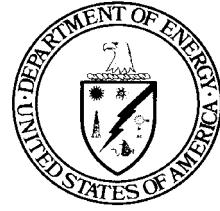




E.O. Lawrence Berkeley National Laboratory  
University of California  
Environmental Restoration Program



United States Department of Energy

## ENVIRONMENTAL RESTORATION PROGRAM

### **QUARTERLY PROGRESS REPORT FIRST QUARTER FISCAL YEAR 2006 (October 1 to December 31, 2005)**

for the  
Lawrence Berkeley National Laboratory  
Hazardous Waste Facility Permit

May 2006

## **QUARTERLY PROGRESS REPORT**

**FIRST QUARTER FISCAL YEAR 2006  
(October 1 to December 31, 2005)**

for the Lawrence Berkeley National Laboratory  
Hazardous Waste Facility Permit

*A Joint Effort of  
Environment, Health and Safety Division and  
Earth Sciences Division*  
Lawrence Berkeley National Laboratory  
Berkeley, CA 94720

May 2006

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## ENVIRONMENTAL RESTORATION PROGRAM

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## **LIST OF ABBREVIATIONS**

AOC	Area of Concern
BC	BC Laboratories
Cal-EPA	California Environmental Protection Agency
CAP	Corrective Action Program
CCV	Continuing Calibration Verification
CMI	Corrective Measures Implementation
CMS	Corrective Measures Study
DCA	Dichloroethane
DCE	Dichloroethene
DOE	U.S. Department of Energy
DTSC	Cal-EPA Department of Toxic Substances Control
EBMUD	East Bay Municipal Utility District
EH&S	Environment, Health and Safety Division
EML	LBNL Environmental Measurement Laboratory
EPA	U. S. Environmental Protection Agency
ERP	Environmental Restoration Program
FY	Fiscal Year (October 1 to September 30)
GAC	Granular Activated Carbon
HRC	Hydrogen Release Compounds
HWHF	Hazardous Waste Handling Facility
ICMs	Interim Corrective Measures
LBNL	Lawrence Berkeley National Laboratory
MCL	Maximum Contaminant Level
MCS	Media Cleanup Standard
MDA	Minimum Detectable Activity
MDL	Method Detection Limit
mg/kg	milligrams per kilogram
$\mu\text{g/L}$	micrograms per liter ( $10^{-6}$ grams per liter)
NTLF	National Tritium Labeling Facility
PCBs	Polychlorinated Biphenyls
PCE	Tetrachloroethene (Perchloroethene)
pCi/L	picocuries per liter ( $10^{-12}$ curies per liter)
PQL	Practical Quantitation Limit
QA	Quality Assurance

QC	Quality Control
RCRA	Resource Conservation and Recovery Act
RFA	RCRA Facility Assessment
RFI	RCRA Facility Investigation
RPD	Relative Percent Difference
RPM	Remedial Project Manager
SWMU	Solid Waste Management Unit
TCA	Trichloroethane
TCE	Trichloroethene
TPH	Total Petroleum Hydrocarbons
UC	University of California
UST	Underground Storage Tank
VOCs	Volatile Organic Compounds
Water Board	Regional Water Quality Control Board

## **EXECUTIVE SUMMARY**

The Lawrence Berkeley National Laboratory (LBNL) Hazardous Waste Handling Facility operates under a Resource Conservation and Recovery Act (RCRA), Part B Hazardous Waste Facility Permit. The Permit requires LBNL to investigate and address all releases of hazardous waste at the facility and to issue quarterly progress reports that cover the following subjects:

- A description of work completed
- Summaries of all findings
- Summaries of all problems encountered and actions taken to rectify problems
- Projected work for the next reporting period.

This Quarterly Progress Report covers LBNL Environmental Restoration Program (ERP) activities conducted as part of the RCRA Corrective Actions Program, during the first quarter of fiscal year 2006 (FY06) (October 1 through December 31, 2005).

## **GROUNDWATER MONITORING**

First quarter fiscal year FY06 groundwater monitoring started on October 3, 2005 and was completed on December 20, 2005. Groundwater monitoring data collected during the first quarter of FY06 (reporting period) are consistent with previous results. No volatile organic compounds (VOCs) were detected in the perimeter or offsite wells, except for 1.8 µg/L of trichloroethene (TCE) in MWP-7. Concentrations of VOCs in MWP-7 have been below Maximum Contaminant Levels (MCLs) for drinking water since May 2000.

The number of groundwater samples submitted for each type of analysis during the reporting period is shown in the following table.

### **Number of Groundwater Samples Collected During the First Quarter of FY 2006**

	VOCs	TPH			PCBs	Metals	Tritium	Total
		-D	-G	-FF				
Monitoring Wells Primary Samples	69					2	1	72
Duplicate Samples	4							4
Trip Blanks	3							3
Rinse Blanks	5						1	6
Slope Stability Wells	5							5
Temporary Sampling Points	122	3	3	2	5	2	1	138
Extraction Wells	76							76

VOCs: Volatile Organic Compounds

PCBs: Polychlorinated Biphenyls

TPH-D: Total Petroleum Hydrocarbons in the diesel range

TPH-G: Total Petroleum Hydrocarbons in the gasoline range

TPH-FF: Total Petroleum Hydrocarbons-fuel fingerprint

The groundwater plumes and other areas of groundwater contamination where halogenated hydrocarbons were detected at concentrations above MCLs during the reporting period are listed in the following table, together with the maximum concentrations of the halogenated VOCs that were detected above MCLs.

### **Maximum Concentrations (µg/L) of Halogenated Hydrocarbons Detected Above MCLs During the First Quarter of FY06**

Area	Groundwater Unit	1,1-DCA	1,2-DCA	1,1-DCE	cis-1,2-DCE	trans-1,2-DCE	PCE	TCE	vinyl chloride	carbon tet	meth chloride
Bevalac	Building 71 Plume				37		124	33	8.9		
	Building 71B Lobe										
	Building 51/64 Plume	8,560	7.5	1,180	225	44	248	701	100		5.9
	Building 51L Plume	24			112			11	735		
Support	SB51A-01-8B <sup>(a)</sup>										
	Old Town Plume										
	Building 7 Lobe			130	160		30,300	23,600	5.6	1,270	
	Building 25A Lobe			21				75			
	Building 52 Lobe						6.5			1.3	
Old Town	Building 69A Area				22				37		
	Building 76 Plume							17			
	Building 75A Area				51			8			

DCA: dichloroethane

DCE: dichloroethene

PCE: tetrachloroethene

TCE: trichloroethene

meth chloride: methylene chloride

carbon tet: carbon tetrachloride

(a): Not sampled during reporting period

No aromatic hydrocarbons were detected at a concentration above the MCL during the reporting period. Benzene has consistently been detected in groundwater monitoring wells MW7-00-4 and MW75A-00-7 at concentrations above MCLs; however, these wells were not scheduled for sampling during the reporting period. The benzene detected in these two deep wells, and previously in other deep wells screened in the Orinda Formation, may be naturally occurring.

Groundwater samples were collected from three temporary groundwater sampling points at Building 76 and one temporary groundwater sampling point at Building 6 during the reporting period and analyzed for petroleum hydrocarbons. No petroleum hydrocarbons were detected.

Groundwater samples were collected from two wells during the reporting period and analyzed for tritium. Tritium concentrations have been below the MCL (<20,000 pCi/L) in all groundwater samples collected since the second quarter of FY05.

Polychlorinated biphenyls (PCBs) (16 µg/L) were detected at one of the four locations sampled in the Building 51 Motor Generator Room Basement during the reporting period. The detection is consistent with previous results from the sampling point.

Groundwater samples were collected at four locations near Building 71B during the reporting period and analyzed for metals. Elevated levels of several metals were detected at three of the locations, apparently the result of the ongoing Hydrogen Release Compound (HRC) injection, which was implemented to enhance biodegradation of contaminants in the Building 71B lobe source area.

## **SURFACE WATER SAMPLING**

Annual surface water samples were collected from four creeks flowing from LBNL and analyzed for VOCs, metals, and tritium. No VOCs were detected. Concentrations of metals detected were consistent with previous results. Tritium was detected in samples collected from North Fork Strawberry Creek (242 pCi/g) and Chicken Creek (273 pCi/g). The tritium concentrations are consistent with previous results, with concentrations in the two creeks declining to levels below 300 pCi/L after closure of the National Tritium Labeling Facility (NTLF) in December 2001.

## **NEW OR SIGNIFICANT FINDINGS AND ACTIVITIES FOR CURRENT REPORTING PERIOD**

### Catch Basin at Building 71

Mercury was detected in sediment removed from a stormwater catch basin near Building 71 during cleaning operations. Six sediment samples were therefore collected from the erosion control basin in North Fork Strawberry Creek downflow from the catch basin. The results indicate no impact to creek sediment from the contaminated sediment in the catch basin. A letter reporting the presence of mercury in the catch basin was sent to the Department of Toxic Substances Control (DTSC), with copies of the letter provided to the City of Berkeley and the Department of Energy (DOE).

### Building 51/64 Groundwater Solvent Plume Source Area

Since the construction of the additional groundwater collection trench on the southeast side of Building 64 and a new groundwater extraction well on the southwest side of the building, the volume of water captured has been approximately equal to the volume injected.

## **MEETINGS AND DOCUMENTS**

- A Remedial Project Managers (RPM) meeting was held at the DTSC offices on November 10, 2005.
- The semi-annual meeting with the regulatory agencies was held on October 26, 2005.
- On October 12, 2005, DOE issued its Finding of No Significant Impact (FONSI) based on the information and analyses contained in the Environmental Assessment.
- On October 20, 2005, the DTSC informed LBNL that the CMS Report was approved and effective immediately

## **CORRECTIVE MEASURES**

Following is a summary of the ongoing corrective measures that continued through the reporting period.

### Old Town Groundwater Solvent Plume (Building 7 lobe)

- Continued operation of the in situ soil flushing system (Building 7 Groundwater Collection Trench) in the Building 7 lobe source area downgradient from the former Building 7 sump location.
- Continued operation of the in situ soil flushing system in the Building 7 lobe core area downgradient from the Building 7 Groundwater Collection Trench.
- Continued operation of the following groundwater collection trenches to control plume migration.
  - Building 58 West Groundwater Collection Trench
  - Building 58 Southeast Groundwater Collection Trench.
- Continued operation of the dual-phase (groundwater and soil vapor) extraction wells on the Building 53/58 slope.

### Old Town Groundwater Solvent Plume (Building 52 Lobe)

- Continued in situ soil flushing in the Building 52 lobe source area.
- Continued extraction and treatment of groundwater from the Building 46 subdrain.

### Old Town Groundwater Solvent Plume (Building 25A Lobe)

- Continued in situ soil flushing in the Building 25A lobe source area.

### Building 51/64 Groundwater Solvent Plume

- Continued in situ soil flushing in the source area.

### Building 71B Lobe of the Building 71 Groundwater Solvent Plume Area

- Continued in situ soil flushing/HRC injection in the source area.

### Building 51L Groundwater Solvent Plume

- Continued operation of the groundwater extraction and treatment system.

### Contaminated Drain Lines

- Continued capture and treatment of contaminated Building 51 area hydrauger effluent.
- Continued extraction and treatment of groundwater from the Building 51 drainage system.

- Continued extraction and treatment of water from an electrical utility manhole (EMH-133) and drain 37-01-01 east of Building 6.

These measures have generally resulted in decreases in the concentrations of VOCs detected in groundwater. Significant decreases include:

- The concentrations of VOCs detected in most wells monitoring the source, core, and transgradient areas of the Building 7 lobe have declined since in situ soil flushing began in the source area in 1997.
- The concentrations of VOCs detected in most wells monitoring the Building 52 lobe have declined since in situ soil flushing began in 2003, with concentrations of VOCs in wells in the source area and some downgradient wells declining to levels below MCLs.
- The concentrations of VOCs detected in wells monitoring the Building 25A lobe source area have declined since in situ soil flushing began in 2002.
- Concentrations of VOCs detected in the Building 51/64 plume source area decreased significantly after the source area ICM excavation was completed, and have declined further since in situ soil flushing was started in 2003.
- Concentrations of VOCs in wells in the source and upgradient core areas of the Building 71B lobe have declined significantly since HRC injection/soil flushing was started.

In addition to the corrective measures noted above, the following activities continued during the reporting period:

- Continued operation of the Building 6 dual-phase (groundwater and soil vapor) extraction system.
- Continued extraction and treatment of water from the concrete sump installed inside Building 51A and SB58-98-4.

# **SECTION 1**

## **INTRODUCTION**

### **1.1 PURPOSE AND SCOPE**

The Lawrence Berkeley National Laboratory (LBNL) Hazardous Waste Handling Facility (HWHF) operates under a Resource Conservation and Recovery Act (RCRA), Part B Hazardous Waste Facility Permit issued by the California Environmental Protection Agency (CAL-EPA) Department of Toxic Substances Control (DTSC). The Permit was issued on May 4, 1993, and requires LBNL to investigate and address all releases of hazardous waste that may have occurred at the facility and issue quarterly progress reports. In accordance with permit requirements, this Quarterly Progress Report covers the following subjects:

- a. A description of work completed (Executive Summary)
- b. Summaries of all findings, including summaries of laboratory data (Section 3)
- c. Summaries of all problems or potential problems encountered during the reporting period and actions taken to rectify problems (Section 4)
- d. Projected work for the next reporting period (Section 6).

This report documents RCRA Corrective Action Program (CAP) activities conducted by the LBNL Environmental Restoration Program (ERP) during the first quarter of fiscal year (FY) 2006 (FY06), which covers the period from October 1 through December 31, 2005. Historical trends in contaminant concentrations in groundwater are discussed in the “Quarterly Progress Report and Annual Status Summary”, which is submitted to the DTSC annually at the end of February of each year. The most recent annual status summary report is the fourth quarter FY05 report (LBNL, 2006). The annual summary report includes tables of the historical groundwater data for volatile organic compounds (VOCs) and four quarters of groundwater data for other analytes.

## **1.2 SITE DESCRIPTION**

LBNL is a research facility managed by the University of California (UC) for the United States Department of Energy (DOE). From an initial emphasis on nuclear physics research in the 1940s, LBNL has diversified to include materials sciences, chemistry, earth sciences, biosciences, and energy conservation research. The facility is located in the Berkeley/Oakland Hills in Alameda County, California (Figure 1). The western three-quarters of LBNL are in Berkeley and the eastern quarter is in Oakland. A map of the site showing the surface topography is included as Figure 2.

## **1.3 DOCUMENTATION OF INVESTIGATION RESULTS**

Results of environmental investigations that have been conducted at LBNL are documented in the following reports:

- Quarterly summaries of RCRA CAP activities conducted since January 1993 have been presented in the LBNL ERP Quarterly Progress Reports (LBNL, 1993-2006).
- Results of the initial environmental investigations at LBNL are described in the RCRA Facility Assessment (RFA) (LBNL, 1992a) and the RCRA Facility Investigation (RFI) Work Plan (LBNL, 1992b).
- Results of environmental investigations conducted from October 1992 through June 1994 are documented in the RCRA Facility Investigation Phase I Progress Report (LBNL, 1994).
- Results of environmental investigations conducted from July 1, 1994 to June 30, 1995 are documented in the RCRA Facility Investigation Phase II Progress Report (LBNL, 1995).
- Results of environmental investigations conducted from June 30, 1995 through September 22, 2000 are documented in the RCRA Facility Investigation Report (LBNL, 2000).

## **1.4 PROJECT ORGANIZATION**

LBNL's various divisions manage and operate the laboratory facilities on site. The DOE provides funding and oversight of these operations. Investigations of areas that contain potential environmental contamination, including soil, surface water, and groundwater, are conducted at LBNL under the ERP, which is part of a nationwide effort by the DOE to identify and clean up contaminated areas at its facilities. The LBNL ERP is part of the Environmental Services Group of the LBNL Environment, Health and Safety (EH&S) Division.

For reporting purposes, the RCRA Facility Assessment (RFA) (LBNL, 1992a) subdivided LBNL into 15 Areas. Solid Waste Management Units (SWMUs) and Areas of Concern (AOCs) identified in the RFA were given designations based on their locations in one of the 15 Areas. Subsequently, during the RCRA Facility Investigation (RFI), the 15 Areas were grouped into the following four areas, based on the locations of groundwater plumes, the direction of groundwater flow, and potential contaminant migration pathways.

- Bevalac Area (RFA Areas 1, 9 and 15)
- Old Town Area (RFA Areas 2, 7, 10, and 14)
- Support Services Area (RFA Areas 3, 4, and 5)
- Outlying Areas (RFA Areas 6, 8, 11, 12, and 13).

Figures and tables presented in this report are organized based on these four areas. The locations of the four areas are shown on Figure 3.

# SECTION 2

## TECHNICAL PROCEDURE DOCUMENTATION

### **2.1 GENERAL PROCEDURES AND GUIDANCE DOCUMENTS**

A listing and a discussion of general ERP procedures, regulatory guidance documents, laboratory procedures, and groundwater monitoring schedules is provided in the fourth quarterly report for FY05 (LBNL, 2006).

### **2.2 LBNL WORKPLANS**

Workplans submitted to the regulatory agencies during the current reporting period are listed in the following table:

**Workplans Submitted to the Regulatory Agencies  
during the Current Reporting Period**

Description	Date Submitted	Reference
<i>Corrective Measures Implementation (CMI) Workplan for Soil Excavation, Building 7 Sump</i>	November 2, 2005	LBNL, 2005a
<i>RCRA Corrective Measures Implementation (CMI) Workplan</i>	November 10, 2005	LBNL, 2005b

## **SECTION 3**

### **ENVIRONMENTAL ACTIVITIES CONDUCTED DURING THE REPORTING PERIOD (October through December 2005)**

#### **3.1 ANALYTICAL METHODS**

Soil and groundwater samples collected during the reporting period were analyzed by the LBNL Environmental Measurement Laboratory (EML), Eberline, or BC Laboratories (BC), as indicated in the following table:

<b>ANALYTICAL LABORATORY</b>		
<b>Analytical Method</b>	<b>Groundwater</b>	<b>Soil/Sediment</b>
VOCs (EPA 8260)	EML/BC	BC
TPH-G, TPH-D, TPH-FF (EPA Mod. 8015)	BC	
PCBs (EPA 8082)	BC	
Metals (EPA 6000 & 7000 series)	BC	BC
Tritium (EPA 906)	Eberline	

Notes: VOCs: Volatile organic compounds

TPH-G: Total Petroleum Hydrocarbons in the gasoline range

TPH-D: Total Petroleum Hydrocarbons in the diesel range

TPH-FF: Total Petroleum Hydrocarbons fuel fingerprint

PCBs: Polychlorinated biphenyls

The complete list of United States Environmental Protection Agency (EPA) Method 8260 analytes and quantitation limits (assuming no sample dilution) for each laboratory are shown in Table 1. Quantitation limits for other analyses are included in the tables of results.

#### **3.2 GROUNDWATER MONITORING SUMMARY**

First quarter FY06 groundwater sampling started on October 3, 2005 and was completed on December 20, 2005. Groundwater samples are collected from groundwater monitoring wells and analyzed for VOCs, metals, and tritium in accordance with the schedule approved by the Regional Water Quality Control Board (Water Board) (LBNL, 2005c). Selected samples are also analyzed for polychlorinated biphenyls (PCBs) and total petroleum hydrocarbons (TPH).

Groundwater samples are also periodically collected from temporary groundwater sampling points, slope stability wells, groundwater extraction wells, and hydraugers. Locations of slope stability wells are shown on Figure 4. Locations of groundwater monitoring wells, temporary groundwater sampling points, extraction wells, and hydraugers are shown on Figures 5 and 6a through 6i. Slope stability wells and hydraugers were not installed for groundwater monitoring purposes, and therefore the results from these installations are not considered valid for quantitative determination of groundwater concentrations.

The sampling locations and analytical methods for groundwater sampling conducted during the current period are presented in Table 2. Water level data are presented in Table 3. Table 4 provides groundwater monitoring well construction details. The table numbers corresponding to the tables containing the groundwater analytical results for the different types of sampling locations are noted below:

**Table Numbers for Groundwater Analytical Result**

Chemical	Area	Groundwater Monitoring Wells	Temporary Groundwater Sampling Points	Groundwater Extraction Wells	Other Locations	Hydraugers
Volatile Organic Compounds (VOCs)	Bevalac	5-1	5-2	5-3	5-4	8
	Old Town	6-1	6-2	6-3	6-4	8
	Support Services	7-1	7-2	—	7-3	—
	Outlying	(a)	—	—	—	—
Petroleum Hydrocarbons	Site Wide	—	10	—	—	—
Tritium	Site Wide	11	11	—	11	—
Metals	Bevalac	12	12	—	—	—
PCBs	Site Wide	—	13	—	—	—

(a) No groundwater samples were collected in Outlying Areas during the current reporting period.

Tables listing VOC concentrations are subdivided into halogenated non-aromatic compounds, which were primarily derived from solvents, and nonhalogenated or aromatic compounds, which were primarily derived from petroleum products. The locations where concentrations of VOCs exceeded Maximum Contaminant Levels (MCLs) for drinking water during the reporting period and the specific VOCs that exceeded MCLs are listed in Table 9.

During the RFI, ten groundwater contamination plumes were identified at LBNL. In addition to the plumes, five localized areas of solvent-contaminated groundwater were identified in the Support Services Area of LBNL. Seven of the ten plumes contain halogenated non-aromatic VOCs derived from industrial solvents, two contain diesel-range petroleum hydrocarbons, and one contains tritium. Two of the plumes, the Old Town Groundwater Solvent Plume and the Building 71 Groundwater Solvent Plume, have been subdivided into multiple lobes to reflect the commingling of contaminated groundwater derived from different sources. The following table lists figure numbers for contaminant concentration maps and groundwater elevation maps for eight of the plumes, the five areas of solvent-contaminated groundwater, and monitoring wells in the Outlying Areas and along the site perimeter. The remaining two plumes (Building 71 Freon plume and Building 37 solvent plume) are not included in the table because contaminant concentrations previously declined to levels substantially below MCLs. Detailed discussions of the characteristics of each of these plumes, plume lobes, and areas of groundwater contamination are provided in the RFI Report (LBNL, 2000) and in the most recent annual summary report (LBNL, 2006).

## Groundwater Monitoring - Figure Index

Plume or Area of Groundwater Contamination	Figure Number	
	Concentration Map	Groundwater Level Elevation Map
<b>Halogenated Non-Aromatic VOCs</b>		
<i>Bevalac Area</i>		9
Building 71 Solvent Plume (AOC 1-9)		
Building 71 Lobe	8a	
Building 71B Lobe	8a	
Building 51/64 Solvent Plume (AOC 9-13)	8a & 8b	
Building 51L Solvent Plume	8a & 8c	
<i>Old Town Area</i>		12
Old Town Solvent Plume (AOCS 2-4 and 10-5)		
Building 7 Lobe	10 & 11	
Building 52 Lobe	10	
Building 25A Lobe	10	
<i>Support Services Area</i>		14
Building 69A, 75, 75A, 75B, and 77 Areas of Groundwater Contamination	13	
Building 76 Solvent Plume (AOC 4-5)	13	
<i>Outlying Areas</i>	15	
<b>Petroleum Hydrocarbons</b>		
Building 7 Diesel Plume (AOC 2-1)		12
Building 74 Diesel Plume (AOC 11-1)		
<b>Tritium</b>		
Building 75 Tritium Plume (SWMU 3-7).	16	14
Building 71 Area.	(a)	9

(a) No groundwater samples collected for tritium analysis at Building 71 during current reporting period.

Groundwater monitoring results for the reporting period were consistent with previously reported results. A summary of the results is provided below. New and/or significant findings are discussed in Section 3.4.

### Volatile Organic Compounds

Monitoring wells (MWP-1, MWP-2, MWP-4 through MWP-8, and CD-92-28) were constructed to monitor the potential offsite migration of contaminated groundwater. Several other wells also monitor the quality of groundwater downgradient from the developed areas of the site including MW88-93-11A, MW62-92-26, MW62-92-27, MW74-94-7, MW74-94-8, MW61-92-12, MW25-95-27, MW31-98-17, and OW3-225. These 17 monitoring wells have been designated as

site perimeter wells (Water Board, 1999) and their locations are shown on Figure 15. Trichloroethene (TCE), which was detected in MWP-7 at a concentration of 1.8 µg/L, was the only VOC detected in the perimeter or offsite wells during the current reporting period. MWP-7 monitors the Building 37 Groundwater Solvent Plume. Concentrations of halogenated hydrocarbons detected in MWP-7 have been below MCLs since May 2000, with TCE the only VOC detected since January 2003.

VOCs detected at concentrations above MCLs during the reporting period are listed in Table 9 and summarized in the following table. The areas of groundwater contamination where MCLs are exceeded are shown on Figure 7.

**Maximum Concentrations (µg/L) of Halogenated Hydrocarbons Detected Above MCLs During the First Quarter of FY06**

Area	Groundwater Unit	1,1-DCA	1,2-DCA	1,1-DCE	cis-1,2-DCE	trans-1,2-DCE	PCE	TCE	vinyl chloride	carbon tet	meth chloride
Bevalac	Building 71 Plume										
	Building 71B Lobe				37		124	33	8.9		
	Building 51/64 Plume	8,560	7.5	1,180	225	44	248	701	100		5.9
	Building 51L Plume	24			112			11	735		
Old Town	SB51A-01-8B <sup>(a)</sup>										
	Old Town Plume										
	Building 7 Lobe			130	160		30,300	23,600	5.6	1,270	
	Building 25A Lobe			21				75			
Support	Building 52 Lobe						6.5			1.3	
	Building 69A Area				22				37		
	Building 76 Plume							17			
	Building 75A Area				51			8			

DCA: dichloroethane  
DCE: dichloroethene

PCE: tetrachloroethene  
TCE: trichloroethene

meth chloride: methylene chloride  
carbon tet: carbon tetrachloride

(a): Not sampled during reporting period

*Aromatic or Non-Halogenated Hydrocarbons*

Wells in which aromatic or non-halogenated hydrocarbons were detected during the reporting period are listed in the following table. Concentrations of aromatic or non-halogenated hydrocarbons detected were all below MCLs.

### **Aromatic or Non-Halogenated Hydrocarbons Detected in Groundwater**

<b>Chemical</b>	<b>MCL (<math>\mu\text{g/L}</math>)</b>	<b>Well Number</b>	<b>Concentration (<math>\mu\text{g/L}</math>)</b>
naphthalene	no MCL specified	MP7-99-2B	70
toluene	150	SB64-02-1	1.9
		SB64-02-2	6.8

### Petroleum Hydrocarbons

Groundwater samples were collected from three temporary groundwater sampling points at Building 76 (W76-97-3, W76-97-4, and W76-97-5) and one temporary groundwater sampling point at Building 6 (SB7-97-1) during the reporting period and analyzed for petroleum hydrocarbons (Table 10). Building 76 is the location of present and former diesel and gasoline underground storage tanks (USTs). SB7-97-1 is located near the Former Building 7E Kerosene UST. No petroleum hydrocarbons were detected.

### Tritium

Groundwater samples were collected from one groundwater monitoring well (MW31-98-17) and one temporary groundwater sampling point (SB69A-99-1) during the reporting period and analyzed for tritium (Table 11). The sampling locations are shown on Figure 16. Tritium was detected in SB69A-99-1 (746 pCi/L) but not in MW31-98-17. The detection is consistent with previous results. Tritium concentrations have been below the MCL (<20,000 pCi/L) in all groundwater samples collected since the second quarter of FY05.

### Metals

Groundwater samples were collected from two groundwater monitoring wells and two temporary groundwater sampling points near Building 71B during the reporting period and analyzed for metals (Table 12). The purpose of the sampling is to monitor changes in the concentrations of metals in the groundwater resulting from the injection of Hydrogen Release Compounds (HRC) in two areas near Building 71B. As reported previously, HRC injection at MW71B-98-13 resulted in increases in the concentrations of several metals in the groundwater,

apparently as the result of the lowered pH. The elevated concentrations at MW71B-98-13 have decreased since injection of HRC was terminated. Elevated levels of metals (arsenic, barium, nickel, and selenium) were detected in MW71B-99-3R, SB71B-03-1, and SB71B-03-2 during the reporting period, apparently the result of the ongoing HRC injection in the Building 71B lobe source area.

#### Polychlorinated Biphenyls (PCBs)

Groundwater samples were collected from one temporary groundwater sampling point inside Building 16 (SB16-98-1) and four temporary groundwater sampling points (SB51-96-6, SB51-98-1, SB51-98-4, and SB51-98-6) in the Building 51 former Motor Generator Room Basement during the reporting period and analyzed for PCBs (Table 13). PCBs (16 µg/L) were detected only in the sample collected from SB51-96-6. The MCL for PCBs is 0.5 µg/L. The detection is consistent with previous results from the sampling point.

### **3.3 SURFACE WATER SAMPLING**

Annual surface water samples were collected from four creeks flowing from LBNL (including both upstream and downstream locations on Chicken Creek and North Fork Strawberry Creek) and analyzed for VOCs, metals, and tritium. Surface water sampling locations are shown on Figure 2. No VOCs were detected (Table 14a). Concentrations of metals detected were consistent with previous results (Table 14a). Barium (110 ug/L maximum) and vanadium (35 µg/L maximum) were detected at all the sampling locations. Arsenic, selenium, and zinc were also detected. Tritium was detected in samples collected from North Fork Strawberry Creek (242 pCi/g) and Chicken Creek (273 pCi/g). The tritium concentrations are consistent with previous results, with concentrations detected in North Fork Strawberry and Chicken Creeks declining to levels below 300 pCi/L after closure of the National Tritium Labeling Facility (NTLF) in December 2001. Concentration trends of tritium detected in the two creeks are plotted on Figure 17.

## **3.4 NEW OR SIGNIFICANT FINDINGS AND ACTIVITIES FOR THE CURRENT REPORTING PERIOD**

Results of new investigations and other significant observations for the reporting period are discussed in the following sections.

### **3.4.1 Catch Basin at Building 71**

Two samples (CB71Q-1 and CB71Q-2) were collected from sediment removed from stormwater catch basin B71Q near Building 71 during cleaning operations. The samples contained relatively high concentrations of copper, lead, mercury, silver, and zinc (Table 15). Six sediment samples (SS-BCECS-10-14-1 through SS-BCECS-10-14-6) were therefore collected from the erosion control basin in North Fork Strawberry Creek downflow from the Building 71 catch basin. All metals were detected at concentrations within LBNL background levels for soil, except for chromium and copper in one sample (Table 15). The results indicate no impact to creek sediment from the contaminated sediment in the catch basin.

A letter reporting the presence of mercury in the catch basin was sent to the DTSC on October 24, 2005. A copy of the letter was provided to the City of Berkeley and the DOE.

### **3.4.2 Well Destruction**

On August 22, 2005, LBNL submitted permit applications for the destruction of 42 wells (including groundwater monitoring wells, temporary groundwater sampling points, and one soil-gas monitoring well) to the City of Berkeley. The monitoring wells were approved for destruction by the Water Board since they were no longer required for monitoring site groundwater. The final well in the permit application, MW37-92-5 was destroyed on December 9, 2005. The other wells were destroyed during the previous reporting period.

### **3.4.3 In Situ Soil Flushing**

#### Building 51/64 Groundwater Solvent Plume Source Area

During the previous reporting period, an additional groundwater collection trench was constructed on the southeast side of Building 64 and a new groundwater extraction well (SB64-05-4) was installed on the southwest side of the building. The purpose of the new extraction trench and well is to provide additional control on the migration of water injected inside Building 64. Prior to their installation, approximately 80% of the injected water escaped capture. Since their construction, the volume of water captured has been approximately equal to the volume injected.

#### Building 52 Lobe of the Old Town Groundwater Solvent Plume Source Area

In situ soil flushing in the Building 52 lobe source area has resulted in concentrations of contaminants in wells in the source area and in some downgradient wells declining to levels below MCLs. To evaluate whether the lower concentration levels would be maintained in the absence of flushing, injection and extraction of water were temporarily halted on October 20, 2005. Operation of the soil flushing system was resumed on December 2, 2005, after no significant rebound in VOC concentrations was observed.

#### Building 71B Lobe of the Building 71 Groundwater Solvent Plume Source Area

The concentrations of VOCs have declined significantly in the three source area wells (MW71B-99-3R, SB71B-03-1, and SB71B-03-2) since the start of HRC injection. Concentrations of PCE and TCE in MW71B-99-3R and SB71B-03-1 have declined to levels below MCLs. The concentration of total VOCs has declined from approximately 3,000 µg/L to approximately 100 µg/L in SB71B-03-2. This well contains the highest concentration of VOCs detected in wells monitoring the plume. Concentrations of VOCs in the downgradient extraction well (SB71B-04-1) have declined from approximately 1,000 µg/l to less than 100 µg/L.

## Building 7 Lobe Core Area

Groundwater extraction well EW7-03-2 was reconstructed with a 5-inch diameter casing during the reporting period.

### **3.5 DOCUMENTS AND MEETINGS**

#### Reports and Other Documents

- The Environmental Assessment and Corrective Measures Study Report for Remediating Contamination at Lawrence Berkeley National Laboratory Regulated under the Resource Conservation and Recovery Act (DOE, 2005) was completed in September 2005. On October 12, 2005, DOE issued its Finding of No Significant Impact (FONSI) based on the information and analyses contained in the Environmental Assessment.
- On October 20, 2005, the DTSC informed LBNL that the CMS Report was approved and effective immediately.

LBNL submitted the following documents to the regulatory agencies during the reporting period:

- LBNL submitted the Corrective Measures Implementation (CMI) Workplan for Soil Excavation, Building 7 Sump of the Old Town Groundwater Solvent Plume Source Area to the DTSC on November 2, 2005 (LBNL, 2005a).
- LBNL submitted the Corrective Measures Implementation (CMI) Workplan to the DTSC on November 10, 2005 (LBNL, 2005b).
- LBNL submitted the Quarterly Progress Report for the Third Quarter of FY05 to the DTSC on November 30, 2005, in compliance with LBNL's RCRA Part B Permit (LBNL, 2005d).

#### Meetings

The following meetings were held with the regulatory agencies during the reporting period:

- A Remedial Project Managers meeting was held at the DTSC offices on November 10, 2005. Representatives of the DTSC, Water Board, City of Berkeley, LBNL, and DOE attended.
- The semi-annual review meeting was held on October 26, 2005. Representatives of the Water Board, City of Berkeley, City of Oakland, UC, LBNL, and DOE attended. Copies of the meeting handout were provided to attendees of the December 1, 2005 City of Berkeley Community Environmental Advisory Commission (CEAC) meeting.

## **SECTION 4**

### **SUMMARY OF PROBLEMS ENOUNTERED**

#### **4.1 DEFINITIONS**

In accordance with the LBNL RCRA Part B Hazardous Waste Facility Permit, Quarterly Progress Reports are required to address problems encountered and actions taken to rectify problems. Problems are defined herein as follows:

1. Quality Assurance and Quality Control problems that would result in failure to meet data quality objectives.
2. Findings that indicate the presence of contamination that could impact human health or the environment, and for which activities are not specified in existing workplans to either further evaluate or remediate the contamination.

#### **4.2 QUALITY ASSURANCE / QUALITY CONTROL**

##### Field Quality Control

Five field (equipment/rinse) blanks and three trip blanks were collected and analyzed for VOCs during the reporting period (Table 16). In addition, one field (equipment/rinse) blank was analyzed for tritium (Table 11). No analytes were detected in the blanks.

Four duplicate groundwater samples were collected and analyzed for VOCs during the reporting period. The relative percent difference (RPD) for the four duplicate samples ranged from 20% to 85%, with the results provided by the LBNL EML consistently higher than those of BC laboratories.

##### Laboratory Quality Control

Laboratory quality assurance/quality control (QA/QC) problems identified in the laboratory data packages are noted in the following table. The affected samples were noted

(flagged) in the database. The data validation review indicated that the identified laboratory QA/QC problems were not sufficient to assign an “R” qualifier (i.e., the data are not usable for any project purpose) to any of the data.

### **Analytical Laboratory Deficiencies**

<b>Laboratory</b>	<b>Chain of Custody</b>	<b>Deficiency</b>
BC	05-10-15	The continuing calibration verification (CCV) for tetracosane was outside control limits. Surrogate recovery was low for PCBs due to matrix interference
BC	05-10-14	The matrix spike recoveries for arsenic and selenium were outside control limits. Lead and mercury were detected in the Method Blank at concentrations between the Practical Quantitation Limit (PQL) and Method Detection Limit (MDL).
BC	05-10-16	Copper and silver were detected in the Method Blank at concentrations between the PQL and MDL. Sample precision for vanadium was outside control limits.
BC	05-10-23	CCCVs for chloroethane, 1,2-dibromo-3-chloropropane, dichlorodifluoromethane, naphthalene, and 1,2,3-trichlorobenzene were outside control limits. Lead, thallium, and mercury were detected in the Method Blank at concentrations between the PQL and MDL. Surrogate recoveries were outside control limits for 1,2-dichloroethane-d4 and 4-bromofluorobenzene. The matrix spike recovery for antimony was outside control limits.
BC	05-11-6	The matrix spike recovery for dichlorodifluoromethane was outside control limits.
BC	05-11-11	CCVs for dioxane and ethanol were outside control limits.
BC	05-12-6	CCV for decachlorobiphenyl was outside control limits.
BC	05-12-13	CCVs for bromomethane, bromochloromethane, dichlorodifluoromethane, and 1,2,3-trichlorobenzene were outside control limits.

## **SECTION 5**

### **STATUS OF CORRECTIVE MEASURES**

#### **5.1 ONGOING CORRECTIVE MEASURES**

The extent of groundwater contamination during the current reporting period and in 1999 is compared on Figure 18, Figure 19, and Figure 20 for total halogenated VOC concentrations greater than 10 µg/L, 100 µg/L, and 1,000 µg/L, respectively. As can be seen on the figures, there have been significant reductions in concentrations of halogenated VOCs in most of the areas of groundwater contamination since 1999. These reductions are the result of the pilot tests and Interim Corrective Measures (ICM) that are continuing as the approved corrective measures for the site. This section provides the status of these measures as well as other ongoing corrective measures that continued through the current reporting period.

##### Old Town Groundwater Solvent Plume (Building 7 lobe)

- Continued operation of the in situ soil flushing system (Building 7 Groundwater Collection Trench) in the Building 7 lobe source area downgradient from the former Building 7 sump location.
- Continued operation of the in situ soil flushing system in the Building 7 lobe core area downgradient from the Building 7 Groundwater Collection Trench.
- Continued operation of the Building 58 West and Building 58 Southeast Groundwater Collection Trenches to control plume migration.
- Continued dual-phase (groundwater and soil vapor) extraction on the Building 53/58 slope.

##### Old Town Groundwater Solvent Plume (Building 52 Lobe)

- Continued in situ soil flushing in the Building 52 lobe source area. As of the beginning of January 2006, more than 4,000,000 gallons of treated water had been injected for flushing.
- Continued extraction and treatment of groundwater from the Building 46 subdrain.

#### Old Town Groundwater Solvent Plume (Building 25A Lobe)

- Continued in situ soil flushing in the Building 25A lobe source area.

#### Building 51/64 Groundwater Solvent Plume

- Continued in situ soil flushing in the Building 51/64 Groundwater Solvent Plume source area. As of the beginning of January 2006, approximately 650,000 gallons of treated water had been injected for flushing.

#### Building 71B Lobe of the Building 71 Groundwater Solvent Plume Area

- Continued in situ soil flushing/HRC injection in the Building 71B source area.

#### Building 51L Groundwater Solvent Plume

- Continued groundwater extraction and treatment in the Building 51L Groundwater Solvent Plume source area.

#### Contaminated Drain Lines

- Continued capture and treatment of contaminated Building 51 area hydrauger effluent.
- Continued extraction and treatment of contaminated water from the Building 51 drainage system.
- Continued to extract and treat water from an electrical utility manhole (EMH-133) and drain 37-01-01 east of Building 6.

In addition to the corrective measures noted above, the following activities continued during the reporting period:

- Continued operation of the Building 6 dual-phase (groundwater and soil vapor) extraction system.
- Continued extraction and treatment of water from the concrete sumps installed inside Building 51A and SB58-98-4.

## **5.2 GROUNDWATER TREATMENT SYSTEMS**

Extracted groundwater and contaminated effluent from drain lines and hydraugers is treated to non-detectable levels of VOCs at granular activated carbon (GAC) treatment systems.

The treated water is injected into the subsurface for soil flushing purposes or discharged to the sanitary sewer in accordance with the provisions of LBNL's Wastewater Discharge permit issued by the East Bay Municipal Utility District (EBMUD). The following table summarizes the volumes of water treated at each GAC treatment systems and the disposition of the treated water.

### Summary of Treatment Systems

Treatment System	Volume Treated First Quarter FY06 (gallons)	Total Volume Treated (gallons)	Discharge/Reuse
Building 6 Bioventing	85,754	2,732,059	Sanitary sewer
Building 7 Trench	658,717	9,258,859	Recirculated or sanitary sewer
Building 37	32,952	1,713,968	Makeup water for cooling tower
Building 46	456,817	16,129,989	Recirculated or sanitary sewer
Building 51 Firetrail	361,489	8,230,832	Sanitary sewer
Building 51 Hydraugers*	0	9,482,665	*
Building 51 Sump	77,235	3,371,652	Sanitary sewer
Building 51L	38,714	925,869	Sanitary sewer
Building 25A	78,196	887,761	Recirculated
Building 64	180,574	564,330	Recirculated
Building 71B	23,396	204,832	Recirculated
Building 53	243,116	2,099,257	Recirculated
Total Volume Treated	2,236,960	55,602,073	

\*System no longer operational. Hydrauger effluent is now treated at Building 51 Firetrail Treatment System.

## **SECTION 6**

### **UPCOMING REPORTING PERIOD ACTIVITIES (SECOND QUARTER FY 2006)**

#### **6.1 ACTIVITIES COMPLETED DURING THE UPCOMING REPORTING PERIOD**

This section describes the activities that were completed during the second quarter of FY06, the upcoming reporting period. Results of these activities will be reported in the next Quarterly Progress Report, scheduled for submittal to DTSC in August 2006.

##### Groundwater Investigations

###### *Quarterly Sampling*

Second quarter FY06 groundwater sampling started on January 18, 2006 and was completed on March 31, 2006. The number of groundwater samples submitted for each type of analysis during the second quarter of FY06 is shown in the following table:

##### **Number of Groundwater Samples Collected During the Second Quarter of FY 2006**

	<b>VOCs</b>	<b>TPH</b>		<b>PCBs</b>	<b>Tritium</b>	<b>Total</b>
		<b>-D</b>	<b>K</b>			
Monitoring Wells Primary Samples	139	1	1		11	152
Duplicate Samples	2				2	4
Trip Blanks	5					5
Rinse Blanks	9				3	12
Slope Stability Wells					4	4
Temporary Sampling Points	150			5	17	172
Extraction Wells	57					57

VOCs: Volatile Organic Compounds

TPH-D: Total Petroleum Hydrocarbons in the diesel range

TPH-G: Total Petroleum Hydrocarbons in the gasoline range

TPH-K: Total Petroleum Hydrocarbons in the kerosene range

TPH-FF: Total Petroleum Hydrocarbons-fuel fingerprint

PCBs: Polychlorinated Biphenyls

## Corrective Measures

### *Former Building 7 Sump- Old Town Groundwater Solvent Plume Source Area*

In January and March 2006, 79 soil samples were collected from 18 borings in the source area of the Old Town Groundwater Solvent Plume to delineate the extent of soil excavation required to attain the required Media Cleanup Standards (MCSs) for the Former Building 7 Sump. The samples were collected to a maximum depth of approximately 50 feet and analyzed for VOCs by EPA Method 8260.

### *Building 25A Lobe - Old Town Groundwater Solvent Plume Source Area*

The construction of an in situ soil flushing system south of Building 25 was started.

## Other Activities

### *Reports*

The following reports were submitted to the regulatory agencies:

- On February 21 2006, LBNL submitted the Workplan for Excavation of PCB-Contaminated Soil, Building 51 Motor Generator Room Basement Filter Sump to the DTSC.
- On February 28, 2006, LBNL submitted the Quarterly Progress Report and Annual Status Summary for the Fourth Quarter of FY05 to the DTSC, in compliance with LBNL's RCRA Part B Permit.
- On February 28, 2006, LBNL submitted responses to DTSC's February 15, 2006 letter containing comments from the Water Board on the CMI Workplan.
- On March 1, 2006, LBNL submitted the Addendum to Corrective Measures Implementation (CMI) Workplan for Soil Excavation Building 7 Sump of the Old Town Groundwater Solvent Plume Source Area to the DTSC.
- On March 15, 2006, LBNL submitted the Workplan for In Situ Soil Flushing in the Building 25A Lobe Old Town Groundwater Solvent Plume Area South of Building 25 to the DTSC.
- On March 15, 2006, LBNL submitted the Draft Soil Management Plan and Draft Groundwater Monitoring and Management Plan to the DTSC.
- On March 17, 2006, LBNL submitted the semiannual Self Assessment Report for Groundwater Treatment Systems to EBMUD.

### *Meetings*

The following meetings were held with the regulatory agencies:

- A Remedial Project Managers (RPM) meeting was held at the DTSC offices on February 9, 2006.

## **6.2 ONGOING ACTIVITIES**

The corrective measures described in Section 5.1 continued through the upcoming reporting period. New or significant results of these activities will be reported in the next Quarterly Progress Report, scheduled for submittal to DTSC in August 2006.

## **6.3 PLANNED ACTIVITIES**

In addition to the ongoing activities described in Section 6.2, following is a list of activities planned for the third and fourth quarters of FY06 (April 1 to September 30, 2006):

- Submit the Quarterly Progress Reports for the first and second quarters of FY06 to the DTSC.
- Continue planning and design work for CMI (excavation) in the source area of the Building 51L Groundwater Solvent Plume and the Former Building 7 Sump area. Complete implementation of the corrective measures.
- Continue to hold RPM meetings with the regulatory agencies.
- Conduct quarterly groundwater sampling and continue depth-to-water measurements.
- Excavate PCB contaminated soil from the Building 51 Motor Generator Room Basement.
- Complete installation of the soil flushing system south of Building 25 and begin soil flushing.
- Submit the Corrective Measures Implementation report to the regulatory agencies.

## **SECTION 7**

### **REFERENCES**

- DOE, 2005. Environmental Assessment and Corrective Measures Study Report for Remediating Contamination at Lawrence Berkeley National Laboratory Regulated under the Resource Conservation and Recovery Act, United States Department of Energy, Office of Environmental Management, Office of Science. DOE/EA 1527. September 2005.
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- LBNL, 1992b. RCRA Facility Investigation Work Plan for the Lawrence Berkeley Laboratory, Environmental Restoration Program, October 30, 1992.
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- LBNL, 2005b. RCRA Corrective Measures Implementation (CMI) Workplan for the Environmental Restoration Program. Lawrence Berkeley National Laboratory, Berkeley, California, November 2005.
- LBNL, 2005c. Proposal for Revised Groundwater Monitoring Schedule for the Lawrence Berkeley National Laboratory Environmental Restoration Program, Lawrence Berkeley National Laboratory, Berkeley, California, May 2005.

LBNL, 2005d. Quarterly Progress Report, Third Quarter Fiscal Year 2005 (April 1 to June 30, 2005) for the LBNL Hazardous Waste Facility Permit, Environmental Restoration Program, Lawrence Berkeley National Laboratory, Berkeley, California, November 2005.

LBNL, 2006. Quarterly Progress Report and Annual Status Summary, 4th Quarter Fiscal Year 2005 (July 1 to September 30, 2005) for the LBNL Hazardous Waste Facility Permit, Environmental Restoration Program, Lawrence Berkeley National Laboratory, Berkeley, California, February 2006.

Water Board, 1999. Proposal for Revised Groundwater Monitoring Schedule dated June 1999, Letter from Michael Rochette (Water Board) to Iraj Javandel (LBNL), July 27, 1999.

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- Figure 15. Total Halogenated Hydrocarbons in Groundwater ( $\mu\text{g/L}$ ) in the Outlying Areas and Perimeter Monitoring Wells, First Quarter FY06.
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- Figure 18. Extent of Groundwater Contamination (Total VOCs  $> 10 \mu\text{g/L}$ ), First Quarter FY06 Compared to 1999.
- Figure 19. Extent of Groundwater Contamination (Total VOCs  $> 100 \mu\text{g/L}$ ), First Quarter FY06 Compared to 1999.
- Figure 20. Extent of Groundwater Contamination (Total VOCs  $> 1,000 \mu\text{g/L}$ ), First Quarter FY06 Compared to 1999.

