**	**80**	**none**	**600[2]**	**600**	**5**	**1,000[2]**	**1,200**	**9.8[3]**	**3[4]**	**5**	**5**	**5**
Layer C Wells																									
STSW-51B	06/27/02	<0.50	<0.50	<0.50	<0.50	NA	<0.50	<0.50	<0.50	<5.0	<0.50	NA	<0.50	1.7	NA	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	0.66	<0.50	<0.50	**5.5**
STSW-52B	06/26/02	<0.50	<0.50	<0.50	<0.50	NA	<0.50	<0.50	<0.50	<5.0	<0.50	NA	<0.50	3	NA	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	**10**
WRD1-WS	08/22/00	<0.0600	<0.0500	<0.0700	<0.130	NA	<0.0700	<0.0600	<0.100	<0.160	<0.0900	NA	<0.100	<0.190	NA	<0.130	<0.210	<0.180	<0.200	<0.0900	<0.150	<0.230	0.235	<0.100	<0.100
	11/30/00	<0.150	<0.120	<0.180	<0.0900	NA	<0.110	<0.140	<0.120	<0.130	<0.110	NA	<0.150	<0.130	NA	<0.0700	<0.170	<0.110	<0.130	<0.150	<0.160	<0.340	<0.130	<0.120	<0.160
	09/27/01	<0.50	<0.50	<0.50	<0.50	NA	<0.50	<0.50	<0.50	<5.0	<0.50	NA	<0.50	<0.50	NA	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
	07/22/02	<0.50	<0.50	<0.50	<0.50	NA	<0.50	<0.50	<0.50	<5.0	<0.50	NA	<0.50	<0.50	NA	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	0.5	<0.50	<0.50	<0.50

Notes:
1. California Department of Health Services (DHS) Primary Maximum Contaminant Level (MCL).
2. California State Action Level for Drinking Water (DHS).
3. USEPA Integrated Risk Information System (IRIS) Reference Dose as a Drinking Water Level.
4. USEPA Drinking Water Health Advisory or Suggested No-Adverse-Response Level (SNARL) for toxicity other than cancer risk
Results shown in bold exceed the MCL, Action Level, IRIS reference dose, or SNARL.
VOCs not detected in any wells during the RI Sampling Period are not included in table.

Abbreviations:
MCL = Maximum Contaminant Level
1,1,1-TCA = 1,1,1-Trichloroethane
1,1-DCA = 1,1-Dichloroethane
1,1-DCE = 1,1-Dichloroethylene
1,2-DCA = 1,2-Dichloroethane
1,2-DCE = 1,2-Dichloroethylene
BDCM = Bromodichloromethane
DCB = Dichlorobenzene
Freon-12 = Dichlorodifluoromethane
PCE = Tetrachloroethylene
TCE = Trichloroethylene
< = less than
NA = Not analyzed

TABLE B-4: Summary of N-Nitrosodimethylamine and Perchlorate Results
January 2000 through June 2004
Zone 2 Perimeter Groundwater Operable Unit

WELL NUMBER	SAMPLE DATE	NDMA (µg/l)	PERCHLORATE (µg/l)
Action Level[1]:		0.01	6
Layer A Wells			
111	11/05/02	<0.0075	**8.3**
161	06/25/02	NA	**110**
177	06/26/02	NA	**6.8**
413	11/03/00	<0.0075	**1200**
	10/29/01	<0.0075	**730**
	10/15/02	<0.0075	**240**
1281	06/09/00	NA	**410**
	07/10/01	NA	**1100**
	04/03/02	NA	**350**
	04/15/03	NA	**130**
	05/14/04	NA	**76**
1290	07/12/02	NA	<4.0
1324	06/13/02	NA	<4.0
3043	07/09/02	NA	4.6
3067	06/30/00	NA	**280**
	06/30/00	NA	**270**
	08/02/01	NA	**430**
	04/23/02	NA	**190**
	04/16/03	NA	**270**
3071	08/02/01	NA	5.2
3460	10/25/02	<0.0075	<20
3470	10/25/02	<0.0075	<4.0
3500	10/25/02	<0.0075	**500**
3509	11/04/02	NA	<4.0
3510	11/04/02	NA	<4.0
3511	11/04/02	NA	<4.0
3512	11/04/02	NA	**28**
3513	11/04/02	NA	**22**
4007	02/04/00	NA	**90**
	04/16/00	NA	**85**
	08/02/00	NA	**110**
	08/02/00	NA	**90**
	10/22/00	NA	**71**
	10/22/00	NA	**72**
	01/25/01	NA	**80**
	01/25/01	NA	**80**
	05/05/01	NA	**70**
	09/19/01	NA	**64**
	11/14/01	NA	**63**
	02/18/02	NA	**54**
	05/16/02	NA	**44**
	08/08/02	<0.0075	**38**
	08/08/02	<0.0075	**38 J**
	11/19/02	<0.0075	**40**

