

**Report**

# **2008 Annual Progress Report**

**Former Raytheon Facilities  
350 Ellis Street  
Mountain View, California**

**Prepared for:  
Raytheon Company**

**15 April 2009**

**Project No. 23016-2100**



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15 April 2009

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*RE: Raytheon Site Specific 2008 Annual Progress Report  
Former Raytheon Facilities  
350 Ellis Street, Mountain View, California  
Project Number 23016-2100*

Dear Ms. Lee:

Enclosed are three copies of the 2008 Annual Progress Report for the Raytheon site specific work performed from 1 January through 31 December 2008 at the groundwater treatment system located at 350 Ellis Street in Mountain View, California.

If you have any questions regarding this transmittal, please contact me.

Very truly yours,



Greg S. Taylor  
Environmental Program Manager

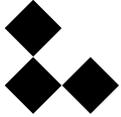
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Enclosure

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## **2008 Annual Progress Report**

### **Former Raytheon Facilities 350 Ellis Street, Mountain View, California**

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# TABLE OF CONTENTS

<b>LIST OF TABLES .....</b>	<b>i</b>
<b>LIST OF FIGURES.....</b>	<b>ii</b>
<b>LIST OF APPENDICES .....</b>	<b>iv</b>
<b>1. INTRODUCTION .....</b>	<b>1</b>
1.1. Site Background.....	1
1.2. Local Hydrogeology .....	2
1.3. Summary of Onsite Remedial Actions .....	2
1.3.1. Soil.....	3
1.3.2. Groundwater .....	3
1.3.3. Air .....	5
1.4. Summary of 2008 Activities and Deliverables.....	7
<b>2. GROUNDWATER EXTRACTION AND TREATMENT SYSTEM .....</b>	<b>10</b>
2.1. System Description and Performance.....	10
2.1.1. Treatment System Sampling and Mass Removal .....	10
2.1.2. System Performance .....	11
2.2. Treatment System Operations and Maintenance .....	11
2.3. Hydraulic Control and Capture Zone Analysis .....	12
2.3.1. Methodology.....	12
2.3.2. Estimated Capture Zones .....	13
2.3.2.1. Flow Budget Calculations.....	14
2.3.2.2. Well Loss Calculations .....	15
2.3.3. Horizontal (Slurry Wall) and Vertical (Aquitard) Groundwater Gradients.....	15
2.4. Onsite VOC Concentrations .....	17
2.4.1. Chemical Data Evaluation and Trend Analysis.....	17
2.4.2. Historical Data Summary .....	17
2.5. Quality Assurance/ Quality Control .....	17
<b>3. ADDITIONAL ACTIVITIES CONDUCTED IN 2008 .....</b>	<b>19</b>
<b>4. PROBLEMS ENCOUNTERED .....</b>	<b>21</b>
4.1. Extraction well flow rates .....	21
4.2. Treatment System Operation .....	21
<b>5. TECHNICAL ASSESSMENT.....</b>	<b>23</b>
5.1. Is the Remedy Functioning as Intended?.....	23
5.2. Are Capture Zones Adequate?.....	24

5.3. Are Vertical Gradients Inside and Gradients Across the Slurry Walls  
Appropriate? ..... 24

5.4. Are Concentrations Decreasing Over Time? ..... 25

**6. CONCLUSIONS AND RECOMMENDATIONS ..... 26**

**7. ACTIVITIES PLANNED FOR 2009 ..... 27**

**REFERENCES**

**TABLES**

**FIGURES**

**APPENDICES**

---

**LIST OF TABLES**

---

<b><u>TABLE NO.</u></b>	<b><u>TITLE</u></b>
1	Average Extraction Well Flow Rates
2	2008 Groundwater Treatment System Analytical Data
3	Cumulative VOC Mass Removal
4	2008 Groundwater Elevations
5	2008 Capture Zone Width Calculation
6	2008 Water Balance Results
7	Well Loss Calculations
8	Differential Water Levels in Well Pairs across the Slurry Wall
9	Differential Water Levels in Well Pairs across the Aquitard
10	Monitoring and Reporting Schedules
11	Summary of 2008 Site-Specific Monitoring Well VOC Data
12	TCE Concentration Comparisons
13	2008 Air Sampling Results