 MW25-95-5	Groundwater monitoring well	LT	Less than reporting limit
 MW90-6	Properly destroyed monitoring well	ND (or <)	Not detected
T  SB76-97-3	Temporary groundwater sampling point	NS	Not sampled
T  SB64-98-16	Properly destroyed sampling point	NA	Not analyzed
EW  EW	Groundwater extraction well	grab or g	Grab sample
IW 	Groundwater injection well	Dup	Duplicated sample
 DP	Dual phase extraction well	<u>51-01-10</u> —	Hydrauger
 SSW-31.63	Slope stability well	—	Sanitary sewer line
 SI-3.63	Slope indicator well	—	Storm drain line
71-95-10  or  VZM-OT-1	Vadose zone monitoring well	— · · · —	Surface creek
 SG-76W-7	Soil gas probe	A — A'	Cross section
●	Shallow soil sampling location	— · · —	LBNL site boundary
⊕	Soil boring	*****	Fence
	Angled soil boring	B 17	Surface structure (e.g. buildings, etc.)
 L-3	Vacuum lysimeter		
	Shallow soil-gas sampling location		
 7-95-1	Soil-gas monitoring well		
 PZ51-92-3	Piezometer		
	Groundwater monitoring point		
	Spring		
— 700 —	Topographic contour line (elevation in ft above mean sea level)		
— 700 —	Water level contour line (elevation in ft above mean sea level)		
746.53	Water level elevation (ft above mean sea level)		
	Area of groundwater contamination		

#### NOTES:

All other symbols used are explained on the figures.

Not all symbols may be included on the attached figures for the current reporting period.

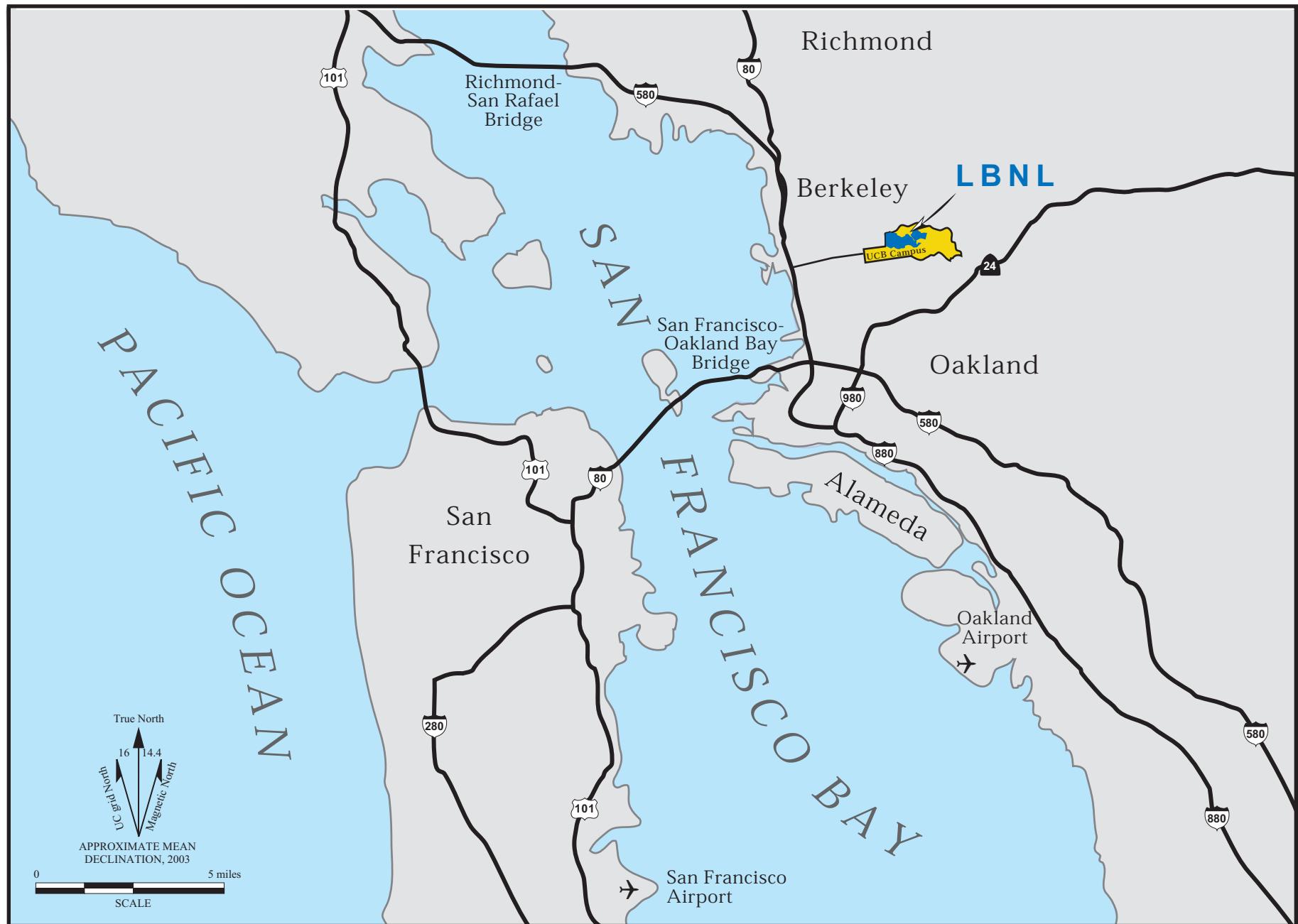


Figure 1. Regional Setting of the Lawrence Berkeley National Laboratory (LBNL).

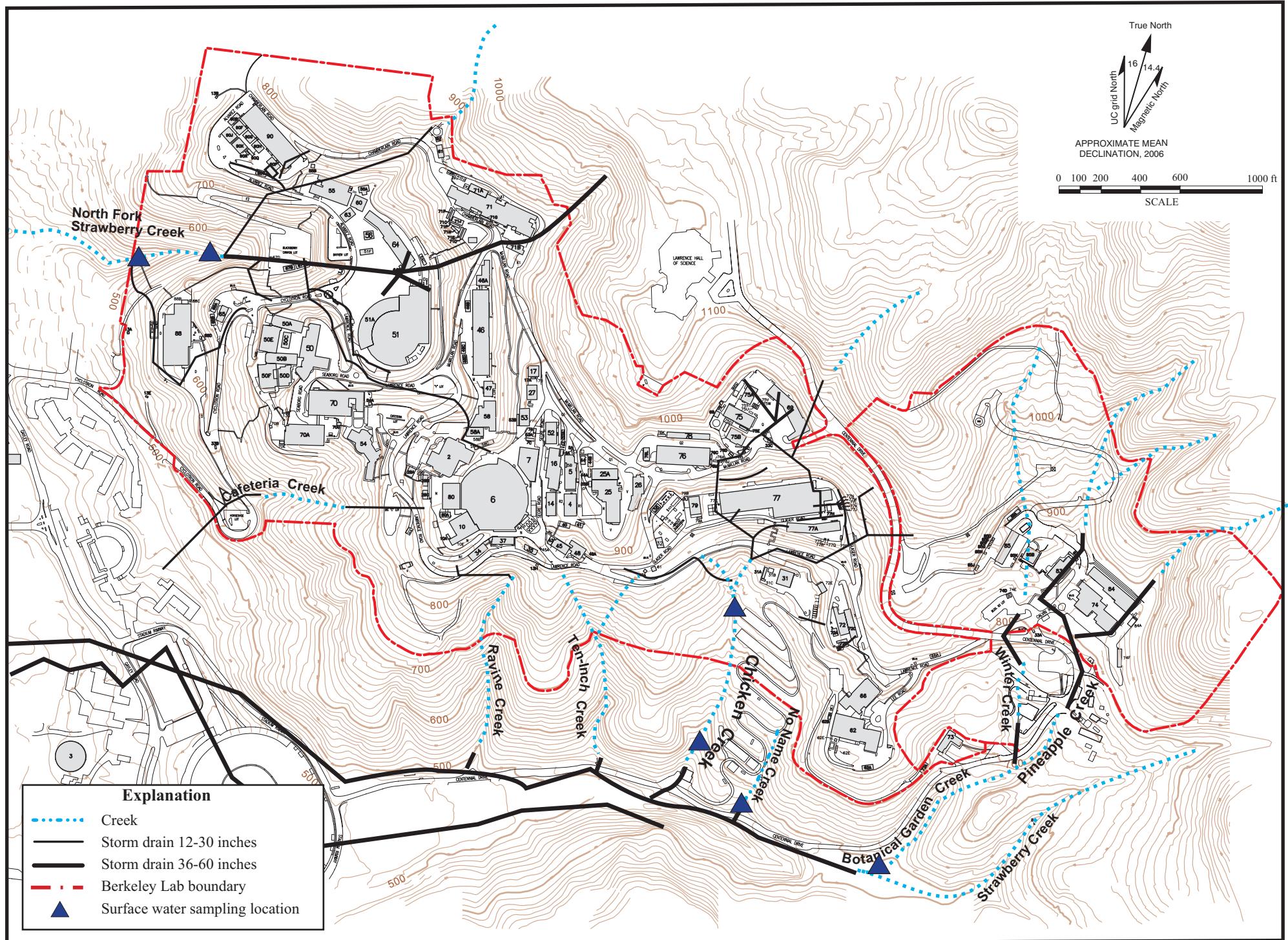


Figure 2. Site Topography and Surface Water Sampling Locations, First Quarter FY06.

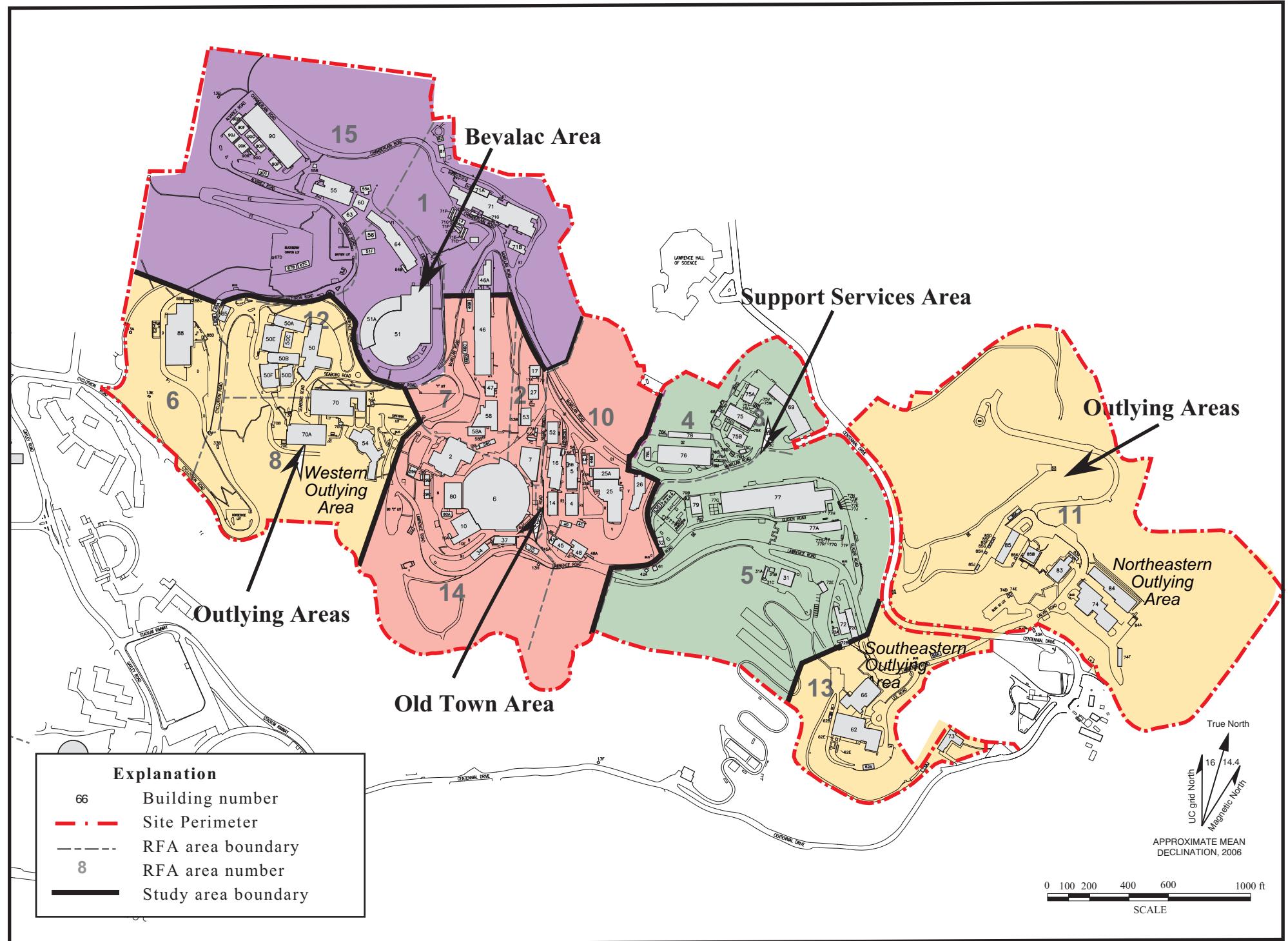


Figure 3. Locations of Study Areas, Lawrence Berkeley National Laboratory.

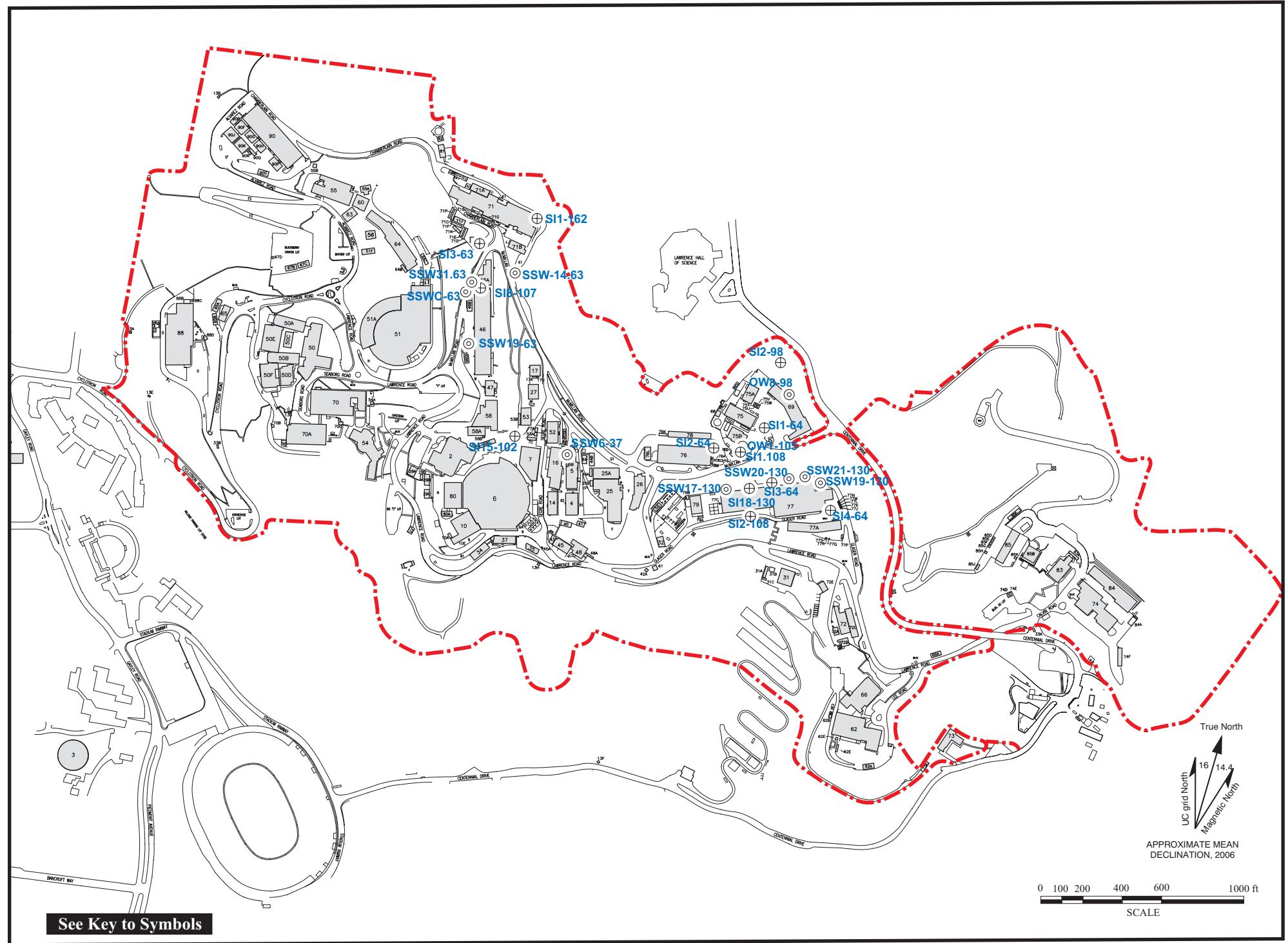
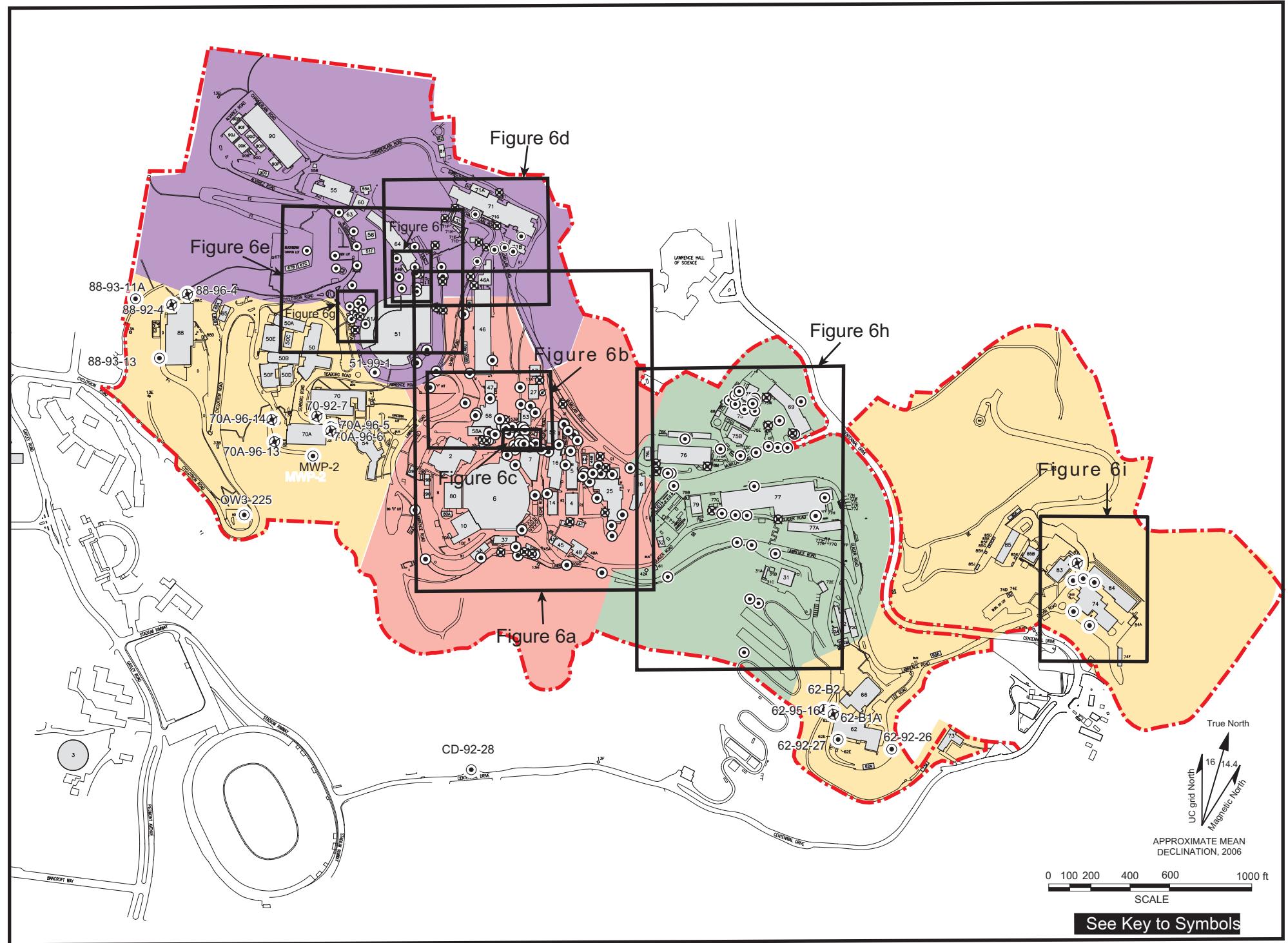


Figure 4. Slope Stability, Slope Indicator, and Observation Well Locations, Lawrence Berkeley National Laboratory (LBNL)



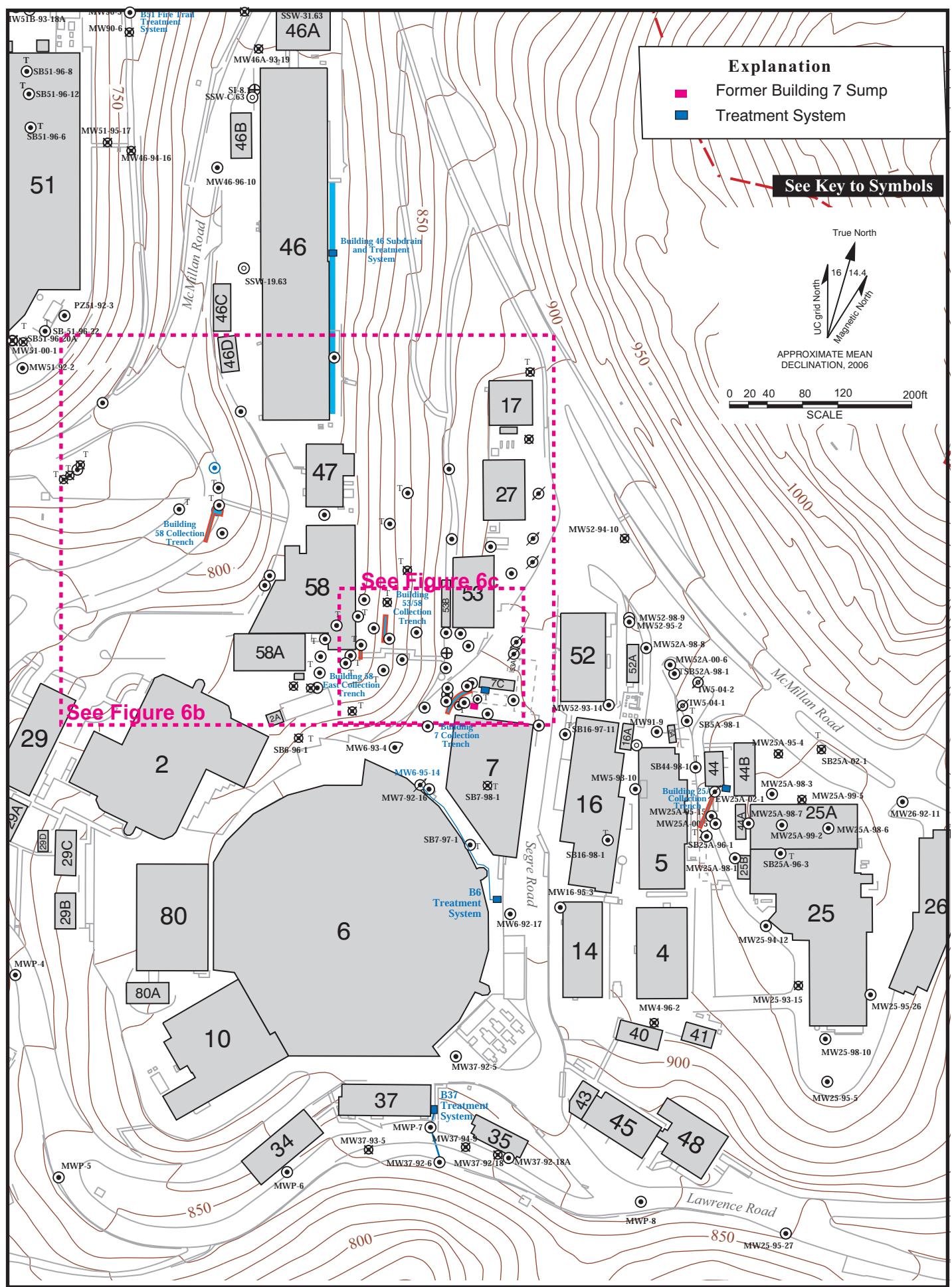


Figure 6a. Well Location Map of Old Town Area, Lawrence Berkeley National Laboratory

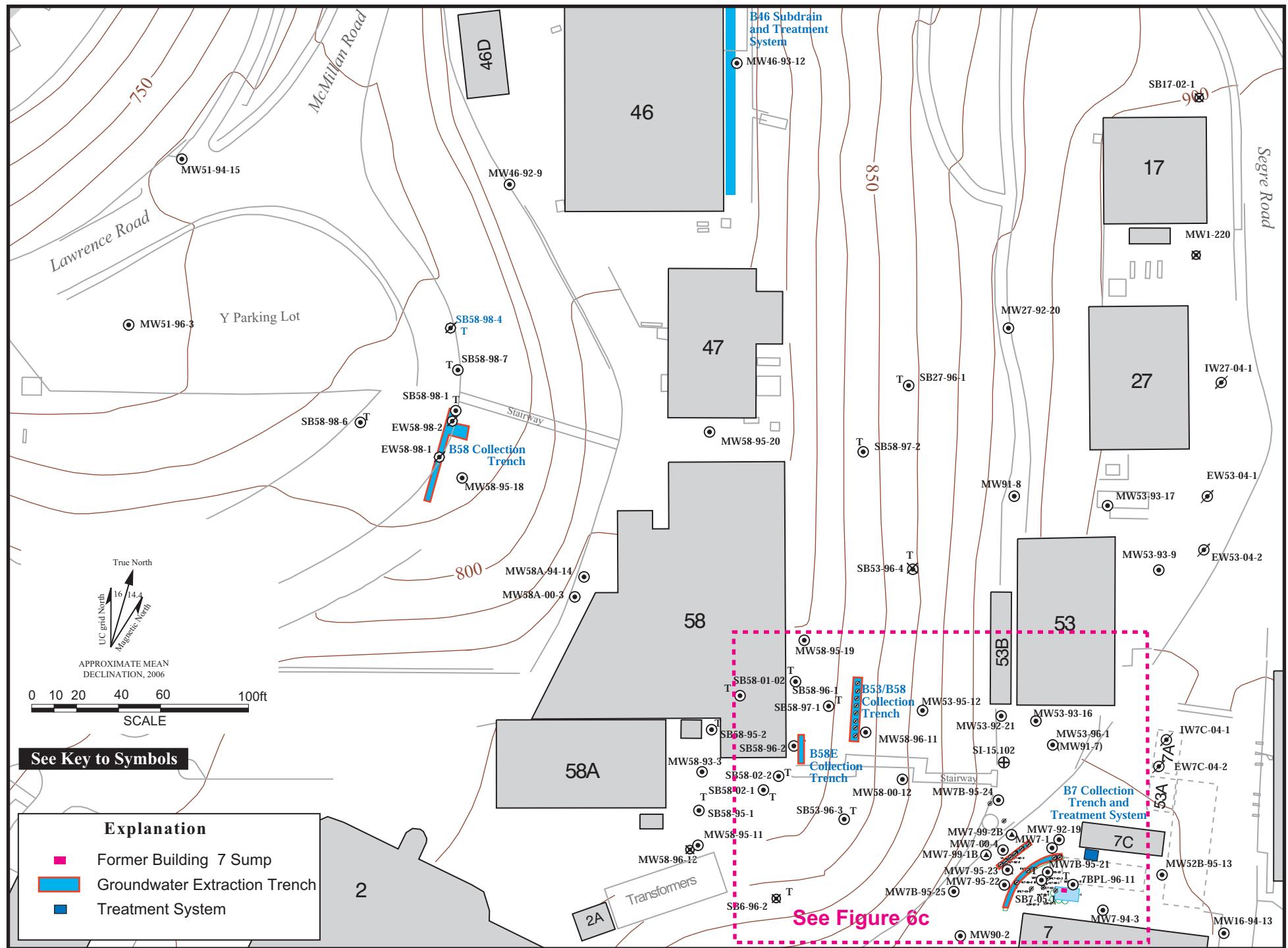


Figure 6b. Well Location Map of the Central Old Town Area, Lawrence Berkeley National Laboratory.

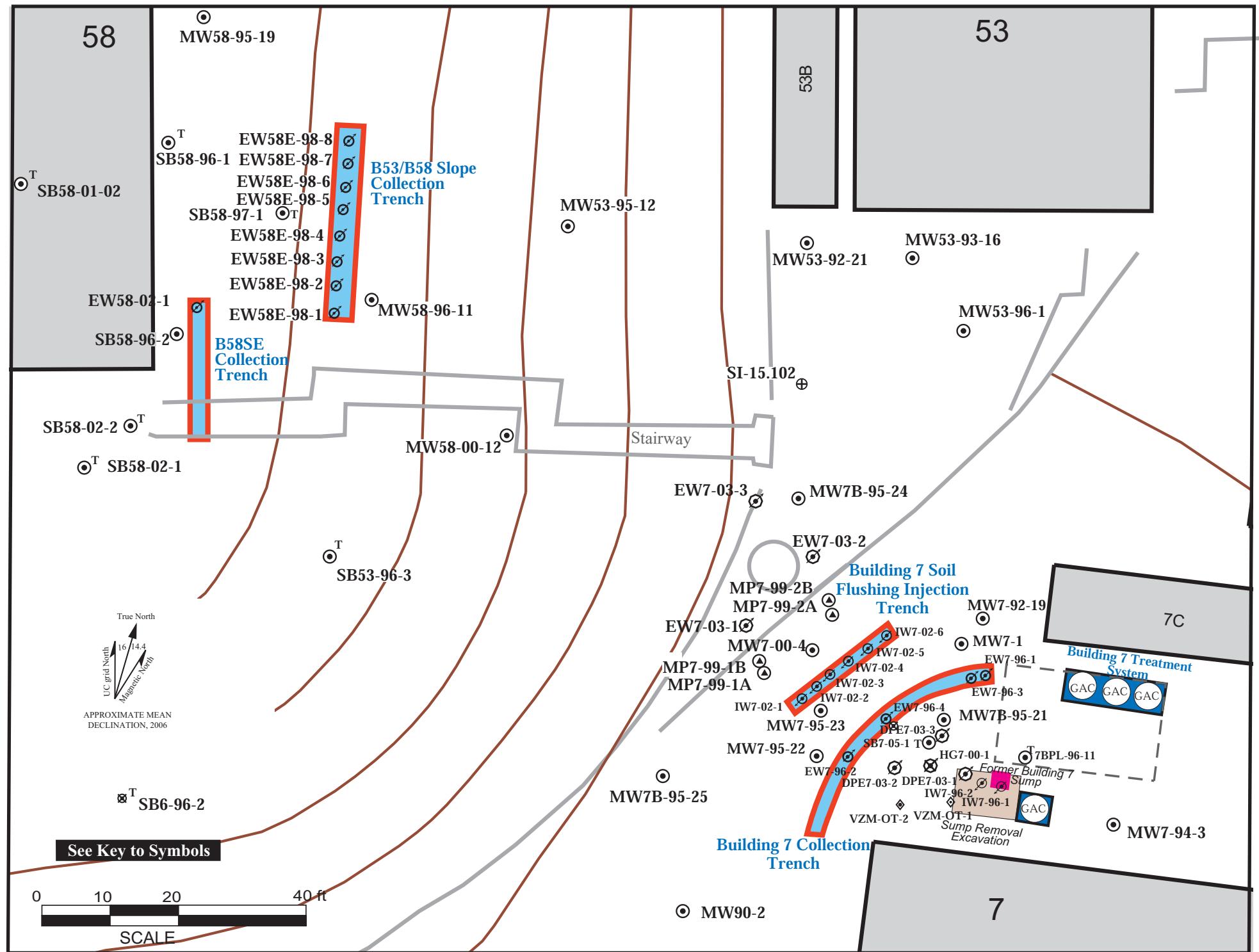


Figure 6c. Well Location Map of the Old Town Plume Source Area, Lawrence Berkeley National Laboratory.

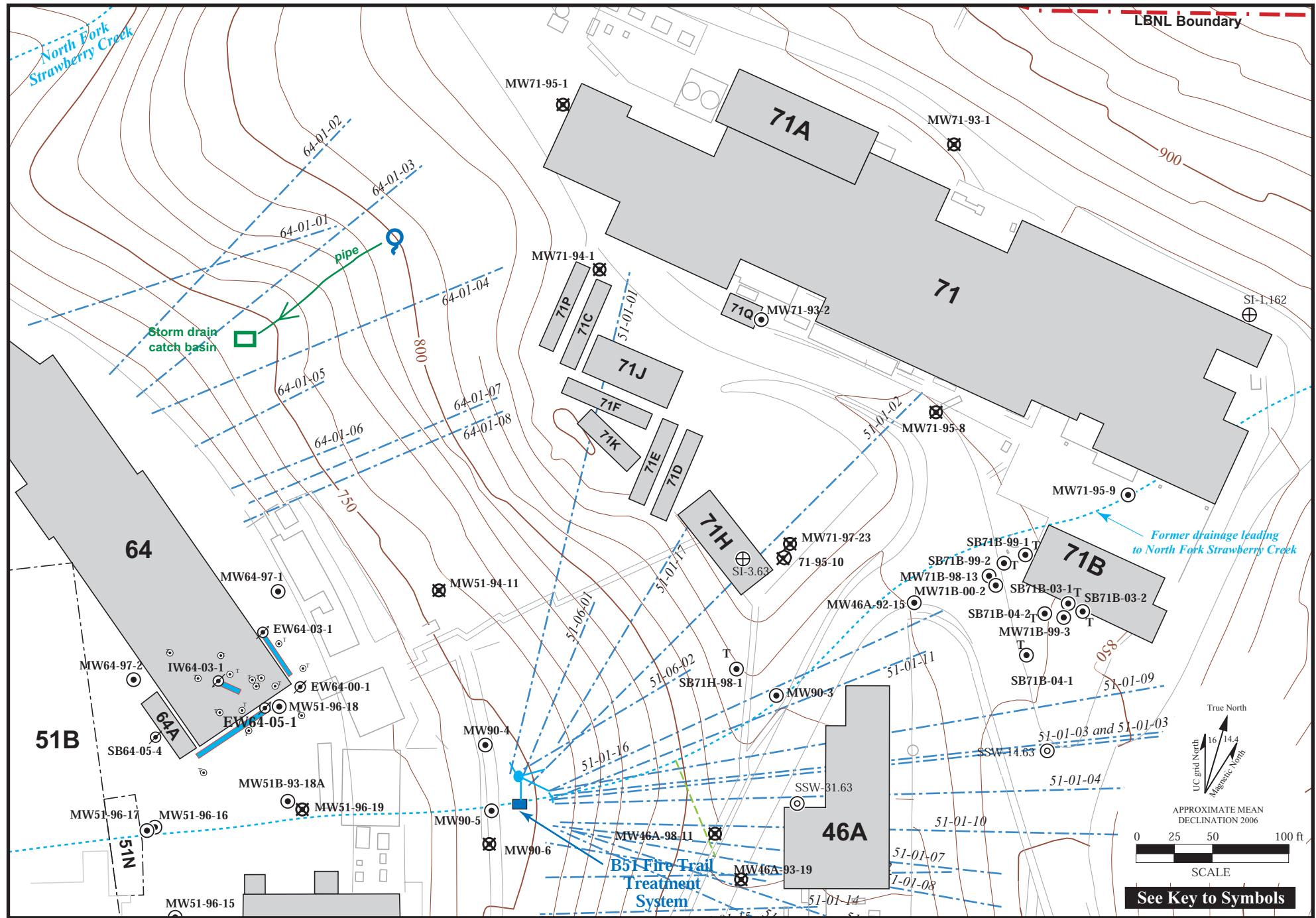


Figure 6d. Well Location Map of the Building 71 Area, Lawrence Berkeley National Laboratory.

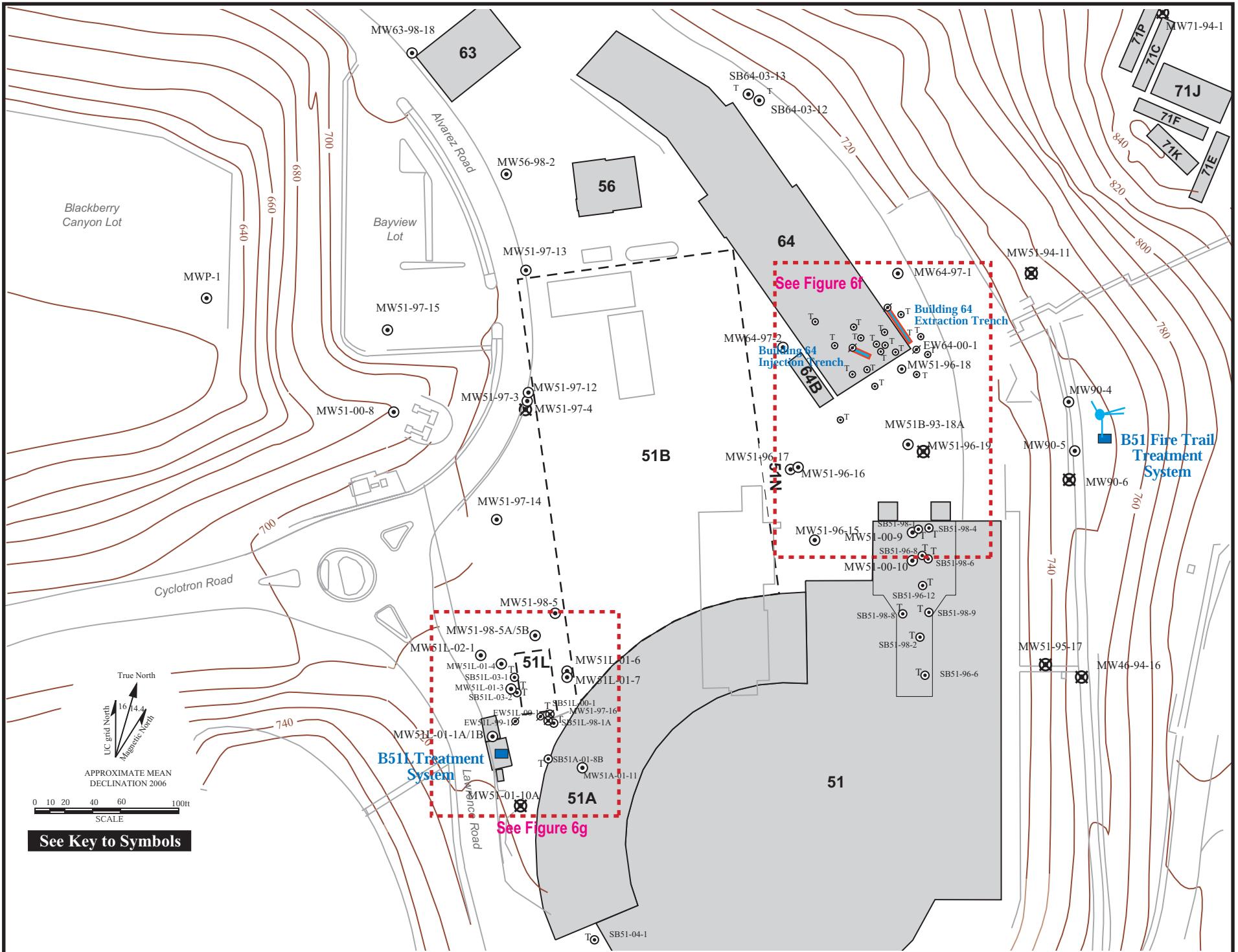


Figure 6e. Well Location Map of the Building 51 and Building 64 Area, Lawrence Berkeley National Laboratory.

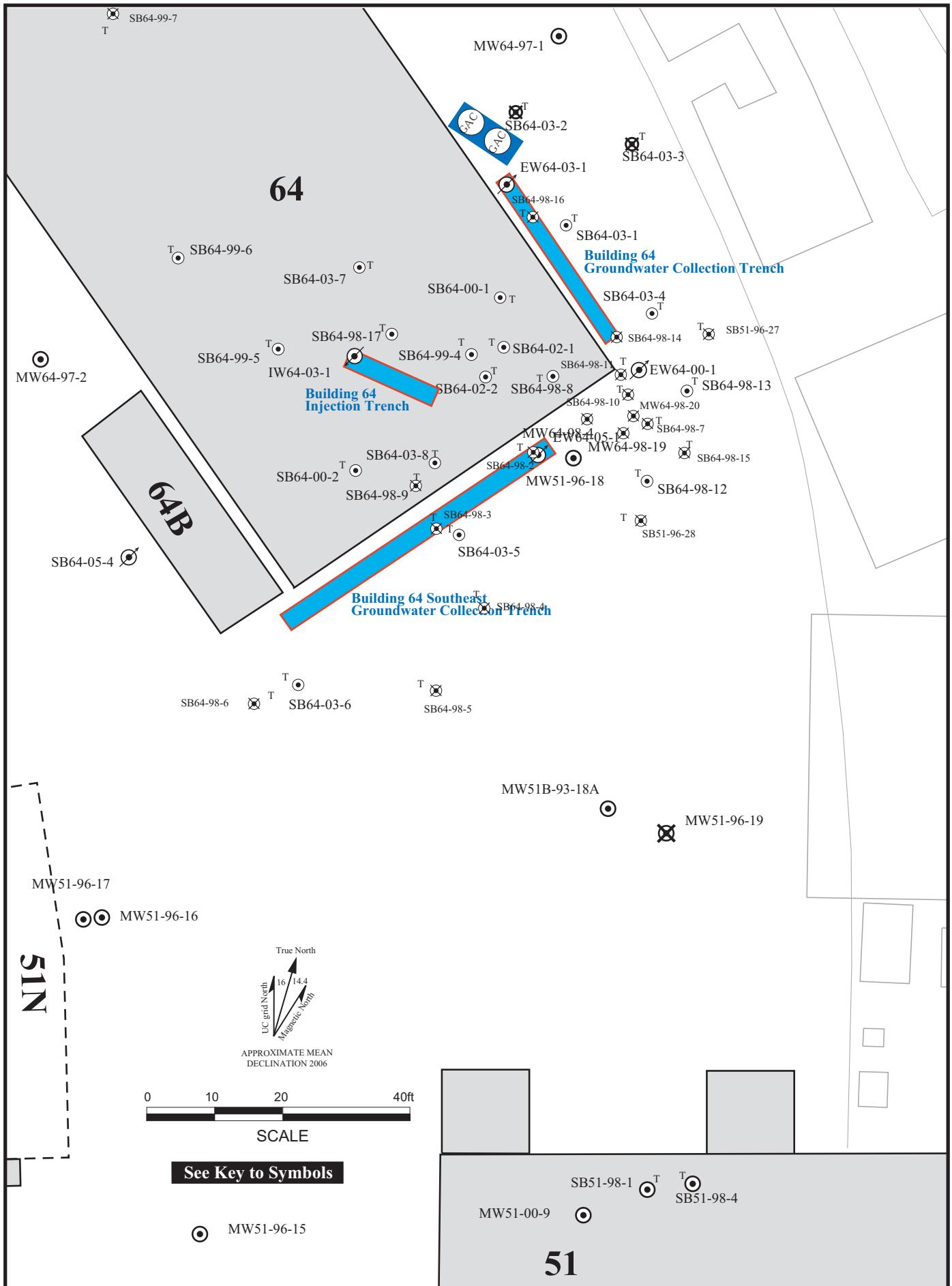


Figure 6f. Detailed Base Map of the Building 51/64 Area, Lawrence Berkeley National Laboratory.