TABLE B-4: Summary of N-Nitrosodimethylamine and Perchlorate Results
January 2000 through June 2004
Zone 2 Perimeter Groundwater Operable Unit

WELL NUMBER	SAMPLE DATE	NDMA (µg/l)	PERCHLORATE (µg/l)
Action Level[1]:		**0.01**	**6**
Layer A Wells			
4007	01/22/03	0.0027 J	**42**
	01/22/03	0.0028 J	**42 J**
	04/14/03	0.0026 J	**43**
	08/25/03	0.0031 J	**40**
	10/08/03	0.0030 J	**40**
	10/24/03	0.0026 J	**43**
	12/10/03	0.0028 J	**41**
	05/12/04	0.0022 J	**45**
30142	08/30/00	**0.017 J ***	**46**
	07/22/02	**0.020 J**	NA
Layer B Wells			
132	07/14/00	NA	**13000**
	08/01/01	NA	**15000**
162	06/25/02	NA	**110**
314	11/04/02	<0.0075	**460**
	11/04/02	<0.0075	**460 J**
315	11/04/02	<0.0075	**230**
1028	06/28/02	NA	<4.0
1229	07/05/01	NA	**870**
	04/04/02	NA	**960**
	04/25/03	NA	**760**
1237	06/26/01	NA	4.5
	04/01/02	NA	<4.0
	04/10/03	NA	<4.0
1238	06/26/01	NA	**7.9**
	04/01/02	NA	**8.7**
	04/10/03	NA	5.8
	06/04/04	NA	**8.1**
	06/04/04	NA	**7.9**
1256	06/07/02	NA	<4.0
1257	06/07/02	NA	<4.0
1305	07/03/02	NA	<4.0
1312	07/08/02	NA	**64**
1319	06/12/02	NA	<4.0
1320	06/12/02	NA	<4.0
1325	06/12/01	NA	**210**
	06/13/02	NA	**190**
1333	06/06/00	NA	<4.0
	08/06/01	NA	4.4
	04/19/02	NA	4.6
	04/11/03	NA	5.2
	04/15/04	NA	5.8
1345	06/17/02	NA	**23**
	06/17/02	NA	**21 J**

TABLE B-4: Summary of N-Nitrosodimethylamine and Perchlorate Results
January 2000 through June 2004
Zone 2 Perimeter Groundwater Operable Unit

WELL NUMBER	SAMPLE DATE	NDMA (µg/l)	PERCHLORATE (µg/l)
Action Level[1]:		0.01	6
Layer B Wells			
3068	06/13/00	NA	**2500**
	08/02/01	NA	**4500**
	04/24/02	NA	**3400**
	04/17/03	NA	**3700**
3072	08/02/01	NA	<4.0
	08/02/01	NA	<4.0
3329	11/05/02	<0.0075	**990**
3501	11/05/02	<0.0075	**1300**
3579	06/25/02	NA	<4.0
30099	06/12/01	NA	**4500**
	07/16/02	NA	**4500**
	07/16/02	NA	**4500 J**
Layer C Wells			
159	06/26/02	NA	**71000**
160	06/26/02	NA	**6600**
163	06/25/02	NA	**800**
178	06/26/02	NA	**260**
306	04/18/00	NA	**3600**
310	04/13/00	NA	**35**
	04/13/00	NA	**36**
1231	07/05/01	NA	**1900**
	07/05/01	NA	**1900 J**
	04/04/02	NA	**2100**
	04/04/02	NA	**2100 J**
	04/11/03	NA	**1600**
1239	06/25/01	NA	**2600**
	04/19/02	NA	**1800**
	05/09/03	NA	**2400**
	06/04/04	NA	**2200**
1240	06/25/01	NA	**1800**
	04/19/02	NA	**1900**
	10/02/03	NA	**2400**
	06/04/04	NA	**2700**
1258	06/07/02	NA	<4.0
1282	06/09/00	NA	**59**
	07/10/01	NA	**30**
	04/03/02	NA	**120**
	04/15/03	NA	**110**
1283	06/07/00	NA	<4.0
	07/10/01	NA	<4.0
	04/05/02	NA	<4.0
	07/07/03	NA	5.8
1291	07/12/02	NA	<4.0
1292	07/12/02	NA	<4.0
	07/12/02	NA	<4.0