## LIST OF FIGURES

<u>FIGURE NO.</u>	<u>DRAWING NO.</u>	<u>TITLE</u>
1	23-016-A38	Site Location Map
2	23-016-B15	Basemap
3	23-016-B37	Property Boundary
4		TCE Concentrations in Groundwater Treatment System Influent Since 2001
5		Total Influent Groundwater Concentrations
6		Cumulative VOC Mass Removal
7	23-016-B171	Potentiometric Surface Map, "A" Aquifer, 27 March
8	23-016-B172	Potentiometric Surface Map, "B1" Aquifer, 27 March
9	23-016-B173	Potentiometric Surface Map, "A" Aquifer, 20 November
10	23-016-B174	Potentiometric Surface Map, "B1" Aquifer, 20 November
11	23-016-B175	Potentiometric Surface Map, Upper "B2" Aquifer, 27 March
12	23-016-B176	Potentiometric Surface Map, Lower "B2" Aquifer, 27 March
13	23-016-B177	Potentiometric Surface Map, "B3" Aquifer, 27 March
14	23-016-B178	Potentiometric Surface Map, Upper "B2" Aquifer, 20 November
15	23-016-B179	Potentiometric Surface Map, Lower "B2" Aquifer, 20 November
16	23-016-B180	Potentiometric Surface Map, "B3" Aquifer, 20 November
17	23-016-B31	Well Cluster and Well Pair Map
18		Water Elevation Differences Across the Slurry Wall in the "A" Aquifer

**LIST OF FIGURES**

<b><u>FIGURE NO.</u></b>	<b><u>DRAWING NO.</u></b>	<b><u>TITLE</u></b>
19		Water Elevation Differences Across the Slurry Wall in the "B1" Aquifer
20		Water Elevation Differences Across the "A/B1" Aquitard
21		Water Elevation Differences Across the "B1/B2" Aquitard
22		Water Elevation Differences Between the Upper and Lower "B2" Aquifers
23	23-016-B181	2008 TCE Concentrations, "A" Aquifer
24	23-016-B182	2008 TCE Concentrations, "B1" Aquifer
25	23-016-B183	2008 TCE Concentrations, Upper "B2" Aquifer

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## LIST OF APPENDICES

<u>APPENDIX</u>	<u>TITLE</u>
A	2008 Annual Report Remedy Performance Checklist
B	Laboratory Analytical Reports
C	Groundwater Hydrographs
D	Historical Groundwater Quality Data and Plots
E	Quality Assurance/Quality Control Report

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# 2008 ANNUAL PROGRESS REPORT FORMER RAYTHEON FACILITIES 350 ELLIS STREET MOUNTAIN VIEW, CALIFORNIA

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## 1. INTRODUCTION

This Annual Progress Report was prepared by Locus Technologies on behalf of Raytheon Company (Raytheon) for the former Raytheon facilities located at 350 Ellis Street in Mountain View, California (Figure 1). This progress report contains a summary of site activities and data from January 1, 2008, through December 31, 2008. On May 6, 2005, the U.S. Environmental Protection Agency (EPA) agreed to change the reporting frequency for the Middlefield-Ellis-Whisman (MEW) site to annual, and requested specific items to be included in the report. This annual report fulfills the provisions specified in the May 6, 2005 EPA correspondence.

### 1.1. Site Background

The former Raytheon site located at 350 Ellis Street in Mountain View, California is approximately 18 acres (Figure 1). Mountain View is a town of approximately 70,000 residents, located in Santa Clara County. The former Raytheon facilities are part of the MEW site, where a number of companies were involved in activities requiring storage, handling, and use of chemicals. These companies are referred to as the MEW Companies in this document.

The facility at 350 Ellis Street was constructed around 1959 and was operated by Raytheon from 1961 to 1997 as a semiconductor manufacturing facility. Raytheon also occupied the property at 415 East Middlefield Road (Lot 5) from 1968 to 1983 as a semiconductor manufacturing facility. An acid neutralization system was located at 401 East Middlefield Road (Lot 4) and was jointly used by both Intel Corporation and Raytheon from 1968 to 1974, when Intel ceased the use of the system and commenced the use of its own system. Raytheon continued to use the acid neutralization system until approximately 1980. This document reports activities and data for the 350 Ellis Street site. Information on 401/415 East Middlefield Road can be found in the annual report submitted by Intel Corporation.