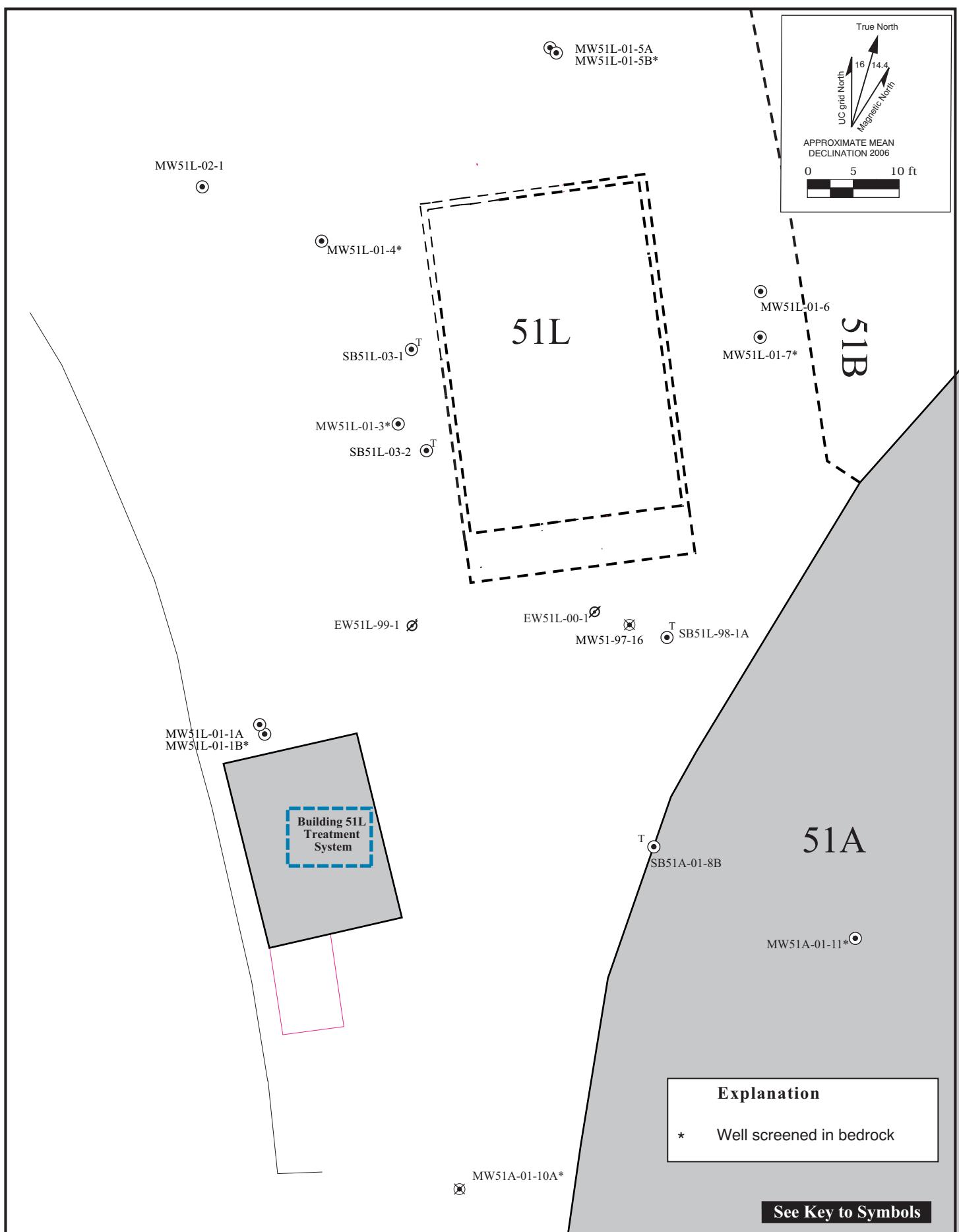
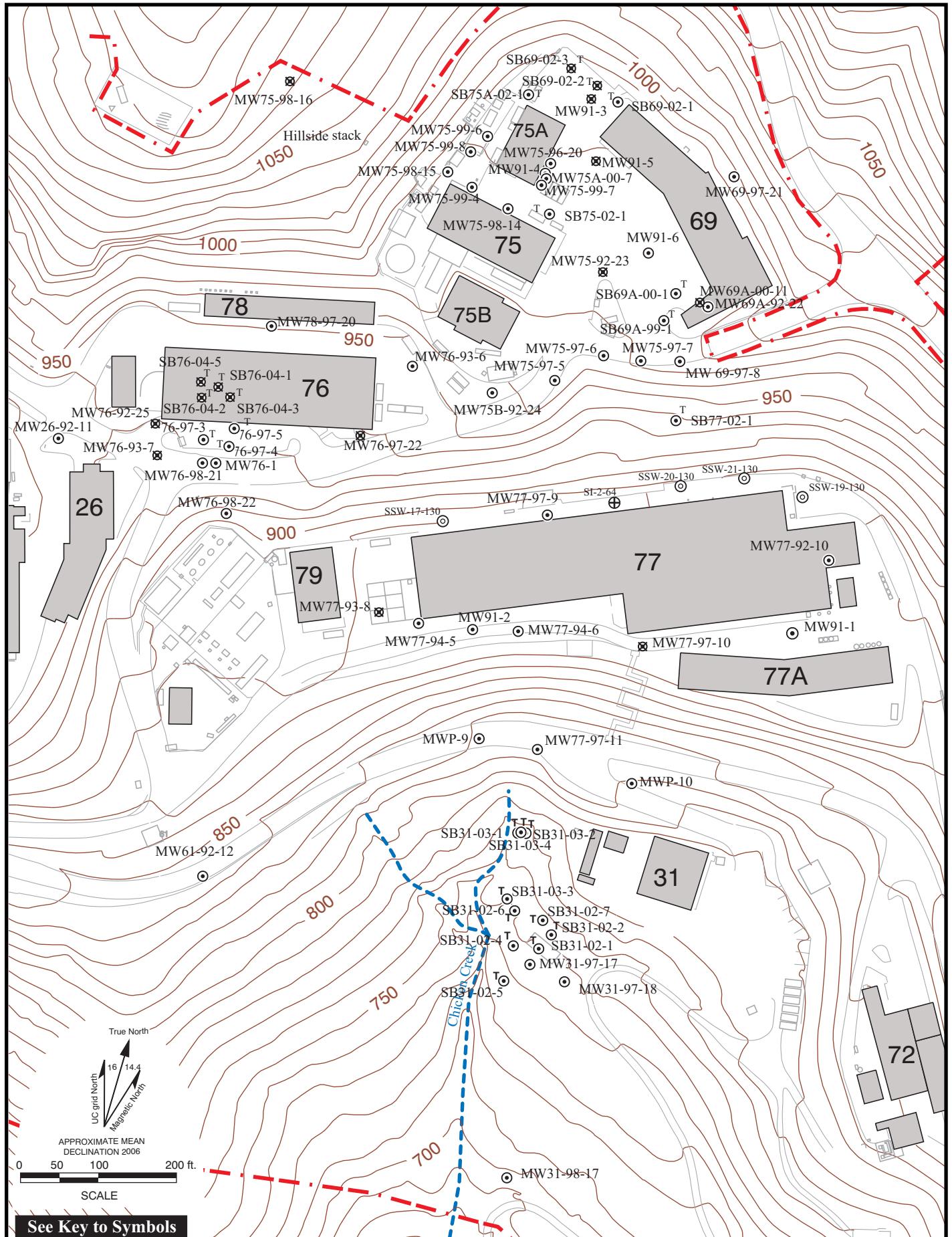
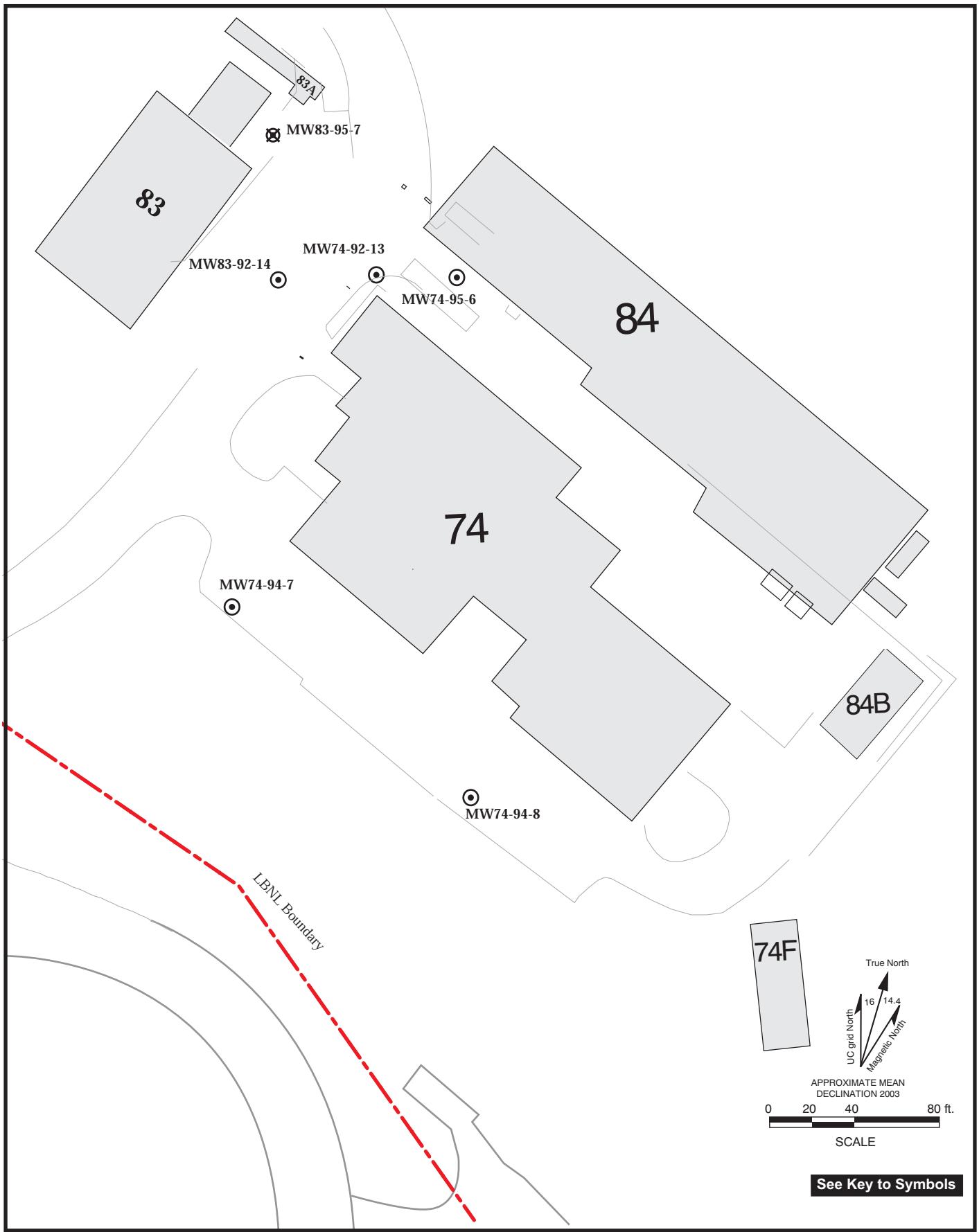


Figure 6g. Well Location Map of the Building 51L Area, Lawrence Berkeley National Laboratory.

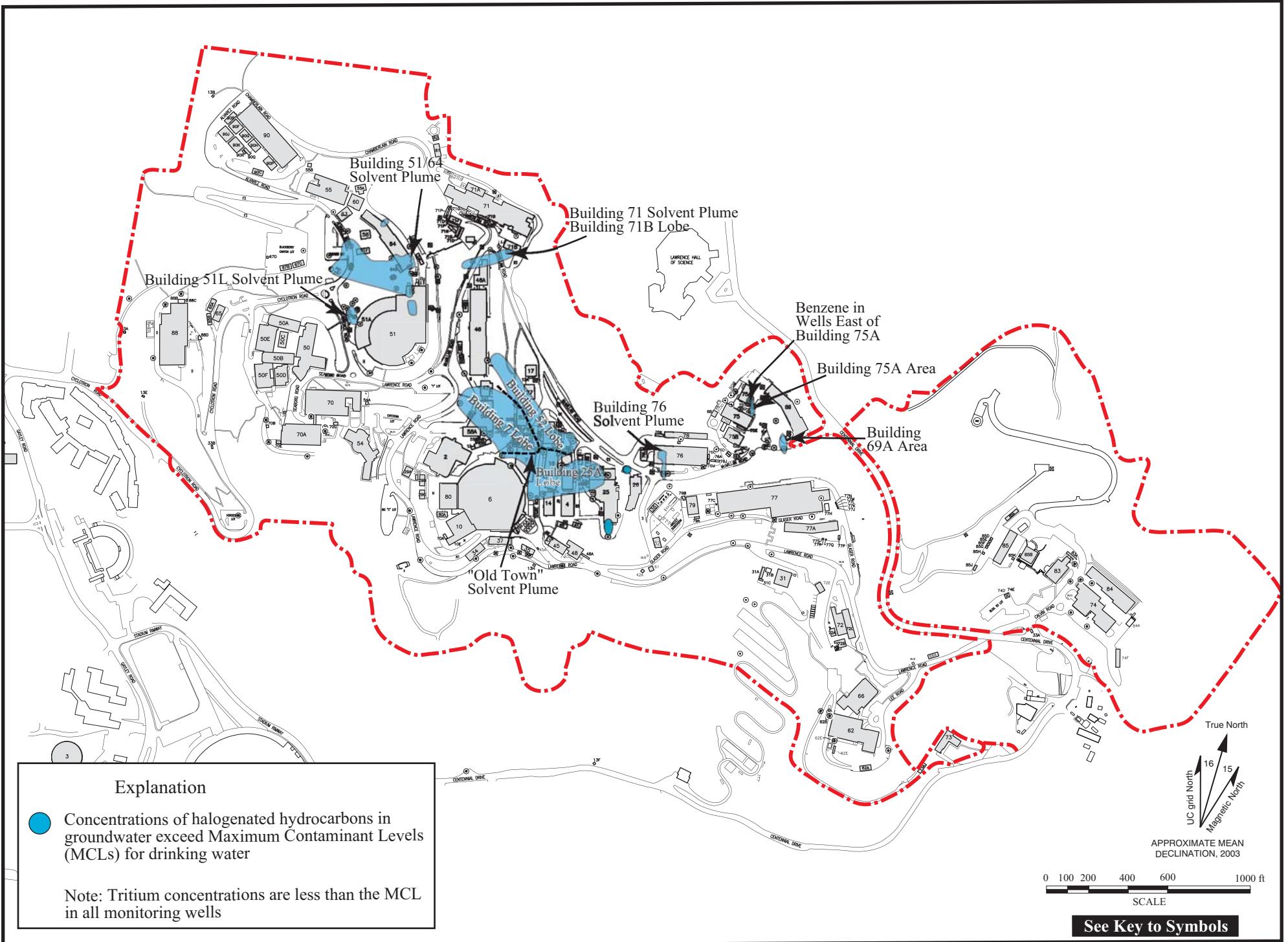


**Figure 6h. Well Location Map of the Corporation Yard Area, Lawrence Berkeley National Laboratory.**



06i-b74 well locations.ai  
3/06

**Figure 6i. Well Location Map of the Building 74 Area, Lawrence Berkeley National Laboratory**



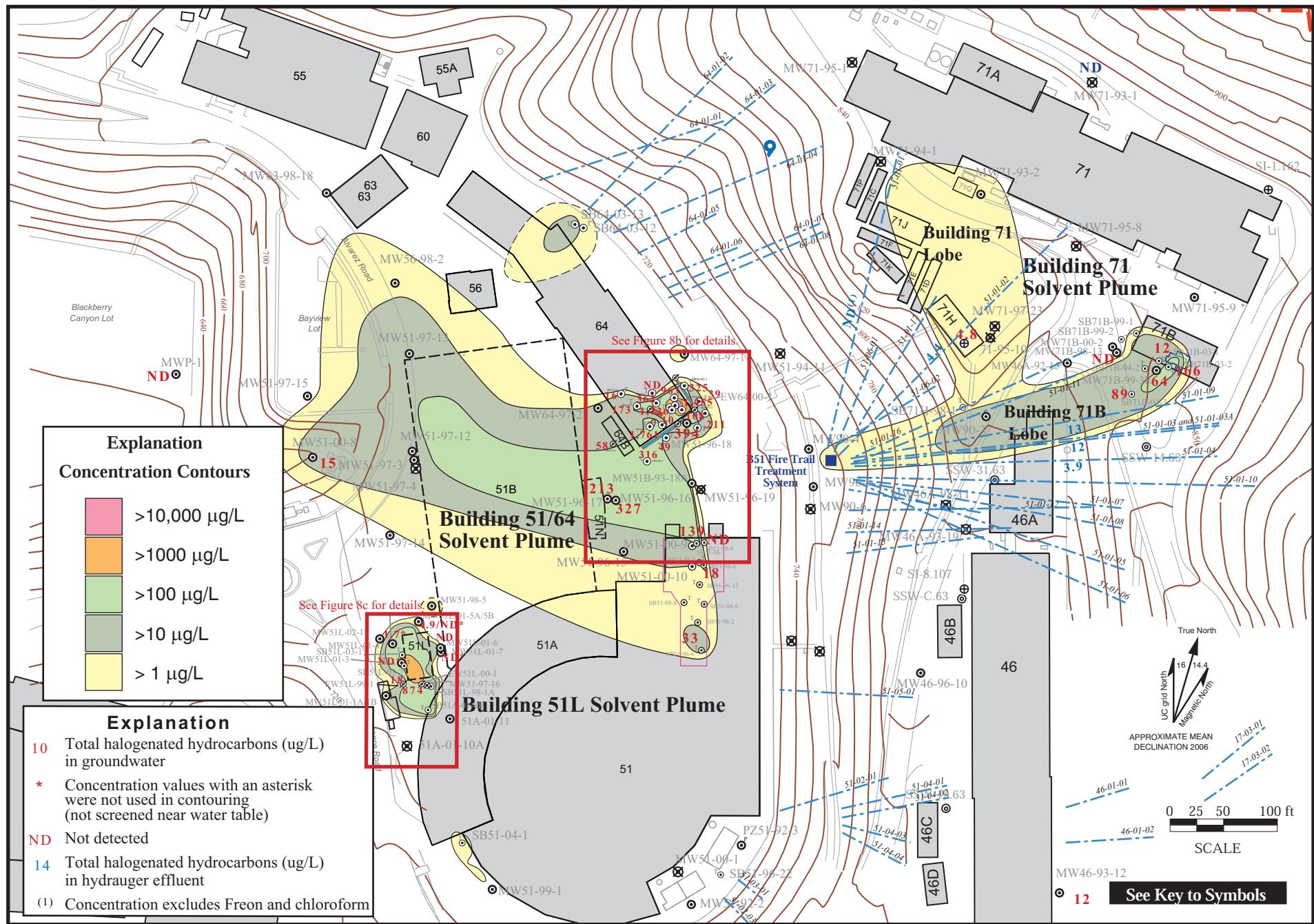


Figure 8a. Isoconcentration Contour Map, Total Halogenated Hydrocarbons in Groundwater in the Bevalac Area, First Quarter FY06.

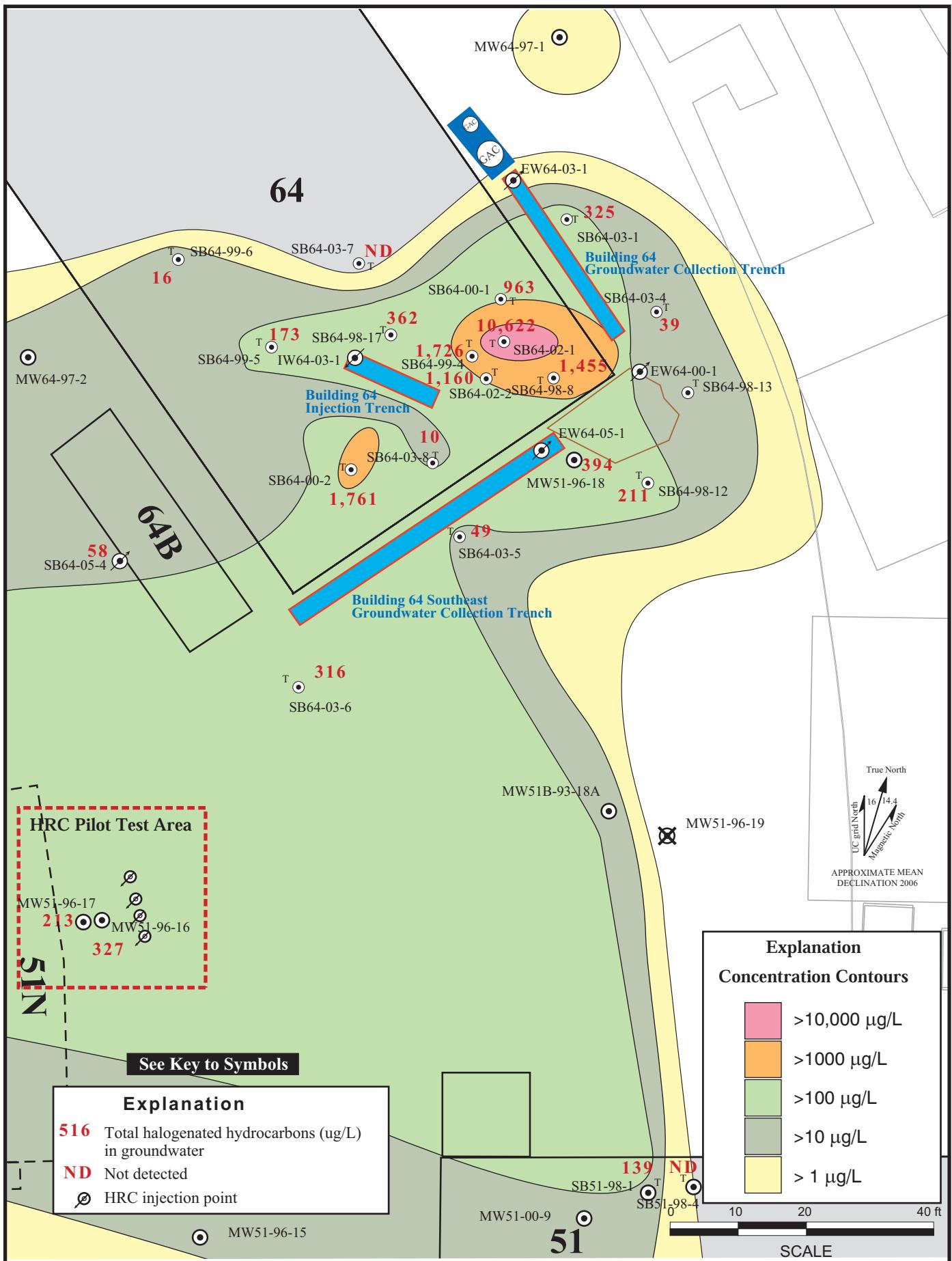
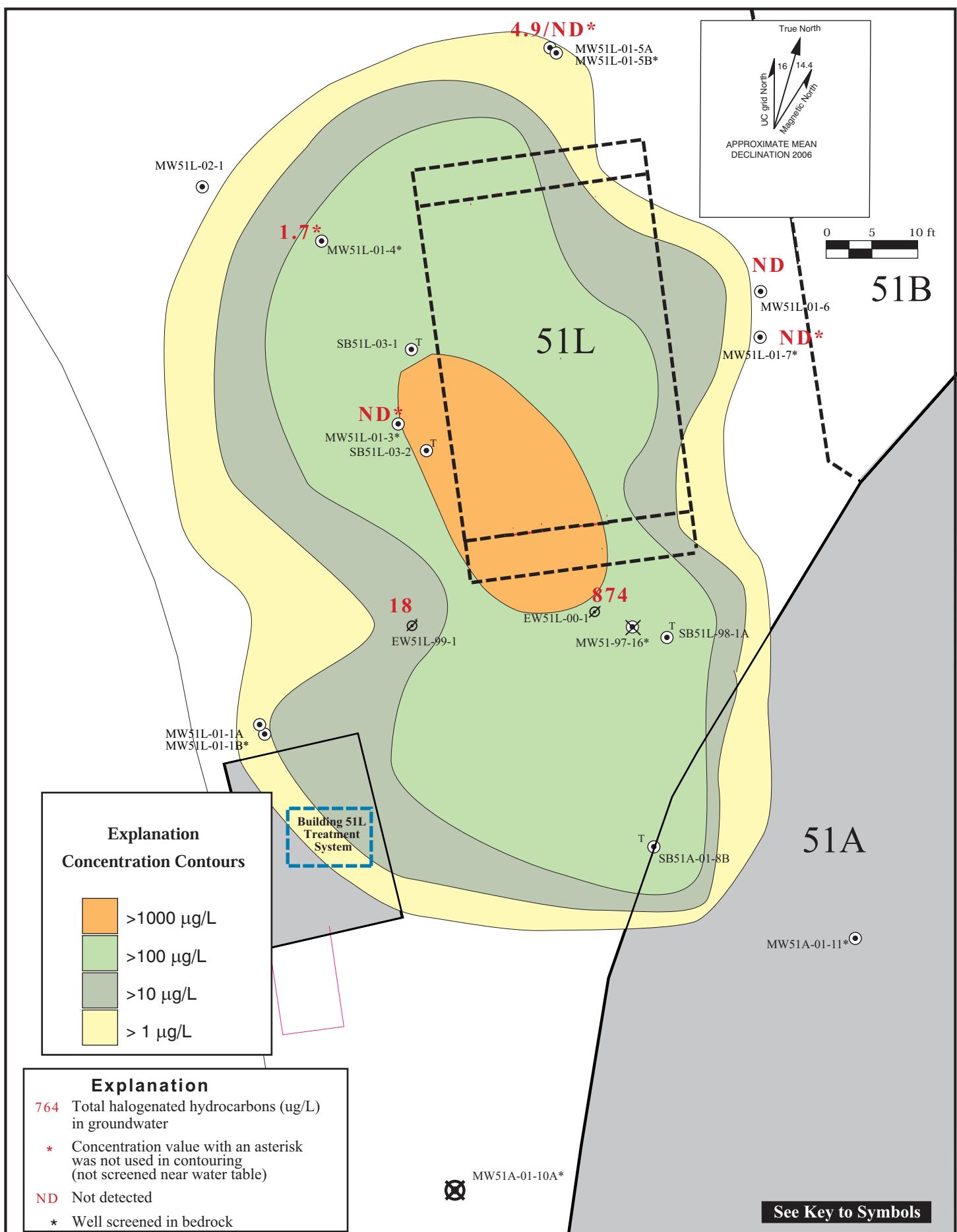


Figure 8b. Isoconcentration Contour Map, Total Halogenated Hydrocarbons in Groundwater, Source Area Building 51/64 Solvent Plume, First Quarter FY06.



**Figure 8c. Isoconcentration Contour Map, Total Halogenated Hydrocarbons in Groundwater in Fill, Building 51L Solvent Plume, First Quarter FY06.**

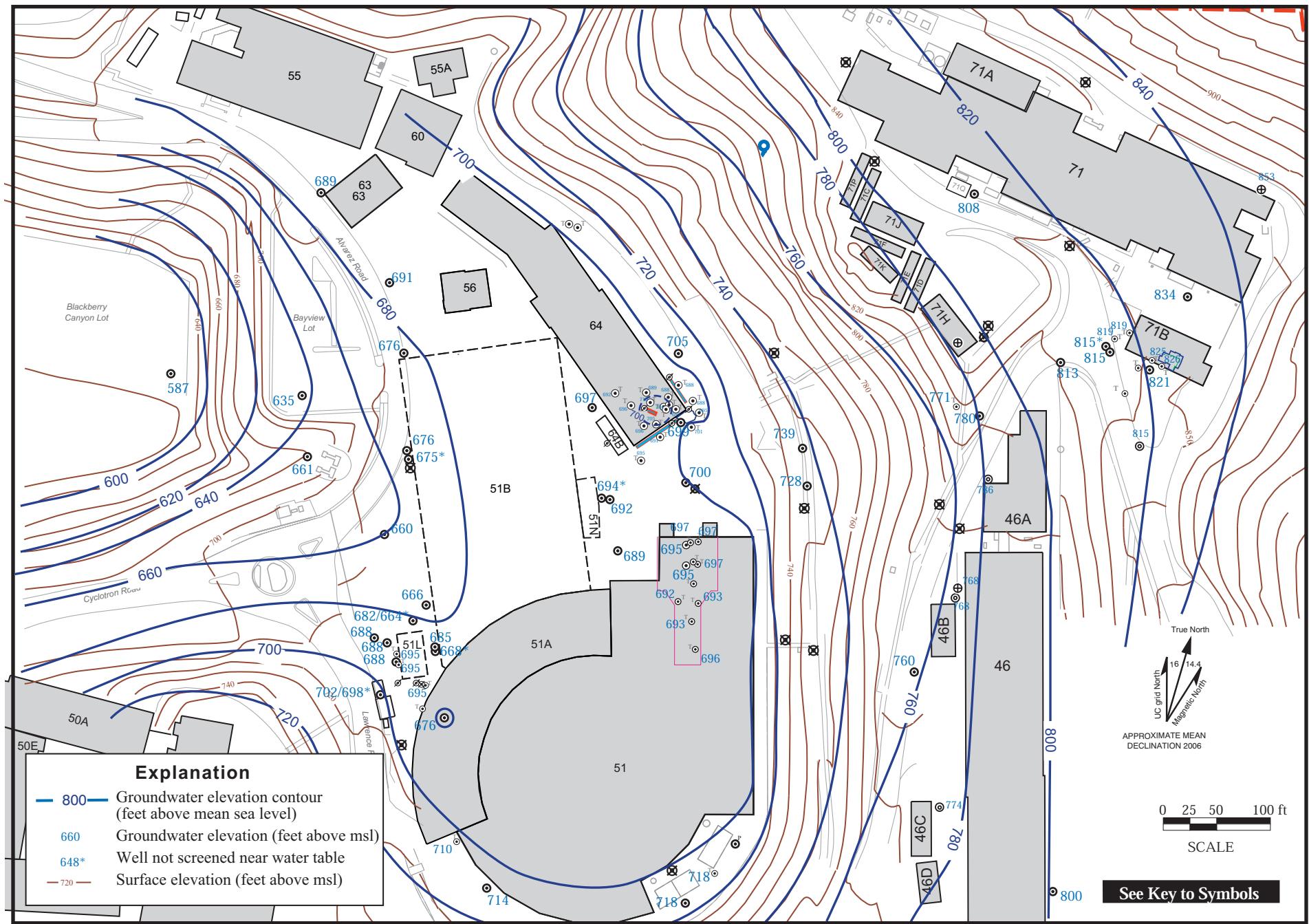


Figure 9. Water Level Elevation Map in the Bevalac Area, First Quarter FY2006.

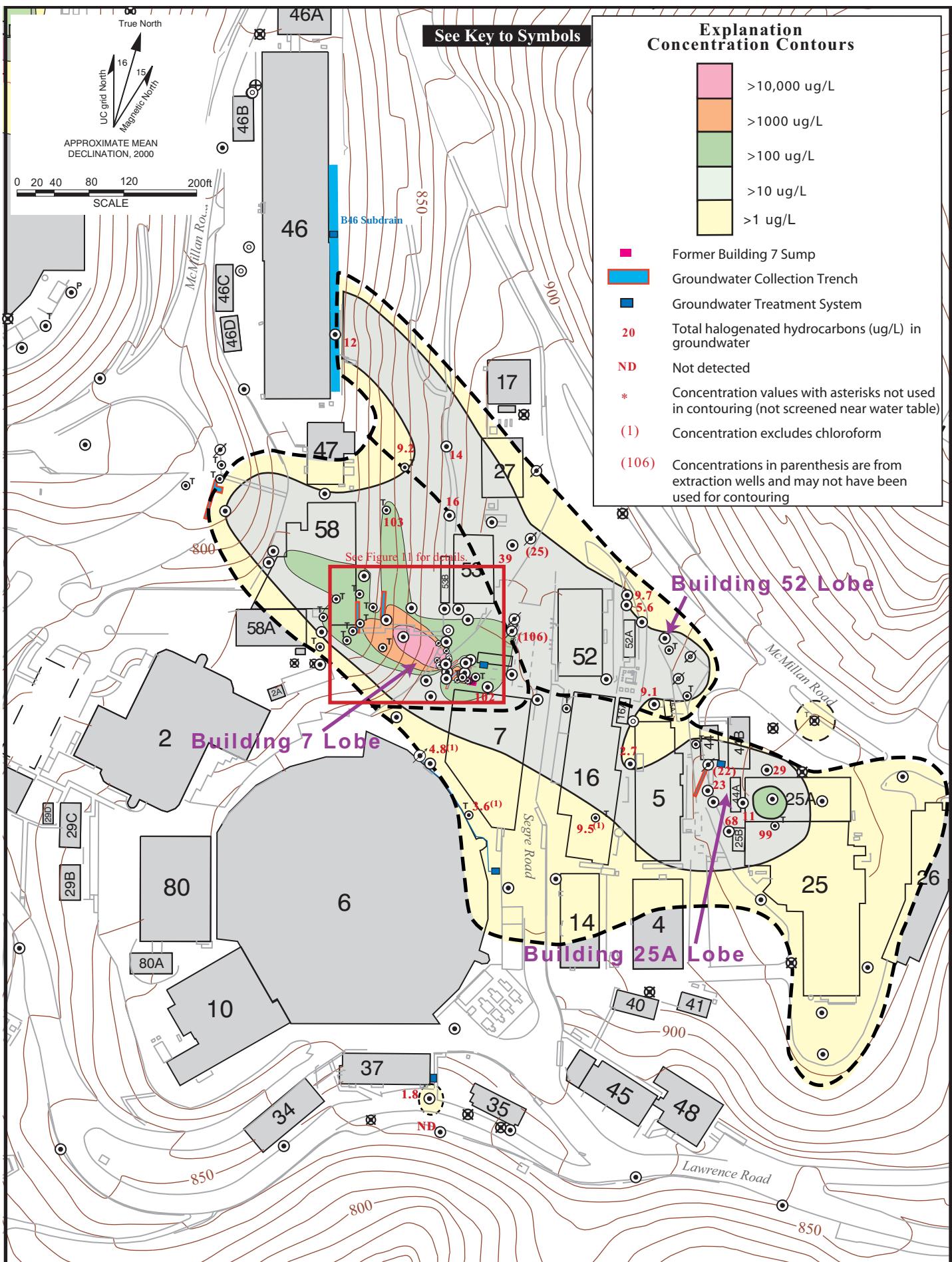


Figure 10. Total Halogenated Hydrocarbons in Groundwater (ug/L) in the Old Town Area, First Quarter FY2006.

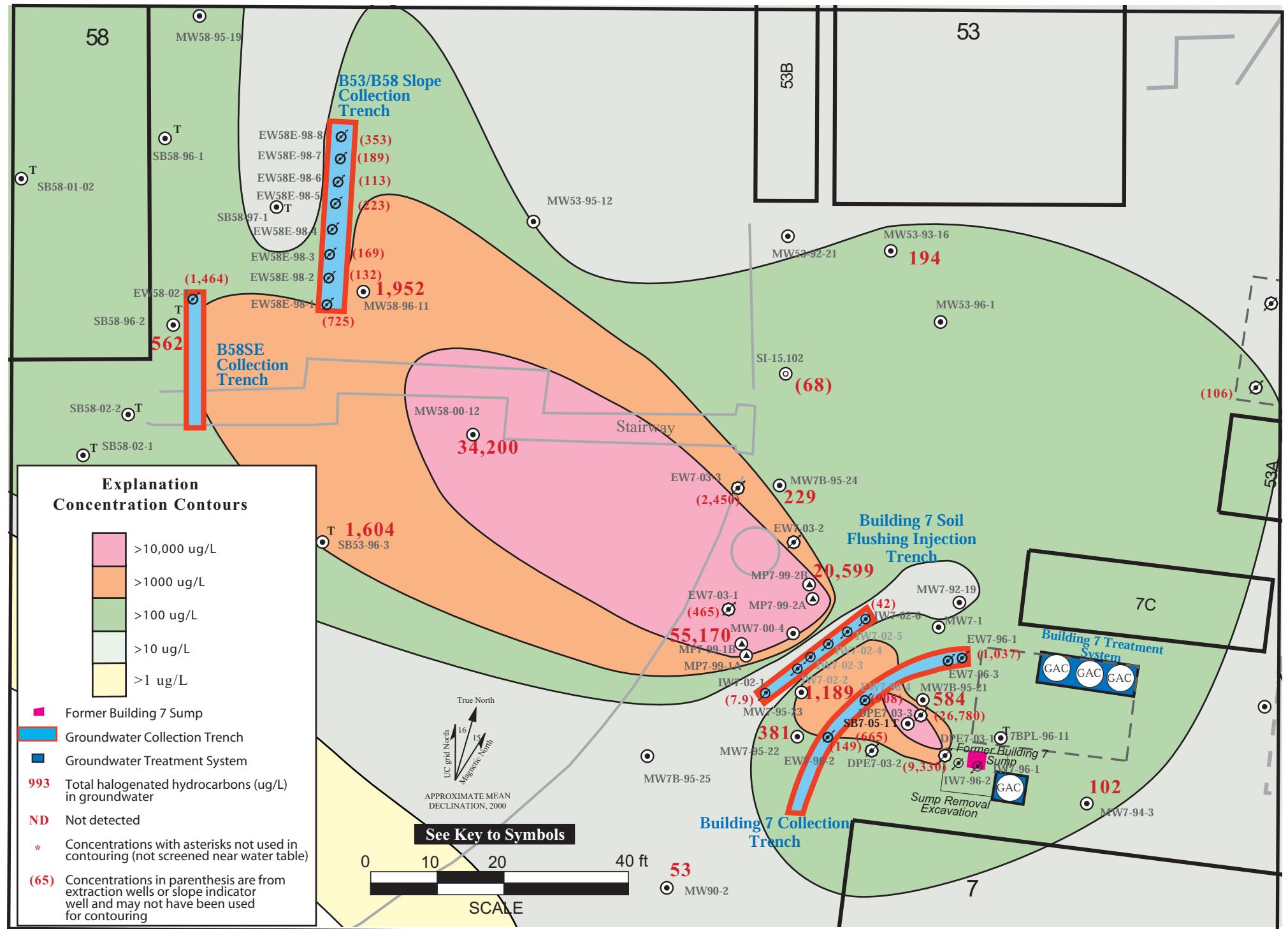


Figure 11. Total Halogenated Hydrocarbons in Groundwater (ug/L) in the Source Area for the Old Town Plume, First Quarter FY2006.

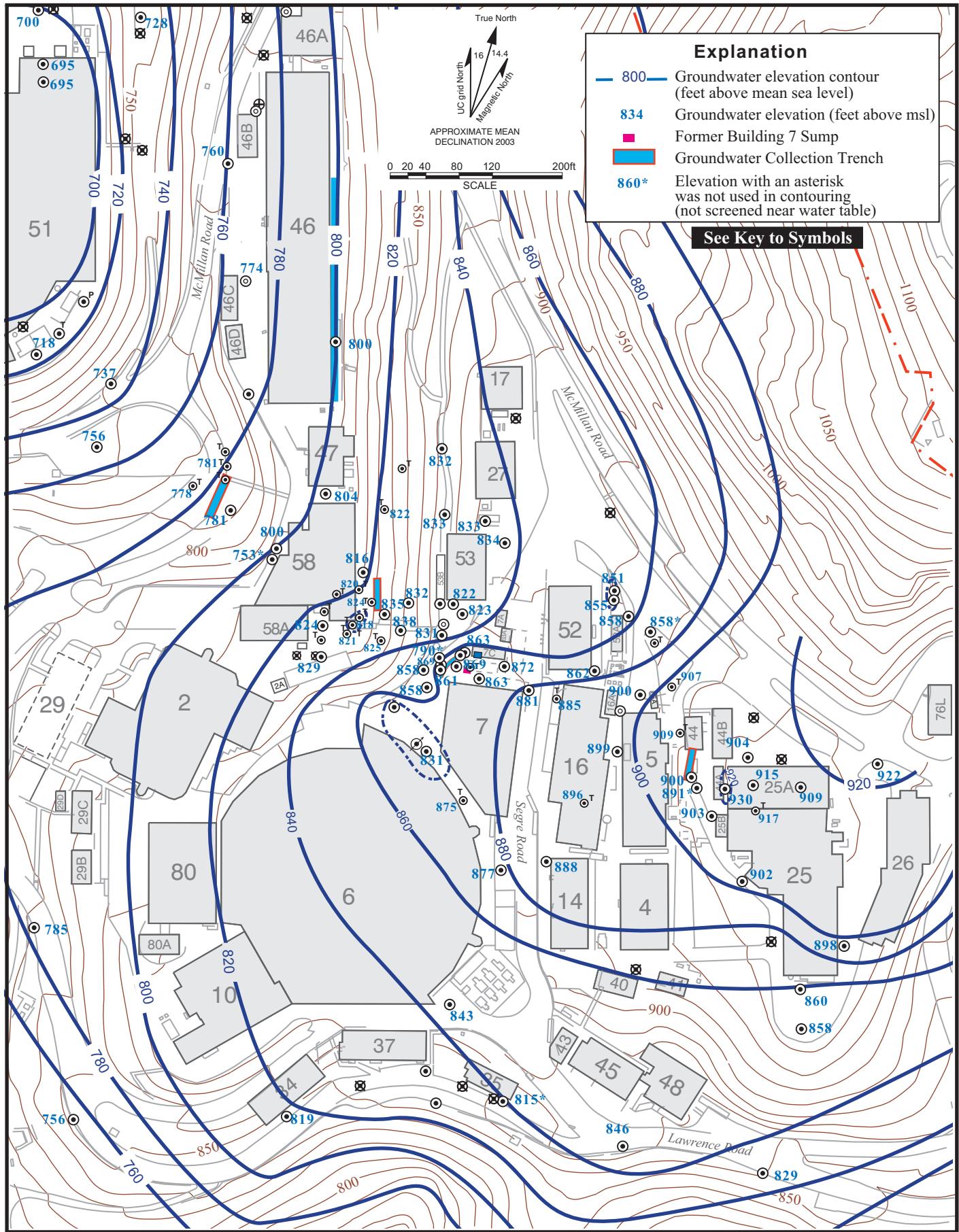
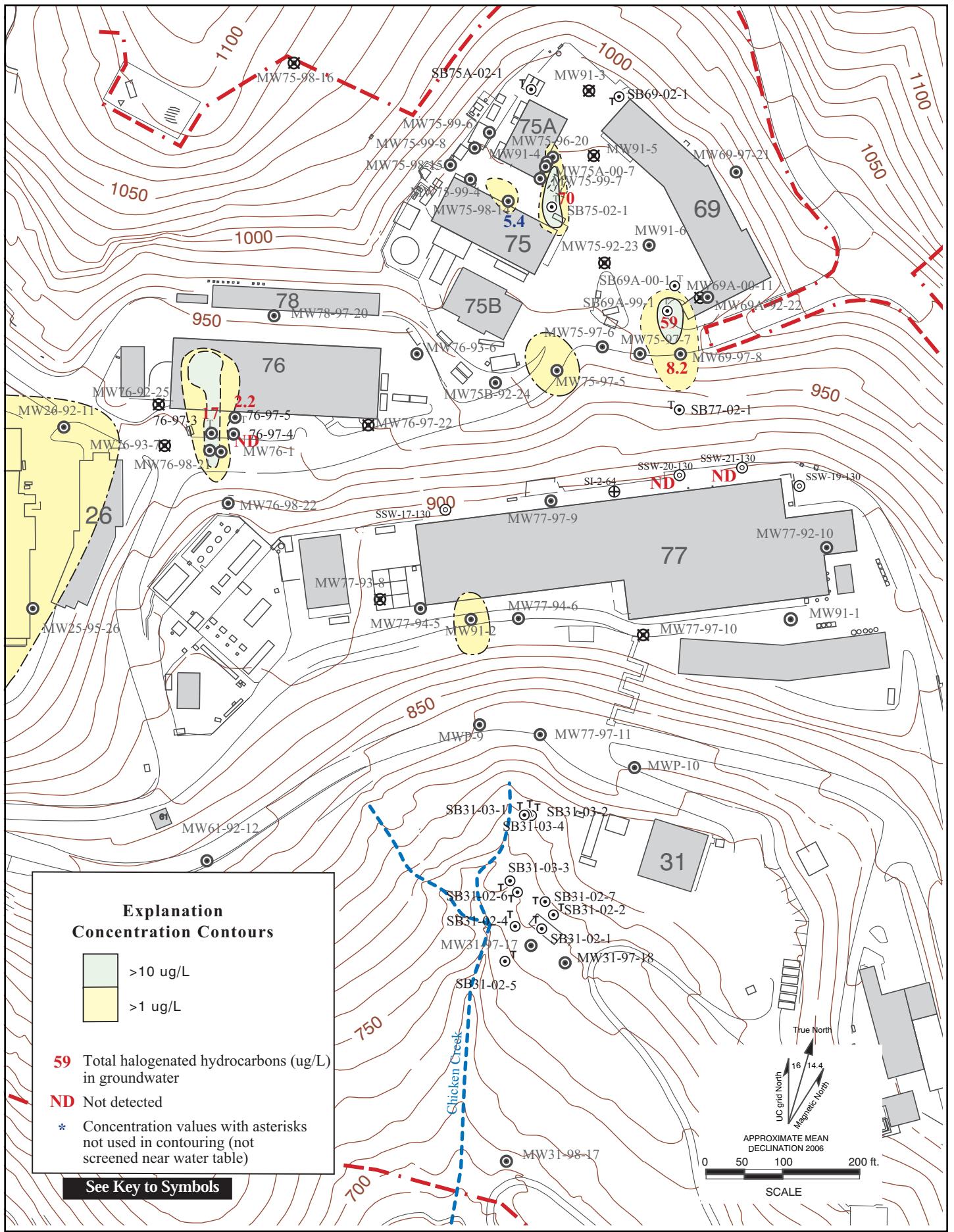


Figure 12. Water Level Elevation Map of the Old Town Area, First Quarter FY2006.



**Figure 13. Total Halogenated Hydrocarbons in Groundwater (ug/L) in the Support Services Area, First Quarter FY2006.**

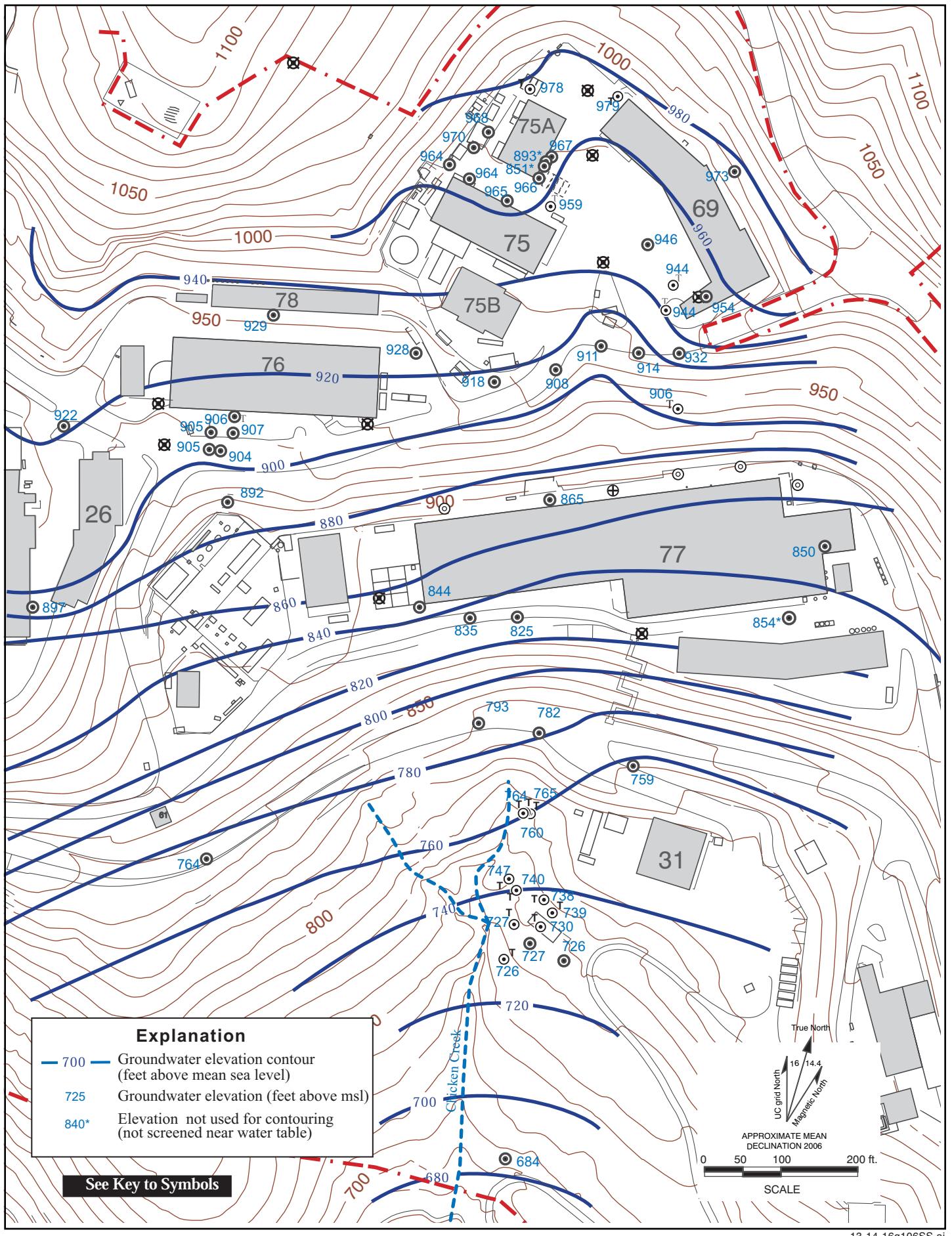
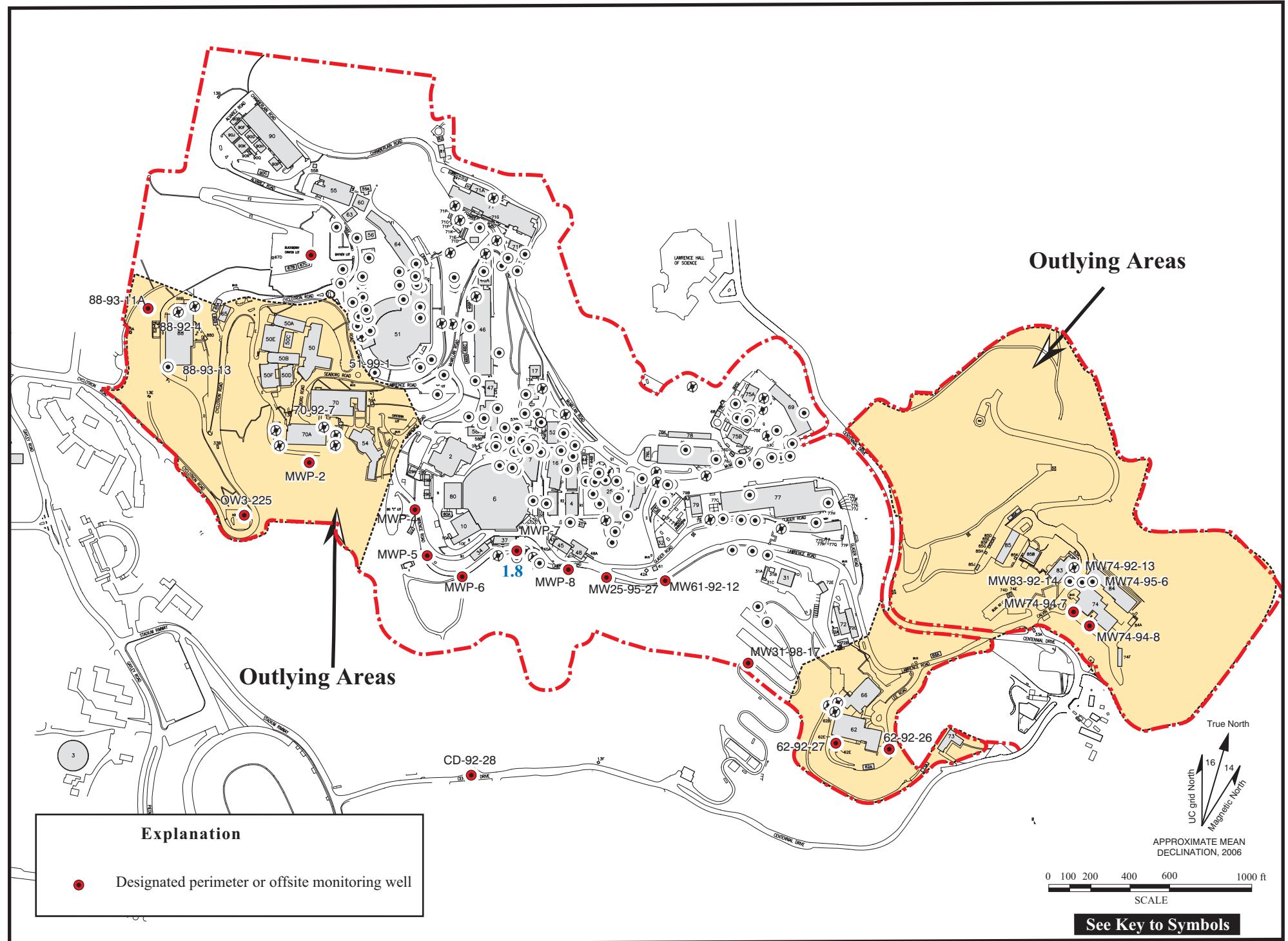
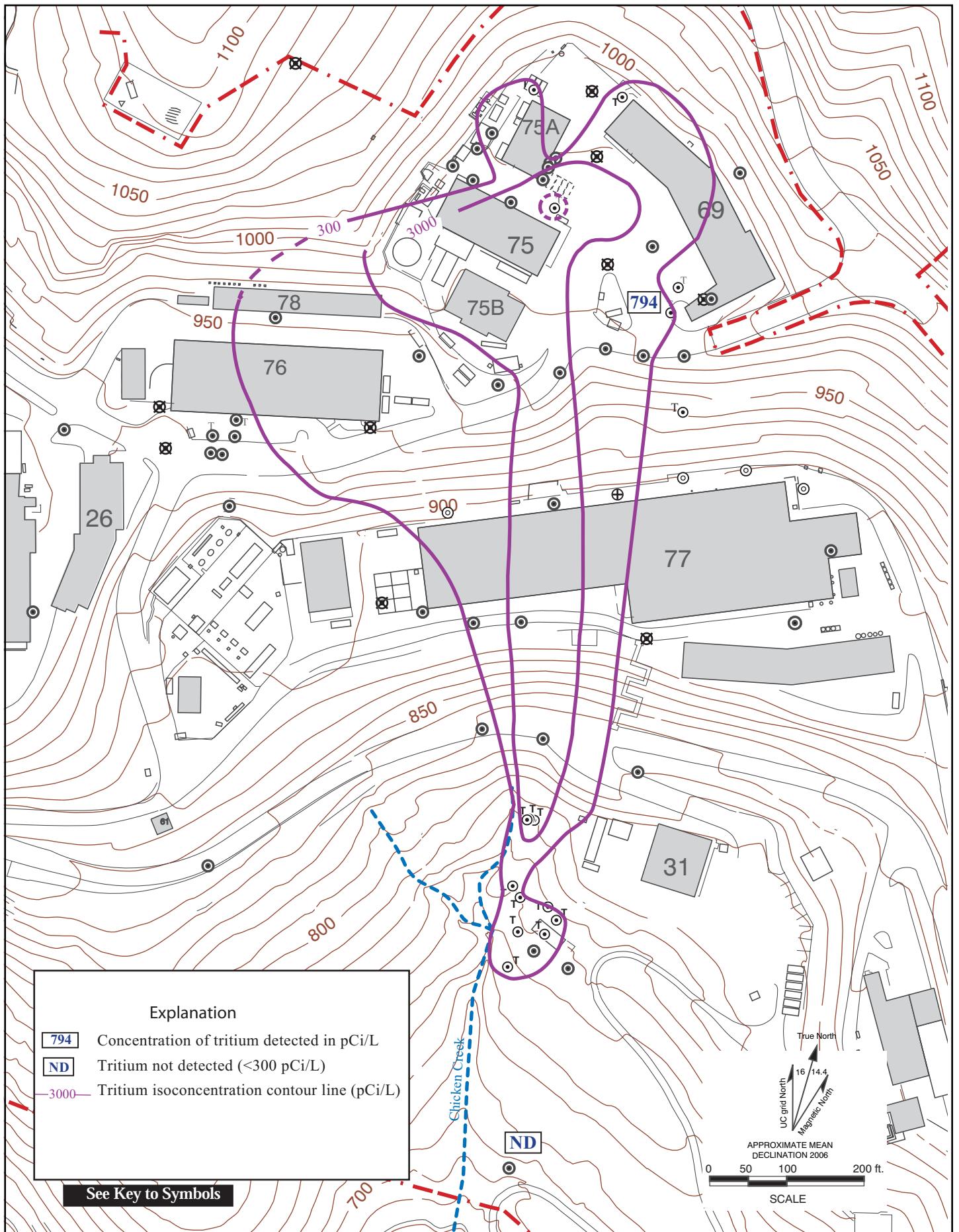


Figure 14. Water Level Elevation Map of the Support Services Area, First Quarter FY2006.