TABLE B-4: Summary of N-Nitrosodimethylamine and Perchlorate Results
January 2000 through June 2004
Zone 2 Perimeter Groundwater Operable Unit

WELL NUMBER	SAMPLE DATE	NDMA (µg/l)	PERCHLORATE (µg/l)
Action Level[1]:		0.01	6
Layer C Wells			
1294	05/24/00	NA	**190**
	07/13/01	NA	**540**
	07/13/01	NA	**530 J**
	04/09/02	NA	**390**
	07/19/02	NA	**390**
	04/15/03	NA	**160**
	05/14/04	NA	**120**
1295	05/24/00	NA	<4.0
	07/13/01	NA	<4.0
	04/09/02	NA	5.1
	07/18/02	NA	<4.0
	04/15/03	NA	<4.0
	05/14/04	NA	<4.0
1306	07/03/02	NA	4.3
1313	07/08/02	NA	**27**
1321	06/12/02	NA	<4.0
1322	07/18/02	NA	<4.0
1326	06/13/02	NA	**72**
1334	06/06/00	NA	<4.0
	08/06/01	NA	<4.0
	04/19/02	NA	<4.0
	04/10/03	NA	<4.0
	04/15/04	NA	<4.0
1335	06/06/00	NA	<4.0
	08/06/01	NA	<4.0
	04/19/02	NA	<4.0
	04/10/03	NA	<4.0
	04/15/04	NA	<4.0
1346	06/17/02	NA	**63**
1347	06/17/02	NA	<4.0
3044	07/09/02	NA	**1900**
	07/09/02	NA	**1900 J**
	10/22/03	NA	**2200**
3069	06/13/00	NA	**4500**
	08/02/01	NA	**4300**
	04/23/02	NA	**3500**
	04/17/03	NA	**3500**
3073	08/02/01	NA	**7.9**
3078	11/01/02	<0.0075	NA
3120	06/24/02	NA	<4.0
3294	05/31/00	NA	**2900**
3358	11/04/02	<0.0075	NA
3580	06/25/02	NA	**210**
3581	06/25/02	NA	<4.0

TABLE B-4: Summary of N-Nitrosodimethylamine and Perchlorate Results
January 2000 through June 2004
Zone 2 Perimeter Groundwater Operable Unit

WELL NUMBER	SAMPLE DATE	NDMA (µg/l)	PERCHLORATE (µg/l)
Action Level[1]:		0.01	6
Layer D Wells			
164	06/24/02	NA	<4.0
179	06/26/02	NA	<4.0
317	02/17/04	NA	<4.0
1232	07/05/01	NA	<4.0
	04/04/02	NA	<4.0
	04/11/03	NA	<4.0
1293	07/18/02	NA	<4.0
1314	07/08/02	NA	<4.0
1327	07/30/02	NA	<4.0
1336	06/06/00	NA	<4.0
	08/06/01	NA	<4.0
	04/19/02	NA	<4.0
	07/09/03	NA	<4.0
1348	07/19/02	NA	<4.0
3045	07/09/02	NA	**1000**
	10/22/03	NA	**8800**
3070	07/06/00	NA	**16**
	08/07/01	NA	4.1
	05/03/02	NA	**13**
	10/02/03	NA	**22**
	10/02/03	NA	**18**
3360	06/24/02	NA	**680**
Layer E Wells			
1233	07/05/01	NA	<4.0
	04/04/02	NA	<4.0
	04/11/03	NA	<4.0
1234	07/05/01	NA	<4.0
	04/04/02	NA	<4.0
	04/11/03	NA	<4.0
	04/11/03	NA	<4.0
1315	07/08/02	NA	<4.0
1316	07/08/02	NA	<4.0
1328	07/30/02	NA	<4.0
1349	07/19/02	NA	<4.0
3047	07/09/02	NA	<4.0
	10/22/03	<0.0010	<4.0

Notes:

1. Calfiornia State Action Level for Drinking Water (Department of Health Services).

Results in bold exceed the Action Level.