Agricultural development in this area began in the mid-1800s. Until about 1960, orchards, low crops, and greenhouse gardening dominated the area. North of U.S. Highway 101, Moffett Federal Airfield (Moffett Field) was commissioned in 1933. Ames Research Center, also north of the highway, was originally opened in 1940 adjacent to Moffett Field as a laboratory of the National Advisory Committee on Aeronautics.

Several buildings at the MEW site have changed ownership and occupancy. For the former Raytheon site at 350 Ellis Street, the property was sold to Fairchild Semiconductor Corporation in 1997. The facility was demolished in 2000, when Veritas Software Corporation purchased the property and built an office campus consisting of five buildings (A, B, C, D and E) and a multi-level garage. Symantec acquired Veritas in 2005 and now owns the property.

## 1.2. Local Hydrogeology

Aquifers in the MEW area include of shallow and deep aquifer systems separated by a laterally extensive aquitard approximately 40 feet thick. The shallow aquifer system is generally less than 160 feet below ground surface (bgs) south of U.S. Highway 101, and generally less than 100 feet bgs north of U.S. Highway 101. Subdivisions within the shallow aquifer have been designated the "A", "B1", "B2", and "B3" Aquifers. The regional aquitard is designated the "B/C" Aquitard. The water-bearing zones below the "B/C" Aquitard are termed the "C" Aquifer and the Deep Aquifer.

The direction of groundwater flow at the MEW site is generally to the north. However, the presence of various groundwater extraction systems near the former Raytheon sites and the slurry walls at 350 Ellis Street and 369 North Whisman Road has altered the local direction of the groundwater gradient. At 350 Ellis Street, the groundwater in the "A" and "B1" Aquifers is contained by the slurry wall enclosure and groundwater extraction wells RAY-1A and RAY-1B1 (Figure 2).

## 1.3. Summary of Onsite Remedial Actions

The record of decision (ROD) for the MEW site was issued in May 1989. Remedial Action Objectives (RAOs) were developed as a result of data collected during the Remedial Investigation (HLA, 1988) to aid in the development and screening of remedial alternatives to be considered for the ROD. The Feasibility Study (Canonie, 1988) for the MEW site lists the RAOs to be:

1. Protection of potential potable water supply;
2. Remediation or control of relatively elevated concentrations of chemicals present in localized vadose zone soils below the ground surface that could migrate into the shallow groundwater system;

3. Remediation or control of groundwater, which contains elevated concentrations of chemicals, including control of discharge of such groundwater into surface water.

For the vadose soils, the ROD selects two remedial technologies: 1) in situ soil vapor extraction (SVE) with treatment by vapor-phase granular activated carbon (GAC), and/or 2) excavation with treatment by aeration. The cleanup levels for soils containing TCE have been established in the ROD to be 1 milligram per kilogram (mg/kg) for soils contained within slurry wall enclosures, and 0.5 mg/kg for soils outside slurry walls.

For groundwater, the ROD proposes remediation and hydraulic control using groundwater extraction and groundwater treatment by air stripping or liquid-phase GAC. The cleanup level for groundwater containing TCE at the site is 5 micrograms per liter ( $\mu\text{g/L}$ ) in the shallow aquifers, and 0.8  $\mu\text{g/L}$  in the deep aquifers.

Remediation at the former Raytheon facility locations includes mitigation measures that have addressed chemicals in the groundwater, soils, and air. These mitigation measures are implemented according to specifications.

### ***1.3.1. Soil***

**Soil Vapor Extraction Pilot Test (1992):** In November 1992, Raytheon conducted a soil vapor extraction (SVE) pilot study that involved both operation of individual wells and a combination of several wells. Following the study, SVE was selected for soil remediation at the site.

**Soil Vapor Extraction:** A SVE system was installed and began operating in 1996 at the 350 Ellis Street property and off the property, immediately north of the slurry wall. This system included 135 vapor extraction wells and a vapor treatment system consisting of two 8,000-pound vapor-phase GAC units (GT, 1996). The SVE system was decommissioned in 2000 after it had removed approximately 3,000 pounds of VOCs from the soils.

**Soil Excavation:** TCE contaminated soil was discovered adjacent to the eastern and southern walls of the former loading dock in March 2000, during the demolition of the slab and foundation of the former building. Approximately 438 tons of soil were excavated, characterized, and transported to Forward Landfill (a class II facility) for disposal.