**Figure 16. Tritium Concentrations in Groundwater (pCi/L) in Corporation Yard Area, First Quarter FY2006.**

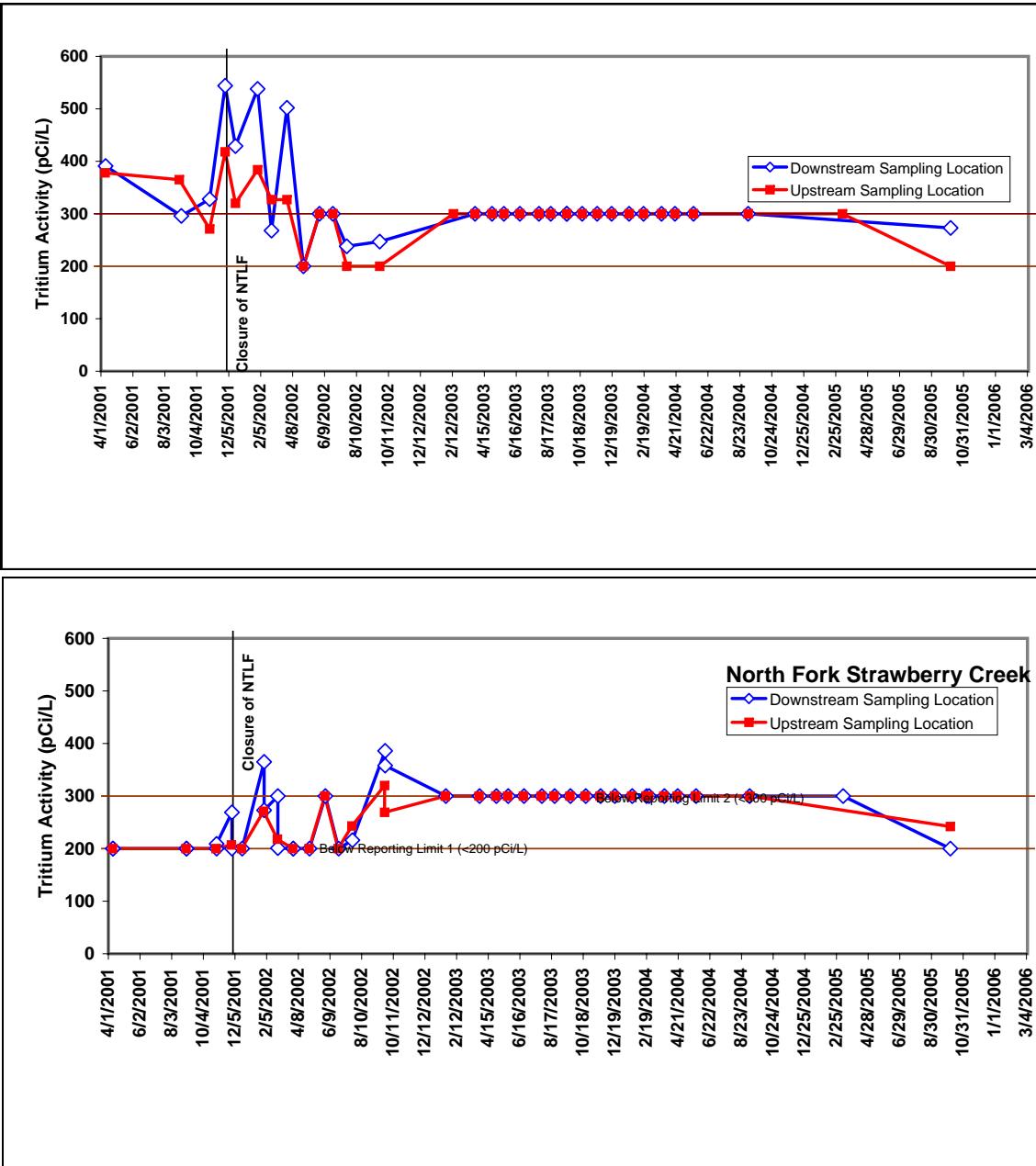


Figure 17. Tritium Activity in Chicken Creek and North Fork Strawberry Creek (2001 through December 2005). 17-tritiumcc.xls

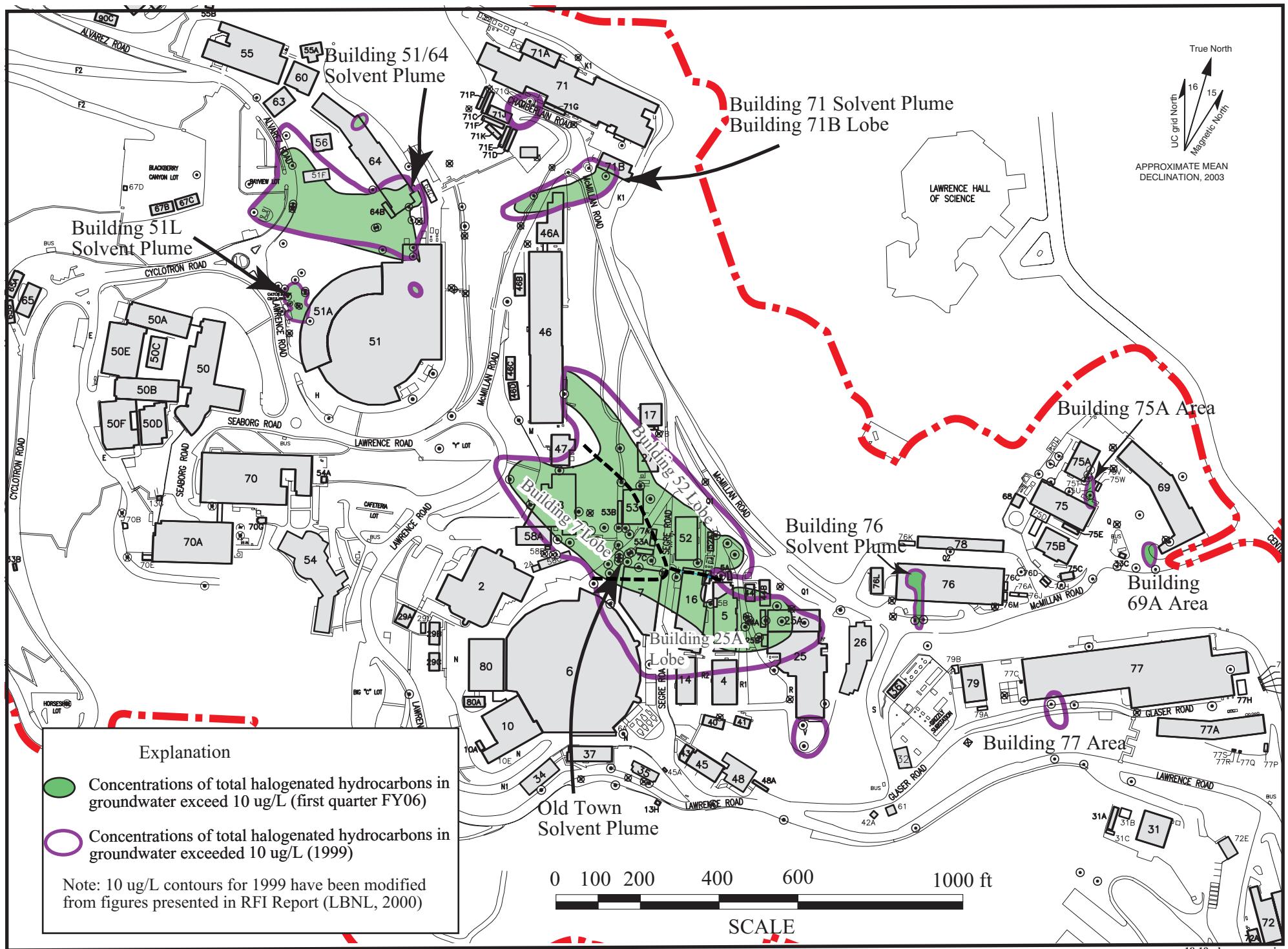


Figure 18. Extent of Groundwater Contamination (Total VOCs > 10 ug/L) First Quarter FY06 Compared to 1999.

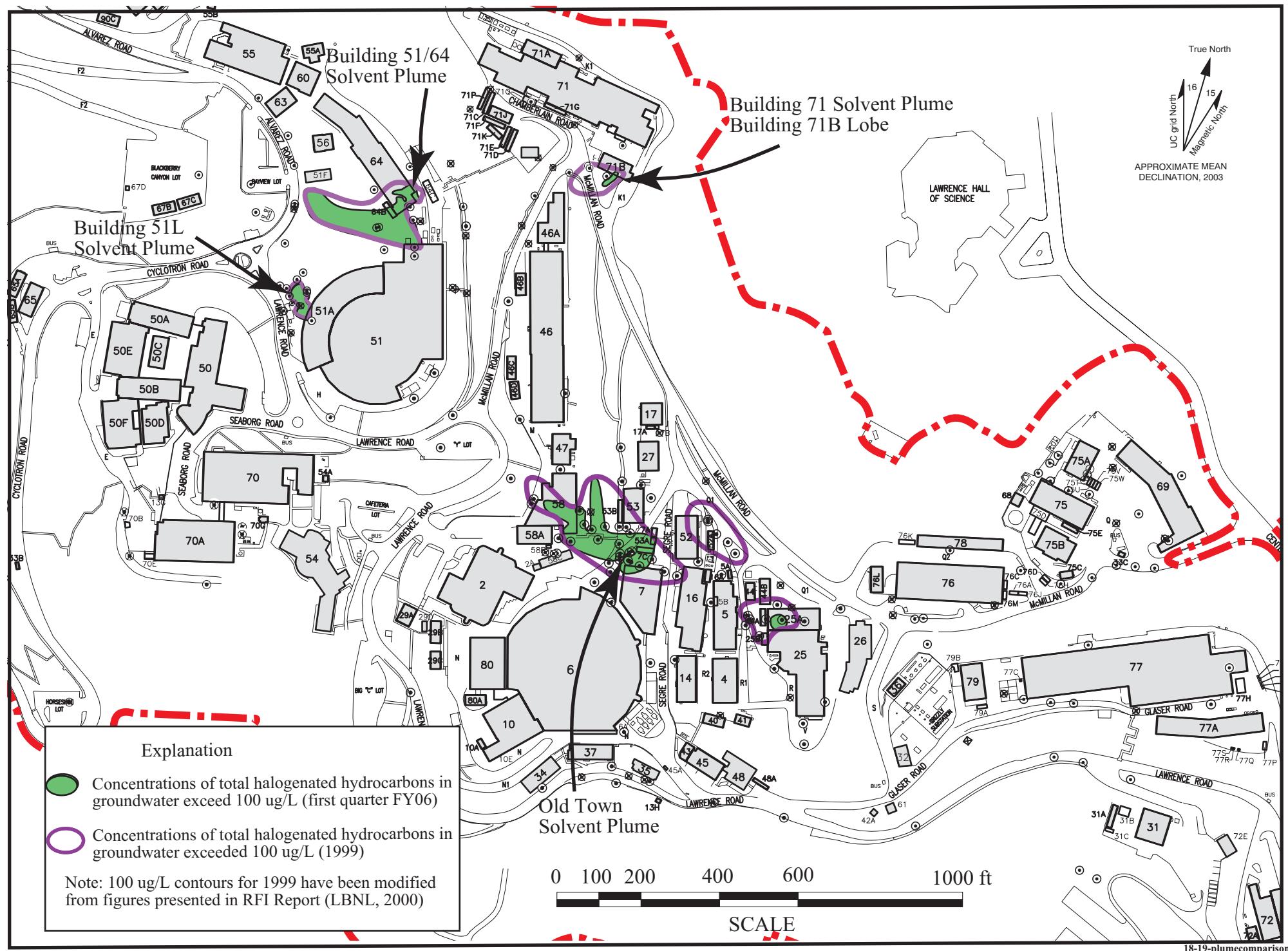
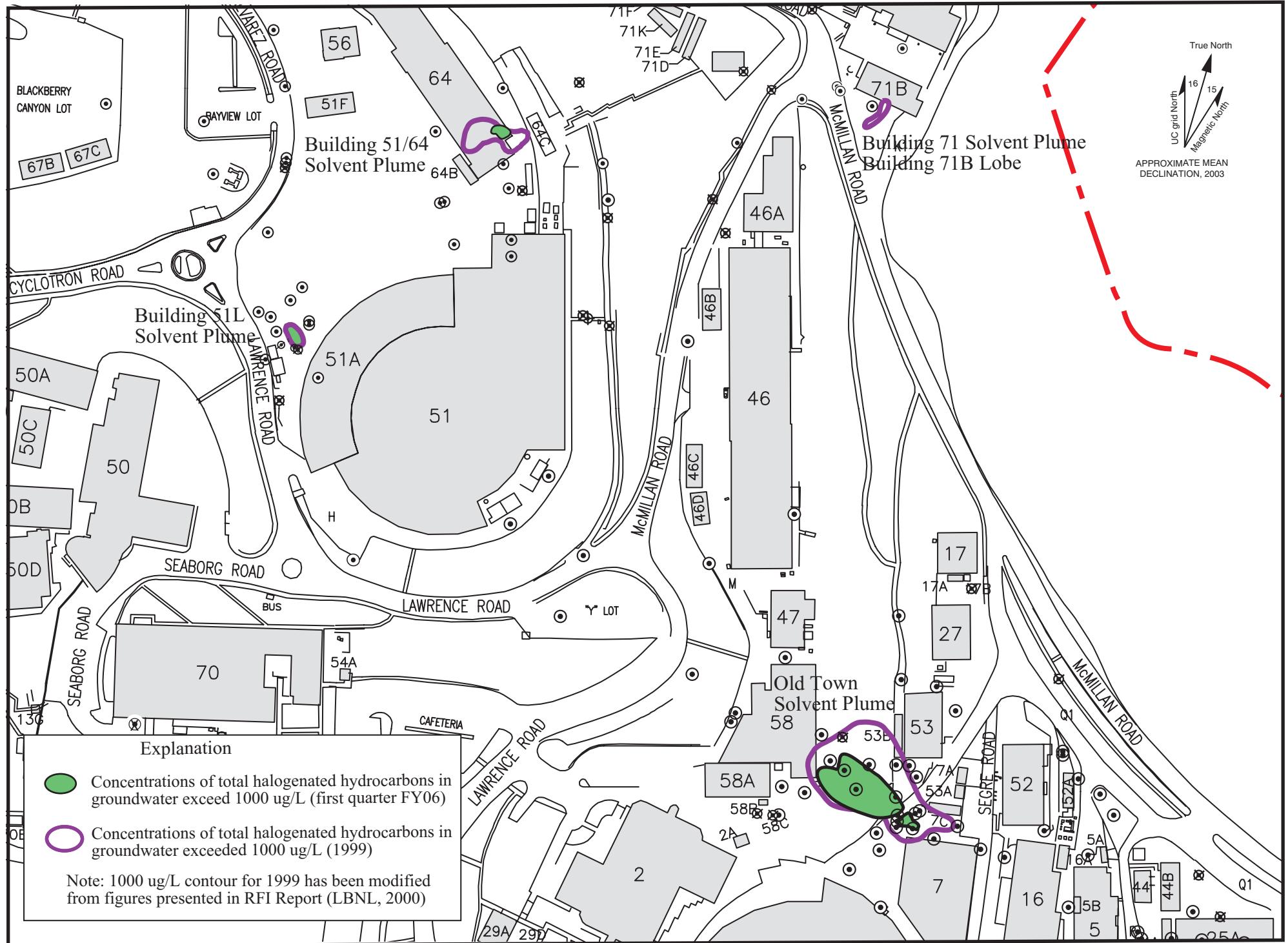


Figure 19. Extent of Groundwater Contamination (Total VOCs > 100 ug/L) First Quarter FY06 Compared to 1999.



**Figure 20. Extent of Groundwater Contamination (Total VOCs > 1000 ug/L) First Quarter FY06 Compared to 1999.**

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**Table 1**  
**EPA Method 8260 Quantitation Limits**  
**for Soil and Groundwater Samples**  
**1st Quarter FY 2006**

Compound	Water Samples µg/L		Soil samples mg/kg BC Laboratories
	LBNL EML	BC Laboratories	
Benzene	1.0	0.5	0.005
Bromobenzene	1.0	0.5	0.005
Bromoform	2.0	0.5	0.005
Bromomethane	1.0	0.5	0.005
n-Butylbenzene	10.0	1	0.005
sec-Butylbenzene	1.0	0.5	0.005
tert-Butylbenzene	1.0	0.5	0.005
Carbon Tetrachloride	1.0	0.5	0.005
Chlorobenzene	1.0	0.5	0.005
Chlorodifluoromethane (Freon-22)	30.0		
Chloroethane	30.0	0.5	0.005
Chloroform	3.0	0.5	0.005
Chloromethane	10.0	0.5	0.005
2-Chlorotoluene	2.0	0.5	0.005
4-Chlorotoluene	2.0	0.5	0.005
Dibromochloromethane	2.0	0.5	0.005
1,2-Dibromo-3-chloropropane	2.0	1	0.005
1,2-Dibromoethane	2.0	0.5	0.005
Dibromomethane	1.0	0.5	0.005
1,2-Dichlorobenzene	1.0	0.5	0.005
1,3-Dichlorobenzene	1.0	0.5	0.005
1,4-Dichlorobenzene	1.0	0.5	0.005
Dichlorodifluoromethane (Freon-12)	3.0	0.5	0.005
1,1-Dichloroethane	1.0	0.5	0.005
1,2-Dichloroethane	2.0	0.5	0.005
1,1-Dichloroethene	1.0	0.5	0.005
cis-1,2-Dichloroethene	1.0	0.5	0.005
trans-1,2-Dichloroethene	1.0	0.5	0.005
Dichlorofluoromethane (Freon-21)	3.0		
1,2-Dichloropropane	1.0	0.5	0.005
1,3-Dichloropropene	1.0	0.5	0.005
2,2-Dichloropropene	1.0	0.5	0.005
1,1-Dichloropropene	1.0	0.5	0.005
cis-1,3-Dichloropropene	1.0	0.5	0.005
trans-1,3-Dichloropropene	1.0	0.5	0.005
1,2-Dichlorotetrafluoroethane (Freon-114)	3.0		
Dichlorotrifluoroethane (Freon-123)	1.0		
1,2-Dichlorotrifluoroethane (Freon-123A)	1.0		
Ethylbenzene	1.0	0.5	0.005
Hexachlorobutadiene	3.0	0.5	0.005
Isopropylbenzene	2.0	0.5	0.005
p-Isopropyltoluene	1.0	0.5	0.005
Methylene Chloride	1.0	1	0.01
Methyl tert-Butyl Ether	5.0	0.5	0.005
Naphthalene	2.0	0.5	0.005
n-Propylbenzene	1.0	0.5	0.005
Styrene	1.0	0.5	0.005
1,1,2,2-Tetrachloroethane	1.0	0.5	0.005
1,1,1,2-Tetrachloroethane	2.0	0.5	0.005
Tetrachloroethene	1.0	0.5	0.005
Toluene	1.0	0.5	0.005
1,2,3-Trichlorobenzene	2.0	0.5	0.005
1,2,4-Trichlorobenzene	1.0	0.5	0.005
1,1,1-Trichloroethane	1.0	0.5	0.005
1,1,2-Trichloroethane	1.0	0.5	0.005
Trichloroethene	1.0	0.5	0.005
Trichlorofluoromethane (Freon-11)	2.0	0.5	0.005
1,2,3-Trichloropropane	1.0	1	0.005
Trichlorotrifluoroethane (Freon-113)	1.0	0.5	0.005
1,2,4-Trimethylbenzene	1.0	0.5	0.005
1,3,5-Trimethylbenzene	1.0	0.5	0.005
Vinyl Chloride	1.0	0.5	0.005
Total-Xylene	2.0	1	0.01

[ ] = Compound not included in analysis

**Table 2**  
**GROUNDWATER SAMPLING LOCATIONS AND ANALYTICAL METHODS**  
**1ST QUARTER FY 2006**

Location	Area	Page #	VOCs - 8260			TPH-D 8015	TPH-G 8015	TPH-FI 8015	PCBs 8082	Metals	Tritium
			Oct	Nov	Dec						
Trip Blank		T-67	✓	✓✓							
Field Blank		T-67	✓✓	✓✓✓							✓
MW90-2 <sup>S</sup>	2	T-37	✓								
MW90-3 <sup>S</sup>	1										
MW90-4 <sup>A</sup>	1										
MW90-5 <sup>S</sup>	1										
MW91-1 <sup>A</sup>	5										
MW91-2 <sup>S</sup>	5										
MW91-4 <sup>N</sup>	3										
MW91-6 <sup>N</sup>	3										
MW91-8 <sup>S</sup>	2	T-38	✓		✓						
MW91-9 <sup>A</sup>	10	T-38	✓	✓							
MWP-1	15	T-22	✓								
MWP-2 <sup>S</sup>	8										
MWP-4 <sup>S</sup>	14										
MWP-5 <sup>S</sup>	14										
MWP-6 <sup>S</sup>	14										
MWP-7 <sup>T</sup>	14	T-38	✓		✓						
MWP-8 <sup>S</sup>	10										
MWP-9 <sup>A</sup>	5										
MWP-10 <sup>N</sup>	5										
MW7-1 <sup>N</sup>	2										
MW76-1 <sup>A</sup>	4										
51-92-2 <sup>N</sup>	9										
37-92-5 <sup>N</sup>	14										
37-92-6 <sup>N</sup>	14	T-36	✓		✓						
46-92-9 <sup>A</sup>	7										
77-92-10 <sup>N</sup>	5										
26-92-11 <sup>A</sup>	10										
61-92-12 <sup>S</sup>	5										
74-92-13 <sup>N</sup>	11										
83-92-14 <sup>N</sup>	11										
46A-92-15 <sup>A</sup>	1										
7-92-16 <sup>S</sup>	2										
6-92-17 <sup>S</sup>	14										
37-92-18A <sup>N</sup>	14										
7-92-19 <sup>S</sup>	2										
27-92-20 <sup>Q</sup>	2	T-36	✓		✓						
53-92-21-130 <sup>N</sup>	2										
53-92-21-147 <sup>N</sup>	2										

**Table 2 (Cont'd)**  
**GROUNDWATER SAMPLING LOCATIONS AND ANALYTICAL METHODS**  
**1ST QUARTER FY 2006**

Location	Area	Page #	VOCs - 8260			TPH-D 8015	TPH-G 8015	TPH-FI 8015	PCBs 8082	Metals	Tritium
			Oct	Nov	Dec						
53-92-21-167 <sup>N</sup>	2										
53-92-21-193 <sup>N</sup>	2										
69A-92-22 <sup>A</sup>	3										
75B-92-24 <sup>N</sup>	3										
62-92-26 <sup>S</sup>	13										
62-92-27 <sup>S</sup>	13										
CD-92-28 <sup>S</sup>	OS										
71-93-2 <sup>N</sup>	1										
58-93-3 <sup>S</sup>	7										
6-93-4 <sup>A</sup>	2										
76-93-6 <sup>N</sup>	4										
53-93-9 <sup>Q</sup>	2	T-37	✓	✓✓✓	✓						
5-93-10 <sup>S</sup>	10	T-35	✓	✓							
88-93-11A <sup>S</sup>	6										
46-93-12 <sup>S</sup>	7	T-36	✓								
88-93-13 <sup>N</sup>	6										
52-93-14 <sup>A</sup>	10										
53-93-16-42 <sup>A</sup>	2	T-37	✓								
53-93-16-69 <sup>S</sup>	2	T-37	✓	✓							
53-93-17 <sup>N</sup>	2										
51B-93-18A <sup>S</sup>	9										
7-94-3 <sup>S</sup>	2	T-35	✓								
77-94-5 <sup>N</sup>	5										
77-94-6 <sup>N</sup>	5										
74-94-7 <sup>S</sup>	11										
74-94-8 <sup>S</sup>	11										
25-94-12 <sup>A</sup>	10										
16-94-13 <sup>A</sup>	10										
58A-94-14 <sup>S</sup>	7										
51-94-15 <sup>A</sup>	7										
52-95-2B <sup>S</sup>	10	T-36	✓								
16-95-3 <sup>N</sup>	10										
25-95-5 <sup>N</sup>	10										
74-95-6 <sup>A</sup>	11										
71-95-9 <sup>N</sup>	1										
58-95-11 <sup>A</sup>	7										
53-95-12 <sup>S</sup>	2										
52B-95-13 <sup>A</sup>	2										
6-95-14 <sup>A</sup>	2	T-35	✓		✓						
25A-95-15 <sup>S</sup>	10	T-35		✓							

**Table 2 (Cont'd)**  
**GROUNDWATER SAMPLING LOCATIONS AND ANALYTICAL METHODS**  
**1ST QUARTER FY 2006**

Location	Area	Page #	VOCs - 8260			TPH-D 8015	TPH-G 8015	TPH-FI 8015	PCBs 8082	Metals	Tritium
			Oct	Nov	Dec						
58-95-18 <sup>A</sup>	7										
58-95-19 <sup>S</sup>	7										
58-95-20 <sup>A</sup>	7										
7B-95-21 <sup>S</sup>	2	T-35	✓								
7-95-22 <sup>S</sup>	2	T-35	✓								
7-95-23 <sup>Q</sup>	2	T-35	✓								
7B-95-24 <sup>Q</sup>	2	T-35	✓								
7B-95-25 <sup>S</sup>	2										
25-95-26 <sup>A</sup>	10										
25-95-27 <sup>S</sup>	10										
53-96-1 <sup>A</sup>	2										
51-96-3 <sup>A</sup>	7										
46-96-10 <sup>A</sup>	7										
58-96-11 <sup>Q</sup>	2	T-37	✓								
51-96-15 <sup>S</sup>	9										
51-96-16 <sup>S</sup>	9	T-20	✓✓	✓✓	✓✓						
51-96-17 <sup>A</sup>	9	T-20	✓✓	✓✓	✓✓						
51-96-18 <sup>S</sup>	9	T-21	✓	✓	✓						
75-96-20 <sup>A</sup>	3										
64-97-1 <sup>A</sup>	9										
64-97-2 <sup>S</sup>	9										
51-97-3 <sup>A</sup>	9										
75-97-5 <sup>N</sup>	3										
75-97-6 <sup>N</sup>	3										
75-97-7 <sup>N</sup>	3										
69-97-8 <sup>S</sup>	3	T-50	✓	✓	✓						
77-97-9 <sup>N</sup>	5										
77-97-11 <sup>N</sup>	5										
51-97-12 <sup>S</sup>	9										
51-97-13 <sup>A</sup>	9										
51-97-14 <sup>A</sup>	9										
51-97-15 <sup>S</sup>	9										
31-97-17 <sup>N</sup>	5										
31-97-18 <sup>N</sup>	5										
78-97-20 <sup>N</sup>	4										
69-97-21 <sup>N</sup>	3										
25A-98-1 <sup>S</sup>	10	T-35	✓								
56-98-2 <sup>A</sup>	9										
25A-98-3 <sup>S</sup>	10	T-35	✓		✓						
51-98-5 <sup>N</sup>	9										

**Table 2 (Cont'd)**  
**GROUNDWATER SAMPLING LOCATIONS AND ANALYTICAL METHODS**  
**1ST QUARTER FY 2006**

Location	Area	Page #	VOCs - 8260			TPH-D 8015	TPH-G 8015	TPH-FI 8015	PCBs 8082	Metals	Tritium
25A-98-6 <sup>N</sup>	10										
25A-98-7 <sup>S</sup>	10	T-36	✓								
52A-98-8A <sup>A</sup>	10										
52A-98-8B <sup>S</sup>	10										
52-98-9 <sup>A</sup>	10	T-36	✓	✓✓✓	✓						
25-98-10 <sup>A</sup>	10										
71B-98-13 <sup>S</sup>	1	T-21	.....✓.....							✓	
75-98-14 <sup>A</sup>	3										
75-98-15 <sup>N</sup>	3										
31-98-17 <sup>S</sup>	5									.....✓.....	
63-98-18 <sup>A</sup>	15										
76-98-21 <sup>S</sup>	4										
76-98-22 <sup>S</sup>	4										
51-99-1 <sup>N</sup>	9										
25A-99-2 <sup>S</sup>	10										
71B-99-3R <sup>Q</sup>	1	T-22	✓✓✓	✓✓	✓✓					✓	
75-99-4 <sup>N</sup>	3										
75-99-6 <sup>N</sup>	3										
75-99-7 <sup>N</sup>	3										
75-99-8 <sup>N</sup>	3										
71B-00-2 <sup>N</sup>	1										
58A-00-3 <sup>N</sup>	7										
7-00-4 <sup>A</sup>	2										
25A-00-5 <sup>N</sup>	10										
52A-00-6 <sup>N</sup>	10										
75A-00-7 <sup>A</sup>	3										
51-00-8 <sup>Q</sup>	9	T-21	✓								
51-00-9 <sup>N</sup>	9										
51-00-10 <sup>A</sup>	9										
58-00-12 <sup>Q</sup>	7	T-37	✓, D								
51L-01-1A <sup>A</sup>	9										
51L-01-1B <sup>N</sup>	9										
51L-01-3 <sup>A</sup>	9	T-21	.....✓.....								
51L-01-4 <sup>A</sup>	9	T-21	✓								
51L-01-5A <sup>A</sup>	9	T-21	✓								
51L-01-5B <sup>A</sup>	9	T-21	.....✓.....								
51L-01-6 <sup>A</sup>	9	T-21	.....✓.....								
51L-01-7 <sup>A</sup>	9	T-21	.....✓.....								
51A-01-11 <sup>A</sup>	9										
51L-02-1 <sup>A</sup>	9										
OW3-225 <sup>S</sup>	8										

**Table 2 (Cont'd)**  
**GROUNDWATER SAMPLING LOCATIONS AND ANALYTICAL METHODS**  
**1ST QUARTER FY 2006**

Location	Area	Page #	VOCs - 8260			TPH-D 8015	TPH-G 8015	TPH-FI 8015	PCBs 8082	Metals	Tritium
			Oct	Nov	Dec						
<b>Hydraugers</b>											
37-01-01	9	T-53	✓			✓					
51-01-01	9	T-53	✓			✓					
51-01-02	9	T-53	✓			✓					
51-01-03	9	T-53	✓			✓					
51-01-03A	9	T-53	✓			✓					
51-01-04	9	T-53	✓			✓					
<b>Slope Stability and Indicator Facilities</b>											
SI3-63	1	T-34	✓								
SI15-102	2	T-47	✓								
SSW19-63	7	T-47	✓								
SSW20-130	5	T-52	✓								
SSW21-130	5	T-52	✓								
<b>Temporary Groundwater Sampling Points</b>											
SB7-97-1	2	T-39	✓	✓					✓		
SB16-98-1	10	T-39	✓						✓		
SB25A-96-3	10	T-39		✓							
SB27-96-1	5	T-39			✓						
SB51-96-6	9	T-23	✓						✓		
SB51-98-1	9	T-23	✓						✓		
SB51-98-4	9	T-23	✓						✓		
SB51-98-6	9	T-23	✓						✓		
SB53-96-3	2	T-39		✓							
SB58-96-2	7	T-39		✓							
SB58-97-2	7	T-39			✓						
SB64-98-8	9	T-23	✓	✓	✓						
SB64-98-12	9	T-23	✓	✓	✓						
SB64-98-17	9	T-23	✓	✓	✓						
SB64-99-4	9	T-24	✓	✓	✓						
SB64-99-5	9	T-24	✓	✓	✓						
SB64-99-6	9	T-24	✓	✓	✓						
SB64-00-1	9	T-24	✓	✓	✓						
SB64-00-2	9	T-25	✓	✓	✓						
SB64-02-1A	9	T-25	✓	✓, D							
SB64-02-1B	9	T-25	✓	✓							
SB64-02-1C	9	T-25	✓	✓							
SB64-02-1D	9	T-25	✓	✓							
SB64-02-1E	9	T-26	✓	✓							
SB64-02-1F	9	T-26	✓	✓							

**Table 2 (Cont'd)**  
**GROUNDWATER SAMPLING LOCATIONS AND ANALYTICAL METHODS**  
**1ST QUARTER FY 2006**

Location	Area	Page #	VOCs - 8260			TPH-D 8015	TPH-G 8015	TPH-FI 8015	PCBs 8082	Metals	Tritium
			Oct	Nov	Dec						
SB64-02-2A	9	T-26	✓	✓							
SB64-02-2B	9	T-26	✓	✓							
SB64-02-2C	9	T-26	✓	✓							
SB64-02-2D	9	T-26	✓	✓							
SB64-02-2E	9	T-27	✓	✓							
SB64-02-2F	9	T-27	✓	✓							
SB64-03-1A	9	T-27	✓	✓	✓						
SB64-03-1B	9	T-27	✓	✓	✓						
SB64-03-4	9	T-27	✓	✓	✓						
SB64-03-5	9	T-28	✓	✓	✓						
SB64-03-6	9	T-28	✓	✓	✓						
SB64-03-7	9	T-28	✓	✓	✓						
SB64-03-8	9	T-28	✓	✓	✓						
SB64-05-4	9	T-29	✓✓✓✓	✓✓✓✓✓	✓✓						
SB69A-99-1	3	T-51	✓✓	✓✓	✓						✓
SB71B-03-1	1	T-30	✓✓	✓✓	✓✓						✓
SB71B-03-2	1	T-30	✓✓	✓✓	✓✓						✓
SB71B-04-1	1	T-31	✓✓✓	✓✓✓	✓✓✓						
SB71B-04-3	1	T-31	✓✓✓								
SB75-02-1	3	T-51		✓							
W76-97-3	4	T-51	✓			✓✓	✓✓				
W76-97-4	4	T-51	✓			✓✓	✓✓				
W76-97-5	4	T-51	✓			✓✓	✓✓				

Other Locations

MP7-99-1B	2	T-47	✓, D								
MP7-99-2B	2	T-47	✓, D								

Extraction Wells

EW7-96-1	2	T-40	✓✓	✓✓	✓✓						
EW7-96-2	2	T-40	✓✓	✓✓	✓✓						
EW7-96-4R	2	T-41	✓✓	✓✓	✓✓						
IW7-02-1	2	T-46	✓✓	✓✓	✓✓	✓✓					
IW7-02-6	2	T-46	✓✓	✓✓	✓✓						
EW7-03-1	2	T-41	✓✓	✓✓	✓✓						
EW7-03-3	2	T-42	✓✓	✓✓	✓✓						
EW7C-04-2	2	T-44	✓								
DPE7-03-1	2	T-42	✓✓	✓✓	✓✓						
DPE7-03-2	2	T-43	✓✓	✓✓	✓✓						
DPE7-03-3	2	T-43	✓✓	✓✓	✓✓						
EW25A-02-1	10	T-44	✓		✓						
EW51L-99-1	9	T-32		✓							

**Table 2 (Cont'd)**  
**GROUNDWATER SAMPLING LOCATIONS AND ANALYTICAL METHODS**  
**1ST QUARTER FY 2006**

Location	Area	Page #	VOCs - 8260			TPH-D 8015	TPH-G 8015	TPH-FI 8015	PCBs 8082	Metals	Tritium
			Oct	Nov	Dec						
EW51L-00-1	9	T-32	✓	✓							
EW53-04-2	2	T-44	✓	✓✓✓	✓						
EW58E-98-1	7	T-45	✓								
EW58E-98-2	7	T-45	✓								
EW58E-98-3	7	T-45	✓								
EW58E-98-4	7	T-45	✓								
EW58E-98-5	7	T-45	✓								
EW58E-98-6	7	T-45	✓								
EW58E-98-7	7	T-45	✓								
EW58E-98-8	7	T-45	✓								
EW58-02-1 <sup>T</sup>	9	T-45			✓						
EW64-00-1 <sup>T</sup>	9	T-32	✓		✓						
EW64-03-1 <sup>T</sup>	9	T-32	✓		✓						
EW64-05-1 <sup>T</sup>	9	T-32	✓✓✓✓	✓✓✓✓✓	✓✓						

[dotted box] = all compounds less than Quantitation Limit or Minimum Detectable Activity (Radionuclides)

Minimum required groundwater monitoring well sampling schedule for VOCs

<sup>A</sup> = Annual

<sup>N</sup> = No sampling

<sup>Q</sup> = Quarterly sampling

<sup>S</sup> = Semi-annual

<sup>T</sup> = Treatment system influent samples

D - each D represents one duplicate sample

OS = Offsite well

✓ = each check represents one sample taken

Analytical Methods:

8260 = Volatile Organic compounds

TPH-FI = Hydrocarbon range includes: Light Naptha, Aviation Gas, Stoddard Solvent, Heavy Naptha, Gasoline, JP4, JP5, JP6, JP8, Kerosene, Diesel, Crude/Waste Oil, Hydraulic/Motor Oil, and WD-40

TPH-D = Diesel Range Organics, EPA Method 8015m or 8015B-SVOA

TPH-G = Gasoline Range Organics, EPA Method 8015m

TPH-K = TPH-Kerosene, EPA Method 8015m

PCBs = Polychlorinated Biphenyls, EPA Method 8082

**Table 3**  
**Groundwater Elevations in LBNL Monitoring Wells**  
**1st Quarter FY 2006**

Well Number	Top of Casing Elevation (feet)	Date	Depth to Water (feet)	Groundwater Elevation (feet msl)		Change from Previous Quarter (feet)
				Current Quarter	Previous Quarter	
<b>Bevalac Area</b>						
46A-92-15	830.10	12/19	16.72	813.38	813.78	-0.40
51-92-2	724.69	12/19	6.27	718.42	718.11	0.31
51-96-15	709.83	12/19	20.86	688.97	688.35	0.62
51-96-16	709.72	12/19	17.84	691.88	689.18	2.70
51-96-17	709.64	12/19	15.28	694.36	693.66	0.70
51-96-18	710.76	12/19	11.73	699.03	698.68	0.35
51-97-3	709.81	12/19	35.14	674.67	675.26	-0.59
51-97-12	709.37	12/19	33.57	675.80	676.41	-0.61
51-97-13	709.48	12/19	33.56	675.92	676.59	-0.67
51-97-14	708.89	12/19	48.68	660.21	660.82	-0.61
51-97-15	706.11	12/19	70.95	635.16	635.23	-0.07
51-98-5	709.63	12/19	43.77	665.86	665.85	0.01
51-99-1	724.44	12/20	10.78	713.66	713.84	-0.18
51-00-8	682.11	12/19	20.84	661.27	657.95	3.32
51-00-9	698.16	12/19	2.84	695.32	695.08	0.24
51-00-10	698.18	12/19	3.02	695.16	695.06	0.10
51A-01-11	709.74	12/19	33.87	675.87	676.00	-0.13
51B-93-18A	709.95	12/19	9.74	700.21	699.41	0.80
51L-01-1A	710.04	12/20	7.88	702.16	702.44	-0.28
51L-01-1B	710.04	12/20	12.12	697.92	696.72	1.20
51L-01-3	709.54	12/19	21.46	688.08	688.05	0.03
51L-01-4	709.87	12/19	21.73	688.14	688.16	-0.02
51L-01-5A	709.96	12/19	27.93	682.03	684.54	-2.51
51L-01-5B	709.94	12/19	46.06	663.88	664.37	-0.49
51L-01-6	709.80	12/19	24.41	685.39	686.56	-1.17
51L-01-7	709.76	12/19	41.57	668.19	668.94	-0.75

Well Number	Top of Casing Elevation (feet)	Date	Depth to Water (feet)	Groundwater Elevation (feet msl)		Change from Previous Quarter (feet)
				Current Quarter	Previous Quarter	
51L-02-1	709.74	12/19	21.66	688.08	687.97	0.11
56-98-2	709.76	12/19	19.02	690.74	690.31	0.43
63-98-18	709.99	12/19	20.96	689.03	689.54	-0.51
64-97-1	709.94	12/19	4.59	705.35	704.31	1.04
64-97-2	709.65	12/19	12.42	697.23	696.21	1.02
71-93-2	844.39	12/19	36.46	807.93	807.61	0.32
71-95-9	854.18	12/19	20.68	833.50	833.68	-0.18
71B-98-13	832.33	12/19	17.08	815.25	816.26	-1.01
71B-99-3R	840.13	12/19	18.96	821.17	821.31	-0.14
71B-00-2	832.41	12/19	17.66	814.75	805.92	8.83
MW90-3	820.60	12/19	40.25	780.35	778.78	1.57
MW90-4	746.15	12/19	7.31	738.84	738.48	0.36
MW90-5	745.75	12/19	17.82	727.93	728.04	-0.11
MWP-1	630.65	12/20	43.20	587.45	587.61	-0.16
<b>Old Town</b>						
5-93-10	914.90	12/22	15.65	899.25	891.83	7.42
6-92-17	891.20	12/20	13.77	877.43	876.58	0.85
6-93-4	881.60	12/20	dry		833.60	
MW7-1	884.13	12/20	12.85	871.28	870.83	0.45
7-92-16	882.40	12/20	51.44	830.96	832.03	-1.07
7-92-19	884.80	12/20	21.97	862.83	864.62	-1.79
7-94-3	882.88	12/20	19.60	863.28	863.00	0.28
7-95-22	882.16	12/20	20.76	861.40	858.82	2.58
7-95-23	882.37	12/20	13.12	869.25	864.97	4.28
7-00-4	883.18	12/20	93.13	790.05	787.34	2.71
7B-95-21	883.63	12/20	15.00	868.63	851.15	17.48
7B-95-24	883.88	12/20	53.28	830.60	833.71	-3.11

**Table 3 (Cont'd)**  
**Groundwater Elevations in LBNL Monitoring Wells**  
**1st Quarter FY 2006**

Well Number	Top of Casing Elevation	Date	Depth to Water	Groundwater		Change from Previous Quarter (feet)
				Current Quarter	Previous Quarter	
7B-95-25	882.03	12/20	24.53	857.50	835.09	22.41
16-94-13	892.50	12/22	11.09	881.41	874.17	7.24
16-95-3	901.52	12/22	13.89	887.63	882.89	4.74
25-94-12	937.59	12/22	35.45	902.14	902.13	0.01
25-95-5	932.88	12/22	74.85	858.03	856.28	1.75
25-95-26	935.81	12/22	38.15	897.66	896.60	1.06
25-95-27	859.83	12/22	30.82	829.01	829.81	-0.80
25-98-10	934.42	12/22	74.38	860.04	857.60	2.44
25A-95-15	931.68	12/22	32.10	899.58	911.48	-11.90
25A-98-1	936.88	12/22	34.28	902.60	903.27	-0.67
25A-98-3	940.14	12/21	35.94	904.20	900.14	4.06
25A-98-6	939.90	12/22	30.75	909.15	908.79	0.36
25A-98-7	942.71	12/21	13.15	929.56	928.67	0.89
25A-99-2	940.45	12/22	25.37	915.08	915.40	-0.32
25A-00-5	933.12	12/22	41.63	891.49	879.88	11.61
26-92-11	936.19	12/22	14.58	921.61	918.25	3.36
27-92-20	881.10	12/20	48.91	832.19	833.85	-1.66
37-92-5	881.56	10/26	38.51	843.05	843.19	-0.14
37-92-18A	861.20	12/20	46.11	815.09	814.29	0.80
46-92-9	805.30	12/20	76.16	729.14	728.23	0.91
46-93-12	807.57	12/20	7.57	800.00	800.01	-0.01
46-96-10	790.35	12/20	30.61	759.74	756.83	2.91
51-94-15	771.17	12/19	33.97	737.20	735.57	1.63
51-96-3	766.44	12/19	10.36	756.08	754.66	1.42
52-93-14	900.03	12/22	38.02	862.01	864.64	-2.63
52-95-2A	910.27	12/22	42.84	867.43	866.52	0.91
52-95-2B	910.23	10/26	55.08	855.15	NM	
52-98-9	910.86	12/22	59.50	851.36	858.78	-7.42
52A-98-8A	913.56	12/22	29.53	884.03	879.78	4.25