Abbreviations:

NDMA = N-Nitrosodimethylamine
µg/l = microgram per liter
NA = Not analyzed
< = less than
J = Estimated concentration
* = Multiple sample results, highest concentration shown

TABLE B-4a: Summary of Perchlorate Results (selected IRCTS wells)
January 2000 through June 2004
Zone 2 Perimeter Groudnwater Operable Unit

WELL NUMBER	SAMPLE DATE	PERCHLORATE (µg/l)
	Action Level[1]:	6
	Layer A Wells	
STSW-142A	08/26/02	4.5
	12/12/02	<4.0
	03/18/03	<4.0
	06/25/03	4.3
STSW-143A	08/26/02	<4.0
	12/27/02	<4.0
	03/21/03	<4.0
	06/24/03	<4.0
	Layer B Wells	
STSW-08A	05/09/02	**4500**
	08/14/02	**6000**
	10/21/02	**5500**
	12/05/02	**340**
	03/28/03	**1200**
	10/09/03	**5600**
	03/24/04	**2300**
STSW-104A	12/19/00	<4.0
	02/06/01	<4.0
	05/25/01	<4.0
	08/22/01	<4.0
	05/02/02	<4.0
STSW-10A	05/03/02	**270**
	05/06/04	**440**
STSW-11A	05/03/02	**10**
STSW-140B	06/11/02	**290**
	12/06/02	**360**
	03/19/03	**400**
	06/24/03	**68**
STSW-141B	06/12/02	**96**
	12/04/02	**140**
	03/19/03	**36**
	06/24/03	**150**
STSW-142B	08/26/02	**830**
	12/12/02	**940**
	03/18/03	**870**
	06/25/03	**960**
STSW-143B	08/26/02	**1100**
	12/27/02	**1200**
	03/21/03	**1000**
	06/24/03	**1100**
STSW-17	05/02/02	**740**
STSW-18	05/02/02	**250**
STSW-19	05/07/02	5.3
	08/14/02	5.6
	10/09/03	5
	03/24/04	**6.9**

TABLE B-4a: Summary of Perchlorate Results (selected IRCTS wells)
January 2000 through June 2004
Zone 2 Perimeter Groudnwater Operable Unit

WELL NUMBER	SAMPLE DATE	PERCHLORATE (µg/l)
	Action Level[1]:	6
	Layer B Wells	
STSW-20	05/07/02	5
STSW-21	05/23/02	**820**
	08/14/02	**760**
	10/21/02	**510**
	12/05/02	**530**
	10/09/03	**540**
	03/24/04	**320**
STSW-22	05/09/02	**68**
STSW-23	05/03/02	**22**
STSW-24	05/06/02	**30**
STSW-41	06/12/01	**32000**
	05/06/02	**11000**
STSW-48A	05/07/02	<4.0
STSW-48B	05/07/02	**42**
STSW-96B	10/05/00	<4.0
	03/16/01	<4.0
	05/25/01	<4.0
	08/22/01	<4.0
	05/02/02	<4.0
	Layer C Wells	
STSW-04C	06/16/00	**1700**
	11/16/00	**1700**
	06/20/01	**1800**
	10/18/01	**1600**
	04/05/02	**1800**
	12/11/02	**1800**
	05/20/03	**1900**
	10/23/03	**1800**
	05/13/04	**1900**
STSW-08B	05/09/02	<4.0
STSW-08C	05/09/02	**30**
STSW-104B	12/19/00	<4.0
	02/06/01	<4.0
	05/25/01	<4.0
	08/22/01	<4.0
	05/02/02	<4.0
STSW-10B	05/03/02	**18**
	05/06/04	**21**
STSW-11B	05/03/02	**13**
STSW-139B	06/11/02	<4.0
	12/04/02	<4.0
	03/21/03	<4.0
	06/25/03	<4.0

TABLE B-4a: Summary of Perchlorate Results (selected IRCTS wells)
January 2000 through June 2004
Zone 2 Perimeter Groudnwater Operable Unit

WELL NUMBER	SAMPLE DATE	PERCHLORATE (µg/l)
	Action Level[1]:	6
	Layer C Wells	
STSW-140C	06/11/02	**130**
	12/06/02	**130**
	03/19/03	**120**
	06/24/03	**150**
STSW-141C	06/12/02	**8.1**
	12/04/02	**9.1**
	03/19/03	**8.4**
	06/24/03	**12**
STSW-143C	12/27/02	**240**
	03/19/03	**210**
	06/24/03	**240**
STSW-27B	06/14/00	**49**
	11/17/00	**74**
	06/21/01	**140**
	10/19/01	**140**
	04/04/02	**160**
	12/19/02	**170**
	05/19/03	**180**
	10/22/03	**170**
	05/12/04	**180**
STSW-29B	05/23/02	**96**
STSW-48C	05/07/02	**110**
STSW-51B	06/27/02	**43**
STSW-52B	06/26/02	**74**

Notes:

1. California State Action Level for Drinking Water (Department of Health Services).

Results shown in bold exceed the Acton Level.