### ***1.3.2. Groundwater***

**Groundwater Extraction:** Groundwater extraction wells were first installed at the site in the "B1" Aquifer in March 1986, and in the "A" Aquifer in July 1986. Until 2000, extracted groundwater was

treated onsite using air stripping followed by a liquid-phase carbon adsorption system to remove volatile organic chemicals (VOCs). The air stripper operated under a permit from the BAAQMD, and discharge of the treated effluent was made pursuant to a National Pollutant Discharge Elimination System (NPDES) permit. Treated water was discharged to Stevens Creek via the storm sewer system.

In 1996, Raytheon added three additional extraction wells outside the slurry wall (RAY-1A, RAY-1B1, and I-1B2) as part of implementation of its facility-specific remedial design plans (GT, 1995). Due to the redevelopment of the area in year 2000, the groundwater treatment system was relocated to the southwest corner of the property. The relocated treatment system consisted of a low-profile air stripper with two liquid phase GAC vessels. The off-gas from the air stripper was treated through vapor phase GAC vessels. The locations of extraction wells, conveyance piping, and groundwater treatment system are shown on Figure 3.

On May 5, 2003, Raytheon received EPA's approval to shut down the air stripper and the carbon system so that the treatment train could be modified. Between May 20, 2003 and October 13, 2003, a temporary liquid phase carbon system consisting of two 5,000-pound (lb) vessels and one 2,000-lb vessel was operated to treat the extracted groundwater. The treatment compound was modified in fall 2003, and a new oxidation system was installed and began operations in December 2003. Because the system oxidizes the VOCs, no hazardous wastes are generated, and no VOCs are emitted into the air. The oxidation system is followed by a 2,000-lb liquid phase GAC vessel. Effluent is discharged under an NPDES permit to Stevens Creek via the storm sewer system.

To date, more than 14,596 lbs of VOCs have been removed from the groundwater at 350 Ellis Street. Influent concentrations have decreased since the current groundwater extraction regime (extraction well locations and pumping rates) was implemented in 2001 (Figure 4). Influent concentrations have been approaching asymptotic levels since 2005..

**Slurry Wall:** Slurry wall construction began at the site on June 12, 1987 and continued through the completion of backfilling on September 30, 1987. Details of the construction and test results are presented in the Raytheon Slurry Wall Construction Report (Golder, 1988). In summary, the wall was constructed to a depth of 100 feet below ground surface around the site perimeter, encompassing all potential chemical source areas at the facility. Backfill material consisted of a low permeability soil-bentonite mixture. The slurry wall penetrated the "A" and "B1" Aquifers, and partially penetrated the "B2" Aquifer. Laboratory permeability test results of over 190 backfill material samples ranged from  $2 \times 10^{-9}$  centimeters per second (cm/s) to  $8 \times 10^{-8}$  cm/s, indicating that the design specification of less than  $1 \times 10^{-7}$  cm/s was achieved.

The integrity of the slurry wall was verified by a program of *in situ* testing conducted during February 1988 to determine the geotechnical and hydraulic properties of the barrier material. Permeabilities estimated from the dissipation of pore pressure range between  $1.5 \times 10^{-9}$  and  $5.3 \times 10^{-8}$  cm/s, significantly better than the specified design maximum of  $1 \times 10^{-7}$  cm/s.

**Potassium Permanganate Injection:** Two rounds of potassium permanganate ( $\text{KMnO}_4$ ) injection tests were performed on April 21, 1999, and July 9, 1999 (IT, 2000). The objective was to evaluate the effectiveness of  $\text{KMnO}_4$  in removing VOCs in groundwater and saturated soil using the SVE wells before the property redevelopment construction started. The test was implemented in the northwest corner of the 350 Ellis Street site. A total of six temporary wells, two vapor extraction wells, and three existing monitoring/extraction wells were used during this study. Soil and groundwater sampling was performed before and after the  $\text{KMnO}_4$  injection to assess the changes in VOC concentrations.

On an average, the TCE concentrations in soil decreased by approximately 19 percent after the  $\text{KMnO}_4$  injection. Reductions in TCE concentrations in groundwater were noticed in three of the wells while two of the wells showed only minor changes overall and others showed increasing TCE concentrations. The TCE concentration reduction in wells away from the injection points was less than expected in both magnitude and extent. The concentration of metals and most field parameters in soils and groundwater experienced little change after the  $\text{KMnO}_4$  injection.