Well Number	Top of Casing Elevation	Date	Depth to Water	Groundwater		Change from Previous Quarter (feet)
				Current Quarter	Previous Quarter	
52A-98-8B	913.51	12/22	55.45	858.06	864.04	-5.98
52A-00-6	917.34	12/22	59.62	857.72	857.38	0.34
52B-95-13	887.40	12/20	15.50	871.90	866.04	5.86
53-92-21-130'	886.97	12/20	69.83	817.14	816.79	0.35
53-92-21-147'	886.99	12/20	68.38	818.61	818.53	0.08
53-92-21-167'	886.97	12/20	69.11	817.86	817.79	0.07
53-92-21-193'	886.98	12/20	83.80	803.18	802.86	0.32
53-93-9	900.68	12/20	66.61	834.07	838.02	-3.95
53-93-16-42'	887.45	12/20	37.49	849.96	847.88	2.08
53-93-16-69'	887.40	12/20	65.68	821.72	836.24	-14.52
53-93-17	902.62	12/20	69.46	833.16	836.97	-3.81
53-95-12	867.45	12/20	35.82	831.63	835.42	-3.79
53-96-1	887.64	12/20	65.14	822.50	837.12	-14.62
58-93-3	830.06	12/20	5.77	824.29	824.14	0.15
58-95-11	831.62	12/20	2.29	829.33	829.25	0.08
58-95-18	788.61	12/20	7.18	781.43	778.04	3.39
58-95-19	834.33	12/20	17.88	816.45	816.45	0.00
58-95-20	818.81	12/20	14.37	804.44	800.73	3.71
58-96-11	848.23	12/20	13.38	834.85	816.09	18.76
58-00-12	860.62	12/20	22.95	837.67	828.23	9.44
58A-94-14	821.73	12/20	21.77	799.96	798.40	1.56
58A-00-3	822.54	12/20	69.75	752.79	747.39	5.40
MW90-2	880.78	12/20	23.28	857.50	851.82	5.68
MW91-8	887.02	12/20	54.50	832.52	834.90	-2.38
MW91-9	915.67	12/22	15.31	900.36	890.98	9.38
MWP-4	831.56	12/20	46.85	784.71	783.92	0.79
MWP-5	852.37	12/20	95.88	756.49	755.60	0.89
MWP-6	845.44	12/20	26.72	818.72	818.49	0.23
MWP-8	872.34	12/22	26.78	845.56	844.40	1.16

**Table 3 (Cont'd)**  
**Groundwater Elevations in LBNL Monitoring Wells**  
**1st Quarter FY 2006**

Well Number	Top of Casing Elevation	Date	Depth to Water	Groundwater		Change from Previous Quarter (feet)
				Current Quarter	Previous Quarter	
<b>Support Services</b>						
31-97-17	746.15	12/21	19.06	727.09	725.47	1.62
31-97-18	747.80	12/21	21.62	726.18	725.16	1.02
31-98-17	693.47	12/21	9.61	683.86	685.06	-1.20
61-92-12	843.90	12/21	80.04	763.86	764.42	-0.56
69-97-8	975.75	12/20	43.87	931.88	930.65	1.23
69-97-21	1003.40	12/20	29.96	973.44	974.56	-1.12
69A-92-22	977.06	12/20	22.86	954.20	954.20	0.00
75-96-20	979.07	12/20	12.39	966.68	966.20	0.48
75-97-5	963.73	12/20	55.38	908.35	912.02	-3.67
75-97-6	967.89	12/20	56.54	911.35	910.42	0.93
75-97-7	970.70	12/20	56.44	914.26	914.92	-0.66
75-98-14	977.94	12/20	12.83	965.11	962.26	2.85
75-98-15	977.97	12/20	13.62	964.35	965.29	-0.94
75-99-4	977.90	12/20	13.61	964.29	965.27	-0.98
75-99-6	979.94	12/20	12.02	967.92	960.49	7.43
75-99-7	977.92	12/20	11.86	966.06	965.54	0.52
75-99-8	979.34	12/20	9.63	969.71	968.50	1.21
75A-00-7	978.32	12/20	127.02	851.30	842.76	8.54
75B-92-24	956.90	12/20	39.28	917.62	916.56	1.06
MW76-1	923.70	12/20	20.06	903.64	903.17	0.47
76-93-6	948.61	12/20	20.77	927.84	929.39	-1.55
76-98-21	923.20	12/20	18.48	904.72	902.56	2.16
76-98-22	904.57	12/20	12.51	892.06	889.03	3.03
77-92-10	879.11	12/21	29.36	849.75	833.36	16.39

Unit in feet

NM = Not measured

Well Number	Top of Casing Elevation	Date	Depth to Water	Groundwater		Change from Previous Quarter (feet)
				Current Quarter	Previous Quarter	
<b>Outlying Areas</b>						
77-94-5	878.96	10/27	34.82	844.14	844.38	-0.24
77-94-6	876.76	12/21	51.92	824.84	824.80	0.04
77-97-9	888.69	12/21	23.31	865.38	866.97	-1.59
77-97-11	814.67	12/21	32.45	782.22	781.89	0.33
78-97-20	949.54	12/20	20.18	929.36	930.05	-0.69
MW91-1	877.98	12/21	23.84	854.14	854.16	-0.02
MW91-2	877.27	12/21	42.07	835.20	835.19	0.01
MW91-4	978.55	12/20	85.46	893.09	877.89	15.20
MW91-6	975.22	12/20	29.65	945.57	945.64	-0.07
MWP-9	818.83	12/21	25.38	793.45	785.17	8.28
MWP-10	809.74	12/21	51.07	758.67	758.60	0.07
OW3-225	570.00	12/20	62.32	507.68	508.21	-0.53

**Table 4**  
**LBNL Monitoring Well Construction Details**

Location ID	Area	Completion Date	Abandonment Date	UC Grid North Coordinate	UC Grid East Coordinate	Top of Casing Elevation (ft above MSL)	Casing Diameter (inches)	Approximate Screened Interval (ft below TOC)	Screened Geologic Unit
MW90-2	2	7/19/1990		253.21	2637.82	880.78	2	25-35	Orinda
MW90-3	1	7/23/1990		1134.60	2460.40	820.60	2	48-58	Colluvium
MW90-4	1	12/1/1990		1103.90	2289.30	746.15	2	15-25	Colluvium
MW90-5	1	12/1/1990		1067.30	2293.70	745.75	4	15-25	Colluvium
MW90-6	1	12/1/1990	9/17/2002	1046.70	2291.60	746.00	2	15-25	Colluvium / Orinda
MW91-1	5	5/30/1991		-69.08	4050.61	877.98	2	44-54	Orinda
MW91-2	5	5/31/1991		-65.83	3666.47	877.27	2	40-50	Orinda
MW91-3	3	6/4/1991	9/21/2005	566.47	3807.95	981.69	2	53-63	Orinda
MW91-4	3	12/2/1991		476.81	3756.52	978.21	2	115-145	Orinda
MW91-5	3	6/3/1991	9/21/2005	490.76	3815.48	978.28	2	30-40	Orinda
MW91-6	3	11/17/1991		382.38	3879.71	975.22	4	34-44	Orinda
MW91-8	2	1/9/1992		465.11	2662.97	887.02	2	65.5-75.5	Moraga
MW91-9	10	12/9/1991		246.20	2896.17	915.67	2	28.5-38.5	Orinda
MWP-1	15	6/6/1991		1177.15	1674.81	630.65	2	39-49	Colluvium
MWP-2	8	12/6/1991		219.37	1693.34	710.33	2	66-76	Great Valley
MWP-4	14	6/19/1991		-36.08	2169.41	831.56	2	43-53	Great Valley
MWP-5	14	6/25/1991		-262.06	2213.41	852.37	2	98-108	Great Valley
MWP-6	14	6/9/1991		-256.79	2476.38	845.44	2	27-37	Great Valley
MWP-7	14	6/10/1991		-206.48	2638.97	854.01	2	25-35	Orinda / Great Valley
MWP-8	10	6/14/1991		-292.68	2876.29	872.34	2	25-35	Orinda
MWP-9	5	6/18/1991		-196.07	3674.77	818.83	2	51-61	Great Valley
MWP-10	5	6/8/1991		-246.37	3862.41	809.74	2	57-67	Great Valley
MW1-220	2	9/24/1988	9/26/2005	578.73	2751.09	901.64	4	83-93	Moraga
MW7-1	2	8/12/1988		295.97	2681.13	884.13	4	8-18	
MW62-B1A	13	9/26/1987	9/20/2005	-987.16	4129.20	757.70	2	23-33	
MW62-B2	13	9/1/1986	9/7/2005	-984.02	4127.06	756.60	2	24-34	
MW76-1	4	8/9/1988		137.13	3366.07	923.70	4	20-30	
51-92-2	9	3/19/1992		660.30	2174.22	724.69	2	6.5-16.5	Orinda
88-92-4	6	3/18/1992	9/28/2005	931.05	1029.80	590.82	2	49-59	Great Valley
37-92-5	14	3/28/1992		-125.20	2668.23	881.56	2	85-105	Great Valley

**Table 4 (Cont'd)**  
**LBNL Monitoring Well Construction Details**

Location ID	Area	Completion Date	Abandonment Date	UC Grid North Coordinate	UC Grid East Coordinate	Top of Casing Elevation (ft above MSL)	Casing Diameter (inches)	Approximate Screened Interval (ft below TOC)	Screened Formation Name
37-92-6	14	2/23/1992		-245.60	2649.39	854.15	2	29-39	Great Valley
70-92-7	8	3/8/1992	9/12/2005	403.84	1708.83	762.93	2	20.8-25.8	Great Valley
46-92-9	7	3/1/1992		612.25	2423.20	805.30	2	68.5-78.5	Orinda
77-92-10	5	3/3/1992		19.05	4092.31	879.11	2	48-68	Orinda
26-92-11	10	3/9/1992		165.02	3175.74	936.19	2	20.5-30.5	Orinda
61-92-12	5	2/28/1992		-356.90	3347.90	843.90	2	89-99	Orinda
74-92-13	11	4/15/1992		-355.80	5301.10	834.90	2	38.2-48.2	San Pablo (?)
83-92-14	11	2/22/1992		-354.70	5254.65	830.09	2	48-58	San Pablo (?)
46A-92-15	1	9/12/1992		1187.20	2539.10	830.10	2	29-39	Colluvium / Orinda
7-92-16	2	8/28/1992		181.20	2635.90	882.40	2	39-59	Moraga
6-92-17	14	8/27/1992		40.50	2729.10	891.20	2	24-39	Moraga/Orinda
37-92-18	14	8/31/1992	9/25/2002	-237.40	2723.80	860.30	2	19-29	Orinda
37-92-18A	14	9/14/1992		-240.60	2730.30	861.20	2	49-69	Great Valley
7-92-19	2	8/29/1992		299.60	2684.50	884.80	2	24-39	Moraga/Orinda
27-92-20	2	10/14/1992		544.10	2661.00	881.10	2	63.5-83.5	Moraga/Orinda
53-92-21-130'	2	10/92		358.33	2657.18	886.97	2	125-130	Orinda
53-92-21-147'	2	10/92		357.94	2657.11	886.99	2	142-147	Orinda
53-92-21-167'	2	10/92		358.07	2656.90	886.97	2	162-167	Orinda
53-92-21-193'	2	10/92		358.35	2656.90	886.98	2	188-193	Orinda
69A-92-22	3	1/22/1993		320.97	3951.1	977.06	2	44-64	Orinda
75-92-23	3	9/2/1992	9/26/2005	362.50	3797.00	972.10	6	29-49	Colluvium
75B-92-24	3	9/1/1992		218.40	3692.30	956.90	2	37-57	Orinda
76-92-25	4	9/13/1992	9/18/2002	181.90	3293.20	928.70	2	23.5-38	Orinda
62-92-26	13	9/3/1992		-1157.60	4402.30	773.70	2	47-57	Great Valley
62-92-27	13	9/4/1992		-1112.00	4157.10	769.90	2	56-66	Great Valley
CD-92-28	OS	10/26/1992		-1240.92	2435.51	486.29	2	45-55	Great Valley
71-93-1	1	9/9/1993	9/19/2005	1458.58	2562.60	872.39	2	43-63	Moraga/Orinda
71-93-2	1	9/8/1993		1352.87	2441.60	844.39	2	39-59	Moraga
58-93-3	7	5/17/1994		331.23	2515.06	830.06	2	14-24	Colluvium/Moraga
6-93-4	2	9/10/1993		229.92	2599.52	881.60	2	35-50	Artificial Fill/Moraga

**Table 4 (Cont'd)**  
**LBNL Monitoring Well Construction Details**

Location ID	Area	Completion Date	Abandonment Date	UC Grid North Coordinate	UC Grid East Coordinate	Top of Casing Elevation (ft above MSL)	Casing Diameter (inches)	Approximate Screened Interval (ft below TOC)	Screened Formation Name
37-93-5	14	8/26/1993	9/18/2002	-231.11	2573.04	850.17	2	39-49	Great Valley
76-93-6	4	8/25/1993		252.62	3600.80	948.61	2	34-44	Orinda
76-93-7	4	8/28/1993	9/27/2005	141.90	3299.84	924.85	2	24-39	Orinda
77-93-8	5	8/23/1993	9/19/2005	-44.32	3554.55	879.01	2	16-26	Art Fill/Col/Orinda
53-93-9	2	9/9/1993		427.92	2732.45	900.68	2	68-88	Moraga/Orinda
5-93-10	10	9/10/1993		179.51	2873.28	914.90	2	22-37	Moraga/Orinda
88-93-11A	6	3/2/1994		956.00	864.20	537.35	2	55-65	Great Valley
46-93-12	7	9/7/1993		673.46	2530.88	807.57	2	8.5-13.5	Moraga/Orinda
88-93-13	6	11/1/1993		671.81	980.85	581.50	2	118.5-138.5	Great Valley
52-93-14	10	12/9/1993		276.79	2842.59	900.03	2	24.5-39.5	Moraga/Orinda
25-93-15	10	11/8/1993	9/14/2005	-46.77	3057.62	936.44	2	55-75	Moraga/Orinda
53-93-16-42'	2	1/29/1994		356.87	2674.05	887.45	2	31.5-41.5	Moraga
53-93-16-69'	2	1/29/1994		356.74	2673.78	887.40	4	58.5-68.5	Moraga
53-93-17	2	11/2/1993		458.40	2707.41	902.62	2	60.5-75.5	Moraga
51B-93-18A	9	5/19/1994		1070.65	2174.99	709.95	2	23.5-43.5	Orinda
46A-93-19	1	1/15/1994	9/28/2005	1024.48	2439.82	809.77	2	44-64	Orinda
71-94-1	1	5/21/1994	9/16/2005	1381.17	2358.57	845.84	2	38.5-48.5	Moraga
7-94-3	2	5/13/1994		267	2705.26	882.88	2	22.5-42.5	Orinda
77-94-5	5	5/9/1994		-53.24	3604.82	878.96	2	43.5-63.5	Orinda
77-94-6	5	5/5/1994		-67.94	3722.2	876.76	2	40.5-60.5	Orinda
74-94-7	11	4/28/1994		-508.66	5233.24	819.82	2	33.5-43.5	San Pablo (?)
74-94-8	11	5/10/1994		-594.5	5343.25	815.74	2	20-30	Col/Alluv/San Pablo (?)
37-94-9	14	5/12/1994	9/9/2005	-228.55	2682.42	856.51	2	24-44	Orinda/Great Valley
52-94-10	10	10/17/1994	9/20/2005	465.38	2859.99	906.04	2	47-67	Moraga/Orinda
51-94-11	1	10/18/1994	9/16/2005	1194.70	2263.64	756.83	4	8-18	Moraga/Orinda
25-94-12	10	10/14/1994		24.60	3021.73	937.59	2	26-46	Moraga/Orinda
16-94-13	10	10/11/1994		253.46	2762.79	892.50	2	22-42	Orinda
58A-94-14	7	10/4/1994		424.85	2457.65	821.73	2	21-41	Moraga/Orinda
51-94-15	7	11/7/1994		625.97	2264.47	771.17	4	30-40	Orinda
46-94-16	9	11/7/1994	9/19/2002	906.27	2300.02	756.16	2		Orinda

**Table 4 (Cont'd)**  
**LBNL Monitoring Well Construction Details**

Location ID	Area	Completion Date	Abandonment Date	UC Grid North Coordinate	UC Grid East Coordinate	Top of Casing Elevation (ft above MSL)	Casing Diameter (inches)	Approximate Screened Interval (ft below TOC)	Screened Formation Name
71-95-1	1	4/11/1995	9/17/2002	1479.30	2335.13	846.94	2		Moraga
52-95-2A	10	8/29/1995		372.05	2864.37	910.27	2	34.5-44.5	Moraga
52-95-2B	10	8/29/1995		372.19	2864.56	910.23	2	65-110	Moraga/Orinda
16-95-3	10	4/18/1995		45.73	2787.74	901.52	2	23-30	Moraga/Orinda
25A-95-4	10	4/20/1995	9/19/2005	219.82	3033.97	938.35	2	28-48	Orinda
25-95-5	10	8/22/1995		-154.47	3091.60	932.88	2	69-94	Moraga/Orinda
74-95-6	11	7/14/1995		-354.67	5334.83	838.66	4	35-50	San Pablo (?)
83-95-7	11	7/14/1995	9/27/2005	-285.14	5246.70	840.75	4	36-46	San Pablo (?)
71-95-8	1	4/13/1995	9/16/2005	1298.86	2549.05	839.09	2	29-49	Orinda
71-95-9	1	4/14/1995		1249.27	2662.35	854.18	2	23.5-38.5	Artificial Fill/Colluvium
58-95-11	7	5/15/1995		296.22	2512.06	831.62	4	8.5-28.5	Moraga/Orinda
53-95-12	2	7/19/1995		360.87	2616.60	867.45	1	35-50	Moraga/Orinda
52B-95-13	10	7/21/1995		282.76	2732.91	887.40	1	16-31	Moraga/Orinda
6-95-14	2	8/15/1995		184.75	2631.08	881.43	4	22-67	Moraga/Orinda
25A-95-15	10	8/3/1995		148.22	2960.59	931.68	2	29-49	Orinda
62-95-16	13	8/4/1995	9/20/2005	-972.38	4088.45	741.06	4	18.5-33.5	Great Valley
51-95-17	9	2/12/1996	11/18/2002	913.86	2272.51	744.67	2	22-37	Orinda
58-95-18	7	8/9/1995		471.88	2401.55	788.61	4	7.5-17.5	Colluvium/Moraga/Orinda
58-95-19	7	9/13/1995		395.42	2562.55	834.33	1	20.5-30.5	Orinda
58-95-20	7	8/8/1995		494.26	2517.86	818.81	2	14.5-34.5	Moraga/Orinda
7B-95-21	2	8/11/1995		283.95	2679.19	883.63	4	13.5-38.5	Moraga/Orinda
7-95-22	2	8/10/1995		278.23	2659.08	882.16	4	13.5-38.5	Moraga
7-95-23	2	12/22/1995		285.15	2659.67	882.37	4	43-53	Moraga/Orinda
7B-95-24	2	12/18/1995		318.75	2655.51	883.88	4	53-73	Moraga/Orinda
7B-95-25	2	12/13/1995		274.27	2634.08	882.03	2	24-44	Moraga
25-95-26	10	4/29/1996		-54.01	3139.20	935.81	2	38-58	Moraga
25-95-27	10	12/20/1995		-327.09	3045.68	859.83	2	19.5-34.5	Orinda
53-96-1 (MW91-7)	2	4/19/1996		344.37	2682.54	887.64	4	67-82	Moraga/Orinda
4-96-2	10	4/17/1996	9/13/2005	-84.00	2889.05	912.64	2	45-65	Orinda
51-96-3	9	4/23/1996		546.48	2240.66	766.44	4		Colluvium

**Table 4 (Cont'd)**  
**LBNL Monitoring Well Construction Details**

Location ID	Area	Completion Date	Abandonment Date	UC Grid North Coordinate	UC Grid East Coordinate	Top of Casing Elevation (ft above MSL)	Casing Diameter (inches)	Approximate Screened Interval (ft below TOC)	Screened Formation Name
88-96-4	6	4/26/1996	9/6/2005	968.53	1105.35	594.25	2	46.5-66.5	Great Valley
70A-96-5	8	4/15/1996	11/13/2002	370.50	1757.93	762.68	4	15-30	Great Valley
70A-96-6	8	4/16/1996	11/13/2002	334.24	1764.19	762.67	4	20-40	Great Valley
46-96-10	7	11/4/1996		886.68	2397.81	790.35	2	22-37	Moraga
58-96-11	2	6/11/1996		350.19	2588.64	848.23	2	15-40	Moraga/Orinda
58-96-12	7	12/4/1996	9/16/2002	295.46	2508.67	831.84	4	2-7	Fill/Moraga
70A-96-13	8	9/24/1996	9/7/2005	292.97	1511.04	711.87	2	111-141	Great Valley
70A-96-14	8	9/24/1996	9/8/2005	392.41	1498.87	716.64	2	112-142	Great Valley
51-96-15	9	9/26/1996		1004.38	2109.8	709.83	2	20-40	Orinda
51-96-16	9	9/25/1996		1054.3	2095.66	709.72	2	10-30	Artificial Fill
51-96-17	9	9/25/1996		1054.56	2093.45	709.64	2	35-55	Orinda
51-96-18	9	9/27/1996		1126.37	2170.13	710.76	2	6-16	Orinda
51-96-19	9	9/27/1996	9/12/2005	1066.52	2184.14	709.40	2	5-15	Artificial Fill
75-96-20	3	2/13/1997		487.72	3762.28	979.07	2	24.5-49.5	Orinda ?
64-97-1	9	5/20/1997		1194.82	2167.79	709.94	2	4.5-24.5	Orinda
64-97-2	9	5/20/1997		1142.40	2085.16	709.65	2	9-29	Orinda
51-97-3	9	6/3/1997		1102.96	1902.48	709.81	2	54.5-74.5	Artificial Fill
51-97-4	9	6/25/1997	9/15/2005	1101.16	1902.01	709.66	2	89-104	Orinda
75-97-5	3	7/19/1997		232.73	3768.01	963.73	2	39-69	Orinda
75-97-6	3	5/22/1997		262.75	3819.22	967.89	4	53.5-73.5	Orinda
75-97-7	3	6/9/1997		253.44	3870.26	970.70	2	58.5-78.5	Orinda
69-97-8	3	9/13/1997		256.51	3937.09	975.75	2.25	50-70	Colluvium/Orinda
77-97-9	5	6/4/1997		76.53	3753.30	888.69	2	19-49	Colluvium/Orinda
77-97-10	5	5/21/1997	9/18/2002	-91.93	3871.35	877.73	2	32-52	Colluvium/Orinda
77-97-11	5	6/24/1997		-205.88	3749.71	814.67	2	22.5-42.5	Colluvium/Orinda
51-97-12	9	9/2/1997		1109.18	1904.55	709.37	2	29.5-49.5	Artificial Fill
51-97-13	9	9/11/1997		1196.36	1901.98	709.48	2	48-68	Artificial Fill
51-97-14	9	9/10/1997		1020.26	1883.14	708.89	2	44-64	Artificial Fill
51-97-15	9	9/12/1997		1155.18	1803.16	706.11	2	88-108	Artificial Fill

**Table 4 (Cont'd)**  
**LBNL Monitoring Well Construction Details**

Location ID	Area	Completion Date	Abandonment Date	UC Grid North Coordinate	UC Grid East Coordinate	Top of Casing Elevation (ft above MSL)	Casing Diameter (inches)	Approximate Screened Interval (ft below TOC)	Screened Formation Name
51-97-16	9	9/9/1997	3/17/2005	875.26	1917.64	709.58	2	14.5-34.5	Art. Fill/Great Valley
31-97-17	5	9/5/1997		-459.67	3738.68	746.15	2	21.5-31.5	Colluvium
31-97-18	5	9/4/1997		-480.52	3779.68	747.80	2	39.5-59.5	Colluvium/Great Valley
78-97-20	4	10/10/1997		298.21	3429.47	949.54	2	14-34	Orinda
69-97-21	3	9/23/1997		471.24	3985.45	1003.4	2	18.5-38.5	Orinda
76-97-22	4	10/17/1997	9/25/2002	165.14	3545.94	937.91	2	25-45	Colluvium/Orinda
71-97-23	1	9/8/1997	9/15/2005	1221.62	2469.83	844.45	2	39.5-59.5	Artificial Fill/Orinda
25A-98-1	10	4/23/1998		99.79	2986.86	936.88	2	30-50	Orinda
56-98-2	9	4/24/1998		1264.86	1887.99	709.76	2	35-55	Artificial Fill/Orinda
25A-98-3	10	4/21/1998		175.76	3027.87	940.14	2	25-45	Orinda
64-98-4	9	4/20/1998	3/15/2000	1133.05	2172.54	711.12	2	5-15	Orinda
51-98-5	9	5/8/1998		951.70	1922.10	709.63	2	30-50	Colluvium
25A-98-6	10	10/2/1998		134.29	3091.47	939.90	2	20.5-40.5	Moraga/Orinda
25A-98-7	10	9/1/1998		140.51	3001.67	942.71	2	19-34	Orinda
52A-98-8A	10	9/16/1998		339.79	2883.49	913.56	2	23-33	Colluvium
52A-98-8B	10	9/17/1998		339.86	2883.73	913.51	2	60-80	Moraga
52-98-9	10	9/11/1998		377.44	2864.09	910.86	2	60-80	Moraga
25-98-10	10	9/12/1998		-105.23	3087.97	934.42	2	70-90	Moraga/Orinda
46A-98-11	1	11/3/1998	11/16/2002	1049.68	2422.42	813.66	2	54-74	Orinda
71B-98-13	1	9/23/1998		1202.90	2583.97	832.33	2	15-30	Artificial Fill/Orinda
75-98-14	3	9/17/1998		436.14	3711.28	977.94	2	20-35	Orinda
75-98-15	3	9/21/1998		479.95	3640.78	977.97	2	20-35	Orinda
75-98-16	3	10/12/1998	9/16/2002	603.26	3451.27	1074.19	2	69-89	Orinda
31-98-17	5	9/14/1998		-719.39	3709.06	693.47	2	50-60	Colluvium
63-98-18	15	9/15/1998		1352.18	1819.94	709.99	2	20-35	Artificial Fill
64-98-19	9	2/1/1999	3/15/2000	1130.56	2178.51	711.11	2	21-26	Orinda
64-98-20	9	4/30/1999	8/2000	1133.29	2180.09	710.98	2	9.5-14.5	Orinda
76-98-21	4	9/25/1998		137.79	3352.42	923.20	2	15-35	Orinda
76-98-22	4	12/18/1998		72.85	3375.83	904.57	2	19-39	Orinda

**Table 4 (Cont'd)**  
**LBNL Monitoring Well Construction Details**

Location ID	Area	Completion Date	Abandonment Date	UC Grid North Coordinate	UC Grid East Coordinate	Top of Casing Elevation (ft above MSL)	Casing Diameter (inches)	Approximate Screened Interval (ft below TOC)	Screened Formation Name
51-99-1	9	5/1/1999		679.33	1978.83	724.44	2	25-35	Great Valley
25A-99-2	10	5/1/1999		137.70	3037.07	940.45	2	20-30	Moraga/Orinda
71B-99-3	1	7/6/1999	10/2000	1179.35	2637.78	843.21	2	20-30	Orinda
71B-99-3R	1	4/5/2001		1178.62	2629.15	840.13	4	24-34	Orinda
75-99-4	3	7/20/1999		462.42	3665.77	977.90	2	19.5-34.5	Orinda
25A-99-5	10	7/19/1999	9/23/2005	166.42	3062.06	940.16	2	24-44	Orinda
75-99-6	3	11/19/1999		519.69	3687.82	979.94	2	15.5-25.5	Orinda
75-99-7	3	11/19/1999		463.30	3749.60	977.92	2	14-24	Artificial Fill/Orinda
75-99-8	3	12/6/1999		502.05	3669.34	979.34	2	20-30	Orinda
51-00-1	9	2/5/2000	9/7/2005	690.86	2162.65	725.28	2	20-25	Orinda
71B-00-2	1	3/20/2000		1197.37	2587.90	832.41	2	45-60	Orinda
58A-00-3	7	5/17/2000		415.38	2454.06	822.54	2	69-84	Orinda
7-00-4	2	5/17/2000		294.69	2658.33	883.18	2	84-99	Orinda
25A-00-5	10	5/17/2000		139.64	2965.28	933.12	2	68-83	Orinda
52A-00-6	10	5/17/2000		321.30	2911.46	917.34	2	105-120	Orinda
75A-00-7	3	1/5/2001		469.39	3758.40	978.32	2	115-145	Orinda
51-00-8	9	9/7/2000		1095.81	1806.71	682.11	2	20-40	Artificial Fill/Orinda
51-00-9	9	10/2/2000		1008.33	2177.85	698.16	2	5-10	Orinda
51-00-10	9	10/3/2000		988.59	2177.76	698.18	2	5-10	Orinda
69A-00-11	3	9/8/2000	9/19/2005	321.66	3943.67	977.05	2	19.5-39.5	Orinda
58-00-12	7	10/5/2000		326.88	2607.24	860.62	2	38-59	Orinda/Mixed Unit
51L-01-1A	9	7/23/2001		864.13	1878.36	710.04	2	4-9	Artificial Fill/Colluvium
51L-01-1B	9	7/23/2001		863.88	1878.37	710.04	2	15-30	Great Valley
51L-01-3	9	12/20/2001		896.88	1893.03	709.54	2	34.5-49.5	Great Valley
51L-01-4	9	7/23/2001		915.93	1884.49	709.87	2	30-45	Great Valley
51L-01-5A	9	7/16/2001		936.13	1908.95	709.96	2	18-33	Artificial Fill/Colluvium
51L-01-5B	9	7/16/2001		936.09	1908.62	709.94	2	48.5-63.5	Great Valley
51L-01-6	9	7/18/2001		911.02	1931.44	709.80	2	20-30	Artificial Fill/Colluvium
51L-01-7	9	7/17/2001		906.47	1931.41	709.76	2	60-75	Great Valley
51A-01-10A	9	10/3/2001	9/14/2005	814.28	1900.05	709.78	2	15-30	Great Valley

**Table 4 (Cont'd)**  
**LBNL Monitoring Well Construction Details**

Location ID	Area	Completion Date	Abandonment Date	UC Grid North Coordinate	UC Grid East Coordinate	Top of Casing Elevation (ft above MSL)	Casing Diameter (inches)	Approximate Screened Interval (ft below TOC)	Screened Formation Name
51A-01-11	9	9/28/2001		841.85	1941.48	709.74	2	30-45	Great Valley
51L-02-1	9	1/11/2002		921.03	1871.48	709.74	2	20-30	Artificial Fill/Colluvium/Great Valley
<b>Soil Gas Wells</b>									
74-95-6	11	7/14/1995					1	15-20	San Pablo (?)
83-95-7	11	7/14/1995					1	25-30	San Pablo (?)
71-95-10	1	4/17/1995	9/15/2005				3/4"	9.9-10.4	Artificial Fill
							3/4"	20.1-20.6	Artificial Fill
							3/4"	32.7-33.2	Artificial Fill

Artificial Fill: soils placed during grading activities

Colluvium: Quaternary soil/colluvium

Alluvium: Quaternary alluvium

San Pablo (?): shallow marine sandstones tentatively assigned to the San Pablo Group

Orinda: Orinda Formation sediments

Great Valley: Upper Cretaceous sedimentary rocks

Moraga: Moraga Formation volcanics

**Table 5-1**  
**Bevalac Area Groundwater Monitoring Well Results**  
**Volatile Organic Compounds - EPA Method 8260**  
**1st Quarter FY 2006**  
(bconcentrations in µg/L)

Constituent	MCL	51-96-16						51-96-17					
		Oct-05	Oct-05	Nov-05	Nov-05	Dec-05	Dec-05*	Oct-05	Oct-05	Nov-05	Nov-05	Dec-05	Dec-05*
<b>Aromatic or Non-Halogenated Hydrocarbons</b>													
Benzene	1	<1	<1	<1	<1	<1	<0.5	<1	<1	<1	<1	<1	<0.5
n-Butylbenzene		<1	<1	<1	<1	<1	<0.5	<1	<1	<1	<1	<1	<0.5
sec-Butylbenzene		<1	<1	<1	<1	<1	<0.5	<1	<1	<1	<1	<1	<0.5
ter-Butylbenzene		<1	<1	<1	<1	<1	<0.5	<1	<1	<1	<1	<1	<0.5
Ethylbenzene	300	<1	<1	<1	<1	<1	<0.5	<1	<1	<1	<1	<1	<0.5
Isopropylbenzene		<2	<2	<2	<2	<2	<0.5	<2	<2	<2	<2	<2	<0.5
p-Isopropyltoluene		<1	<1	<1	<1	<1	<0.5	<1	<1	<1	<1	<1	<0.5
Methyl tert-Butyl Ether	13	<5	<5	<5	<5	<5	<0.5	<5	<5	<5	<5	<5	<0.5
Naphthalene		<2	<2	<2	<2	<2	<0.5	<2	<2	<2	<2	<2	<0.5
n-Propylbenzene		<1	<1	<1	<1	<1	<0.5	<1	<1	<1	<1	<1	<0.5
Toluene	150	<1	<1	<1	<1	<1	<0.5	<1	<1	<1	<1	<1	<0.5
1,2,4-Trimethylbenzene		<1	<1	<1	<1	<1	<0.5	<1	<1	<1	<1	<1	<0.5
1,3,5-Trimethylbenzene		<1	<1	<1	<1	<1	<0.5	<1	<1	<1	<1	<1	<0.5
Xylenes, total	1750	<2	<2	<2	<2	<2	<1	<2	<2	<2	<2	<2	<1
Total Aromatic Hydrocarbons													
<b>Halogenated Hydrocarbons</b>													
Bromodichloromethane	80	<1	<1	<1	<1	<1	<0.5	<1	<1	<1	<1	<1	<0.5
Bromoform		<2	<2	<2	<2	<2	<0.5	<2	<2	<2	<2	<2	<0.5
Carbon Tetrachloride	0.5	<1	<1	<1	<1	<1	<0.5	<1	<1	<1	<1	<1	<0.5
Chloroethane		<30	<30	<30	<30	<30	<0.5	<30	<30	<30	<30	<30	<0.5
Chloroform	80	<30	<30	<30	<30	<30	<0.5	<3	<3	<3	<3	<3	<0.5
1,1-Dichloroethane	5	9.3	10.7	9.9	9.9	9.6	10.0	4.6	4.6	5.1	4.8	5.2	5.3
1,2-Dichloroethane	0.5	<2	<2	<2	<2	<2	<0.5	<2	<2	<2	<2	<2	<0.5
1,1-Dichloroethene	6	4.0	4.4	4.4	4.6	4.7	4.1	2.7	1.9	2.9	2.6	2.5	2.7
cis-1,2-Dichloroethene	6	170.0	184.0	169.0	189.0	225.0	200.0	123.0	107.0	128.0	124.0	120.0	110.0
trans-1,2-Dichloroethene	10	19.1	22.9	25.3	25.1	25.7	24.0	40.9	35.1	43.9	39.6	44.3	44.0
1,2-Dichloropropane	5	<1	<1	<1	<1	<1	<0.5	<1	<1	<1	<1	<1	<0.5
Methylene Chloride	5	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,1,2,2-Tetrachloroethane	1	<1	<1	<1	<1	<1	<0.5	<1	<1	<1	<1	<1	<0.5
Tetrachloroethene	5	1.4	2.2	2.1	1.3	2.4	4.1	<1	<1	<1	<1	<1	<0.5
1,1,1-Trichloroethane	200	<1	<1	<1	<1	<1	<0.5	<1	<1	<1	<1	<1	<0.5
1,1,2-Trichloroethane	5	<1	<1	<1	<1	<1	<0.5	<1	<1	<1	<1	<1	<0.5
Trichloroethene	5	31.0	40.1	38.8	35.6	42.2	55.0	13.6	9.9	13.6	12.9	13.1	16.0
Freon-11	150	<1	<1	<1	<1	<1	<0.5	<1	<1	<1	<1	<1	<0.5
Freon-113	1200	<1	<1	<1	<1	<1	<0.5	<1	<1	<1	<1	<1	<0.5
Freon-123A		<1	<1	<1	<1	<1	<0.5	<1	<1	<1	<1	<1	<0.5
Vinyl Chloride	0.5	13.9	17.4	19.1	19.8	17.8	21.0	15.4	13.8	19.5	22.8	22.6	32.0
Total Halogenated Hydrocarbons		248.7	281.7	268.6	285.3	327.4	318.2	200.2	172.3	213.0	206.7	207.7	210.0
Total Concentration of VOCs		248.7	281.7	268.6	285.3	327.4	318.2	200.2	172.3	213.0	206.7	207.7	210.0

**Table 5-1 (Cont'd)**  
**Bevalac Area Groundwater Monitoring Well Results**  
**Volatile Organic Compounds - EPA Method 8260**  
**1st Quarter FY 2006**  
(bconcentrations in µg/L)

Constituent	MCL	51-96-18			51-00-8	51L-01-3	51L-01-4	51L-01-5A	51L-01-5B	51L-01-6	51L-01-7	71B-98-13	
		Oct-05	Nov-05	Dec-05	Oct-05	Oct-05	Oct-05	Oct-05	Oct-05	Oct-05	Oct-05	Oct-05	
<b>Aromatic or Non-Halogenated Hydrocarbons</b>													
Benzene	1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
n-Butylbenzene		<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
sec-Butylbenzene		<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
ter-Butylbenzene		<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Ethylbenzene	300	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Isopropylbenzene		<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
p-Isopropyltoluene		<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Methyl tert-Butyl Ether	13	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Naphthalene		<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
n-Propylbenzene		<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Toluene	150	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,2,4-Trimethylbenzene		<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,3,5-Trimethylbenzene		<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Xylenes, total	1750	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
Total Aromatic Hydrocarbons													
<b>Halogenated Hydrocarbons</b>													
Bromodichloromethane	80	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Bromoform		<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
Carbon Tetrachloride	0.5	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Chloroethane		<30	<30	<30	<30	<30	<30	<30	<30	<30	<30	<30	<30
Chloroform	80	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3
1,1-Dichloroethane	5	51.9	64.3	67.7	4.5	<1	1.7	2.4	<1	<1	<1	<1	<1
1,2-Dichloroethane	0.5	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
1,1-Dichloroethene	6	15.2	15.3	17.5	2.3	<1	<1	<1	<1	<1	<1	<1	<1
cis-1,2-Dichloroethene	6	2.2	2.2	2.4	6.6	<1	<1	2.5	<1	<1	<1	<1	<1
trans-1,2-Dichloroethene	10	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,2-Dichloropropane	5	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Methylene Chloride	5	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,1,2,2-Tetrachloroethane	1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Tetrachloroethene	5	232.0	248.0	227.0	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,1,1-Trichloroethane	200	3.9	4.0	3.1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,1,2-Trichloroethane	5	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Trichloroethene	5	61.6	60.5	62.2	<1	<1	<1	<1	<1	<1	<1	<1	<1
Freon-11	150	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Freon-113	1200	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Freon-123A		<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Vinyl Chloride	0.5	<1	<1	<1	<1	1.2	<1	<1	<1	<1	<1	<1	<1
Total Halogenated Hydrocarbons		366.8	394.3	379.9	14.6		1.7	4.9					
Total Concentration of VOCs		366.8	394.3	379.9	14.6		1.7	4.9					

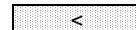
**Table 5-1 (Cont'd)**  
**Bevalac Area Groundwater Monitoring Well Results**  
**Volatile Organic Compounds - EPA Method 8260**  
**1st Quarter FY 2006**  
 (concentrations in µg/L)

Constituent	MCL	71B-99-3R							<b>MWP-1</b>
		Oct-05 <sup>†</sup>	Oct-05	Oct-05	Nov-05	Nov-05	Dec-05	Dec-05*	
<b>Aromatic or Non-Halogenated Hydrocarbons</b>									
Benzene	1	<1	<1	<1	<1	<1	<1	<0.5	<1
n-Butylbenzene		<1	<1	<1	<1	<1	<1	<0.5	<1
sec-Butylbenzene		<1	<1	<1	<1	<1	<1	<0.5	<1
ter-Butylbenzene		<1	<1	<1	<1	<1	<1	<0.5	<1
Ethylbenzene	300	<1	<1	<1	<1	<1	<1	<0.5	<1
Isopropylbenzene		<2	<2	<2	<2	<2	<2	<0.5	<2
p-Isopropyltoluene		<1	<1	<1	<1	<1	<1	<0.5	<1
Methyl tert-Butyl Ether	13	<5	<5	<5	<5	<5	<5	<0.5	<5
Naphthalene		<2	<2	<2	<2	<2	<2	<0.5	<2
n-Propylbenzene		<1	<1	<1	<1	<1	<1	<0.5	<1
Toluene	150	<1	<1	<1	<1	<1	<1	<0.5	<1
1,2,4-Trimethylbenzene		<1	<1	<1	<1	<1	<1	<0.5	<1
1,3,5-Trimethylbenzene		<1	<1	<1	<1	<1	<1	<0.5	<1
Xylenes, total	1750	<2	<2	<2	<2	<2	<2	<1	<2
Total Aromatic Hydrocarbons									
<b>Halogenated Hydrocarbons</b>									
Bromodichloromethane	80	<1	<1	<1	<1	<1	<1	<0.5	<1
Bromoform		<2	<2	<2	<2	<2	<2	<0.5	<2
Carbon Tetrachloride	0.5	<1	<1	<1	<1	<1	<1	<0.5	<1
Chloroethane		<30	<30	<30	<30	<30	<30	<0.5	<30
Chloroform	80	<3	<3	<3	<3	<3	<3	<0.5	<3
1,1-Dichloroethane	5	<1	<1	<1	<1	<1	<1	<0.5	<1
1,2-Dichloroethane	0.5	<2	<2	<2	<2	<2	<2	<0.5	<2
1,1-Dichloroethene	6	<1	<1	<1	<1	<1	<1	<0.5	<1
cis-1,2-Dichloroethene	6	24.2	36.5	10.6	9.0	11.5	7.5	9.0	<1
trans-1,2-Dichloroethene	10	<1	<1	<1	<1	<1	<1	<0.5	<1
1,2-Dichloropropane	5	<1	<1	<1	<1	<1	<1	<0.5	<1
Methylene Chloride	5	<1	<1	<1	<1	<1	<1	<1	<1
1,1,2,2-Tetrachloroethane	1	<1	<1	<1	<1	<1	<1	<0.5	<1
Tetrachloroethene	5	1.8	3.1	<1	<1	<1	<1	0.63	<1
1,1,1-Trichloroethane	200	<1	<1	<1	<1	<1	<1	<0.5	<1
1,1,2-Trichloroethane	5	<1	<1	<1	<1	<1	<1	<0.5	<1
Trichloroethene	5	13.0	16.6	3.7	3.3	3.8	2.9	3.3	<1
Freon-11	150	<2	<2	<2	<2	<2	<2	<0.5	<1
Freon-113	1200	<1	<1	<1	<1	<1	<1	<0.5	<1
Freon-123A		<1	<1	<1	<1	<1	<1	<0.5	<1
Vinyl Chloride	0.5	8.9	8.1	7.9	7.9	6.0	5.5	7.8	<1
Total Halogenated Hydrocarbons		47.9	64.3	22.2	20.2	21.3	15.9	20.73	
Total Concentration of VOCs		47.9	64.3	22.2	20.2	21.3	15.9	20.73	

MCL = Maximum contaminant level for drinking water

All analyses by LBNL EML unless otherwise noted

<sup>Q</sup>Quarterly Sampling; <sup>S</sup>Semi-Annual Sampling

 = Less than Quantitation Limit

\* = Analysis by BC Laboratories

<sup>T</sup>Treatment system influent samples

**Table 5-2**  
**Bevalac Area Temporary Groundwater Sampling Point Results**  
**Volatile Organic Compounds - EPA Method 8260**

**1st Quarter FY 2006**

(concentrations in  $\mu\text{g/L}$ )

Constituent	MCL	SB51-96-6	SB51-98-1	SB51-98-4	SB51-98-6	SB64-98-8			SB64-98-12			SB64-98-17				
		Oct-05	Oct-05	Oct-05	Oct-05	Oct-05	Nov-05	Dec-05	Oct-05	Nov-05	Dec-05	Oct-05	Nov-05	Dec-05		
<b>Aromatic or Non-Halogenated Hydrocarbons</b>																
Benzene	1	<1		<1		<10	<10	<50	<1	<1	<1	<10	<10	<10		
n-Butylbenzene		<1		<1		<10	<10	<50	<1	<1	<1	<10	<10	<10		
sec-Butylbenzene		<1		<1		<10	<10	<50	<1	<1	<1	<10	<10	<10		
ter-Butylbenzene		<1		<1		<10	<10	<50	<1	<1	<1	<10	<10	<10		
Chlorobenzene		<1		<1		<10	<10	<50	<1	<1	<1	<10	<10	<10		
Ethylbenzene	300	<1		<1		<10	<10	<50	<1	<1	<1	<10	<10	<10		
Isopropylbenzene		<2		<2		<20	<20	<100	<2	<2	<2	<20	<20	<20		
p-Isopropyltoluene		<1		<1		<10	<10	<50	<1	<1	<1	<10	<10	<10		
Methyl tert-Butyl Ether	13	<5		<5		<50	<50	<250	<5	<5	<5	<50	<50	<50		
Naphthalene		<2		<2		<20	<20	<100	<2	<2	<2	<20	<20	<20		
n-Propylbenzene		<1		<1		<10	<10	<50	<1	<1	<1	<10	<10	<10		
Toluene	150	<1		<1		<10	<10	<50	<1	<1	<1	<10	<10	<10		
Xylenes, total	1750	<2		<2		<20	<20	<100	<2	<2	<2	<20	<20	<20		
Total Aromatic Hydrocarbons																
<b>Halogenated Non-Aromatic Hydrocarbons</b>																
Bromodichloromethane		<1		<1		<10	<10	<50	<1	<1	<1	<10	<10	<10		
Bromomethane		<10		<10		<100	<100	<500	<10	<10	<10	<100	<100	<100		
Carbon Tetrachloride	0.5	<1		<1		<10	<10	<50	<1	<1	<1	<10	<10	<10		
Chloroethane		<30		<30		<300	<300	<1500	<30	<30	<30	<300	<300	<300		
Chloroform	100	<3		<3		<30	<30	<150	<3	<3	<3	<30	<30	<30		
Chloromethane		<10		<10		<100	<100	<500	<10	<10	<10	<100	<100	<100		
1,1-Dichloroethane	5	<1		7.5		<1	<1	800.0	932.0	912	141.0	120.0	80.8	275.0	329.0	241.0
1,2-Dichloroethane	0.5	<2		<2		<20	<20	<100	<2	<2	<2	<20	<20	<20		
1,1-Dichloroethene	6	<1		<1		<1	<1	161.0	178.0	199.0	15.7	13.0	15.7	26.7	32.9	26.5
cis-1,2-Dichloroethene	6	11.6		120.0		<1	7.1	12.8	11.8	<50	7.2	8.0	12.9	<10	<10	<10
trans-1,2-Dichloroethene	10	2.2		<1		<1	<1	<10	<10	<50	<1	<1	<1	<10	<10	<10
1,3-Dichloropropane	5	<1		<1		<1	<1	<10	<10	<50	<1	<1	<1	<10	<10	<10
Methylene Chloride	5	<1		<1		<1	<1	<10	<10	<50	<1	<1	<1	<10	<10	<10
1,1,1,2-Tetrachloroethane		<2		<2		<2	<2	<20	<20	<100	<2	<2	<2	<20	<20	<20
1,1,2,2-Tetrachloroethan	1	<1		<1		<1	<1	<10	<10	<50	<1	<1	<1	<10	<10	<10
Tetrachloroethene	5	<1		<1		<1	5.1	108.0	101.0	115.0	9.1	6.7	6.8	<10	<10	<10
1,1,1-Trichloroethane	200	<1		<1		<1	<1	<10	<10	<50	<1	<1	<1	<10	<10	<10
1,1,2-Trichloroethane	5	<1		<1		<1	<1	<10	<10	<50	<1	<1	<1	<10	<10	<10
Trichloroethene	5	5.3		8.8		<1	6.1	249.0	232.0	207.0	38.4	32.9	41.3	<10	<10	<10
Freon-113	1200	<1		<1		<1	<1	<10	<10	<50	<1	<1	<1	<10	<10	<10
Freon-123A		<1		<1		<1	<1	<10	<10	<50	<1	<1	<1	<10	<10	<10
Vinyl Chloride	0.5	13.7		2.3		<1	<1	<10	<10	<50	<1	1.2	2.5	<10	<10	12.3
Total Halogenated Hydrocarbon	32.8		138.6			18.3	1,330.8	1,454.8	1,433.0	211.4	181.8	160.0	301.7	361.9	279.8	
Total Concentration of VOCs	32.8		138.6			18.3	1,330.8	1,454.8	1,433.0	211.4	181.8	160.0	301.7	361.9	279.8	