Abbreviations:

µg/l = micrograms per liter

< = less than

TABLE B-5: Summary of Detects - Metals
January 2000 through June 2004
Zone 2 Perimeter Groundwater Operable Unit

WELL NUMBER	SAMPLE DATE	Aluminum (mg/l)	Antimony (mg/l)	Arsenic (mg/l)	Barium (mg/l)	Cadmium (mg/l)	Chromium (mg/l)	Chromium^{6+} (mg/l)	Copper (mg/l)	Iron (mg/l)	Lead (mg/l)	Magnesium (mg/l)	Manganese (mg/l)	Selenium (mg/l)	Thallium (mg/l)	Vanadium (mg/l)	Zinc (mg/l)
	MCL[1]:	**1.0**	**0.006**	**0.05**	**1.0**	**0.005**	**0.05**	**0.05[3]**	**1.3**	**0.3**	**0.015**	**none**	**0.05**	**0.05**	**0.002**	**0.05[2]**	**5.0**
Layer A Wells																	
109	05/01/00	<0.20	<0.20	<0.080	0.05	<0.0040	<0.0080	NA	<0.0060	**0.33**	<0.060	13	<0.0050	<0.10	<0.050	<0.0060	<0.10
	10/10/00	<0.20	<0.20	<0.080	0.057	<0.0040	<0.0080	NA	<0.0060	<0.30	<0.060	15	<0.0050	<0.10	<0.050	<0.0060	<0.10
	04/09/01	<0.20	<0.20	<0.080	0.059	<0.0040	<0.0080	NA	<0.0060	**0.86**	<0.060	15	0.028	<0.10	<0.050	<0.0060	<0.10
	10/16/01	<0.20	<0.20	<0.080	0.05	<0.0040	<0.0080	NA	0.008	**1.6**	<0.060	14	0.024	<0.10	<0.050	<0.0060	<0.10
	04/24/02	<0.20	<0.20	<0.080	0.045	<0.0040	<0.0080	NA	<0.0060	**0.4**	<0.060	14	0.011	<0.10	<0.050	<0.0060	<0.10
	10/07/02	<0.20	<0.20	<0.080	0.046	<0.0040	<0.0080	NA	0.026	**0.45**	<0.060	12	0.026	<0.10	<0.050	<0.0060	<0.10
	10/07/02	<0.20	<0.20	<0.080	0.046 J	<0.0040	<0.0080	NA	<0.0060	**0.47 J**	<0.060	12 J	0.028 J	<0.10	<0.050	<0.0060	<0.10
	04/04/03	<0.20	<0.20	<0.080	0.044	<0.0040	<0.0080	NA	<0.0060	<0.30	<0.060	12	0.012	<0.10	<0.050	<0.0060	<0.10
	10/13/03	<0.20	<0.20	<0.080	0.05	<0.0040	<0.0080	NA	<0.0060	**1.2**	<0.060	13	**0.085**	<0.10	<0.050	<0.0060	<0.10
	10/13/03	<0.20	<0.20	<0.080	0.049	<0.0040	<0.0080	NA	<0.0060	**0.72**	<0.060	13	**0.06**	<0.10	<0.050	<0.0060	<0.10
	04/20/04	<0.20	<0.20	<0.080	0.05	<0.0040	<0.0080	NA	<0.0060	**10**	<0.060	12	**0.18**	<0.10	<0.050	0.0069	<0.10