The results of the sampling events indicated that a 30% VOC reduction was achieved and no adverse effects on groundwater quality were observed.

### 1.3.3. Air

On October 3, 2002, the EPA requested a work plan "to conduct a human health risk assessment to evaluate the groundwater-to-indoor air exposure pathway." Subsequently, the MEW Companies submitted a unified work plan on December 2, 2002 (Locus, 2002), and a revision on April 16, 2003 (Locus, 2003a), to respond to EPA's February 17, 2003 comments.

A report documenting and interpreting the spring 2003 air sample results for the site was submitted to EPA on August 15, 2003 (Locus, 2003b); a report documenting the fall results was submitted on January 9, 2004 (Locus, 2004a). During the fall sampling event, some buildings showed indoor air concentrations slightly higher than EPA's interim action level for TCE of  $2.7 \mu\text{g}/\text{m}^3$  because these buildings were not ventilated (these buildings were either vacant or sampled on the weekend). In such instances, additional samples collected after the ventilation systems were re-started showed concentrations below the interim action level. Additional samples collected on weekdays during normal occupancy showed TCE concentrations significantly below the interim action level.

Some pathway samples collected in unoccupied utility rooms at the Ellis Street property during the initial 2003 sampling showed concentrations of TCE above the interim action level. Although exposure in these utility rooms is infrequent and is limited in duration, Raytheon implemented voluntary mitigation measures in these utility rooms. Conduits in the utility rooms at the Ellis Street property are connected directly to vaults outside the buildings. Raytheon collected air samples from the vaults, and the results showed concentrations similar to those in the utility rooms, suggesting the outside vaults as the source. Accordingly, in August 2003 Raytheon sealed utility conduits entering the utility rooms from exterior vaults, and collected confirmation samples. This mitigation measure resulted in a significant decrease in concentrations in these utility rooms by up to two orders of magnitude. TCE concentrations in some utility rooms remained slightly above the interim action level. The action level, however, assumes an exposure period of 10 hours per day, 250 days per year, for 21 years, which is not representative of the usage of these utility rooms, where exposure is limited, and where the utility rooms are accessed only on an as-needed basis. Nonetheless, an evaluation of alternatives to further decrease concentrations was conducted. Air purification canisters were installed in the four utility rooms that showed TCE concentrations higher than the interim action level. The first unit was installed in 2004 as a trial phase; the additional three units were installed in 2005. Confirmation sampling has shown further decreases in TCE concentrations to below the interim action level.

Because the majority of the indoor air samples at the Ellis property were collected on the weekend while the ventilation system was off, an additional round of indoor, outdoor and pathway samples was collected on a weekday in September 2006. All indoor TCE concentrations were significantly below the interim action level.

To further confirm the results of weekday sampling, a total of 45 air samples were collected over a 10-hour period at 350-380 Ellis Street (Locus, 2008d) on February 20, 2008. This included 21 indoor, 10 outdoor, and 12 pathway samples. The analytical results confirmed previous findings that concentrations during normal weekday occupancy are below long-term exposure goals. One February 2008 sample collected in utility room D106 contained  $6.4 \mu\text{g}/\text{m}^3$  TCE, which is higher than the interim action level. Another air sample was collected from utility room D106 on July 9, 2008. The July 2008 sample contained only  $1.7 \mu\text{g}/\text{m}^3$  TCE, less than the interim action level of  $2.7 \mu\text{g}/\text{m}^3$ . This utility room is not occupied. The results indicate that risks from inhalation exposure due to vapor intrusion of VOCs should not be concern to occupants of the property (Locus, 2008d). The results of 2008 indoor air sampling at 350-380 Ellis Street are reported in Table 13.

Appendix A, the annual remedy performance checklist, contains a summary of all past and current onsite remedial actions.