**Table 5-2 (Cont'd)**  
**Bevalac Area Temporary Groundwater Sampling Point Results**  
**Volatile Organic Compounds - EPA Method 8260**  
**1st Quarter FY 2006**  
(bconcentrations in µg/L)

Constituent	MCL	SB64-99-4			SB64-99-5			SB64-99-6			SB64-00-1		
		Oct-05	Nov-05	Dec-05									
<b>Aromatic or Non-Halogenated Hydrocarbons</b>													
Benzene	1	<50	<50	<50	<1	<1	<1	<1	<1	<1	<10	<10	<10
n-Butylbenzene		<50	<50	<50	<1	<1	<1	<1	<1	<1	<10	<10	<10
sec-Butylbenzene		<50	<50	<50	<1	<1	<1	<1	<1	<1	<10	<10	<10
ter-Butylbenzene		<50	<50	<50	<1	<1	<1	<1	<1	<1	<10	<10	<10
Chlorobenzene		<50	<50	<50	<1	<1	<1	<1	<1	<1	<10	<10	<10
Ethylbenzene	300	<50	<50	<50	<1	<1	<1	<1	<1	<1	<10	<10	<10
Isopropylbenzene		<100	<100	<100	<2	<2	<2	<2	<2	<2	<20	<20	<20
p-Isopropyltoluene		<50	<50	<50	<1	<1	<1	<1	<1	<1	<10	<10	<10
Methyl tert-Butyl Ether	13	<250	<250	<250	<5	<5	<5	<5	<5	<5	<50	<50	<50
Naphthalene		<100	<100	<100	<2	<2	<2	<2	<2	<2	<20	<20	<20
n-Propylbenzene		<50	<50	<50	<1	<1	<1	<1	<1	<1	<10	<10	<10
Toluene	150	<50	<50	<50	<1	<1	<1	<1	<1	<1	<10	<10	<10
Xylenes, total	1750	<100	<100	<100	<2	<2	<2	<2	<2	<2	<20	<20	<20
Total Aromatic Hydrocarbons													
<b>Halogenated Non-Aromatic Hydrocarbons</b>													
Bromodichloromethane		<50	<50	<50	<1	<1	<1	<1	<1	<1	<10	<10	<10
Bromomethane		<500	<500	<500	<10	<10	<10	<10	<10	<10	<100	<100	<100
Carbon Tetrachloride	0.5	<50	<50	<50	<1	<1	<1	<1	<1	<1	<10	<10	<10
Chloroethane		<1500	<1500	<1500	<30	<30	<30	<30	<30	<30	<300	<300	<300
Chloroform	100	<150	<150	<150	<3	<3	<3	<3	<3	<3	<30	<30	<30
Chloromethane		<500	<500	<500	<10	<10	<10	<10	<10	<10	<100	<100	<100
1,1-Dichloroethane	5	1,520	1,240	744	123.0	37.0	83.1	4.7	4.1	5.3	807.0	484.0	431.0
1,2-Dichloroethane	0.5	<100	<100	<100	<2	<2	<2	<2	<2	<2	<20	<20	<20
1,1-Dichloroethene	6	206.0	138.0	<50	31.2	11.4	22.3	6.7	4.8	3.9	60.4	31.7	15.6
cis-1,2-Dichloroethene	6	<50	<50	<50	<1	<1	<1	<1	<1	<1	14.2	<10	<10
trans-1,2-Dichloroethene	10	<50	<50	<50	<1	<1	<1	<1	<1	<1	<10	<10	<10
1,3-Dichloropropane	5	<50	<50	<50	<1	<1	<1	<1	<1	<1	<10	<10	<10
Methylene Chloride	5	<50	<50	<50	<1	<1	<1	<1	<1	<1	<10	<10	<10
1,1,1,2-Tetrachloroethane		<100	<100	<100	<2	<2	<2	<2	<2	<2	<20	<20	<20
1,1,2,2-Tetrachloroethane	1	<50	<50	<50	<1	<1	<1	<1	<1	<1	<10	<10	<10
Tetrachloroethene	5	<50	<50	<50	2.8	<1	2.3	<1	<1	<1	<10	<10	<10
1,1,1-Trichloroethane	200	<50	<50	<50	<1	<1	<1	<1	<1	<1	<10	<10	<10
1,1,2-Trichloroethane	5	<50	<50	<50	<1	<1	<1	<1	<1	<1	<10	<10	<10
Trichloroethene	5	<50	77.3	94.8	15.7	3.6	11.3	4.4	3.8	3.4	81.6	58.4	45.5
Freon-113	1200	<50	<50	<50	<1	<1	<1	<1	<1	<1	<10	<10	<10
Freon-123A		<50	<50	<50	<1	<1	<1	<1	<1	<1	<10	<10	<10
Vinyl Chloride	0.5	<50	<50	<50	<1	<1	<1	<1	<1	<1	<10	<10	<10
Total Halogenated Hydrocarbons	1,726	1,455.3	838.8		172.7	52.0	119.0	15.8	12.7	12.6	963.2	574.1	492.1
Total Concentration of VOCs	1,726	1,455.3	838.8		172.7	52.0	119.0	15.8	12.7	12.6	963.2	574.1	492.1

**Table 5-2 (Cont'd)**  
**Bevalac Area Temporary Groundwater Sampling Point Results**  
**Volatile Organic Compounds - EPA Method 8260**  
**1st Quarter FY 2006**  
 (concentrations in µg/L)

Constituent	MCL	SB64-00-2			SB64-02-1A			SB64-02-1B		SB64-02-1C		SB64-02-1D	
		Oct-05	Nov-05	Dec-05	Oct-05	Nov-05	(D)*	Oct-05	Nov-05	Oct-05	Nov-05	Oct-05	Nov-05
<b>Aromatic or Non-Halogenated Hydrocarbons</b>													
Benzene	1	<1	<1	<1	<100	<100	<100	<1	<10	<10	<10	<1	<1
n-Butylbenzene		<1	<1	<1	<100	<100		<1	<10	<10	<10	<1	<1
sec-Butylbenzene		<1	<1	<1	<100	<100		<1	<10	<10	<10	<1	<1
ter-Butylbenzene		<1	<1	<1	<100	<100		<1	<10	<10	<10	<1	<1
Chlorobenzene		<1	<1	<1	<100	<100	<100	<1	<10	<10	<10	<1	<1
Ethylbenzene	300	<1	<1	<1	<100	<100	<100	<1	<10	<10	<10	<1	<1
Isopropylbenzene		<2	<2	<2	<200	<200		<2	<20	<20	<20	<2	<2
p-Isopropyltoluene		<1	<1	<1	<100	<100		<1	<10	<10	<10	<1	<1
Methyl tert-Butyl Ether	13	<5	<5	<5	<500	<500	<100	<5	<50	<50	<50	<5	<5
Naphthalene		<2	<2	<2	<200	<200		<2	<20	<20	<20	<2	<2
n-Propylbenzene		<1	<1	<1	<100	<100		<1	<10	<10	<10	<1	<1
Toluene	150	<1	<1	<1	<100	<100	<100	<1	<10	<10	<10	<1	<1
Xylenes, total	1750	<2	<2	<2	<200	<200	<200	<2	<20	<20	<20	<2	<2
Total Aromatic Hydrocarbons													
<b>Halogenated Non-Aromatic Hydrocarbons</b>													
Bromodichloromethane		<1	<1	<1	<100	<100	<100	<1	<10	<10	<10	<1	<1
Bromomethane		<10	<10	<10	<1000	<1000	<100	<10	<100	<100	<100	<10	<10
Carbon Tetrachloride	0.5	<1	<1	<1	<100	<100	<100	<1	<10	<10	<10	<1	<1
Chloroethane		<30	<30	<30	<3000	<3000	<100	<30	<300	<300	<300	<30	<30
Chloroform	100	<3	<3	<3	<300	<300	<100	<3	<30	<30	<30	<3	<3
Chloromethane		<10	<10	<10	<1000	<1000	<100	<10	<100	<100	<100	<10	<10
1,1-Dichloroethane	5	216.0	143.0	139.0	8,560	6,020	5,000	697	462.0	1150.0	1050.0	139.0	112.0
1,2-Dichloroethane	0.5	7.5	6.8	7.0	<200	<200	<100	5.6	<20	<20	<20	<2	<2
1,1-Dichloroethene	6	1160.0	623.0	918.0	1,180.0	970.0	730.0	90.1	47.6	161.0	172.0	14.6	13.3
cis-1,2-Dichloroethene	6	7.1	5.9	5.2	<100	<100	<100	16.7	10.8	94.5	86.2	14.7	8.6
trans-1,2-Dichloroethene	10	1.5	1.2	1.2	<100	<100	<100	<1	<10	<10	<10	<1	<1
1,3-Dichloropropane	5	<1	<1	<1	<100	<100	<100	<1	<10	<10	<10	<1	<1
Methylene Chloride	5	<1	<1	<1	<100	<100	<200	<1	<10	<10	<10	<1	<1
1,1,1,2-Tetrachloroethane		<2	<2	<2	<200	<200	<100	<2	<20	<20	<20	<2	<2
1,1,2,2-Tetrachloroethane	1	<1	<1	<1	<100	<100	<100	1.2	<10	<10	<10	<1	<1
Tetrachloroethene	5	80.0	67.5	70.6	181.0	168.0	120.0	39.0	25.4	<10	<10	<1	<1
1,1,1-Trichloroethane	200	1.6	1.2	1.2	<100	<100	<100	<1	<10	<10	<10	<1	<1
1,1,2-Trichloroethane	5	<1	<1	<1	<100	<100	<100	<1	<10	<10	<10	<1	<1
Trichloroethene	5	285.0	156.0	204.0	701.0	616.0	420.0	127.0	79.4	15.8	37.3	3.8	3.8
Freon-113	1200	2.4	1.5	1.6	<100	<100	<100	<1	<10	<10	<10	<1	<1
Freon-123A		<1	<1	<1	<100	<100		<1	<10	<10	<10	<1	<1
Vinyl Chloride	0.5	<1	<1	<1	<100	<100	<100	99.8	60.7	66.6	54.1	16.9	12.6
Total Halogenated Hydrocarbons	1,761.1	1,006.1	1,347.8		10,622	7,774	6,270	1,076.4	685.9	1,487.9	1,399.6	189.0	150.3
Total Concentration of VOCs	1,761.1	1,006.1	1,347.8		10,622	7,774	6,270	1,076.4	685.9	1,487.9	1,399.6	189.0	150.3

**Table 5-2 (Cont'd)**  
**Bevalac Area Temporary Groundwater Sampling Point Results**  
**Volatile Organic Compounds - EPA Method 8260**  
**1st Quarter FY 2006**  
 (concentrations in µg/L)

Constituent	MCL	SB64-02-1E		SB64-02-1F		SB64-02-2A		SB64-02-2B		SB64-02-2C		SB64-02-2D	
		Oct-05	Nov-05										
<b>Aromatic or Non-Halogenated Hydrocarbons</b>													
Benzene	1	<1	<1	<1	<1	<1	<10	<1	<1	<1	<1	<1	<1
n-Butylbenzene		<1	<1	<1	<1	<1	<10	<1	<1	<1	<1	<1	<1
sec-Butylbenzene		<1	<1	<1	<1	<1	<10	<1	<1	<1	<1	<1	<1
ter-Butylbenzene		<1	<1	<1	<1	<1	<10	<1	<1	<1	<1	<1	<1
Chlorobenzene		<1	<1	<1	<1	<1	<10	<1	<1	<1	<1	<1	<1
Ethylbenzene	300	<1	<1	<1	<1	<1	<10	<1	<1	<1	<1	<1	<1
Isopropylbenzene		<2	<2	<2	<2	<2	<20	<2	<2	<2	<2	<2	<2
p-Isopropyltoluene		<1	<1	<1	<1	<1	<10	<1	<1	<1	<1	<1	<1
Methyl tert-Butyl Ether	13	<5	<5	<5	<5	<5	<50	<5	<5	<5	<5	<5	<5
Naphthalene		<2	<2	<2	<2	<2	<20	<2	<2	<2	<2	<2	<2
n-Propylbenzene		<1	<1	<1	<1	<1	<10	<1	<1	<1	<1	<1	<1
Toluene	150	1.9	<1	<1	1.0	<1	<10	<1	<1	1.4	1.1	<1	<1
Xylenes, total	1750	<2	<2	<2	<2	<2	<20	<2	<2	<2	<2	<2	<2
Total Aromatic Hydrocarbons		1.9			1.0					1.4	1.1		
<b>Halogenated Non-Aromatic Hydrocarbons</b>													
Bromodichloromethane		<1	<1	<1	<1	<1	<10	<1	<1	<1	<1	<1	<1
Bromomethane		<10	<10	<10	<10	<10	<100	<10	<10	<10	<10	<10	<10
Carbon Tetrachloride	0.5	<1	<1	<1	<1	<1	<10	<1	<1	<1	<1	<1	<1
Chloroethane		<30	<30	<30	<30	<30	<300	<30	<30	<30	<30	<30	<30
Chloroform	100	<3	<3	<3	<3	<3	<30	<3	<3	<3	<3	<3	<3
Chloromethane		<10	<10	<10	<10	<10	<100	<10	<10	<10	<10	<10	<10
1,1-Dichloroethane	5	103.0	42.0	26.7	51.5	166	211.0	832	723.0	149	138	79.2	130.0
1,2-Dichloroethane	0.5	<2	<2	<2	<2	3.6	<20	4.6	4.1	<2	<2	<2	<2
1,1-Dichloroethene	6	7.7	4.3	3.0	4.3	61.0	47.3	146.0	109.0	52.9	61.2	18.5	39.2
cis-1,2-Dichloroethene	6	5.6	1.8	<1	1.7	18.1	12.9	93.6	34.1	47.1	40.4	19.5	23.3
trans-1,2-Dichloroethene	10	<1	<1	<1	<1	<1	<10	<1	<1	<1	<1	<1	<1
1,3-Dichloropropane	5	<1	<1	<1	<1	<1	<10	<1	<1	<1	<1	<1	<1
Methylene Chloride	5	<1	<1	<1	<1	<1	<10	5.9	1.6	<1	<1	<1	<1
1,1,1,2-Tetrachloroethane		<2	<2	<2	<2	<2	<20	<2	<2	<2	<2	<2	<2
1,1,2,2-Tetrachloroethane	1	<1	<1	<1	<1	<1	<10	<1	<1	<1	<1	<1	<1
Tetrachloroethene	5	<1	<1	<1	<1	47.9	30.2	5.8	<1	<1	<1	1.5	<1
1,1,1-Trichloroethane	200	<1	<1	<1	<1	<1	<10	<1	<1	<1	<1	<1	<1
1,1,2-Trichloroethane	5	<1	<1	<1	<1	<1	<10	<1	<1	<1	<1	<1	<1
Trichloroethene	5	3.2	2.1	1.6	2.7	143.0	85.4	66.3	16.9	4.1	4.1	9.6	4.2
Freon-113	1200	<1	<1	<1	<1	<1	<10	<1	<1	<1	<1	<1	<1
Freon-123A		<1	<1	<1	<1	<1	<10	<1	<1	<1	<1	<1	<1
Vinyl Chloride	0.5	15.7	6.4	2.0	5.9	<1	<10	5.8	1.6	2.7	2.7	<1	1.7
Total Halogenated Hydrocarbons		135.2	56.6	33.3	66.1	439.6	386.8	1,160.0	890.3	255.8	246.4	128.3	198.4
Total Concentration of VOCs		137.1	56.6	33.3	67.1	439.6	386.8	1,160.0	890.3	257.2	247.5	128.3	198.4

**Table 5-2 (Cont'd)**  
**Bevalac Area Temporary Groundwater Sampling Point Results**  
**Volatile Organic Compounds - EPA Method 8260**  
**1st Quarter FY 2006**  
(bconcentrations in µg/L)

Constituent	MCL	SB64-02-2E		SB64-02-2F		SB64-03-1A			SB64-03-1B			SB64-03-4		
		Oct-05	Nov-05	Oct-05	Nov-05	Oct-05	Nov-05	Dec-05	Oct-05	Nov-05	Dec-05	Oct-05	Nov-05	Dec-05
<b>Aromatic or Non-Halogenated Hydrocarbons</b>														
Benzene	1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
n-Butylbenzene		<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
sec-Butylbenzene		<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
ter-Butylbenzene		<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Chlorobenzene		<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Ethylbenzene	300	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Isopropylbenzene		<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
p-Isopropyltoluene		<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Methyl tert-Butyl Ether	13	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Naphthalene		<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
n-Propylbenzene		<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Toluene	150	6.8	4.9	2.5	3.1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Xylenes, total	1750	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
Total Aromatic Hydrocarbons		6.8	4.9	2.5	3.1									
<b>Halogenated Non-Aromatic Hydrocarbons</b>														
Bromodichloromethane		<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Bromomethane		<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
Carbon Tetrachloride	0.5	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Chloroethane		<30	<30	<30	<30	<30	<30	<30	<30	<30	<30	<30	<30	<30
Chloroform	100	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3
Chloromethane		<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
1,1-Dichloroethane	5	112.0	82.8	303.0	126.0	155.0	189.0	130.0	268.0	216.0	193.0	35.1	36.9	27.6
1,2-Dichloroethane	0.5	<2	<2	2.6	2.4	2.7	2.6	<2	3.6	2.9	2.6	<2	<2	<2
1,1-Dichloroethene	6	35.9	27.6	33.4	41.0	6.0	9.3	7.4	13.1	10.3	14.8	2.1	1.7	2.1
cis-1,2-Dichloroethene	6	21.8	17.8	57.3	42.8	1.8	2.3	1.6	2.9	2.3	2.4	<1	<1	<1
trans-1,2-Dichloroethene	10	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,3-Dichloropropane	5	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Methylene Chloride	5	<1	<1	<1	<1	1.2	<1	<1	<1	<1	<1	<1	<1	<1
1,1,1,2-Tetrachloroethane		<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
1,1,2,2-Tetrachloroethane	1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Tetrachloroethene	5	<1	<1	<1	<1	1.7	1.5	1.6	3.6	2.8	3.5	<1	<1	<1
1,1,1-Trichloroethane	200	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,1,2-Trichloroethane	5	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Trichloroethene	5	2.9	2.3	1.7	1.9	16.7	17.9	15.5	33.3	25.3	29.0	<1	<1	<1
Freon-113	1200	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Freon-123A		<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Vinyl Chloride	0.5	2.4	1.7	2.7	2.9	<1	<1	<1	<1	<1	<1	<1	<1	<1
Total Halogenated Hydrocarbons		175.0	132.2	400.7	218.2	183.9	222.6	156.1	324.5	259.6	245.3	37.2	38.6	29.7
Total Concentration of VOCs		181.8	137.1	403.2	221.3	183.9	222.6	156.1	324.5	259.6	245.3	37.2	38.6	29.7

**Table 5-2 (Cont'd)**  
**Bevalac Area Temporary Groundwater Sampling Point Results**  
**Volatile Organic Compounds - EPA Method 8260**  
**1st Quarter FY 2006**  
(concentrations in µg/L)

Constituent	MCL	SB64-03-5			SB64-03-6			SB64-03-7			SB64-03-8		
		Oct-05	Nov-05	Dec-05									
<b>Aromatic or Non-Halogenated Hydrocarbons</b>													
Benzene	1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
n-Butylbenzene		<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
sec-Butylbenzene		<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
ter-Butylbenzene		<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Chlorobenzene		<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Ethylbenzene	300	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Isopropylbenzene		<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
p-Isopropyltoluene		<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Methyl tert-Butyl Ether	13	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Naphthalene		<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
n-Propylbenzene		<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Toluene	150	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Xylenes, total	1750	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
Total Aromatic Hydrocarbons													
<b>Halogenated Non-Aromatic Hydrocarbons</b>													
Bromodichloromethane		<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Bromomethane		<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
Carbon Tetrachloride	0.5	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Chloroethane		<30	<30	<30	<30	<30	<30	<30	<30	<30	<30	<30	<30
Chloroform	100	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3
Chloromethane		<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
1,1-Dichloroethane	5	4.8	2.5	2.6	2.8	3.5	1.7	2.8	2.2	2.2	2.0	1.2	2.2
1,2-Dichloroethane	0.5	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
1,1-Dichloroethene	6	6.2	3.0	2.7	8.7	9.7	5.3	8.7	<1	<1	2.9	<1	1.8
cis-1,2-Dichloroethene	6	2.3	<1	1.3	22.7	24.9	14.2	22.7	<1	<1	<1	<1	<1
trans-1,2-Dichloroethene	10	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,3-Dichloropropane	5	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Methylene Chloride	5	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,1,1,2-Tetrachloroethane		<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
1,1,2,2-Tetrachloroethane	1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Tetrachloroethene	5	4.3	4.0	3.5	8.7	9.6	7.6	8.7	<1	<1	3.1	1.4	1.4
1,1,1-Trichloroethane	200	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,1,2-Trichloroethane	5	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Trichloroethene	5	31.4	20.4	15.1	250.0	268.0	150.0	250.0	<1	<1	2.1	1.2	1.3
Freon-113	1200	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Freon-123A		<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Vinyl Chloride	0.5	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Total Halogenated Hydrocarbons	49.0	29.9	25.2		292.9	315.7	178.8	292.9	315.7	178.8	10.1	3.8	6.7
Total Concentration of VOCs	49.0	29.9	25.2								10.1	3.8	6.7

**Table 5-2 (Cont'd)**  
**Bevalac Area Temporary Groundwater Sampling Point Results**  
**Volatile Organic Compounds - EPA Method 8260**  
**1st Quarter FY 2006**  
(bconcentrations in µg/L)

Constituent	MCL	SB64-05-4										
		Oct-05	Oct-05	Oct-05	Oct-05	Nov-05	Nov-05	Nov-05	Nov-05	Dec-05	Dec-05*	
<b>Aromatic or Non-Halogenated Hydrocarbons</b>												
Benzene	1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.5	
n-Butylbenzene		<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.5	
sec-Butylbenzene		<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.5	
ter-Butylbenzene		<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.5	
Chlorobenzene		<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.5	
Ethylbenzene	300	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.5	
Isopropylbenzene		<2	<2	<2	<2	<2	<2	<2	<2	<2	<0.5	
p-Isopropyltoluene		<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.5	
Methyl tert-Butyl Ether	13	<5	<5	<5	<5	<5	<5	<5	<5	<5	<0.5	
Naphthalene		<2	<2	<2	<2	<2	<2	<2	<2	<2	<0.5	
n-Propylbenzene		<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.5	
Toluene	150	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.5	
Xylenes, total	1750	<2	<2	<2	<2	<2	<2	<2	<2	<2	<1	
Total Aromatic Hydrocarbons												
<b>Halogenated Non-Aromatic Hydrocarbons</b>												
Bromodichloromethane		<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.5	
Bromomethane		<10	<10	<10	<10	<10	<10	<10	<10	<10	<1	
Carbon Tetrachloride	0.5	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.5	
Chloroethane		<30	<30	<30	<30	<30	<30	<30	<30	<30	<0.5	
Chloroform	100	<3	<3	<3	<3	<3	<3	<3	<3	<3	<0.5	
Chloromethane		<10	<10	<10	<10	<10	<10	<10	<10	<10	<0.5	
1,1-Dichloroethane	5	4.9	3.9	2.3	2.4	2.4	2.3	2.3	1.9	2.3	2.2	
1,2-Dichloroethane	0.5	<2	<2	<2	<2	<2	<2	<2	<2	<2	<0.5	
1,1-Dichloroethene	6	11.2	8.9	5.2	6.6	5.7	5.4	6.0	5.0	4.8	5.5	
cis-1,2-Dichloroethene	6	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.5	
trans-1,2-Dichloroethene	10	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.5	
1,3-Dichloropropane	5	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.5	
Methylene Chloride	5	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	
1,1,1,2-Tetrachloroethane		<2	<2	<2	<2	<2	<2	<2	<2	<2	<0.5	
1,1,2,2-Tetrachloroethane	1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.5	
Tetrachloroethene	5	21.8	16.2	12.3	13.2	13.4	9.7	10.0	9.0	9.1	9.4	
1,1,1-Trichloroethane	200	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.5	
1,1,2-Trichloroethane	5	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.5	
Trichloroethene	5	19.9	15.3	7.8	9.3	9.4	8.6	8.7	8.1	9.8	10.5	
Freon-113	1200	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.5	
Freon-123A		<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.5	
Vinyl Chloride	0.5	<1	<1	<1	<1	<1	<1	<1	<1	<1	<0.5	
Total Halogenated Hydrocarbons	57.8	44.3	27.6	31.5	30.9	26.0	27.0	24.4	25.6	27.7	26.3	
Total Concentration of VOCs	57.8	44.3	27.6	31.5	30.9	26.0	27.0	24.4	25.6	27.7	26.3	

**Table 5-2 (Cont'd)**  
**Bevalac Area Temporary Groundwater Sampling Point Results**  
**Volatile Organic Compounds - EPA Method 8260**  
**1st Quarter FY 2006**  
(bconcentrations in µg/L)

Constituent	MCL	SB71B-03-1						SB71B-03-2					
		Oct-05	Oct-05	Nov-05	Nov-05	Dec-05	Dec-05*	Oct-05	Oct-05	Nov-05	Nov-05	Dec-05	Dec-05*
<b>Aromatic or Non-Halogenated Hydrocarbons</b>													
Benzene	1	<1	<1	<1	<1	<1	<0.5	<1	<1	<1	<1	<1	<0.5
n-Butylbenzene		<1	<1	<1	<1	<1	<0.5	<1	<1	<1	<1	<1	<0.5
sec-Butylbenzene		<1	<1	<1	<1	<1	<0.5	<1	<1	<1	<1	<1	<0.5
ter-Butylbenzene		<1	<1	<1	<1	<1	<0.5	<1	<1	<1	<1	<1	<0.5
Chlorobenzene		<1	<1	<1	<1	<1	<0.5	<1	<1	<1	<1	<1	<0.5
Ethylbenzene	300	<1	<1	<1	<1	<1	<0.5	<1	<1	<1	<1	<1	<0.5
Isopropylbenzene		<2	<2	<2	<2	<2	<0.5	<2	<2	<2	<2	<2	<0.5
p-Isopropyltoluene		<1	<1	<1	<1	<1	<0.5	<1	<1	<1	<1	<1	<0.5
Methyl tert-Butyl Ether	13	<5	<5	<5	<5	<5	<0.5	<5	<5	<5	<5	<5	<0.5
Naphthalene		<2	<2	<2	<2	<2	<0.5	<2	<2	<2	<2	<2	<0.5
n-Propylbenzene		<1	<1	<1	<1	<1	<0.5	<1	<1	<1	<1	<1	<0.5
Toluene	150	<1	<1	<1	<1	<1	<0.5	<1	<1	<1	<1	<1	<0.5
Xylenes, total	1750	<2	<2	<2	<2	<2	<1	<2	<2	<2	<2	<2	<1
Total Aromatic Hydrocarbons													
<b>Halogenated Non-Aromatic Hydrocarbons</b>													
Bromodichloromethane		<1	<1	<1	<1	<1	<0.5	<1	<1	<1	<1	<1	<0.5
Bromomethane		<10	<10	<10	<10	<10	<1	<10	<10	<10	<10	<10	<1
Carbon Tetrachloride	0.5	<1	<1	<1	<1	<1	<0.5	<1	<1	<1	<1	<1	<0.5
Chloroethane		<30	<30	<30	<30	<30	<0.5	<30	<30	<30	<30	<30	<0.5
Chloroform	100	<3	<3	<3	<3	<3	<0.5	<3	<3	<3	<3	<3	<0.5
Chloromethane		<10	<10	<10	<10	<10	<0.5	<10	<10	<10	<10	<10	<0.5
1,1-Dichloroethane	5	<1	<1	<1	<1	<1	<0.5	<1	<1	<1	<1	<1	<0.5
1,2-Dichloroethane	0.5	<2	<2	<2	<2	<2	<0.5	<2	<2	<2	<2	<2	<0.5
1,1-Dichloroethene	6	<1	<1	<1	<1	<1	<0.5	<1	<1	<1	<1	<1	<0.5
cis-1,2-Dichloroethene	6	6.3	<1	2.7	5.0	5.0	3.9	29.0	16.8	15.6	18.0	12.1	6.0
trans-1,2-Dichloroethene	10	<1	<1	<1	<1	<1	<0.5	<1	<1	<1	<1	<1	<0.5
1,3-Dichloropropane	5	<1	<1	<1	<1	<1	<0.5	<1	<1	<1	<1	<1	<0.5
Methylene Chloride	5	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,1,1,2-Tetrachloroethane		<2	<2	<2	<2	<2	<0.5	<2	<2	<2	<2	<2	<0.5
1,1,2,2-Tetrachloroethane	1	<1	<1	<1	<1	<1	<0.5	<1	<1	<1	<1	<1	<0.5
Tetrachloroethene	5	<1	<1	<1	<1	<1	<0.5	124.0	108.0	111.0	95.0	86.1	97.0
1,1,1-Trichloroethane	200	<1	<1	<1	<1	<1	<0.5	<1	<1	<1	<1	<1	<0.5
1,1,2-Trichloroethane	5	<1	<1	<1	<1	<1	<0.5	<1	<1	<1	<1	<1	<0.5
Trichloroethene	5	<1	<1	<1	<1	<1	<0.5	11.3	9.3	8.9	10.4	8.7	9.7
Freon-113	1200	<1	<1	<1	<1	<1	<0.5	<1	<1	<1	<1	<1	<0.5
Freon-123A		<1	<1	<1	<1	<1	<0.5	<1	<1	<1	<1	<1	<0.5
Vinyl Chloride	0.5	5.3	<1	<1	<1	<1	1.7	2.5	2.0	<1	<1	1.3	<1
Total Halogenated Hydrocarbons		11.6		2.7	5.0	6.7	6.4	166.3	134.1	135.5	124.7	106.9	112.7
Total Concentration of VOCs		11.6		2.7	5.0	6.7	6.4	166.3	134.1	135.5	124.7	106.9	112.7

**Table 5-2 (Cont'd)**  
**Bevalac Area Temporary Groundwater Sampling Point Results**  
**Volatile Organic Compounds - EPA Method 8260**  
**1st Quarter FY 2006**  
(bconcentrations in µg/L)

Constituent	MCL	SB71B-04-1							SB71B-04-3 Oct-05
		Oct-05 <sup>1</sup>	Oct-05	Oct-05	Nov-05	Nov-05	Dec-05	Dec-05*	
<b>Aromatic or Non-Halogenated Hydrocarbons</b>									
Benzene	1	<1	<1	<1	<1	<1	<1	<0.5	<1
n-Butylbenzene		<1	<1	<1	<1	<1	<1	<0.5	<1
sec-Butylbenzene		<1	<1	<1	<1	<1	<1	<0.5	<1
ter-Butylbenzene		<1	<1	<1	<1	<1	<1	<0.5	<1
Chlorobenzene		<1	<1	<1	<1	<1	<1	<0.5	<1
Ethylbenzene	300	<1	<1	<1	<1	<1	<1	<0.5	<1
Isopropylbenzene		<2	<2	<2	<2	<2	<2	<0.5	<2
p-Isopropyltoluene		<1	<1	<1	<1	<1	<1	<0.5	<1
Methyl tert-Butyl Ether	13	<5	<5	<5	<5	<5	<5	<0.5	<5
Naphthalene		<2	<2	<2	<2	<2	<2	<0.5	<2
n-Propylbenzene		<1	<1	<1	<1	<1	<1	<0.5	<1
Toluene	150	<1	<1	<1	<1	<1	<1	<0.5	<1
Xylenes, total	1750	<2	<2	<2	<2	<2	<2	<1	<2
Total Aromatic Hydrocarbons									
<b>Halogenated Non-Aromatic Hydrocarbons</b>									
Bromodichloromethane		<1	<1	<1	<1	<1	<1	<0.5	<1
Bromomethane		<10	<10	<10	<10	<10	<10	<1	<10
Carbon Tetrachloride	0.5	<1	<1	<1	<1	<1	<1	<0.5	<1
Chloroethane		<30	<30	<30	<30	<30	<30	<0.5	<30
Chloroform	100	<3	<3	<3	<3	<3	<3	<0.5	<3
Chloromethane		<10	<10	<10	<10	<10	<10	<0.5	<10
1,1-Dichloroethane	5	<1	<1	<1	<1	<1	<1	<0.5	<1
1,2-Dichloroethane	0.5	<2	<2	<2	<2	<2	<2	<0.5	<2
1,1-Dichloroethene	6	<1	<1	<1	<1	<1	<1	<0.5	<1
cis-1,2-Dichloroethene	6	25.0	17.4	12.3	16.7	17.7	18.6	17.0	<1
trans-1,2-Dichloroethene	10	<1	<1	<1	<1	<1	<1	<0.5	<1
1,3-Dichloropropane	5	<1	<1	<1	<1	<1	<1	<0.5	<1
Methylene Chloride	5	<1	<1	<1	<1	<1	<1	<1	<1
1,1,1,2-Tetrachloroethane		<2	<2	<2	<2	<2	<2	<0.5	<2
1,1,2,2-Tetrachloroethane	1	<1	<1	<1	<1	<1	<1	<0.5	<1
Tetrachloroethene	5	27.0	26.0	32.9	28.9	29.7	19.9	23.0	<1
1,1,1-Trichloroethane	200	<1	<1	<1	<1	<1	<1	<0.5	<1
1,1,2-Trichloroethane	5	<1	<1	<1	<1	<1	<1	<0.5	<1
Trichloroethene	5	33.3	27.7	25.3	28.6	28.2	26.0	29.0	<1
Freon-113	1200	<1	<1	<1	<1	<1	<1	<0.5	<1
Freon-123A		<1	<1	<1	<1	<1	<1	<0.5	<1
Vinyl Chloride	0.5	3.5	1.9	<1	3.0	2.8	2.4	2.6	<1
Total Halogenated Hydrocarbons	88.8	73.0	70.5	77.2	78.4	66.9	71.6		
Total Concentration of VOCs	88.8	73.0	70.5	77.2	78.4	66.9	71.6		

MCL = Maximum contaminant level for drinking water

All analyses by LBNL EML unless otherwise noted

\* = Analysis by BC Laboratories

	= Less than Quantitation Limit
	= Compound not included in analysis

**Table 5-3**  
**Bevalac Area Extraction Well Sampling Results**  
**Volatile Organic Compounds - EPA Method 8260**

1st Quarter FY 2006

(concentrations in  $\mu\text{g/L}$ )

Constituent	MCL	EW51L-99-1		EW51L-00-1		EW64-00-1 <sup>T</sup>		EW64-03-1 <sup>T</sup>		EW64-05-1	
		Nov-05	Oct-05	Nov-05	Oct-05 <sup>1</sup>	Dec-05 <sup>1</sup>	Oct-05 <sup>1</sup>	Dec-05 <sup>1</sup>	Oct-05	Oct-05	
<b>Aromatic or Non-Halogenated Hydrocarbons</b>											
Benzene	1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
n-Butylbenzene		<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
sec-Butylbenzene		<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
ter-Butylbenzene		<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Chlorobenzene		<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Ethylbenzene	300	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Isopropylbenzene		<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
p-Isopropyltoluene		<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Methyl tert-Butyl Ether	13	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Naphthalene		<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
n-Propylbenzene		<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Toluene	150	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Xylenes, total	1750	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
Total Aromatic Hydrocarbons											
<b>Halogenated Non-Aromatic Hydrocarbons</b>											
Bromodichloromethane	80	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Bromoform	80	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
Carbon Tetrachloride	0.5	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Chloromethane		<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
Chloroform	80	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3
1,1-Dichloroethane	5	<1	11.4	23.7	61.7	17.8	24.9	20.6	5.7	4.6	
1,2-Dichloroethane	0.5	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
1,1-Dichloroethene	6	<1	<1	<1	11.7	4.0	4.1	1.2	<1	3.0	
cis-1,2-Dichloroethene	6	4.8	13.2	112.0	<1	<1	<1	<1	<1	<1	<1
trans-1,2-Dichloroethene	10	<1	<1	1.3	<1	<1	<1	<1	<1	<1	<1
1,2-Dichloropropane	5	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Methylene Chloride	5	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,1,1,2-Tetrachloroethane		<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
1,1,2,2-Tetrachloroethane	1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Tetrachloroethene	5	1.7	<1	<1	11.6	5.8	6.8	2.6	5.9	5.9	
1,1,1-Trichloroethane	200	<1	<1	<1	10.6	6.1	<1	<1	<1	<1	<1
1,1,2-Trichloroethane	5	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Trichloroethene	5	11.1	7.1	1.9	12.6	4.8	7.0	3.2	5.3	9.0	
Freon-113	1200	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Freon-123A		<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Vinyl Chloride	0.5	<1	93.2	735.0	<1	<1	<1	<1	<1	<1	<1
Total Halogenated Hydrocarbons		17.6	124.9	873.9	108.2	38.5	42.8	27.6	16.9	22.5	
Total Concentration of VOCs		17.6	124.9	873.9	108.2	38.5	42.8	27.6	16.9	22.5	

**Table 5-3 (Cont'd)**  
**Bevalac Area Extraction Well Sampling Results**  
**Volatile Organic Compounds - EPA Method 8260**  
**1st Quarter FY 2006**  
(bconcentrations in µg/L)

Constituent	MCL	EW64-05-1(cont'd)								
		Oct-05	Oct-05	Nov-05	Nov-05	Nov-05	Nov-05	Nov-05	Dec-05	Dec-05*
<b>Aromatic or Non-Halogenated Hydrocarbons</b>										
Benzene	1	<1	<1	<1	<1	<1	<1	<1	<1	<0.5
n-Butylbenzene		<1	<1	<1	<1	<1	<1	<1	<1	<0.5
sec-Butylbenzene		<1	<1	<1	<1	<1	<1	<1	<1	<0.5
ter-Butylbenzene		<1	<1	<1	<1	<1	<1	<1	<1	<0.5
Chlorobenzene		<1	<1	<1	<1	<1	<1	<1	<1	<0.5
Ethylbenzene	300	<1	<1	<1	<1	<1	<1	<1	<1	<0.5
Isopropylbenzene		<2	<2	<2	<2	<2	<2	<2	<2	<0.5
p-Isopropyltoluene		<1	<1	<1	<1	<1	<1	<1	<1	<0.5
Methyl tert-Butyl Ether	13	<5	<5	<5	<5	<5	<5	<5	<5	<0.5
Naphthalene		<2	<2	<2	<2	<2	<2	<2	<2	<0.5
n-Propylbenzene		<1	<1	<1	<1	<1	<1	<1	<1	<0.5
Toluene	150	<1	<1	<1	<1	<1	<1	<1	<1	<0.5
Xylenes, total	1750	<2	<2	<2	<2	<2	<2	<2	<2	<1
Total Aromatic Hydrocarbons										
<b>Halogenated Non-Aromatic Hydrocarbons</b>										
Bromodichloromethane	80	<1	<1	<1	<1	<1	<1	<1	<1	<0.5
Bromoform	80	<2	<2	<2	<2	<2	<2	<2	<2	<0.5
Carbon Tetrachloride	0.5	<1	<1	<1	<1	<1	<1	<1	<1	<0.5
Chloromethane		<10	<10	<10	<10	<10	<10	<10	<10	<0.5
Chloroform	80	<3	<3	<3	<3	<3	<3	<3	<3	<0.5
1,1-Dichloroethane	5	4.0	3.2	2.8	4.0	2.7	2.4	1.7	1.7	2.3
1,2-Dichloroethane	0.5	<2	<2	<2	<2	<2	<2	<2	<2	<0.5
1,1-Dichloroethene	6	3.6	4.0	3.1	3.7	2.9	2.2	1.5	1.9	2.5
cis-1,2-Dichloroethene	6	<1	<1	<1	<1	<1	<1	<1	<1	<0.5
trans-1,2-Dichloroethene	10	<1	<1	<1	<1	<1	<1	<1	<1	<0.5
1,2-Dichloropropane	5	<1	<1	<1	<1	<1	<1	<1	<1	<0.5
Methylene Chloride	5	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,1,1,2-Tetrachloroethane		<2	<2	<2	<2	<2	<2	<2	<2	<0.5
1,1,2,2-Tetrachloroethane	1	<1	<1	<1	<1	<1	<1	<1	<1	<0.5
Tetrachloroethene	5	6.4	6.0	6.0	6.4	4.2	2.9	2.2	2.2	5.0
1,1,1-Trichloroethane	200	<1	<1	<1	<1	<1	<1	<1	<1	<0.5
1,1,2-Trichloroethane	5	<1	<1	<1	<1	<1	<1	<1	<1	<0.5
Trichloroethene	5	7.2	7.8	7.6	6.5	6.5	3.4	3.0	3.1	7.8
Freon-113	1200	<1	<1	<1	<1	<1	<1	<1	<1	<0.5
Freon-123A		<1	<1	<1	<1	<1	<1	<1	<1	<0.5
Vinyl Chloride	0.5	<1	<1	<1	<1	<1	<1	<1	<1	<0.5
Total Halogenated Hydrocarbons		21.2	21.0	19.5	20.6	16.3	10.9	8.4	8.9	17.6
Total Concentration of VOCs		21.2	21.0	19.5	20.6	16.3	10.9	8.4	8.9	17.6

MCL = Maximum contaminant level for drinking water

All analyses by LBNL EML unless otherwise noted

\* = Analysis by BC Laboratories

<	= Less than Quantitation Limit
[empty]	= Compound not included in analysis

<sup>T</sup>Treatment system influent samples

**Table 5-4**  
**Bevalac Area Sampling Results from Other Locations**  
**Volatile Organic Compounds - EPA Method 8260**  
**1st Quarter FY 2006**  
**(Concentrations in µg/L)**

Constituent	MCL	SI3-63
		Oct-05
<b>Aromatic or Non-Halogenated Hydrocarbons</b>		
Benzene	1	<1
n-Butylbenzene		<1
sec-Butylbenzene		<1
ter-Butylbenzene		<1
Chlorobenzene		<1
Ethylbenzene	300	<1
Isopropylbenzene		<2
p-Isopropyltoluene		<1
Methyl tert-Butyl Ether	13	<5
Naphthalene		<2
n-Propylbenzene		<1
Toluene	150	<1
Xylenes, total	1750	<2
Total Aromatic Hydrocarbons		
<b>Halogenated Non-Aromatic Hydrocarbons</b>		
Bromodichloromethane	80	<1
Bromoform	80	<2
Carbon Tetrachloride	0.5	<1
Chloromethane		<10
Chloroform	80	<3
1,1-Dichloroethane	5	1.7
1,2-Dichloroethane	0.5	<2
1,1-Dichloroethene	6	<1
cis-1,2-Dichloroethene	6	<1
trans-1,2-Dichloroethene	10	<1
1,2-Dichloropropane	5	<1
Methylene Chloride	5	<1
1,1,1,2-Tetrachloroethane		<2
1,1,2,2-Tetrachloroethane	1	<1
Tetrachloroethene	5	<1
1,1,1-Trichloroethane	200	<1
1,1,2-Trichloroethane	5	<1
Trichloroethene	5	3.1
Freon-113	1200	<1
Freon-123A		<1
Vinyl Chloride	0.5	<1
Total Halogenated Hydrocarbons		4.8
Total Concentration of VOCs		4.8

MCL = Maximum contaminant level for drinking water      < = Less than Quantitation Limit  
 Analysis by LBNL EML

**Table 6-1**  
**Old Town Area Groundwater Monitoring Well Results**  
**Volatile Organic Compounds - EPA Method 8260**  
**1st Quarter FY 2006**  
(bconcentrations in  $\mu\text{g/L}$ )

Constituent	MCL	<b>5-93-10</b>		<b>6-95-14<sup>T</sup></b>		<b>7-94-3</b>	<b>7-95-22</b>	<b>7-95-23</b>	<b>7B-95-21</b>	<b>7B-95-24</b>	<b>25A-95-15</b>	<b>25A-98-1</b>	<b>25A-98-3</b>	
		Oct-05	Nov-05	Oct-05 <sup>†</sup>	Dec-05 <sup>†</sup>	Oct-05	Oct-05	Oct-05	Oct-05	Oct-05	Oct-05	Nov-05	Oct-05	Oct-05 <sup>†</sup>
<b>Aromatic or Non-Halogenated Hydrocarbons</b>														
Benzene	1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
n-Butylbenzene		<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
sec-Butylbenzene		<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
ter-Butylbenzene		<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,4-Dichlorobenzene	5	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Ethylbenzene	300	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Isopropylbenzene		<2	<2	<2	<2	<2	<2	<100	<2	<2	<2	<2	<2	<2
p-Isopropyltoluene		<1	<1	<1	<1	<1	<1	<50	<1	<1	<1	<1	<1	<1
Methyl tert-Butyl Ether	13	<5	<5	<5	<5	<5	<5	<250	<5	<5	<5	<5	<5	<5
Naphthalene		<2	<2	<2	<2	<2	<2	<100	<2	<2	<2	<2	<2	<2
n-Propylbenzene		<1	<1	<1	<1	<1	<1	<50	<1	<1	<1	<1	<1	<1
Toluene	150	<1	<1	<1	<1	<1	<1	<50	<1	<1	<1	<1	<1	<1
1,2,4-Trimethylbenzene		<1	<1	<1	<1	<1	<1	<50	<1	<1	<1	<1	<1	<1
1,3,5-Trimethylbenzene		<1	<1	<1	<1	<1	<1	<50	<1	<1	<1	<1	<1	<1
Xylenes, total	1750	<2	<2	<2	<2	<2	<2	<100	<2	<2	<2	<2	<2	<2
Total Aromatic Hydrocarbons														
<b>Halogenated Hydrocarbons</b>														
Bromodichloromethane	80	<1	<1	<1	<1	<1	<1	<50	<1	<1	<1	<1	<1	<1
Bromoform		<2	<2	<2	<2	<2	<2	<100	<2	<2	<2	<2	<2	<2
Carbon Tetrachloride	0.5	<1	<1	<1	<1	1.9	4.4	<50	<1	5.0	<1	<1	<1	<1
Chloroform	80	<3	<3	25.5	22.8	5.6	<3	<150	<3	<3	<3	<3	<3	<3
1,1-Dichloroethane	5	<1	<1	<1	<1	1.3	<1	<50	<1	<1	<1	<1	<1	<1
1,2-Dichloroethane	0.5	<2	<2	<2	<2	<2	<2	<100	<2	<2	<2	<2	<2	<2
1,1-Dichloroethene	6	<1	<1	<1	<1	8.9	2.1	<50	<1	<1	3.7	3.6	<1	2.4
cis-1,2-Dichloroethene	6	<1	<1	<1	<1	<1	4.5	<50	9.5	2.6	<1	2.7	<1	<1
trans-1,2-Dichloroethene	10	<1	<1	<1	<1	<1	<1	<50	7.3	<1	<1	<1	<1	<1
Methylene Chloride	5	<1	<1	<1	<1	<1	<1	<50	<1	<1	<1	<1	<1	<1
1,1,1,2-Tetrachloroethane		<2	<2	<2	<2	<2	<2	<100	<2	<2	<2	<2	<2	<2
1,1,2,2-Tetrachloroethane	1	<1	<1	<1	<1	<1	<1	<50	<1	<1	<1	<1	<1	<1
Tetrachloroethene	5	<1	<1	<1	<1	54.8	258.0	515.0	327.0	156.0	<1	<1	<1	<1
1,1,1-Trichloroethane	200	<1	<1	<1	<1	<1	<1	<50	<1	<1	<1	<1	<1	<1
1,1,2-Trichloroethane	5	<1	<1	<1	<1	<1	<1	<50	<1	<1	<1	<1	<1	<1
Trichloroethene	5	2.5	2.7	3.1	4.8	29.9	112.0	674.0	240.0	65.7	18.9	61.3	22.0	26.4
Freon-113	1200	<1	<1	<1	<1	<1	<1	<50	<1	<1	<1	<1	<1	<1
Freon-123A		<1	<1	<1	<1	<1	<1	<50	<1	<1	<1	<1	<1	<1
Vinyl Chloride	0.5	<1	<1	<1	<1	<1	<1	<50	<1	<1	<1	<1	<1	<1
Total Halogenated Hydrocarbons		2.5	2.7	28.6	27.6	102.4	381.0	1,189.0	583.8	229.3	22.6	67.6	22.0	28.8
Total Concentration of VOCs		2.5	2.7	28.6	27.6	102.4	381.0	1,189.0	583.8	229.3	22.6	67.6	22.0	28.8