161	09/10/04	<0.20[5]	<0.20[5]	<0.08[5]	0.038[5]	<0.004[5]	<0.008[5]	NA	<0.006[5]	<0.30[5]	<0.06[5]	6.4[5]	**0.17[5]**	<0.10[5]	<0.05[5]	<0.006[5]	1.5[5]
410	10/29/02	NA	NA	NA	NA	NA	NA	<1.0[5]	NA	NA	<0.002[5]	NA	NA	NA	<0.002[5]	NA	NA
413	11/12/02	NA	NA	<0.002[5]	NA	NA	NA	<1.0[5]	NA	NA	<0.002[5]	NA	NA	<0.002[5]	NA	NA	NA
415	10/29/02	NA	NA	NA	NA	<0.001[5]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
461	05/04/01	<0.20[5]	<0.20[5]	<0.08[5]	0.034[5]	<0.004[5]	<0.008[5]	NA	<0.006[5]	<0.30[5]	<0.06[5]	17[5]	0.014[5]	<0.10[5]	<0.05[5]	<0.006[5]	<0.10[5]
	05/04/01	<0.20[5]	<0.20[5]	<0.08[5]	0.033 J[5]	<0.004[5]	<0.008[5]	NA	<0.006[5]	<0.30[5]	<0.06[5]	17 J[5]	0.014 J[5]	<0.10[5]	<0.05[5]	<0.006[5]	<0.10[5]
1324	09/08/04	<0.20[5]	<0.20[5]	<0.08[5]	0.06[5]	<0.004[5]	<0.008[5]	NA	<0.006[5]	**0.56[5]**	<0.06[5]	15[5]	0.009[5]	<0.10[5]	<0.05[5]	<0.006[5]	<0.10[5]
	09/08/04	<0.20[5]	<0.20[5]	<0.08[5]	0.06[5]	<0.004[5]	<0.008[5]	NA	<0.006[5]	**0.54[5]**	<0.06[5]	15[5]	0.0081[5]	<0.10[5]	<0.05[5]	<0.006[5]	<0.10[5]
3067	09/10/04	<0.20[5]	<0.20[5]	<0.08[5]	0.064[5]	<0.004[5]	<0.008[5]	NA	<0.006[5]	<0.30[5]	<0.06[5]	13[5]	**0.3[5]**	<0.10[5]	<0.05[5]	<0.006[5]	1.1[5]
3119	10/30/02	NA	<0.003[5]	NA	NA	NA	NA	NA	NA	NA	<0.002[5]	NA	NA	<0.002[5]	NA	NA	NA
30142	08/30/00	<0.20[5]	<0.20[5]	<0.08[5]	0.11[5]	<0.004[5]	<0.008[5]	<0.010	<0.006[5]	<0.30[5]	<0.06[5]	30[5]	0.038[5]	<0.10[5]	<0.05[5]	<0.006[5]	<0.10[5]
	08/30/00	<0.20[5]	<0.20[5]	<0.08[5]	0.11 J[5]	<0.004[5]	<0.008[5]	NA	<0.006[5]	<0.30[5]	<0.06[5]	30 J[5]	0.038 J[5]	<0.10[5]	<0.05[5]	<0.006[5]	<0.10[5]
Layer B Wells																	
1325	09/08/04	<0.20[5]	<0.20[5]	<0.08[5]	0.056[5]	<0.004[5]	<0.008[5]	NA	<0.006[5]	<0.30[5]	<0.06[5]	14[5]	0.0054[5]	<0.10[5]	<0.05[5]	0.0066[5]	0.38[5]
1345	09/08/04	<0.20[5]	<0.20[5]	<0.08[5]	0.077[5]	<0.004[5]	<0.008[5]	NA	<0.006[5]	<0.30[5]	<0.06[5]	16[5]	<0.005[5]	<0.10[5]	<0.05[5]	0.0067[5]	<0.10[5]