**Table 6-1 (Cont'd)**  
**Old Town Area Groundwater Monitoring Well Results**  
**Volatile Organic Compounds - EPA Method 8260**  
**1st Quarter FY 2006**  
(bconcentrations in  $\mu\text{g/L}$ )

Constituent	MCL	25A-98-7		27-92-20		37-92-6		46-93-12		52-95-2B		52-98-9				
		Oct-05	Oct-05	Dec-05	Dec-05	Oct-05 <sup>†</sup>	Dec-05 <sup>†</sup>	Oct-05	Oct-05	Oct-05	Oct-05	Oct-05	Nov-05	Nov-05	Nov-05	Dec-05
<b>Aromatic or Non-Halogenated Hydrocarbons</b>																
Benzene	1	<1		<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
n-Butylbenzene		<1		<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
sec-Butylbenzene		<1		<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
ter-Butylbenzene		<1		<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,4-Dichlorobenzene	5	<1		<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Ethylbenzene	300	<1		<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Isopropylbenzene		<2		<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
p-Isopropyltoluene		<1		<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Methyl tert-Butyl Ether	13	<5		<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Naphthalene		<2		<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
n-Propylbenzene		<1		<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Toluene	150	<1		<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,2,4-Trimethylbenzene		<1		<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,3,5-Trimethylbenzene		<1		<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Xylenes, total	1750	<2		<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
Total Aromatic Hydrocarbons																
<b>Halogenated Hydrocarbons</b>																
Bromodichloromethane	80	<1		<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Bromoform		<2		<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
Carbon Tetrachloride	0.5	<1		<1	1.1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Chloroform	80	<3		3.7	<3	<3	<3	<3	<3	<3	<3	3.1	3.0	<3	3.7	3.5
1,1-Dichloroethane	5	<1		1.2	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,2-Dichloroethane	0.5	<2		<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
1,1-Dichloroethene	6	<1		<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
cis-1,2-Dichloroethene	6	<1		2.1	1.3	<1	<1	2.2	1.4			<1	<1	<1	<1	1.1
trans-1,2-Dichloroethene	10	<1		<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Methylene Chloride	5	<1		<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,1,1,2-Tetrachloroethane		<2		<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
1,1,2,2-Tetrachloroethane	1	<1		<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Tetrachloroethene	5	<1		2.3	1.8	<1	<1	4.6	1.3			1.1	1.4	1.7	2.0	2.1
1,1,1-Trichloroethane	200	<1		<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,1,2-Trichloroethane	5	<1		<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Trichloroethene	5	10.6		4.7	3.7	<1	<1	4.9	2.9			1.9	2.4	2.6	2.5	3.0
Freon-113	1200	<1		<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Freon-123A		<1		<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Vinyl Chloride	0.5	<1		<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Total Halogenated Hydrocarbons	10.6			14.0	7.9			11.7	5.6			6.1	6.8	4.3	8.2	9.7
Total Concentration of VOCs	10.6			14.0	7.9			11.7	5.6			6.1	6.8	4.3	8.2	9.7

**Table 6-1 (Cont'd)**  
**Old Town Area Groundwater Monitoring Well Results**  
**Volatile Organic Compounds - EPA Method 8260**  
**1st Quarter FY 2006**  
(concentrations in µg/L)

Constituent	MCL	53-93-9					53-93-16-42'		53-93-16-69'		58-96-11		58-00-12		MW90-2	
		Oct-05	Nov-05	Nov-05	Nov-05	Dec-05	Oct-05	Oct-05	Nov-05	Oct-05	Oct-05	Oct-05	Oct-05	Oct-05	Oct-05	
<b>Aromatic or Non-Halogenated Hydrocarbons</b>																
Benzene	1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<50	<1000	<25	<1	<1	<1
n-Butylbenzene		<1	<1	<1	<1	<1	<1	<1	<1	<1	<50	<1000	<25	<1	<1	<1
sec-Butylbenzene		<1	<1	<1	<1	<1	<1	<1	<1	<1	<50	<1000	<25	<1	<1	<1
ter-Butylbenzene		<1	<1	<1	<1	<1	<1	<1	<1	<1	<50	<1000	<25	<1	<1	<1
1,4-Dichlorobenzene	5	<1	<1	<1	<1	<1	<1	<1	<1	<1	<50	<1000	<25	<1	<1	<1
Ethylbenzene	300	<1	<1	<1	<1	<1	<1	<1	<1	<1	<50	<1000	<25	<1	<1	<1
Isopropylbenzene		<2	<2	<2	<2	<2	<2	<2	<2	<2	<100	<2000	<25	<2	<2	<2
p-Isopropyltoluene		<1	<1	<1	<1	<1	<1	<1	<1	<1	<50	<1000	<25	<1	<1	<1
Methyl tert-Butyl Ether	13	<5	<5	<5	<5	<5	<5	<5	<5	<5	<250	<5000	<25	<5	<5	<5
Naphthalene		<2	<2	<2	<2	<2	<2	<2	<2	<2	<100	<2000	<25	<2	<2	<2
n-Propylbenzene		<1	<1	<1	<1	<1	<1	<1	<1	<1	<50	<1000	<25	<1	<1	<1
Toluene	150	<1	<1	<1	<1	<1	<1	<1	<1	<1	<50	<1000	<25	<1	<1	<1
1,2,4-Trimethylbenzene		<1	<1	<1	<1	<1	<1	<1	<1	<1	<50	<1000	<25	<1	<1	<1
1,3,5-Trimethylbenzene		<1	<1	<1	<1	<1	<1	<1	<1	<1	<50	<1000	<25	<1	<1	<1
Xylenes, total	1750	<2	<2	<2	<2	<2	<2	<2	<2	<2	<100	<2000	<50	<2	<2	<2
Total Aromatic Hydrocarbons																
<b>Halogenated Hydrocarbons</b>																
Bromodichloromethane	80	<1	<1	<1	<1	<1	<1	<1	<1	<1	<50	<1000	<25	<1	<1	<1
Bromoform		<2	<2	<2	<2	<2	<2	<2	<2	<2	<100	<2000	<25	<2	<2	<2
Carbon Tetrachloride	0.5	2.0	3.3	2.9	3.5	3.1	<1	4.8	6.9	<50	<1000	380.0	<1	<1	<1	<1
Chloroform	80	7.0	8.3	9.0	10.4	10.8	<3	<3	4.3	<150	<3000	<25	<3	<3	<3	<3
1,1-Dichloroethane	5	<1	<1	<1	<1	<1	<1	<1	<1	<1	<50	<1000	<25	<1	<1	<1
1,2-Dichloroethane	0.5	<2	<2	<2	<2	<2	<2	<2	<2	<2	<100	<2000	<25	<2	<2	<2
1,1-Dichloroethene	6	<1	<1	<1	<1	<1	<1	<1	1.9	2.1	<50	<1000	60.0	<1	<1	<1
cis-1,2-Dichloroethene	6	1.1	2.3	2.4	2.9	2.4	<1	4.5	4.5	<50	<1000	160.0	<1	<1	<1	<1
trans-1,2-Dichloroethene	10	<1	<1	<1	<1	<1	<1	<1	<1	<1	<50	<1000	<25	<1	<1	<1
Methylene Chloride	5	<1	<1	<1	<1	<1	<1	<1	<1	<1	<50	<1000	<50	<1	<1	<1
1,1,1,2-Tetrachloroethane		<2	<2	<2	<2	<2	<2	<2	<2	<2	<100	<2000	<25	<2	<2	<2
1,1,2,2-Tetrachloroethane	1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<50	<1000	<25	<1	<1	<1
Tetrachloroethene	5	9.4	13.4	12.8	12.9	12.3	3.9	83.4	128.0	1,100.0	22,000	14,000	48.5	48.5	48.5	48.5
1,1,1-Trichloroethane	200	<1	<1	<1	<1	<1	<1	<1	<1	<1	<50	<1000	<25	<1	<1	<1
1,1,2-Trichloroethane	5	<1	<1	<1	<1	<1	<1	<1	<1	<1	<50	<1000	<25	<1	<1	<1
Trichloroethene	5	6.0	9.6	8.2	8.8	9.3	<1	27.9	48.5	852.0	12,200	8,700	4.0	4.0	4.0	4.0
Freon-113	1200	<1	<1	<1	<1	<1	<1	<1	<1	<1	<50	<1000	<25	<1	<1	<1
Freon-123A		<1	<1	<1	<1	<1	<1	<1	<1	<1	<50	<1000	<25	<1	<1	<1
Vinyl Chloride	0.5	<1	<1	<1	<1	<1	<1	<1	<1	<1	<50	<1000	<25	<1	<1	<1
Total Halogenated Hydrocarbons	25.5	36.9	35.3	38.5	37.9		3.9	122.5	194.3	1,952.0	34,200.0	23,300.0	52.5	52.5	52.5	52.5
Total Concentration of VOCs	25.5	36.9	35.3	38.5	37.9		3.9	122.5	194.3	1,952.0	34,200.0	23,300.0	52.5	52.5	52.5	52.5

**Table 6-1 (Cont'd)**  
**Old Town Area Groundwater Monitoring Well Results**  
**Volatile Organic Compounds - EPA Method 8260**  
**1st Quarter FY 2006**  
(bconcentrations in µg/L)

Constituent	MCL	MW91-8		MW91-9		MWP-7 <sup>T</sup>	
		Oct-05	Dec-05	Oct-05	Nov-05	Oct-05 <sup>I</sup>	Dec-05 <sup>I</sup>
<b>Aromatic or Non-Halogenated Hydrocarbons</b>							
Benzene	1	<1	<1	<1	<1	<1	<1
n-Butylbenzene		<1	<1	<1	<1	<1	<1
sec-Butylbenzene		<1	<1	<1	<1	<1	<1
ter-Butylbenzene		<1	<1	<1	<1	<1	<1
1,4-Dichlorobenzene	5	<1	<1	<1	<1	<1	<1
Ethylbenzene	300	<1	<1	<1	<1	<1	<1
Isopropylbenzene		<2	<2	<2	<2	<2	<2
p-Isopropyltoluene		<1	<1	<1	<1	<1	<1
Methyl tert-Butyl Ether	13	<5	<5	<5	<5	<5	<5
Naphthalene		<2	<2	<2	<2	<2	<2
n-Propylbenzene		<1	<1	<1	<1	<1	<1
Toluene	150	<1	<1	<1	<1	<1	<1
1,2,4-Trimethylbenzene		<1	<1	<1	<1	<1	<1
1,3,5-Trimethylbenzene		<1	<1	<1	<1	<1	<1
Xylenes, total	1750	<2	<2	<2	<2	<2	<2
Total Aromatic Hydrocarbons							
<b>Halogenated Hydrocarbons</b>							
Bromodichloromethane	80	<1	<1	<1	<1	<1	<1
Bromoform		<2	<2	<2	<2	<2	<2
Carbon Tetrachloride	0.5	1.1	1.3	<1	<1	<1	<1
Chloroform	80	4.6	3.0	<3	<3	<3	<3
1,1-Dichloroethane	5	<1	<1	<1	<1	<1	<1
1,2-Dichloroethane	0.5	<2	<2	<2	<2	<2	<2
1,1-Dichloroethene	6	<1	<1	<1	<1	<1	<1
cis-1,2-Dichloroethene	6	1.3	1.3	<1	<1	<1	<1
trans-1,2-Dichloroethene	10	<1	<1	<1	<1	<1	<1
Methylene Chloride	5	<1	<1	<1	<1	<1	<1
1,1,1,2-Tetrachloroethane		<2	<2	<2	<2	<2	<2
1,1,2,2-Tetrachloroethane	1	<1	<1	<1	<1	<1	<1
Tetrachloroethene	5	4.9	4.1	6.0	6.5	<1	<1
1,1,1-Trichloroethane	200	<1	<1	<1	<1	<1	<1
1,1,2-Trichloroethane	5	<1	<1	<1	<1	<1	<1
Trichloroethene	5	3.9	4.2	1.7	2.6	1.8	1.4
Freon-113	1200	<1	<1	<1	<1	<1	<1
Freon-123A		<1	<1	<1	<1	<1	<1
Vinyl Chloride	0.5	<1	<1	<1	<1	<1	<1
Total Halogenated Hydrocarbons		15.8	13.9	7.7	9.1	1.8	1.4
Total Concentration of VOCs		15.8	13.9	7.7	9.1	1.8	1.4

MCL = Maximum contaminant level for drinking water

All analyses by LBNL EML unless otherwise noted

\* = Analysis by BC Laboratories

<sup>Q</sup>Quarterly Sampling; <sup>T</sup>Treatment System Influent Line

< = Less than Quantitation Limit

**Table 6-2**  
**Old Town Area Temporary Groundwater Sampling Point Results**  
**Volatile Organic Compounds - EPA Method 8260**

**1st Quarter FY 2006**

(concentrations in µg/L)

Constituent	MCL	SB7-97-1		SB16-98-1	SB25A-96-3	SB27-96-1	SB53-96-3	SB58-96-2	SB58-97-2
		Oct-05	Nov-05	Oct-05	Nov-05	Dec-05	Nov-05	Nov-05	Dec-05
<b>Aromatic or Non-Halogenated Hydrocarbons</b>									
Benzene	1	<1	<1	<1	<1	<1	<10	<1	<1
n-Butylbenzene		<1	<1	<1	<1	<1	<10	<1	<1
sec-Butylbenzene		<1	<1	<1	<1	<1	<10	<1	<1
ter-Butylbenzene		<1	<1	<1	<1	<1	<10	<1	<1
Ethylbenzene	300	<1	<1	<1	<1	<1	<10	<1	<1
Isopropylbenzene		<2	<2	<2	<2	<2	<20	<2	<2
p-Isopropyltoluene		<1	<1	<1	<1	<1	<10	<1	<1
Methyl tert-Butyl Ether	13	<5	<5	<5	<5	<5	<50	<5	<5
Naphthalene		<2	<2	<2	<2	<2	<20	<2	<2
n-Propylbenzene		<1	<1	<1	<1	<1	<10	<1	<1
Toluene	150	<1	<1	<1	<1	<1	<10	<1	<1
1,2,4-Trimethylbenzene		<1	<1	<1	<1	<1	<10	<1	<1
1,3,5-Trimethylbenzene		<1	<1	<1	<1	<1	<10	<1	<1
Xylenes, total	1750	<2	<2	<2	<2	<2	<20	<2	<2
Total Aromatic Hydrocarbons									
<b>Halogenated Non-Aromatic Hydrocarbons</b>									
Bromodichloromethane	80	<1	<1	<1	<1	<1	<10	<1	<1
Carbon Tetrachloride	0.5	<1	<1	<1	<1	<1	18.8	3.1	<1
Chloroform	80	23.2	16.8	6.2	<3	<3	<30	<3	<3
1,1-Dichloroethane	5	<1	<1	<1	<1	<1	<10	1.3	1.2
1,2-Dichloroethane	0.5	<2	<2	<2	<2	<2	<20	<2	<2
1,1-Dichloroethene	6	<1	<1	<1	20.8	<1	<10	6.5	<1
cis-1,2-Dichloroethene	6	<1	<1	<1	2.7	2.7	50.0	14.7	91.1
trans-1,2-Dichloroethene	10	<1	<1	<1	<1	<1	<10	<1	<1
1,2-Dichloropropane	5	<1	<1	<1	<1	<1	<10	<1	<1
Methylene Chloride	5	<1	<1	<1	<1	<1	<10	<1	<1
1,1,1,2-Tetrachloroethane		<2	<2	<2	<2	<2	<20	<2	<2
1,1,2,2-Tetrachloroethane	1	<1	<1	<1	<1	<1	<10	<1	<1
Tetrachloroethene	5	<1	<1	<1	<1	2.6	1,140	358.0	<1
1,1,1-Trichloroethane	200	<1	<1	<1	<1	<1	<10	<1	<1
1,1,2-Trichloroethane	5	<1	<1	<1	<1	<1	<10	<1	<1
Trichloroethene	5	1.3	3.6	9.5	75.4	3.9	395.0	178.0	5.3
Freon-113	1200	<1	<1	<1	<1	<1	<10	<1	<1
Freon-123A		<1	<1	<1	<1	<1	<10	<1	<1
Vinyl Chloride	0.5	<1	<1	<1	<1	<1	<10	<1	5.6
Total Halogenated Hydrocarbon		24.5	20.4	15.7	98.9	9.2	1,603.8	561.6	103.2
Total Concentration of VOCs		24.5	20.4	15.7	98.9	9.2	1,603.8	561.6	103.2

MCL = Maximum contaminant level for drinking water

All analyses by LBNL EML unless otherwise noted

< = Less than Quantitation Limit

**Table 6-3**  
**Old Town Area Extraction Well Sampling Results**  
**Volatile Organic Compounds - EPA Method 8260**  
**1st Quarter FY 2006**  
(bconcentrations in µg/L)

Constituent	MCL	EW7-96-1						EW7-96-2					
		Oct-05	Oct-05	Nov-05	Nov-05	Dec-05	Dec-05	Oct-05	Oct-05	Nov-05	Nov-05	Dec-05	Dec-05
<b>Aromatic or Non-Halogenated Hydrocarbons</b>													
Benzene	1	<10	<10	<10	<10	<10	<10	<1	<1	<1	<1	<1	<1
n-Butylbenzene		<10	<10	<10	<10	<10	<10	<1	<1	<1	<1	<1	<1
sec-Butylbenzene		<10	<10	<10	<10	<10	<10	<1	<1	<1	<1	<1	<1
ter-Butylbenzene		<10	<10	<10	<10	<10	<10	<1	<1	<1	<1	<1	<1
1,4-Dichlorobenzene	5	<10	<10	<10	<10	<10	<10	<1	<1	<1	<1	<1	<1
Ethylbenzene	300	<10	<10	<10	<10	<10	<10	<1	<1	<1	<1	<1	<1
Isopropylbenzene		<20	<20	<20	<20	<20	<20	<2	<2	<2	<2	<2	<2
p-Isopropyltoluene		<10	<10	<10	<10	<10	<10	<1	<1	<1	<1	<1	<1
Methyl tert-Butyl Ether	13	<50	<50	<50	<50	<50	<50	<5	<5	<5	<5	<5	<5
Naphthalene		<20	<20	<20	<20	<20	<20	<2	<2	<2	<2	<2	<2
n-Propylbenzene		<10	<10	<10	<10	<10	<10	<1	<1	<1	<1	<1	<1
Toluene	150	<10	<10	<10	<10	<10	<10	<1	<1	<1	<1	<1	<1
Xylenes, total	1750	<20	<20	<20	<20	<20	<20	<2	<2	<2	<2	<2	<2
Total Aromatic Hydrocarbons													
<b>Halogenated Non-Aromatic Hydrocarbons</b>													
Bromodichloromethane	80	<10	<10	<10	<10	<10	<10	<1	<1	<1	<1	<1	<1
Bromoform	80	<20	<20	<20	<20	<20	<20	<2	<2	<2	<2	<2	<2
Carbon Tetrachloride	0.5	<10	<10	<10	<10	<10	<10	1.8	<1	<1	<1	<1	<1
Chloromethane		<100	<100	<100	<100	<100	<100	<10	<10	<10	<10	<10	<10
Chloroform	80	<30	<30	<30	<30	<30	<30	<3	<3	<3	<3	<3	<3
1,1-Dichloroethane	5	<10	<10	<10	<10	<10	<10	<1	<1	<1	<1	<1	<1
1,2-Dichloroethane	0.5	<20	<20	<20	<20	<20	<20	<2	<2	<2	<2	<2	<2
1,1-Dichloroethene	6	<10	<10	<10	<10	<10	<10	<1	<1	<1	<1	<1	<1
cis-1,2-Dichloroethene	6	<10	<10	<10	<10	<10	<10	<1	<1	<1	<1	<1	<1
trans-1,2-Dichloroethene	10	<10	<10	<10	<10	<10	<10	<1	<1	<1	<1	<1	<1
1,2-Dichloropropane	5	<10	<10	<10	<10	<10	<10	<1	<1	<1	<1	<1	<1
Methylene Chloride	5	<10	<10	<10	<10	<10	<10	<1	<1	<1	<1	<1	<1
1,1,1,2-Tetrachloroethane		<20	<20	<20	<20	<20	<20	<2	<2	<2	<2	<2	<2
1,1,2,2-Tetrachloroethane	1	<10	<10	<10	<10	<10	<10	<1	<1	<1	<1	<1	<1
Tetrachloroethene	5	604.0	360.0	1,030.0	1,010.0	550.0	1,020.0	116.0	82.9	85.8	50.8	49.9	48.4
1,1,1-Trichloroethane	200	<10	<10	<10	<10	<10	<10	<1	<1	<1	<1	<1	<1
1,1,2-Trichloroethane	5	<10	<10	<10	<10	<10	<10	<1	<1	<1	<1	<1	<1
Trichloroethene	5	<10	<10	23.2	25.9	13.9	17.2	31.0	23.0	29.8	13.1	10.6	13.6
Freon-113	1200	<10	<10	<10	<10	<10	<10	<1	<1	<1	<1	<1	<1
Freon-123A		<10	<10	<10	<10	<10	<10	<1	<1	<1	<1	<1	<1
Vinyl Chloride	0.5	<10	<10	<10	<10	<10	<10	<1	<1	<1	<1	<1	<1
Total Halogenated Hydrocarbons		604.0	360.0	1,053.2	1,035.9	563.9	1,037.2	148.8	105.9	115.6	63.9	60.5	62.0
Total Concentration of VOCs		604.0	360.0	1,053.2	1,035.9	563.9	1,037.2	148.8	105.9	115.6	63.9	60.5	62.0

**Table 6-3 (Cont'd)**  
**Old Town Area Extraction Well Sampling Results**  
**Volatile Organic Compounds - EPA Method 8260**  
**1st Quarter FY 2006**  
(bconcentrations in µg/L)

Constituent	MCL	EW7-96-4R						EW7-03-1					
		Oct-05	Oct-05	Nov-05	Nov-05	Dec-05	Dec-05	Oct-05	Oct-05	Nov-05	Nov-05	Dec-05	Dec-05
<b>Aromatic or Non-Halogenated Hydrocarbons</b>													
Benzene	1	<10	<10	<10	<10	<10	<10	<10	<10	<5	<5	<5	<5
n-Butylbenzene		<10	<10	<10	<10	<10	<10	<10	<10	<5	<5	<5	<5
sec-Butylbenzene		<10	<10	<10	<10	<10	<10	<10	<10	<5	<5	<5	<5
ter-Butylbenzene		<10	<10	<10	<10	<10	<10	<10	<10	<5	<5	<5	<5
1,4-Dichlorobenzene	5	<10	<10	<10	<10	<10	<10	<10	<10	<5	<5	<5	<5
Ethylbenzene	300	<10	<10	<10	<10	<10	<10	<10	<10	<5	<5	<5	<5
Isopropylbenzene		<20	<20	<20	<20	<20	<20	<20	<20	<10	<10	<10	<10
p-Isopropyltoluene		<10	<10	<10	<10	<10	<10	<10	<10	<5	<5	<5	<5
Methyl tert-Butyl Ether	13	<50	<50	<50	<50	<50	<50	<50	<50	<25	<25	<25	<25
Naphthalene		<20	<20	<20	<20	<20	<20	<20	<20	<10	<10	<10	<10
n-Propylbenzene		<10	<10	<10	<10	<10	<10	<10	<10	<5	<5	<5	<5
Toluene	150	<10	<10	<10	<10	<10	<10	<10	<10	<5	<5	<5	<5
Xylenes, total	1750	<20	<20	<20	<20	<20	<20	<20	<20	<10	<10	<10	<10
Total Aromatic Hydrocarbons													
<b>Halogenated Non-Aromatic Hydrocarbons</b>													
Bromodichloromethane	80	<10	<10	<10	<10	<10	<10	<10	<10	<5	<5	<5	<5
Bromoform	80	<20	<20	<20	<20	<20	<20	<20	<20	<10	<10	<10	<10
Carbon Tetrachloride	0.5	<10	<10	<10	<10	<10	<10	<10	<10	10.6	9.9	6.7	7.2
Chloromethane		<100	<100	<100	<100	<100	<100	<100	<100	<50	<50	<50	<50
Chloroform	80	<30	<30	<30	<30	<30	<30	<30	<30	<15	<15	<15	<15
1,1-Dichloroethane	5	<10	<10	<10	<10	<10	<10	<10	<10	<5	<5	<5	<5
1,2-Dichloroethane	0.5	<20	<20	<20	<20	<20	<20	<20	<20	<10	<10	<10	<10
1,1-Dichloroethene	6	<10	<10	<10	<10	<10	<10	<10	<10	<5	<5	<5	<5
cis-1,2-Dichloroethene	6	<10	<10	<10	<10	<10	<10	<10	<10	<5	<5	<5	<5
trans-1,2-Dichloroethene	10	<10	<10	<10	<10	<10	<10	<10	<10	<5	<5	<5	<5
1,2-Dichloropropane	5	<10	<10	<10	<10	<10	<10	<10	<10	<5	<5	<5	<5
Methylene Chloride	5	<10	<10	<10	<10	<10	<10	<10	<10	<5	<5	<5	<5
1,1,1,2-Tetrachloroethane		<20	<20	<20	<20	<20	<20	<20	<20	<10	<10	<10	<10
1,1,2,2-Tetrachloroethane	1	<10	<10	<10	<10	<10	<10	<10	<10	<5	<5	<5	<5
Tetrachloroethene	5	324.0	312.0	837.0	404.0	205.0	367.0						
1,1,1-Trichloroethane	200	<10	<10	<10	<10	<10	<10	<10	<10	<5	<5	<5	<5
1,1,2-Trichloroethane	5	<10	<10	<10	<10	<10	<10	<10	<10	<5	<5	<5	<5
Trichloroethene	5	24.5	23.6	71.3	33.2	13.7	23.5						
Freon-113	1200	<10	<10	<10	<10	<10	<10	<10	<10	<5	<5	<5	<5
Freon-123A		<10	<10	<10	<10	<10	<10	<10	<10	<5	<5	<5	<5
Vinyl Chloride	0.5	<10	<10	<10	<10	<10	<10	<10	<10	<5	<5	<5	<5
Total Halogenated Hydrocarbons		348.5	335.6	908.3	437.2	218.7	390.5						
Total Concentration of VOCs		348.5	335.6	908.3	437.2	218.7	390.5						
								387.0	430.6	464.9	291.8	274.8	358.2
								387.0	430.6	464.9	291.8	274.8	358.2

**Table 6-3 (Cont'd)**  
**Old Town Area Extraction Well Sampling Results**  
**Volatile Organic Compounds - EPA Method 8260**  
**1st Quarter FY 2006**  
(bconcentrations in µg/L)

Constituent	MCL	EW7-03-3						DPE7-03-1					
		Oct-05	Oct-05	Nov-05	Nov-05	Dec-05	Dec-05	Oct-05	Oct-05	Nov-05	Nov-05	Dec-05	Dec-05
<b>Aromatic or Non-Halogenated Hydrocarbons</b>													
Benzene	1	<50	<50	<10	<10	<10	<10	<50	<50	<10	<10	<10	<10
n-Butylbenzene		<50	<50	<10	<10	<10	<10	<50	<50	<10	<10	<10	<10
sec-Butylbenzene		<50	<50	<10	<10	<10	<10	<50	<50	<10	<10	<10	<10
ter-Butylbenzene		<50	<50	<10	<10	<10	<10	<50	<50	<10	<10	<10	<10
1,4-Dichlorobenzene	5	<50	<50	<10	<10	<10	<10	<50	<50	<10	<10	<10	<10
Ethylbenzene	300	<50	<50	<10	<10	<10	<10	<50	<50	<10	<10	<10	<10
Isopropylbenzene		<100	<100	<20	<20	<20	<20	<100	<100	<20	<20	<20	<20
p-Isopropyltoluene		<50	<50	<10	<10	<10	<10	<50	<50	<10	<10	<10	<10
Methyl tert-Butyl Ether	13	<250	<250	<50	<50	<50	<50	<250	<250	<50	<50	<50	<50
Naphthalene		<100	<100	<20	<20	<20	<20	<100	<100	<20	<20	<20	<20
n-Propylbenzene		<50	<50	<10	<10	<10	<10	<50	<50	<10	<10	<10	<10
Toluene	150	<50	<50	<10	<10	<10	<10	<50	<50	<10	<10	<10	<10
Xylenes, total	1750	<100	<100	<20	<20	<20	<20	<100	<100	<20	<20	<20	<20
Total Aromatic Hydrocarbons													
<b>Halogenated Non-Aromatic Hydrocarbons</b>													
Bromodichloromethane	80	<50	<50	<10	<10	<10	<10	<50	<50	<10	<10	<10	<10
Bromoform	80	<100	<100	<20	<20	<20	<20	<100	<100	<20	<20	<20	<20
Carbon Tetrachloride	0.5	<50	52.7	29.8	33.6	36.2	34.8	<50	<50	<10	22.6	<10	65.9
Chloromethane		<500	<500	<100	<100	<100	<100	<500	<500	<100	<100	<100	<100
Chloroform	80	<150	<150	<30	<30	<30	<30	<150	<150	<30	<30	<30	<30
1,1-Dichloroethane	5	<50	<50	<10	<10	<10	<10	<50	<50	<10	<10	<10	<10
1,2-Dichloroethane	0.5	<100	<100	<20	<20	<20	<20	<100	<100	<20	<20	<20	<20
1,1-Dichloroethene	6	<50	<50	<10	<10	<10	<10	<50	<50	<10	<10	<10	<10
cis-1,2-Dichloroethene	6	<50	<50	19.1	21.1	20.6	20.6	<50	<50	<10	<10	<10	<10
trans-1,2-Dichloroethene	10	<50	<50	<10	<10	<10	<10	<50	<50	<10	<10	<10	<10
1,2-Dichloropropane	5	<50	<50	<10	<10	<10	<10	<50	<50	<10	<10	<10	<10
Methylene Chloride	5	<50	<50	<10	<10	<10	<10	<50	<50	<10	<10	<10	<10
1,1,2-Tetrachloroethane		<100	<100	<20	<20	<20	<20	<100	<100	<20	<20	<20	<20
1,1,2,2-Tetrachloroethane	1	<50	<50	<10	<10	<10	<10	<50	<50	<10	<10	<10	<10
Tetrachloroethene	5	1,670	1,510	1,530.0	1,380.0	1,480.0	1,790.0	3,390	3,640	3,610.0	4,220.0	1,940.0	8,620.0
1,1,1-Trichloroethane	200	<50	<50	<10	<10	<10	<10	<50	<50	<10	<10	<10	<10
1,1,2-Trichloroethane	5	<50	<50	<10	<10	<10	<10	<50	<50	<10	<10	<10	<10
Trichloroethene	5	517.0	512.0	489.0	587.0	526.0	605.0	<50	<50	110.0	295.0	44.6	644.0
Freon-113	1200	<50	<50	<10	<10	<10	<10	<50	<50	<10	<10	<10	<10
Freon-123A		<50	<50	<10	<10	<10	<10	<50	<50	<10	<10	<10	<10
Vinyl Chloride	0.5	<50	<50	<10	<10	<10	<10	<50	<50	<10	<10	<10	<10
Total Halogenated Hydrocarbons		2,187.0	2,074.7	2,067.9	2,021.7	2,062.8	2,450.4	3,390.0	3,640.0	3,720.0	4,537.6	1,984.6	9,329.9
Total Concentration of VOCs		2,187.0	2,074.7	2,067.9	2,021.7	2,062.8	2,450.4	3,390.0	3,640.0	3,720.0	4,537.6	1,984.6	9,329.9

**Table 6-3 (Cont'd)**  
**Old Town Area Extraction Well Sampling Results**  
**Volatile Organic Compounds - EPA Method 8260**  
**1st Quarter FY 2006**  
(bconcentrations in µg/L)

Constituent	MCL	DPE7-03-2						DPE7-03-3					
		Oct-05	Oct-05	Nov-05	Nov-05	Dec-05	Dec-05	Oct-05	Oct-05	Nov-05	Nov-05	Dec-05	Dec-05
<b>Aromatic or Non-Halogenated Hydrocarbons</b>													
Benzene	1	<10	<10	<5	<5	<5	<5	<500	<500	<100	<100	<100	<100
n-Butylbenzene		<10	<10	<5	<5	<5	<5	<500	<500	<100	<100	<100	<100
sec-Butylbenzene		<10	<10	<5	<5	<5	<5	<500	<500	<100	<100	<100	<100
ter-Butylbenzene		<10	<10	<5	<5	<5	<5	<500	<500	<100	<100	<100	<100
1,4-Dichlorobenzene	5	<10	<10	<5	<5	<5	<5	<500	<500	<100	<100	<100	<100
Ethylbenzene	300	<10	<10	<5	<5	<5	<5	<500	<500	<100	<100	<100	<100
Isopropylbenzene		<20	<20	<10	<10	<10	<10	<1000	<1000	<200	<200	<200	<200
p-Isopropyltoluene		<10	<10	<5	<5	<5	<5	<500	<500	<100	<100	<100	<100
Methyl tert-Butyl Ether	13	<50	<50	<25	<25	<25	<25	<2500	<2500	<500	<500	<500	<500
Naphthalene		<20	<20	<10	<10	<10	<10	<1000	<1000	<200	<200	<200	<200
n-Propylbenzene		<10	<10	<5	<5	<5	<5	<500	<500	<100	<100	<100	<100
Toluene	150	<10	<10	<5	<5	<5	<5	<500	<500	<100	<100	<100	<100
Xylenes, total	1750	<20	<20	<10	<10	<10	<10	<1000	<1000	<200	<200	<200	<200
Total Aromatic Hydrocarbons													
<b>Halogenated Non-Aromatic Hydrocarbons</b>													
Bromodichloromethane	80	<10	<10	<5	<5	<5	<5	<500	<500	<100	<100	<100	<100
Bromoform	80	<20	<20	<10	<10	<10	<10	<1000	<1000	<200	<200	<200	<200
Carbon Tetrachloride	0.5	<10	<10	<5	<5	<5	<5	<500	<500	137.0	190.0	168.0	165.0
Chloromethane		<100	<100	<50	<50	<50	<50	<5000	<5000	<1000	<1000	<1000	<1000
Chloroform	80	<30	<30	<15	<15	<15	<15	<1500	<1500	<300	<300	<300	<300
1,1-Dichloroethane	5	<10	<10	<5	<5	<5	<5	<500	<500	<100	<100	<100	<100
1,2-Dichloroethane	0.5	<20	<20	<10	<10	<10	<10	<1000	<1000	<200	<200	<200	<200
1,1-Dichloroethene	6	<10	<10	<5	<5	<5	<5	<500	<500	<100	<100	<100	<100
cis-1,2-Dichloroethene	6	17.4	24.6	22.9	25.8	20.0	19.6	<500	<500	<100	<100	<100	<100
trans-1,2-Dichloroethene	10	<10	<10	<5	<5	<5	<5	<500	<500	<100	<100	<100	<100
1,2-Dichloropropane	5	<10	<10	<5	<5	<5	<5	<500	<500	<100	<100	<100	<100
Methylene Chloride	5	<10	<10	<5	<5	<5	<5	<500	<500	<100	<100	<100	<100
1,1,1,2-Tetrachloroethane		<20	<20	<10	<10	<10	<10	<1000	<1000	<200	<200	<200	<200
1,1,2,2-Tetrachloroethane	1	<10	<10	<5	<5	<5	<5	<500	<500	<100	<100	<100	<100
Tetrachloroethene	5	267.0	370.0	394.0	419.0	506.0	357.0	22,800	24,900	19,000	22,200	22,000	22,700
1,1,1-Trichloroethane	200	<10	<10	<5	<5	<5	<5	<500	<500	<100	<100	<100	<100
1,1,2-Trichloroethane	5	<10	<10	<5	<5	<5	<5	<500	<500	<100	<100	<100	<100
Trichloroethene	5	114.0	147.0	154.0	150.0	139.0	124.0	2,250	1,880	1,900	1910.0	1,590	1,820
Freon-113	1200	<10	<10	<5	<5	<5	<5	<500	<500	<100	<100	<100	<100
Freon-123A		<10	<10	<5	<5	<5	<5	<500	<500	<100	<100	<100	<100
Vinyl Chloride	0.5	<10	<10	<5	<5	<5	<5	<500	<500	<100	<100	<100	<100
Total Halogenated Hydrocarbons		398.4	541.6	570.9	594.8	665.0	500.6	25,050	26,780	21,037	24,300	23,758	24,685
Total Concentration of VOCs		398.4	541.6	570.9	594.8	665.0	500.6	25,050	26,780	21,037	24,300	23,758	24,685

**Table 6-3 (Cont'd)**  
**Old Town Area Extraction Well Sampling Results**  
**Volatile Organic Compounds - EPA Method 8260**  
**1st Quarter FY 2006**  
(bconcentrations in µg/L)

Constituent	MCL	EW7C-04-2		EW25A-02-1'		EW53-04-2					
		Oct-05	Oct-05	Dec-05'	Oct-05	Nov-05	Nov-05	Nov-05	Dec-05	Dec-05	
<b>Aromatic or Non-Halogenated Hydrocarbons</b>											
Benzene	1	<1		<1	<1	<1	<1	<1	<1	<1	
n-Butylbenzene		<1		<1	<1	<1	<1	<1	<1	<1	
sec-Butylbenzene		<1		<1	<1	<1	<1	<1	<1	<1	
ter-Butylbenzene		<1		<1	<1	<1	<1	<1	<1	<1	
1,4-Dichlorobenzene	5	<1		<1	<1	<1	<1	<1	<1	<1	
Ethylbenzene	300	<1		<1	<1	<1	<1	<1	<1	<1	
Isopropylbenzene		<2		<2	<2	<2	<2	<2	<2	<2	
p-Isopropyltoluene		<1		<1	<1	<1	<1	<1	<1	<1	
Methyl tert-Butyl Ether	13	<5		<5	<5	<5	<5	<5	<5	<5	
Naphthalene		<2		<2	<2	<2	<2	<2	<2	<2	
n-Propylbenzene		<1		<1	<1	<1	<1	<1	<1	<1	
Toluene	150	<1		<1	<1	<1	<1	<1	<1	<1	
Xylenes, total	1750	<2		<2	<2	<2	<2	<2	<2	<2	
Total Aromatic Hydrocarbons											
<b>Halogenated Non-Aromatic Hydrocarbons</b>											
Bromodichloromethane	80	<1		<1	<1	<1	<1	<1	<1	<1	
Bromoform	80	<2		<2	<2	<2	<2	<2	<2	<2	
Carbon Tetrachloride	0.5	9.8		<1	<1	2.0	1.1	2.5	1.7	1.3	
Chloromethane		<10		<10	<10	<10	<10	<10	<10	<10	
Chloroform	80	8.0		<3	4.4	5.9	4.9	6.5	7.5	5.9	
1,1-Dichloroethane	5	<1		<1	<1	<1	<1	<1	<1	<1	
1,2-Dichloroethane	0.5	<2		<2	<2	<2	<2	<2	<2	<2	
1,1-Dichloroethene	6	1.5		<1	<1	<1	<1	<1	<1	<1	
cis-1,2-Dichloroethene	6	2.9		<1	2.5	1.9	1.6	2.2	1.7	2.0	
trans-1,2-Dichloroethene	10	<1		<1	<1	<1	<1	<1	<1	<1	
1,2-Dichloropropane	5	<1		<1	<1	<1	<1	<1	<1	<1	
Methylene Chloride	5	<1		<1	<1	<1	<1	<1	<1	<1	
1,1,1,2-Tetrachloroethane		<2		<2	<2	<2	<2	<2	<2	<2	
1,1,2,2-Tetrachloroethane	1	<1		<1	<1	<1	<1	<1	<1	<1	
Tetrachloroethene	5	66.3		<1	<1	6.8	3.6	7.3	5.6	4.2	
1,1,1-Trichloroethane	200	<1		<1	<1	<1	<1	<1	<1	<1	
1,1,2-Trichloroethane	5	<1		<1	<1	<1	<1	<1	<1	<1	
Trichloroethene	5	17.8		15.0	15.5	6.9	4.7	6.6	5.8	5.4	
Freon-113	1200	<1		<1	<1	<1	<1	<1	<1	<1	
Freon-123A		<1		<1	<1	<1	<1	<1	<1	<1	
Vinyl Chloride	0.5	<1		<1	<1	<1	<1	<1	<1	<1	
Total Halogenated Hydrocarbons	106.3			15.0	22.4	23.5	15.9	25.1	22.3	18.8	
Total Concentration of VOCs	106.3			15.0	22.4	23.5	15.9	25.1	22.3	18.8	

**Table 6-3 (Cont'd)**  
**Old Town Area Extraction Well Sampling Results**  
**Volatile Organic Compounds - EPA Method 8260**  
**1st Quarter FY 2006**  
(bconcentrations in µg/L)

Constituent	MCL	EW58E-98-1 Oct-05	EW58E-98-2 Oct-05	EW58E-98-3 Oct-05	EW58E-98-4 Oct-05	EW58E-98-5 Oct-05	EW58E-98-6 Oct-05	EW58E-98-7 Oct-05	EW58E-98-8 Oct-05	EW58-02-1 Dec-05
<b>Aromatic or Non-Halogenated Hydrocarbons</b>										
Benzene	1	<10	<1	<10	<1	<1	<1	<1	<1	<1
n-Butylbenzene		<10	<1	<10	<1	<1	<1	<1	<1	<1
sec-Butylbenzene		<10	<1	<10	<1	<1	<1	<1	<1	<1
ter-Butylbenzene		<10	<1	<10	<1	<1	<1	<1	<1	<1
1,4-Dichlorobenzene	5	<10	<1	<10	<1	<1	<1	<1	<1	<1
Ethylbenzene	300	<10	<1	<10	<1	<1	<1	<1	<1	<1
Isopropylbenzene		<20	<2	<20	<2	<2	<2	<2	<2	<2
p-Isopropyltoluene		<10	<1	<10	<1	<1	<1	<1	<1	<1
Methyl tert-Butyl Ether	13	<50	<5	<50	<5	<5	<5	<5	<5	<5
Naphthalene		<20	<2	<20	<2	<2	<2	<2	<2	<2
n-Propylbenzene		<10	<1	<10	<1	<1	<1	<1	<1	<1
Toluene	150	<10	<1	<10	<1	<1	<1	<1	<1	<1
Xylenes, total	1750	<20	<2	<20	<2	<2	<2	<2	<2	<2
Total Aromatic Hydrocarbons										
<b>Halogenated Non-Aromatic Hydrocarbons</b>										
Bromodichloromethane	80	<10	<1	<10	<1	<1	<1	<1	<1	<1
Bromoform	80	<20	<2	<20	<2	<2	<2	<2	<2	<2
Carbon Tetrachloride	0.5	<10	<1	<10	<1	1.6	<1	<1	2.1	15.0
Chloromethane		<100	<10	<100	<10	<10	<10	<10	<10	<10
Chloroform	80	<30	<3	<30	<3	<3	<3	<3	<3	<3
1,1-Dichloroethane	5	<10	<1	<10	<1	<1	<1	<1	<1	<1
1,2-Dichloroethane	0.5	<20	<2	<20	<2	<2	<2	<2	<2	<2
1,1-Dichloroethene	6	<10	<1	<10	<1	<1	<1	<1	<1	8.4
cis-1,2-Dichloroethene	6	<10	6.4	<10	5.4	15.2	19.9	23.5	49.0	41.1
trans-1,2-Dichloroethene	10	<10	<1	<10	<1	<1	<1	<1	<1	<1
1,2-Dichloropropane	5	<10	<1	<10	<1	<1	<1	<1	<1	<1
Methylene Chloride	5	<10	<1	<10	<1	<1	<1	<1	<1	<1
1,1,1,2-Tetrachloroethane		<20	<2	<20	<2	<2	<2	<2	<2	3.3
1,1,2,2-Tetrachloroethane	1	<10	<1	<10	<1	<1	<1	<1	<1	<1
Tetrachloroethene	5	370	54.1	63.8	11.6	78.4	28.0	113.0	146.0	1,060
1,1,1-Trichloroethane	200	<10	<1	<10	<1	<1	<1	<1	<1	<1
1,1,2-Trichloroethane	5	<10	<1	<10	<1	<1	<1	<1	<1	<1
Trichloroethene	5	355.0	71.7	103.0	39.5	128.0	65.5	52.3	156.0	337.0
Freon-113	1200	<10	<1	<10	<1	<1	<1	<1	<1	<1
Freon-123A		<10	<1	<10	<1	<1	<1	<1	<1	<1
Vinyl Chloride	0.5	<10	<1	<10	<1	<1	<1	<1	<1	<1
Total Halogenated Hydrocarbons	725.0	132.2	166.8	56.5	223.2	113.4	188.8	353.1	1,464.8	
Total Concentration of VOCs	725.0	132.2	166.8	56.5	223.2	113.4	188.8	353.1	1,464.8	

**Table 6-3 (Cont'd)**  
**Old Town Area Extraction Well Sampling Results**  
**Volatile Organic Compounds - EPA Method 8260**  
**1st Quarter FY 2006**  
(bconcentrations in µg/L)

Constituent	MCL	IW7-02-1						IW7-02-6					
		Oct-05	Oct-05	Nov-05	Nov-05	Dec-05	Dec-05	Oct-05	Oct-05	Nov-05	Nov-05	Dec-05	Dec-05
<b>Aromatic or Non-Halogenated Hydrocarbons</b>													
Benzene	1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
n-Butylbenzene		<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
sec-Butylbenzene		<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
ter-Butylbenzene		<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,4-Dichlorobenzene	5	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Ethylbenzene	300	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Isopropylbenzene		<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
p-Isopropyltoluene		<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Methyl tert-Butyl Ether	13	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Naphthalene		<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
n-Propylbenzene		<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Toluene	150	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Xylenes, total	1750	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
Total Aromatic Hydrocarbons													
<b>Halogenated Non-Aromatic Hydrocarbons</b>													
Bromodichloromethane	80	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Bromoform	80	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
Carbon Tetrachloride	0.5	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Chloromethane		<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
Chloroform	80	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3
1,1-Dichloroethane	5	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,2-Dichloroethane	0.5	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
1,1-Dichloroethene	6	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
cis-1,2-Dichloroethene	6	<1	<1	<1	3.5	<1	<1	<1	<1	<1	<1	<1	<1
trans-1,2-Dichloroethene	10	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,2-Dichloropropane	5	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Methylene Chloride	5	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,1,1,2-Tetrachloroethane		<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
1,1,2,2-Tetrachloroethane	1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Tetrachloroethene	5	1.9	2.0	2.3	3.1	1.4	<1	23.9	36.0	5.9	7.3	5.7	4.2
1,1,1-Trichloroethane	200	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,1,2-Trichloroethane	5	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Trichloroethene	5	<1	1.1	<1	1.3	<1	<1	3.0	5.7	<1	1.1	<1	<1
Freon-113	1200	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Freon-123A		<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Vinyl Chloride	0.5	<1	<1	<1	<1	<1	<1	<1	<1	<1	1.6	<1	<1
Total Halogenated Hydrocarbons		1.9	3.1	2.3	7.9	1.4		26.9	41.7	5.9	10.0	5.7	4.2
Total Concentration of VOCs		1.9	3.1	2.3	7.9	1.4		26.9	41.7	5.9	10.0	5.7	4.2