TABLE B-5: Summary of Detects - Metals
January 2000 through June 2004
Zone 2 Perimeter Groundwater Operable Unit

Notes:
1. State of California Primary or Secondary Maximum Contaminant Level (MCL).
2. State of California Action Level for Drinking Water (Department of Health Services).
3. Cr^{6+} is regulated under the 50 µg/l MCL for total chromium (State of California, DHS).
4. Agricultural Water Quality Limit.
5. Filtered sample result.

Samples not filtered prior to laboratory analysis, unless otherwise noted.
Results shown in bold exceed the MCL or Action Level.
Results for wells located outside the Z2SA (i.e. Western Groundwater Operable Unit wells and

Abbreviations:
MCL = Maximum Contaminant Level
mg/L = milligrams per liter
< = less than
J = Estimated concentration
NA = Not analyzed

TABLE B-6: Summary of Miscellaneous Compound Results
January 2000 through June 2004
Zone 2 Perimeter Groundwater Operable Unit

WELL NUMBER	SAMPLE DATE	Alkalinity (as $CaCO_3$) (mg/l)	Bicarbonate (as $CaCO_3$) (mg/l)	Calcium (mg/l)	Chloride (mg/l)	COD (mg/l)	Fluoride (mg/l)	Nitrate (mg/l)	Nitrite (mg/l)	Potassium (mg/l)	Sulfate (mg/l)	TDS (mg/l)	TOC (mg/l)
	MCL[1]:	**none**	**none**	**none**	**250**	**none**	**2**	**45**	**1**	**none**	**250**	**500**	**none**
Layer A Wells													
50	11/01/02	NA	NA	NA	NA	NA	NA	3.4	NA	NA	NA	NA	NA
109	05/01/00	NA	NA	20	7	NA	0.1	5.2	NA	2.1	48	180	0.6
	10/10/00	NA	NA	22	9.6	NA	0.092	4.1	NA	<2.0	73	220	0.77
	04/09/01	NA	NA	23	8.5	NA	0.084	3	NA	<2.0	70	220	0.75
	10/16/01	NA	NA	20	7	NA	0.12	2.4	NA	<2.0	53	200	0.64
	04/24/02	NA	NA	21	8.8	NA	0.1	3.3	NA	<2.0	44	190	0.52
	10/07/02	NA	NA	19	7.1	NA	0.097	2.7	NA	<2.0	36	170	0.5
	10/07/02	NA	NA	19 J	NA	NA	NA	NA	NA	<2.0	NA	NA	NA
	04/04/03	NA	NA	18	6.5	NA	0.097	2.9	NA	<2.0	33 J	170	0.57
	10/13/03	NA	NA	19	6	NA	0.095	2.5	NA	2.1	32	170	0.57
	10/13/03	NA	NA	19	5.9	NA	0.1	2.5	NA	<2.0	32	170	0.62
	04/20/04	NA	NA	17	5.5	NA	0.11	1.6	NA	<2.0	31	160	0.55
	04/20/04	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	160	NA
411	11/12/02	NA	NA	NA	NA	NA	NA	11	NA	NA	NA	NA	NA
415	10/29/02	NA	NA	NA	NA	NA	NA	3.2	NA	NA	NA	NA	NA
461	05/04/01	140	140	24[2]	7.9	NA	NA	NA	NA	<2.0[2]	11	220	NA
	05/04/01	NA	NA	24 J[2]	NA	NA	NA	NA	NA	<2.0[2]	NA	NA	NA
3076	11/01/02	NA	NA	NA	NA	NA	NA	1.4	NA	NA	NA	NA	NA
30142	08/30/00	NA	NA	53[2]	57	<3.0	NA	11	<0.25	7.4[2]	43	NA	NA
	08/30/00	NA	NA	52 J[2]	NA	NA	NA	NA	NA	7.2 J[2]	NA	NA	NA
Layer B Wells													
3077	11/01/02	NA	NA	NA	NA	NA	NA	<0.050	NA	NA	NA	NA	NA
3357	11/04/02	NA	NA	NA	NA	NA	NA	5.9	NA	NA	NA	NA	NA
Layer C Wells													
3078	11/01/02	NA	NA	NA	NA	NA	NA	<0.050	NA	NA	NA	NA	NA
3358	11/04/02	NA	NA	NA	NA	NA	NA	4.4	NA	NA	NA	NA	NA

Notes:

1. California Department of Health Services (DHS) Primary or Secondary Maximum Contaminant Level (MCL).
2. Filtered sample result.

Samples were not filtered prior to laboratory analysis, unless otherwise noted.

Abbreviations:

MCL = Maximum Contaminant Level
$CaCO_3$ = Calcium Carbonate
COD = Chemical Oxygen Demand
TDS = Total Dissolved Solids
TOC = Total Organic Carbon
mg/l = milligrams per liter
NA = Not analyzed
J = Estimated Concentration
< = less than

TABLE B-7: Summary of Supplemental Sample Locations and Analyses
November 2004
Zone 2 Perimeter Groundwater Operable Unit

WELL NUMBER	VOCs	Perchlorate
USEPA Method:	**8260B**	**PAL-EA-0040**
Layer A Wells		
174 303 307 3471	X	X
Layer B Wells		
304 3045 3326 3354 3461 3588 3589	X	X
Layer C Wells		
175 316 430 431 3078 3327 3502 3541 3585 3590	X	X
Layer D Wells		
214 317 432 433 3074 3121 3462 3542 3543 3586	X	X
Layer E Wells		
3075 3080 3123 3328 3330 3361 3537	X	X

TABLE B-8 - Summary of Detects - Supplemental VOCs and Perchlorate
November 2004
Zone 2 Perimeter Groundwater Operable Unit