MCL = Maximum contaminant level for drinking water

All analyses by LBNL EML unless otherwise noted

< = Less than Quantitation Limit

<sup>T</sup>Treatment system influent samples

**Table 6-4**  
**Old Town Area Sampling Results from Other Locations**  
**Volatile Organic Compounds - EPA Method 8260**  
**1st Quarter FY 2006**  
(bconcentrations in µg/L)

Constituent	MCL	MP7-99-1B		MP7-99-2B		SSW19-63	SI15-102	HI7-00-1-15'	
		Oct-05	Oct-05(D*)	Oct-05	Oct-05(D*)			Oct-05	Oct-05
<b>Aromatic or Non-Halogenated Hydrocarbons</b>									
Benzene	1	<1000	<25	<100	<25	<1	<1	<100	<100
n-Butylbenzene		<1000	<25	<100	<25	<1	<1	<100	<100
sec-Butylbenzene		<1000	<25	<100	<25	<1	<1	<100	<100
ter-Butylbenzene		<1000	<25	<100	<25	<1	<1	<100	<100
Ethylbenzene	300	<1000	<25	<100	<25	<1	<1	<100	<100
Isopropylbenzene		<2000	<25	<200	<25	<2	<2	<200	<200
p-Isopropyltoluene		<1000	<25	<100	<25	<1	<1	<100	<100
Methyl tert-Butyl Ether	13	<5000	<25	<500	<25	<5	<5	<500	<500
Naphthalene		<2000	<25	<200	70	<2	<2	<200	<200
n-Propylbenzene		<1000	<25	<100	<25	<1	<1	<100	<100
Toluene	150	<1000	<25	<100	<25	<1	<1	<100	<100
1,2,4-Trimethylbenzene		<1000	<25	<100	<25	<1	<1	<100	<100
1,3,5-Trimethylbenzene		<1000	<25	<100	<25	<1	<1	<100	<100
Xylenes, total	1750	<2000	<50	<200	<50	<2	<2	<200	<200
Total Aromatic Hydrocarbons					70				
<b>Halogenated Non-Aromatic Hydrocarbons</b>									
Bromodichloromethane	80	<1000	<25	<100	<25	<1	<1	<100	<100
Carbon Tetrachloride	0.5	1,270	680	529	240	<1	<1	<100	<100
Chloroform	80	<3000	<25	<300	<25	<3	<3	<300	<300
1,1-Dichloroethane	5	<1000	<25	<100	<25	<1	<1	<100	<100
1,2-Dichloroethane	0.5	<2000	<25	<200	<25	<2	<2	<200	<200
1,1-Dichloroethene	6	<1000	130	<100	<25	<1	<1	<100	<100
cis-1,2-Dichloroethene	6	<1000	<25	<100	<25	<1	2	<100	<100
trans-1,2-Dichloroethene	10	<1000	<25	<100	<25	<1	<1	<100	<100
1,2-Dichloropropane	5	<1000	<25	<100	<25	<1	<1	<100	<100
Methylene Chloride	5	<1000	<50	<100	<50	<1	<1	<100	<100
1,1,1,2-Tetrachloroethane		<2000	<25	<200	<25	<2	<2	<200	<200
1,1,2,2-Tetrachloroethane	1	<1000	<25	<100	<25	<1	<1	<100	<100
Tetrachloroethene	5	30,300	16,000	11,400	4,500	<1	46.4	2,310	2,450
1,1,1-Trichloroethane	200	<1000	<25	<100	<25	<1	<1	<100	<100
1,1,2-Trichloroethane	5	<1000	<25	<100	<25	<1	<1	<100	<100
Trichloroethene	5	23,600	14,000	8,670	3,400	<1	19.1	<100	<100
Freon-113	1200	<1000	<25	<100	<25	<1	<1	<100	<100
Freon-123A		<1000	<25	<100	<25	<1	<1	<100	<100
Vinyl Chloride	0.5	<1000	<25	<100	<25	<1	<1	<100	<100
Total Halogenated Hydrocarbons		55,170	30,810	20,599	8,140		67.5	2,310	2,450
Total Concentration of VOCs		55,170	30,810	20,599	8,210		67.5	2,310	2,450

**Table 6-4 (Cont'd)**  
**Old Town Area Sampling Results from Other Locations**  
**Volatile Organic Compounds - EPA Method 8260**  
**1st Quarter FY 2006**  
(bconcentrations in µg/L)

Constituent	MCL	HI7-00-1-20'		HI7-00-1-25'		HI7-00-1-35'		HI7-00-1-40'		HI7-00-1-45'	
		Oct-05	Nov-05	Oct-05	Oct-05	Nov-05	Oct-05	Nov-05	Oct-05	Nov-05	
<b>Aromatic or Non-Halogenated Hydrocarbons</b>											
Benzene	1	<100	<100	<100	<100	<100	<500	<1000	<100	<100	<100
n-Butylbenzene		<100	<100	<100	<100	<100	<500	<1000	<100	<100	<100
sec-Butylbenzene		<100	<100	<100	<100	<100	<500	<1000	<100	<100	<100
ter-Butylbenzene		<100	<100	<100	<100	<100	<500	<1000	<100	<100	<100
Ethylbenzene	300	<100	<100	<100	<100	<100	<500	<1000	<100	<100	<100
Isopropylbenzene		<200	<200	<200	<200	<200	<1000	<2000	<200	<200	<200
p-Isopropyltoluene		<100	<100	<100	<100	<100	<500	<1000	<100	<100	<100
Methyl tert-Butyl Ether	13	<500	<500	<500	<500	<500	<2500	<5000	<500	<500	<500
Naphthalene		<200	<200	<200	<200	<200	<1000	<2000	<200	<200	<200
n-Propylbenzene		<100	<100	<100	<100	<100	<500	<1000	<100	<100	<100
Toluene	150	<100	<100	<100	<100	<100	<500	<1000	<100	<100	<100
1,2,4-Trimethylbenzene		<100	<100	<100	<100	<100	<500	<1000	<100	<100	<100
1,3,5-Trimethylbenzene		<100	<100	<100	<100	<100	<500	<1000	<100	<100	<100
Xylenes, total	1750	<200	<200	<200	<200	<200	<1000	<2000	<200	<200	<200
Total Aromatic Hydrocarbons											
<b>Halogenated Non-Aromatic Hydrocarbons</b>											
Bromodichloromethane	80	<100	<100	<100	<100	<100	<500	<1000	<100	<100	<100
Carbon Tetrachloride	0.5	<100	<100	<100	<100	<100	<500	<1000	<100	<100	<100
Chloroform	80	<300	<300	<300	<300	<300	<1500	<3000	<300	<300	<300
1,1-Dichloroethane	5	<100	<100	<100	<100	<100	<500	<1000	<100	<100	<100
1,2-Dichloroethane	0.5	<200	<200	<200	<200	<200	<1000	<2000	<200	<200	<200
1,1-Dichloroethene	6	<100	<100	<100	<100	<100	<500	<1000	<100	<100	<100
cis-1,2-Dichloroethene	6	<100	<100	<100	<100	<100	<500	<1000	<100	<100	<100
trans-1,2-Dichloroethene	10	<100	<100	<100	<100	<100	<500	<1000	<100	<100	<100
1,2-Dichloropropane	5	<100	<100	<100	<100	<100	<500	<1000	<100	<100	<100
Methylene Chloride	5	<100	<100	<100	<100	<100	<500	<1000	<100	<100	<100
1,1,1,2-Tetrachloroethane		<200	<200	<200	<200	<200	<1000	<2000	<200	<200	<200
1,1,2,2-Tetrachloroethane	1	<100	<100	<100	<100	<100	<500	<1000	<100	<100	<100
Tetrachloroethene	5	5,530	1,750	2,160	13,000	10,900	57,500	80,800	15,800	11,700	
1,1,1-Trichloroethane	200	<100	<100	<100	<100	<100	<500	<1000	<100	<100	<100
1,1,2-Trichloroethane	5	<100	<100	<100	<100	<100	<500	<1000	<100	<100	<100
Trichloroethene	5	<100	<100	<100	<100	<100	<500	<1000	326.0	220.0	
Freon-113	1200	<100	<100	<100	<100	<100	<500	<1000	<100	<100	<100
Freon-123A		<100	<100	<100	<100	<100	<500	<1000	<100	<100	<100
Vinyl Chloride	0.5	<100	<100	<100	<100	<100	<500	<1000	<100	<100	<100
Total Halogenated Hydrocarbons		5,530	1,750	2,160	13,000	10,900	57,500	80,800	16,126	11,920	
Total Concentration of VOCs		5,530	1,750	2,160	13,000	10,900	57,500	80,800	16,126	11,920	

**Table 6-4 (Cont'd)**  
**Old Town Area Sampling Results from Other Locations**  
**Volatile Organic Compounds - EPA Method 8260**  
**1st Quarter FY 2006**  
(bconcentrations in µg/L)

Constituent	MCL	HI7-00-2-15'		HI7-00-2-25'		HI7-00-2-30'		HI7-00-2-40'		HI7-00-2-45'	
		Oct-05	Nov-05	Nov-05	Oct-05	Oct-05	Nov-05	Oct-05	Nov-05	Oct-05	Nov-05
<b>Aromatic or Non-Halogenated Hydrocarbons</b>											
Benzene	1	<10	<10	<1	<10	<10	<1000	<1000	<500	<500	<500
n-Butylbenzene		<10	<10	<1	<10	<10	<1000	<1000	<500	<500	<500
sec-Butylbenzene		<10	<10	<1	<10	<10	<1000	<1000	<500	<500	<500
ter-Butylbenzene		<10	<10	<1	<10	<10	<1000	<1000	<500	<500	<500
Ethylbenzene	300	<10	<10	<1	<10	<10	<1000	<1000	<500	<500	<500
Isopropylbenzene		<20	<20	<2	<20	<20	<2000	<2000	<1000	<1000	<1000
p-Isopropyltoluene		<10	<10	<1	<10	<10	<1000	<1000	<500	<500	<500
Methyl tert-Butyl Ether	13	<50	<50	<5	<50	<50	<5000	<5000	<2500	<2500	<2500
Naphthalene		<20	<20	<2	<20	<20	<2000	<2000	<1000	<1000	<1000
n-Propylbenzene		<10	<10	<1	<10	<10	<1000	<1000	<500	<500	<500
Toluene	150	<10	<10	<1	<10	<10	<1000	<1000	<500	<500	<500
1,2,4-Trimethylbenzene		<10	<10	<1	<10	<10	<1000	<1000	<500	<500	<500
1,3,5-Trimethylbenzene		<10	<10	<1	<10	<10	<1000	<1000	<500	<500	<500
Xylenes, total	1750	<20	<20	<2	<20	<20	<2000	<2000	<1000	<1000	<1000
Total Aromatic Hydrocarbons											
<b>Halogenated Non-Aromatic Hydrocarbons</b>											
Bromodichloromethane	80	<10	<10	<1	<10	<10	<1000	<1000	<500	<500	<500
Carbon Tetrachloride	0.5	<10	<10	<1	<10	<10	<1000	<1000	<500	<500	<500
Chloroform	80	<30	<30	<3	<30	<30	<3000	<3000	<1500	<1500	<1500
1,1-Dichloroethane	5	<10	<10	<1	<10	<10	<1000	<1000	<500	<500	<500
1,2-Dichloroethane	0.5	<20	<20	<2	<20	<20	<2000	<2000	<1000	<1000	<1000
1,1-Dichloroethene	6	<10	<10	<1	<10	<10	<1000	<1000	<500	<500	<500
cis-1,2-Dichloroethene	6	<10	<10	<1	<10	<10	<1000	<1000	<500	<500	<500
trans-1,2-Dichloroethene	10	<10	<10	<1	<10	<10	<1000	<1000	<500	<500	<500
1,2-Dichloropropane	5	<10	<10	<1	<10	<10	<1000	<1000	<500	<500	<500
Methylene Chloride	5	<10	<10	<1	<10	<10	<1000	<1000	<500	<500	<500
1,1,1,2-Tetrachloroethane		<20	<20	<2	<20	<20	<2000	<2000	<1000	<1000	<1000
1,1,2,2-Tetrachloroethane	1	<10	<10	<1	<10	<10	<2000	<2000	<500	<500	<500
Tetrachloroethene	5	141.0	76.0	8.3	1290.0	1290.0	80,200	84,800	19,700	20,400	19,700
1,1,1-Trichloroethane	200	<10	<10	<1	<10	<10	<1000	<1000	<500	<500	<500
1,1,2-Trichloroethane	5	<10	<10	<1	<10	<10	<1000	<1000	<500	<500	<500
Trichloroethene	5	<10	<10	<1	110.0	110.0	15,400	16,000	6,440	6,340	6,440
Freon-113	1200	<10	<10	<1	<10	<10	<1000	<1000	<500	<500	<500
Freon-123A		<10	<10	<1	<10	<10	<1000	<1000	<500	<500	<500
Vinyl Chloride	0.5	<10	<10	<1	<10	<10	<1000	<1000	<500	<500	<500
Total Halogenated Hydrocarbons		141.0	76.0	8.3	1,400.0	1,400.0	95,600	100,800	26,140	26,740	26,140
Total Concentration of VOCs		141.0	76.0	8.3	1,400.0	1,400.0	95,600	100,800	26,140	26,740	26,140

MCL = Maximum contaminant level for drinking water

All analyses by LBNL EML unless otherwise noted

\* = Analysis by BC Laboratories

< = Less than Quantitation Limit

(D) = Duplicate sample

**Table 7-1**  
**Support Services Area Groundwater Monitoring Well Results**  
**Volatile Organic Compounds - EPA Method 8260**  
**1st Quarter FY 2006**  
(bconcentrations in µg/L)

Constituent	MCL	69-97-8		
		Oct-05	Nov-05	Dec-05*
<b>Aromatic or Non-Halogenated Hydrocarbons</b>				
Benzene	1	<1	<1	<0.5
n-Butylbenzene		<1	<1	<0.5
sec-Butylbenzene		<1	<1	<0.5
ter-Butylbenzene		<1	<1	<0.5
Ethylbenzene	300	<1	<1	<0.5
Isopropylbenzene		<2	<2	<0.5
p-Isopropyltoluene		<1	<1	<0.5
Naphthalene		<2	<2	<0.5
n-Propylbenzene		<1	<1	<0.5
Toluene	150	<1	<1	<0.5
1,2,4-Trimethylbenzene		<1	<1	<0.5
1,3,5-Trimethylbenzene		<1	<1	<0.5
Xylenes, total	1750	<2	<2	<1
Total Aromatic Hydrocarbons				
<b>Halogenated Non-Aromatic Hydrocarbons</b>				
Carbon Tetrachloride	0.5	<1	<1	<0.5
Chloroform	80	<3	<3	<0.5
1,1-Dichloroethane	5	<1	<1	<0.5
1,2-Dichloroethane	0.5	<2	<2	<0.5
1,1-Dichloroethene	6	<1	<1	<0.5
cis-1,2-Dichloroethene	6	8.2	7.8	4.5
trans-1,2-Dichloroethene	10	<1	<1	<0.5
Methylene Chloride	5	<1	<1	<1
Tetrachloroethene	5	<1	<1	<0.5
1,1,1-Trichloroethane	200	<1	<1	<0.5
1,1,2-Trichloroethane	5	<1	<1	<0.5
Trichloroethene	5	<1	<1	<0.5
Freon-113	1200	<1	<1	<0.5
Vinyl Chloride	0.5	<1	<1	<0.5
Total Halogenated Hydrocarbons		8.2	7.8	4.5
Total Concentration of VOCs		8.2	7.8	4.5

MCL = Maximum contaminant level for drinking water      < = Less than Quantitation Limit  
All analyses by LBNL EML unless otherwise noted

<sup>Q</sup>Quarterly Sampling

\* = Analysis by BC Laboratories

**Table 7-2**  
**Support Services Area Temporary Groundwater Sampling Point Results**  
**Volatile Organic Compounds - EPA Method 8260**  
**1st Quarter FY 2006**  
**(Concentrations in µg/L)**

Constituent	MCL	SB69A-99-1					SB75-02-1 Nov-05	W76-97-3 Oct-05	W76-97-4 Oct-05	W76-97-5 Oct-05
		Oct-05	Oct-05	Nov-05	Nov-05	Dec-05				
<b>Aromatic or Non-Halogenated Hydrocarbons</b>										
Benzene	1	<1	<1	<1	<1	<1	<1	<1	<1	<1
n-Butylbenzene		<1	<1	<1	<1	<1	<1	<1	<1	<1
sec-Butylbenzene		<1	<1	<1	<1	<1	<1	<1	<1	<1
ter-Butylbenzene		<1	<1	<1	<1	<1	<1	<1	<1	<1
Chlorobenzene		<1	<1	<1	<1	<1	<1	<1	<1	<1
Ethylbenzene	300	<1	<1	<1	<1	<1	<1	<1	<1	<1
Isopropylbenzene		<2	<2	<2	<2	<2	<2	<2	<2	<2
p-Isopropyltoluene		<1	<1	<1	<1	<1	<1	<1	<1	<1
Methyl tert-Butyl Ether	13	<5	<5	<5	<5	<5	<5	<5	<5	<5
Naphthalene		<2	<2	<2	<2	<2	<2	<2	<2	<2
n-Propylbenzene		<1	<1	<1	<1	<1	<1	<1	<1	<1
Toluene	150	<1	<1	<1	<1	<1	<1	<1	<1	<1
Xylenes, total	1750	<2	<2	<2	<2	<2	<2	<2	<2	<2
Total Aromatic Hydrocarbons										
<b>Halogenated Non-Aromatic Hydrocarbons</b>										
Bromodichloromethane	80	<1	<1	<1	<1	<1	<1	<1	<1	<1
Carbon Tetrachloride	0.5	<1	<1	<1	<1	<1	<1	<1	<1	<1
Chloroethane		<30	<30	<30	<30	<30	<30	<30	<30	<30
Chloroform	80	<3	<3	<3	<3	<3	7.7	<3	<3	<3
1,1-Dichloroethane	5	<1	<1	<1	<1	<1	2.0	<1	<1	<1
1,2-Dichloroethane	0.5	<2	<2	<2	<2	<2	<2	<2	<2	<2
1,1-Dichloroethene	6	<1	<1	<1	<1	<1	1.4	<1	<1	<1
cis-1,2-Dichloroethene	6	22.3	21.3	22.0	20.2	18.6	50.7	<1	<1	<1
trans-1,2-Dichloroethene	10	<1	<1	1.2	<1	1.7	<1	<1	<1	<1
Methylene Chloride	5	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,1,1,2-Tetrachloroethane		<2	<2	<2	<2	<2	<2	<2	<2	<2
Tetrachloroethene	5	<1	<1	<1	<1	<1	<1	<1	<1	2.2
1,1,1-Trichloroethane	200	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,1,2-Trichloroethane	5	<1	<1	<1	<1	<1	<1	<1	<1	<1
Trichloroethene	5	<1	<1	<1	<1	<1	8.0	17.0	<1	<1
Freon-113	1200	<1	<1	<1	<1	<1	<1	<1	<1	<1
Freon-123A		<1	<1	<1	<1	<1	<1	<1	<1	<1
Vinyl Chloride	0.5	36.4	32.2	28.8	20.7	37.3	<1	<1	<1	<1
Total Halogenated Hydrocarbons	58.7	53.5	52.0	40.9	57.6		69.8	17.0		2.2
Total Concentration of VOCs	58.7	53.5	52.0	40.9	57.6		69.8	17.0		2.2

MCL = Maximum contaminant level for drinking water

All analyses by LBNL EML unless otherwise noted

= Less than Quantitation Limit

**Table 7-3**  
**Support Services Area Sampling Results from Other Locations**  
**Volatile Organic Compounds - EPA Method 8260**  
**1st Quarter FY 2006**  
**(Concentrations in µg/L)**

Constituent	MCL	SSW20-130		SSW21-130	
		Oct-05	Oct-05	Oct-05	Oct-05
<b>Aromatic or Non-Halogenated Hydrocarbons</b>					
Benzene	1	<1	<1	<1	<1
n-Butylbenzene		<1	<1	<1	<1
sec-Butylbenzene		<1	<1	<1	<1
ter-Butylbenzene		<1	<1	<1	<1
Chlorobenzene		<1	<1	<1	<1
Ethylbenzene	300	<1	<1	<1	<1
Isopropylbenzene		<2	<2	<2	<2
p-Isopropyltoluene		<1	<1	<1	<1
Methyl tert-Butyl Ether	13	<5	<5	<5	<5
Naphthalene		<2	<2	<2	<2
n-Propylbenzene		<1	<1	<1	<1
Toluene	150	<1	<1	<1	<1
Xylenes, total	1750	<2	<2	<2	<2
Total Aromatic Hydrocarbons					
<b>Halogenated Non-Aromatic Hydrocarbons</b>					
Bromodichloromethane		<1	<1	<1	<1
Carbon Tetrachloride	0.5	<1	<1	<1	<1
Chloroform	100	<3	<3	<3	<3
Chloroethane		<30	<30	<30	<30
1,1-Dichloroethane	5	<1	<1	<1	<1
1,2-Dichloroethane	0.5	<2	<2	<2	<2
1,1-Dichloroethene	6	<1	<1	<1	<1
cis-1,2-Dichloroethene	6	<1	<1	<1	<1
trans-1,2-Dichloroethene	10	<1	<1	<1	<1
Methylene Chloride	5	<1	<1	<1	<1
1,1,1,2-Tetrachloroethane		<2	<2	<2	<2
Tetrachloroethene	5	<1	<1	<1	<1
1,1,1-Trichloroethane	200	<1	<1	<1	<1
1,1,2-Trichloroethane	5	<1	<1	<1	<1
Trichloroethene	5	<1	<1	<1	<1
Freon-11		<2	<2	<2	<2
Freon-113	1200	<1	<1	<1	<1
Vinyl Chloride	0.5	<1	<1	<1	<1
Total Halogenated Hydrocarbons					
Total Concentration of VOCs					

MCL = Maximum contaminant level for drinking water      < = Less than Quantitation Limit  
 All analyses by LBNL EML unless otherwise noted

**Table 8**  
**LBNL Hydrauger Monitoring Results**  
**Volatile Organic Compounds - EPA Method 8260**  
**1st Quarter FY 2006**  
(Concentrations in µg/L)

Constituent	MCL	37-01-01		51-01-01		51-01-02		51-01-03		51-01-03A		51-01-04	
		Oct-05	Dec-05	Oct-05	Dec-05	Oct-05	Dec-05	Oct-05	Dec-05	Oct-05	Dec-05	Oct-05	Dec-05
<b>Aromatic or Non-Halogenated Hydrocarbons</b>													
Benzene	1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
n-Butylbenzene		<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
sec-Butylbenzene		<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
ter-Butylbenzene		<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Chlorobenzene		<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Ethylbenzene	700	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Isopropylbenzene		<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
p-Isopropyltoluene		<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Methyl tert-Butyl Ether	13	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Naphthalene		<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
n-Propylbenzene		<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Toluene	150	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Xylenes, total	1750	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
Total Aromatic Hydrocarbons													
<b>Halogenated Non-Aromatic Hydrocarbons</b>													
Bromodichloromethane		<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Carbon Tetrachloride	0.5	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Chloroform	100	<3	<3	10.2	11.1	<3	<3	<3	<3	<3	<3	<3	<3
Chloroethane		<30	<30	<30	<30	<30	<30	<30	<30	<30	<30	<30	<30
1,1-Dichloroethane	5	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,2-Dichloroethane	0.5	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
1,1-Dichloroethene	6	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
cis-1,2-Dichloroethene	6	<1	<1	<1	<1	<1	<1	9.1	7.8	8.6	7.4	<1	1.0
trans-1,2-Dichloroethene	10	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Methylene Chloride	5	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,1,1,2-Tetrachloroethane		<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
Tetrachloroethene	5	<1	<1	<1	<1	<1	<1	2.2	1.4	1.9	2.2	1.0	1.4
1,1,1-Trichloroethane	200	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,1,2-Trichloroethane	5	<1	<1	<1	<1	<1	<1	4.4	3.8	2.0	1.5	1.4	1.9
Trichloroethene	5	<1	<1	<1	<1	<2	<2	<2	<2	<2	<2	<2	<2
Freon-11		<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
Freon-113	1200	<1	<1	4.3	3.4	<1	<1	<1	<1	<1	<1	<1	<1
Vinyl Chloride	0.5	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Total Halogenated Hydrocarbons				14.5	14.5	4.4	3.8	13.3	10.7	11.9	11.5	2.2	3.9
Total Concentration of VOCs				14.5	14.5	4.4	3.8	13.3	10.7	11.9	11.5	2.2	3.9

MCL = Maximum contaminant level for drinking water

\* = All analyses by BC Laboratories

= Less than Quantitation Limit

**Table 9**  
**Volatile Organic Compounds Detected in Groundwater Above MCLs**  
**EPA Method 8260**  
**1st Quarter FY 2006**  
(bconcentrations in µg/L)

MCLs	1,1-DCA	1,2-DCA	1,1-DCE	cis-1,2-DCE	trans-1,2-DCE	METHYLENE CHLORIDE	PCE	TCE	VINYL CHLORIDE	CARBON TET
	5	0.5	6	6	10	5	5	5	0.5	0.5
<b>Building 71 VOC Plume - Building 71B Lobe</b>										
MW71B-99-3R				36.5				16.6	8.9	
SB71B-03-1				6.3					5.3	
SB71B-03-2				29.0			124.0	11.3	2.0	
SB71B-04-1				25.0			32.9	33.3	3.5	
<b>Building 51/64 VOC Plume</b>										
MW51-96-16	10.7			225.0	25.7			55.0	21.0	
MW51-96-17	5.3			128.0	44.3			16.0	32.0	
MW51-96-18	67.7		17.5				248.0	62.2		
MW51-00-8				6.6					1.2	
SB51-96-6				11.6				5.3	13.7	
SB51-98-1	7.5			120.0				8.8	2.3	
SB51-98-6				7.1			5.1	6.1		
SB64-98-8	932		199.0	12.8			115.0	249.0		
SB64-98-12	141.0		15.7	12.9			9.1	41.3	2.5	
SB64-98-17	329.0		32.9						12.3	
SB64-99-4	1,520		206.0					94.8		
SB64-99-5	123.0		31.2					15.7		
SB64-99-6	5.3		6.7							
SB64-00-1	807		60.4	14.2				81.6		
SB64-00-2	216.0	7.5	1,160	7.1			80.0	285.0		
SB64-02-1A	8,560		1,180				181.0	701.0		
SB64-02-1B	697.0	5.6	90.1	16.7			39.0	127.0	99.8	
SB64-02-1C	1,150		172.0	94.5				37.3	66.6	
SB64-02-1D	139.0		14.6	14.7					19.6	
SB64-02-1E	103.0		7.7						15.7	
SB64-02-1F	51.5								5.9	
SB64-02-2A	211.0	3.6	61.0	18.1			47.9	143.0		
SB64-02-2B	832.0	4.6	146.0	93.6		5.9	5.8	66.3	5.8	
SB64-02-2C	149.0		61.2	47.1					2.7	
SB64-02-2D	130.0		39.2	23.3				9.6	1.7	
SB64-02-2E	112.0		35.9	21.8					2.4	
SB64-02-2F	303.0	2.6	9.3						2.9	
SB64-03-1A	189.0	2.7	14.8					17.9		
SB64-03-1B	268.0	3.6						33.3		

**Table 9 (Cont'd)**  
**Volatile Organic Compounds Detected in Groundwater Above MCLs**  
**EPA Method 8260**  
**1st Quarter FY 2006**  
(bconcentrations in µg/L)

MCLs	1,1-DCA	1,2-DCA	1,1-DCE	cis-1,2-DCE	trans-1,2-DCE	METHYLENE CHLORIDE	PCE	TCE	VINYL CHLORIDE	CARBON TET
	5	0.5	6	6	10	5	5	5	0.5	0.5
SB64-03-4	36.9									
SB64-03-5			6.2					31.4		
SB64-03-6			9.7	24.9			9.6	268.0		
SB64-05-4			11.2				21.8	12.6		
EW64-00-1	61.7		11.7				11.6	7.0		
EW64-03-1	24.9						6.8	11.6		
EW64-05-1	5.7						6.4	9.0		
Building 51L Plume										
EW51L-99-1								11.1		
EW51L-00-1	23.7			112.0				7.1	735.0	
Old Town VOC Plume - Building 7 Lobe										
MW90-2						48.5				
MW7-94-3			8.9			54.8	29.9			1.9
MW7-95-22				15.8		258.0	112.0			4.4
MW7-95-23						515.0	674.0			
MW7B-95-21			9.5			327.0	240.0			
MW7B-95-24				26.0		156.0	65.7			5.0
MW53-93-9						13.4	9.6			3.5
MW53-93-16-69'						128.0	48.5			6.9
MW58-96-11			97.0			1,100	852			50.0
MW58-00-12		60.0		160.0		22,000	12,200			380
SB53-96-3				50.0		1,140	395.0			18.8
SB58-96-2			6.5	14.7		358.0	178.0			3.1
SB58-97-2				91.1			5.3	5.6		
EW7-96-1						1,030	25.9			
EW7-96-2						116.0	31.0			1.8
EW7-96-4R						837.0	71.3			
EW7-03-1						310	145			10.6
EW7-03-3				21.1		1,790	605			52.7
EW7C-04-2						66.3	17.8			9.8
DPE7-03-1						8,620	644.0			65.9
DPE7-03-2				25.8		506.0	154.0			
DPE7-03-3						24,900	2,250			190.0
EW53-04-2						7.3	6.9			2.5
EW58E-98-1						370.0	355.0			

**Table 9 (Cont'd)**  
**Volatile Organic Compounds Detected in Groundwater Above MCLs**  
**EPA Method 8260**  
**1st Quarter FY 2006**  
(bconcentrations in µg/L)

MCLs	1,1-DCA	1,2-DCA	1,1-DCE	cis-1,2-DCE	trans-1,2-DCE	METHYLENE CHLORIDE	PCE	TCE	VINYL CHLORIDE	CARBON TET
	5	0.5	6	6	10	5	5	5	0.5	0.5
EW58E-98-2				6.4			54.1	71.7		
EW58E-98-3							63.8	103.0		
EW58E-98-4							11.6	39.5		
EW58E-98-5				15.2			78.4	128.0		1.6
EW58E-98-6				19.9			28.0	65.5		
EW58E-98-7				23.5			113.0	52.3		
EW58E-98-8				49.0			146.0	156.0		2.1
EW58-02-1			8.4	41.1			1,060	337.0		15.0
IW7-02-6							36.0	5.7	1.6	
MP7-99-1B			130.0				30,300	23,600		1,270
MP7-99-2B							11,400	8,670		529.0
Old Town VOC Plume - Building 25A Lobe										
MW25A-95-15								18.9		
MW25A-98-1								61.3		
MW25A-98-3								26.4		
MW25A-98-7								10.6		
SB16-98-1								9.5		
SB25A-96-3			20.8					75.4		
EW25A-02-1								15.5		
Old Town VOC Plume - Building 52 Lobe										
MW91-8										1.3
MW91-9							6.5			
MW27-92-20										1.1
Building 69 Area of Groundwater Contamination										
MW69-97-8				8.2						
SB69A-99-1				22.3				37.3		
Building 75A Area of Groundwater Contamination										
SB75-02-1				50.7				8.0		
Building 76 Area of Groundwater Contamination										
w76-97-3								17.0		

MCL - Maximum contaminant level for drinking water (determined by California DHS).

Note: where duplicate or split samples were collected, or more than one sample was collected during the quarter, the highest concentrations are shown.

**Table 10**  
**Groundwater Monitoring Results**  
**Concentration of Total Petroleum Hydrocarbons**  
**LUFT Modified Method 8015 or TPH-FI EPA 8015M**  
**(All Concentrations in µg/L)**  
**1st Quarter FY2006**

RFI Unit	Area	Well No.	Date	TPH-D	TPH-G	TPH-FI
Monitoring Wells and Temporary Sampling Points						
AOC 2-1	2	SB7-97-1	Oct-05			ND
			Nov-05			ND
AOC 4-2	4	W76-97-3	Oct-05	<200	<50	
		W76-97-4	Oct-05	<200	<50	
		W76-97-5	Oct-05	<200	<50	

 = Not Sampled  
 < = Not detected above reporting limit

Analysis for TPH-FI, included: Light Naptha, Aviation Gas, Stoddard Solvent, Heavy Naptha, Gasoline, JP4, JP5, JP6, JP8, Kerosene, Diesel, Crude/Waste Oil, Hydraulic/Motor Oil, and WD-40

**Table 11**  
**Concentration of Tritium in Groundwater**  
**(Concentrations in pCi/L)**  
**MCL = 20,000 pCi/L**  
**January 2005 through December 2005**

Area	Well No.	FY2005 Qtr 2 Jan-Mar	FY2005 Qtr 3 Apr-Jun	FY2005 Qtr 4 Jul-Sept	FY2006 Qtr 1 Oct-Dec
<b>Groundwater Monitoring Wells</b>					
1	MW90-3	<300		<300	
	MW90-4			<300	
	MW90-5			<300	
	46A-92-15			<300	
	71-93-1			<300	
	71-95-8			<300	
	71-95-9	425	<300	500	
	71B-98-13	<300	<300	<300	
	71B-99-3R	329	<300	570	
3	MW91-3	<300		<300	
	MW91-4	<300		470	
	MW91-5	1,784		1,740	
	MW91-6	2,069		2,240	
	69A-92-22	<300		<300	
	75-92-23	1,419		840	
	75B-92-24	1,070		1,050	
	75-96-20	<300		<300	
	75-97-5	21,301	18,327	16,200	
		19,800 (D)	17,200 (D)	16,600 (D)	
	75-97-6	<300		<300	
	75-97-7	<300		436	
	69-97-8	<300	<300	<300	
	69-97-21	<300		<300	
	75-98-14	6,778	5,816 6,040 (D)	5,820	
	75-98-15	<300	<300	<300	
	75-99-4	<300	<300	<300	
	75-99-6	3,255	3,540	1,990	
	75-99-6R			3,920	
	75-99-7	6,818	6,083 6,240 (D)	5,610	
	75-99-8	<300	<300	<300	
	75A-00-7	<300	<300	<300	
	69A-00-11	<300	<300	<300	

**Table 11 (Cont'd)**  
**Concentration of Tritium in Groundwater**  
**(Concentrations in pCi/L)**  
**MCL = 20,000 pCi/L**  
**January 2005 through December 2005**

Area	Well No.	FY2005 Qtr 2 Jan-Mar	FY2005 Qtr 3 Apr-Jun	FY2005 Qtr 4 Jul-Sept	FY2006 Qtr 1 Oct-Dec
<b>Groundwater Monitoring Wells</b>					
4	MW76-1	<300		<300	
	76-93-6	4,704		2,300	
	76-93-7	<300		<300	
	78-97-20	1,528		1,390	
	76-98-21	<300	<300	<300	
	76-98-22	<300	<300	<300	
5	MW91-1	<300		<300	
	MW91-2	757		1,270	
	MWP-9	<300	<300	<300	
	MWP-10	<300	<300	<300	
	77-92-10	<300		<300	
	61-92-12	<300	<300	<300	
	77-93-8	<300		<300	
	77-94-5	<300		<300	
	77-94-6	8,278 8,050		6,200 6,000 (D)	
	77-97-9	10,423 9,400 (D)		8,380 8,310 (D)	
	77-97-11	5,470		5,140	
	31-97-17	1,384		1,420	
	31-97-18	<300	<300	<300	
	31-98-17	<300	<300	<300	<200
6	88-93-11A	<300	<300	<300	
8	MWP-2	<300	<300	<300	
	OW3-225	<300	<300	<300	
10	MWP-8	<300	<300	<300	
	25-95-27	<300	<300	<300	
	52-94-10			<300	
	52-95-2B			<300	
11	74-94-7	<300	<300	<300	
	74-94-8	<300	<300	<300	
13	62-92-26	<300	<300	<300	
	62-92-27	<300	<300	<300	

**Table 11 (Cont'd)**  
**Concentration of Tritium in Groundwater**  
**(Concentrations in pCi/L)**  
**MCL = 20,000 pCi/L**  
**January 2005 through December 2005**

Area	Well No.	FY2005 Qtr 2 Jan-Mar	FY2005 Qtr 3 Apr-Jun	FY2005 Qtr 4 Jul-Sept	FY2006 Qtr 1 Oct-Dec
<b>Groundwater Monitoring Wells</b>					
14	MWP-4	<300	<300	<300	
	MWP-5	<300	<300	<300	
	MWP-6	<300	<300	<300	
	MWP-7	<300	<300	<300	
	37-92-6			<300	
	37-92-18A			<300	
	37-94-9			<300	
15	MWP-1	<300	<300	<300	
OS	CD-92-28	<300	<300	<300	
<b>Temporary Groundwater Sampling Points</b>					
3	SB69A-99-1	704		794	746
	SB69A-00-1	<300		<300	
	SB75-02-1	535 501		783	
5	SB31-02-1	842	937	1,150	
	SB31-02-2	737	480	1,120	
	SB31-02-4	1,975	2,093	2,370	
	SB31-02-5	1,939	1,970	2,340	
	SB31-02-6	<300	<300	503	
	SB31-02-7	<300	<300	<300	
	SB31-03-1	1,698	2,930	3,230	
	SB31-03-2	2,275	3,078	3,900	
	SB31-03-3	1,525	1,728		
	SB31-03-4	2,836	2,493	2,230	
	SB77-02-1	<300	<300	<300	
<b>Slope Stability/Indicator Facilities</b>					
5	SSW17-130	664*		1,710	
	SSW19-130	451*		541	
	SSW20-130	666*		1,130	
	SSW21-130	<300*		<300	

**Table 11 (Cont'd)**  
**Concentration of Tritium in Groundwater**  
**(Concentrations in pCi/L)**  
**MCL = 20,000 pCi/L**  
**January 2005 through December 2005**

Area	Well No.	FY2005	FY2005	FY2005	FY2006
		Qtr 2 Jan-Mar	Qtr 3 Apr-Jun	Qtr 4 Jul-Sept	Qtr 1 Oct-Dec
<b>Quality Assurance Samples</b>					
	Rinse Blank	<300	<300	<300	<200
		<300	<300	<300	
		<300		<300	
		<300		<300	

MCL = Maximum contaminant level for drinking water determined by California DHS



= Not Sampled



= Less than minimum detectable activity (MDA)

\* = Grab sample

(D) = Duplicate sample

**Table 12**  
**CONCENTRATION OF METALS IN GROUNDWATER**  
**1st Quarter FY 2006**  
**(All Concentrations in µg/L)**

				Sb	As	Ba	Be	Cd	Cr	Co	Cu	Pb	Hg	Mo	Ni	Se	Ag	Tl	V	Zn
		<b>MCL:</b>		6	50	1000	4	5	50	NS	1000 (a)	15 (b)	2	NS	100	50	100 (a)	2	NS	5000 (a)
		<b>Background**</b>		<2	53(56)*	540	<1	<1	25	9.3	28	<2	<0.2	85(156)*	18	12	<10	<1	62	31
AREA	WELL NO.	LAB	DATE																	
1	71B-98-13	BC	Oct-05	<2	36	290	<1	<1	<10	<50	<10	<1	<0.2	<50	<10	23	<10	<1	<10	<10
	71B-99-3R	BC	Oct-05	<2	45	700	<1	<1	<10	<50	<10	<1	<0.2	<50	18	16	<10	<1	<10	18
	SB71B-03-1	BC	Oct-05	<2	35	540	<1	<1	<10	<50	<10	<1	<0.2	<50	44	12	<10	<5	<10	<10
	SB71B-03-2	BC	Oct-05	<2	10	380	<1	<1	<10	<50	<10	<1	<0.2	<50	<10	22	<10	<1	<10	<10

MCL: Maximum contaminant level for drinking water (determined by California DHS)     = Not detected

(a): secondary MCL

BC: Analysis by BC Laboratories

(b): action level

\* Background concentrations in parentheses represent values for wells screened in the Orinda Formation

NS: Not Specified

\*\* LBNL Maximum Background Level

**Table 13**  
**Groundwater Monitoring Well Results**  
**Polychlorinated Biphenyl Compounds**  
**1st Quarter FY 2006**  
**(Concentrations in µg/L)**

Area	Location	Lab	Date	PCBs (8082)
9	SB51-96-6	BC	Oct-05	16 (PCB-1248)
	SB51-98-1	BC	Oct-05	<0.2
	SB51-98-4	BC	Oct-05	<0.2
	SB51-98-6	BC	Oct-05	<0.2
10	SB16-98-1	BC	Oct-05	<0.2

< = Less than Quantitation Limit

BC = Analysis by BC Laboratories.

**Table 14a**  
**Creek Sampling Results ( µg/L)**  
**VOCs and Metals**  
**1st Quarter FY 2006**

Location	Date	VOCs	Metals																
			Sb	As	Ba	Be	Cd	Cr	Co	Cu	Pb	Hg	Mo	Ni	Se	Ag	Tl	V	Zn
No Name Creek	Oct-05	LT	<2	4.2	68	<1	<1	<10	<50	<10	<1	<0.2	<50	<10	<2	<10	<1	12	<10
Botonical Garden Creek	Oct-05	LT	<2	<2	97	<1	<1	<10	<50	<10	<1	<0.2	<50	<10	<2	<10	<1	17	<10
Chicken Creek - Downstream	Oct-05	LT	<2	<2	110	<1	<1	<10	<50	<10	<1	<0.2	<50	<10	<2	<10	<5	15	16
Chicken Creek - Upstream	Oct-05	LT	<2	<2	68	<1	<1	<10	<50	<10	<1	<0.2	<50	<10	<2	<10	<5	35	16
N.Fork Strawberry Creek - Upstream	Oct-05	LT	<2	2.3	89	<1	<1	<10	<50	<10	<1	<0.2	<50	<10	2.8	<10	<5	24	<10
N.Fork Strawberry Creek - Downstream	Oct-05	LT	<2	2.0	83	<1	<1	<10	<50	<10	<1	<0.2	<50	<10	2.4	<10	<5	20	<10

VOC analyses by LBNL EML

Metals samples were analyzed by BC laboratory.

LT
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 = Less than Quantitation Limit

<
---

 = Not detected

**Table 14b**  
**CONCENTRATION OF TRITIUM IN SURFACE WATER**  
**1st Quarter FY 2006**  
**MCL = 20,000 pCi/L**

Location	Concentration (pCi/L)
No Name Creek	<200
Botanical Garden Creek	<200
Chicken Creek Downstream	273
Chicken Creek Upstream	<200
N.Fork Strawberry Upstream	242
N.Fork Strawberry Downstream	<200

< = Less than minimum detectable activity (MDA)

**Table 15**  
**Sediment Sampling Results (mg/kg)**

1st Quarter FY 2006

Soil Background		Sb	As	Ba	Be	Cd	Cr	Co	Cu	Pb	Hg	Mo	Ni	Se	Ag	Ti	V	Zn	
			<10	24	410	1.1	5.6	120	25	63	57	0.5	<5	270	5.1	3	10	90	140
Location	Sample ID	Date																	
Blackberry Creek	SS-BCECS-10-14-05-1	Oct-05	<10	4.4	91	<1	<1	39	10	26	7.9	<0.13	<5	39	1.4	<1	<10	43	90
	SS-BCECS-10-14-05-2		<10	5.9	77	<1	<1	82	11	47	14	0.15	<5	50	1.1	<1	<10	36	160
	SS-BCECS-10-14-05-3		<10	4.2	77	<1	<1	45	9.2	27	7.8	<0.16	<5	40	1.2	<1	<10	37	95
	SS-BCECS-10-14-05-4		<10	11	110	<1	<1	79	12	31	12	0.34	<5	54	1.6	<1	<10	37	110
	SS-BCECS-10-14-05-5		<10	11	140	<1	<1	150	13	260	20	0.17	<5	59	1.2	<1	<10	40	130
	SS-BCECS-10-14-05-6		<10	12	92	<1	<1	50	12	31	24	0.14	<5	50	1.6	<1	<10	40	110
B71 Catch Basin	CB71Q-1	Oct-05	<10	3.3	150	<1	3.6	120	11	230	880	7900	<5	46	1.1	6.2	<10	32	670
	CB71Q-2		<10	3.8	180	<1	2.5	91	9.1	780	150	2400	<5	53	1.6	1.3	<10	34	880

All samples were analyzed by BC Laboratory.

 = Not detected

**Table 16**  
**LBNL Groundwater Quality Control Samples**  
**Volatile Organic Compounds - EPA Method 8260**  
**1st Quarter FY 2006**  
(bconcentrations in µg/L)

Constituent	MCL	Equipment (Rinseate) Blanks					Trip Blanks		
		Oct-05	Oct-05	Nov-05	Nov-05	Nov-05	Oct-05	Nov-05	Nov-05
<b>Aromatic and Non-Halogenated Hydrocarbons</b>									
Benzene	1	<1	<1	<1	<1	<1	<1	<1	<1
n-Butylbenzene		<1	<1	<1	<1	<1	<1	<1	<1
sec-Butylbenzene		<1	<1	<1	<1	<1	<1	<1	<1
ter-Butylbenzene		<1	<1	<1	<1	<1	<1	<1	<1
1,4-Dichlorobenzene	5	<1	<1	<1	<1	<1	<1	<1	<1
Ethylbenzene	300	<1	<1	<1	<1	<1	<1	<1	<1
Isopropylbenzene		<2	<2	<2	<2	<2	<2	<2	<2
p-Isopropyltoluene		<1	<1	<1	<1	<1	<1	<1	<1
Methyl tert-Butyl Ether	13	<5	<5	<5	<5	<5	<5	<5	<5
Naphthalene		<2	<2	<2	<2	<2	<2	<2	<2
n-Propylbenzene		<1	<1	<1	<1	<1	<1	<1	<1
Toluene	150	<1	<1	<1	<1	<1	<1	<1	<1
1,2,4-Trichlorobenzene	5	<1	<1	<1	<1	<1	<1	<1	<1
1,2,4-Trimethylbenzene		<1	<1	<1	<1	<1	<1	<1	<1
1,3,5-Trimethylbenzene		<1	<1	<1	<1	<1	<1	<1	<1
Xylenes, total	1750	<2	<2	<2	<2	<2	<2	<2	<2
Total Aromatic Hydrocarbons									
<b>Halogenated Non-Aromatic Hydrocarbons</b>									
Carbon Tetrachloride	0.5	<1	<1	<1	<1	<1	<1	<1	<1
Chloroform	100	<3	<3	<3	<3	<3	<3	<3	<3
Dibromochloromethane		<1	<1	<1	<1	<1	<1	<1	<1
1,1-Dichloroethane	5	<1	<1	<1	<1	<1	<1	<1	<1
1,2-Dichloroethane	0.5	<2	<2	<2	<2	<2	<2	<2	<2
1,1-Dichloroethene	6	<1	<1	<1	<1	<1	<1	<1	<1
cis-1,2-Dichloroethene	6	<1	<1	<1	<1	<1	<1	<1	<1
trans-1,2-Dichloroethene	10	<1	<1	<1	<1	<1	<1	<1	<1
Methylene Chloride	5	<1	<1	<1	<1	<1	<1	<1	<1
Tetrachloroethene	5	<1	<1	<1	<1	<1	<1	<1	<1
1,1,1-Trichloroethane	200	<1	<1	<1	<1	<1	<1	<1	<1
1,1,2-Trichloroethane	5	<1	<1	<1	<1	<1	<1	<1	<1
Trichloroethene	5	<1	<1	<1	<1	<1	<1	<1	<1
Freon-113	1200	<1	<1	<1	<1	<1	<1	<1	<1
Vinyl Chloride	0.5	<1	<1	<1	<1	<1	<1	<1	<1
Total Halogenated Hydrocarbons									
Total Concentration of VOCs									

MCL = Maximum contaminant level for drinking water

All analyses by LBNL EML unless otherwise noted

< = Less than Quantitation Limit