WELL NUMBER	SAMPLE DATE	Perchlorate (µg/l)	1,1,2-TCA (µg/l)	1,1-DCA (µg/l)	1,1-DCE (µg/l)	1,2-DCA (µg/l)	cis-1,2-DCE (µg/l)	trans-1,2-DCE (µg/l)	Chloroform (µg/l)	Methyl chloride (µg/l)	PCE (µg/l)	TCE (µg/l)
	MCL[1]:	**6[2]**	**5**	**5**	**6**	**0.5**	**6**	**10**	**80**	**3[2]**	**5**	**5**
Layer A Wells												
303	11/12/04	**11**	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
307	11/12/04	**10**	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	1.7
3471	11/22/04	**18**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Layer B Wells												
304	11/12/04	**38**	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	1	<0.5	<0.5	**69**
3326	11/14/04	<4.0	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.61	<0.5	<0.5	<0.5
3354	11/18/04	**3600**	1.1	<0.5	**36**	<0.5	**8.5**	<0.5	2.8	<0.5	**5.5**	**6700**
3461	11/23/04	**780**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
3588	11/16/04	**750**	<0.5	<0.5	4.8	<0.5	**21**	<0.5	<0.5	<0.5	<0.5	**560**
3589	11/16/04	**790**	<0.5	<0.5	4.2	<0.5	**20**	0.64	<0.5	<0.5	<0.5	**570**
Layer C Wells												
316	11/29/04	<4.0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
430	11/23/04	**200**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
431	11/23/04	**85**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
3078	11/14/04	<4.0	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
	11/14/04	<4.0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	11/14/04	NA	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.63	<0.5	<0.5	<0.5
3327	11/14/04	<4.0	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
	11/14/04	<4.0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	11/14/04	NA	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
3502	11/19/04	<4.0	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.86
3541	11/19/04	**500**	<0.5	<0.5	2.6	<0.5	2.8	<0.5	<0.5	<0.5	<0.5	**1000**
	11/19/04	**500**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	11/19/04	NA	<0.5	<0.5	3.7	<0.5	3	<0.5	<0.5	<0.5	<0.5	**1100**
3585	11/19/04	**670**	<0.5	<0.5	1.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	**130**
3590	11/16/04	**280**	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	**34**
Layer D Wells												
214	11/12/04	**19000**	1.9	2.2	**95**	**1.9**	**26**	0.56	30	<0.5	3.4	**7900**
	12/19/04	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	12/19/04	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	12/19/04	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
317	11/29/04	<4.0	<0.5	<0.5	<0.5	<0.5	NA	NA	<0.5	NA	<0.5	<0.5
432	11/23/04	4.3	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
433	12/01/04	<4.0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
3121	11/29/04	<4.0	<0.5	<0.5	<0.5	<0.5	NA	NA	<0.5	NA	<0.5	<0.5
3462	11/22/04	<4.0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
3542	11/19/04	<4.0	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.54
3543	11/19/04	<4.0	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
3586	11/19/04	**8**	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.63	<0.5	<0.5

TABLE B-8 - Summary of Detects - Supplemental VOCs and Perchlorate
November 2004
Zone 2 Perimeter Groundwater Operable Unit

WELL NUMBER	SAMPLE DATE	Perchlorate (µg/l)	1,1,2-TCA (µg/l)	1,1-DCA (µg/l)	1,1-DCE (µg/l)	1,2-DCA (µg/l)	cis-1,2-DCE (µg/l)	trans-1,2-DCE (µg/l)	Chloroform (µg/l)	Methyl chloride (µg/l)	PCE (µg/l)	TCE (µg/l)
	MCL[1]:	**6[2]**	**5**	**5**	**6**	**0.5**	**6**	**10**	**80**	**3[2]**	**5**	**5**
Layer E Wells												
3080	11/30/04	<4.0	<0.5	<0.5	<0.5	<0.5	NA	NA	<0.5	NA	<0.5	<0.5
3328	11/14/04	<4.0	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
3330	11/24/04	**350**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
3361	11/22/04	<4.0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
3537	11/22/04	<4.0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Notes:
1. California Department of Health Services (DHS) Primary or Secondary Maximum Contaminant Level (MCL).
2. California State Action Level for Drinking Water (DHS).
Results shown in bold exceed MCL or Action Level.
VOCs not detected in any wells during the RI Sampling Period are not included in this table.

Abbreviations:
MCL = Maximum Contaminant Level
1,1,2-TCA = 1,1,2-Trichloroethane
1,1-DCA = 1,1-Dichloroethane
1,1-DCE = 1,1-Dichloroethylene
1,2-DCA = 1,2-Dichloroethane
1,2-DCE = 1,2-Dichloroethylene
PCE = Tetrachloroethylene
TCE = Trichloroethylene
µg/l = micrograms per liter
NA = Not analyzed