## 1.4. Summary of 2008 Activities and Deliverables

The following activities were completed at the 350 Ellis Street facility during this reporting period:

January	<ul style="list-style-type: none"> <li>7<sup>th</sup> – 2,000-lb liquid-phase GAC vessel was changed out; the system was shutdown for approximately 30 hours.</li> <li>21<sup>st</sup> - Monthly treatment system sampling.</li> <li>30<sup>th</sup> – 2007 Annual NPDES report was submitted to RWQCB (Locus, 2008a).</li> </ul>
February	<ul style="list-style-type: none"> <li>18<sup>th</sup> - Monthly treatment system sampling.</li> <li>20<sup>th</sup> - Raytheon collected an additional round of air samples on a weekday in all buildings at the Site while the ventilation system was operating.</li> </ul>
March	<ul style="list-style-type: none"> <li>17<sup>th</sup> - Monthly treatment system sampling.</li> <li>27<sup>th</sup> - Measured semiannual water elevations per the regional monitoring program.</li> <li>31<sup>st</sup> – Samples were collected from R-39B2, R-27B2, R-68B2, and RE-1B2, the B2 aquifer wells that are sampled every five years.</li> </ul>
April	<ul style="list-style-type: none"> <li>15<sup>th</sup> – 2007 Annual Report was submitted to EPA (Locus, 2008b).</li> <li>16<sup>th</sup> - Monthly treatment system sampling.</li> <li>30<sup>th</sup> – Submitted first quarter 2008 NPDES report to RWQCB (Locus, 2008c).</li> </ul>
May	<ul style="list-style-type: none"> <li>6<sup>th</sup> - 2,000-lb liquid-phase GAC vessel was changed out; the system was shutdown for approximately 30 hours.</li> <li>14<sup>th</sup> – MEW All Parties meeting attended by Raytheon and Locus representatives regarding vapor intrusion.</li> <li>20<sup>th</sup> - Monthly treatment system sampling.</li> </ul>
June	<ul style="list-style-type: none"> <li>5<sup>th</sup> - EPA requested a RPO Report from the MEW Companies (EPA, 2008b). EPA further defined their requirement in the June 12, 2008, All-Parties meeting.</li> <li>12<sup>th</sup> - MEW All Parties meeting attended by Raytheon and Locus representatives.</li> <li>16<sup>th</sup> - Monthly treatment system sampling.</li> <li>26<sup>th</sup> - MEW All Parties meeting attended by Raytheon and Locus representatives.</li> <li>27<sup>th</sup> - Submitted request to EPA for temporary shut down of groundwater treatment system for evaluation of steady-state conditions in the absence of groundwater extraction.</li> </ul>
July	<ul style="list-style-type: none"> <li>7<sup>th</sup> - 2,000 lb liquid-phase GAC vessel was changed out; the system was shutdown</li> </ul>

	<p>for approximately 30 hours.</p> <ul style="list-style-type: none"> <li>• 9<sup>th</sup> - Monthly treatment system sampling.</li> <li>• 14<sup>th</sup> to September 22<sup>nd</sup> – Treatment system was shut down as part of the groundwater investigation approved by EPA. During this period water levels were measured at selected wells on Mondays, Wednesdays, and Fridays until steady-state conditions were reached.</li> <li>• 22<sup>nd</sup> - MEW All Parties teleconference meeting attended by Raytheon and Locus representatives.</li> <li>• 30<sup>th</sup> - Submitted second quarter 2008 NPDES report to RWQCB (Locus, 2008e).</li> </ul>
August	<ul style="list-style-type: none"> <li>• Treatment system remained shut down for the steady-state groundwater investigation.</li> <li>• 29<sup>th</sup> - Raytheon submitted the RPO Report for the site (Locus, 2008f).</li> </ul>
September	<ul style="list-style-type: none"> <li>• 22<sup>nd</sup> - The site-wide water levels appeared to have reached a steady state. Water levels were measured from all of the wells at the Site, and in wells within the capture zones of wells RAY-1A and RAY-1B1.</li> <li>• 23<sup>rd</sup> to October 16<sup>th</sup> - Extraction wells RAY-IB1, I-IB2, RAY-1A, and R-65B1B2 were restarted. Samples were collected from 14 wells (24A, R-27A, R-58A, R-69A, R-72A, RE-5A, RE-9A, RE-21A, RE-22A, RE-25A, RP-21B, RP-23B, and RP-24B) for geochemical analysis.</li> <li>• 29<sup>th</sup> - Groundwater elevations were measured site-wide to determine the influence of extraction wells RAY-IB1, I-IB2, RAY-1A, and R-65B1B2 in the "A" and "B1" Aquifers inside the slurry wall enclosure.</li> <li>• 29<sup>th</sup> - A pump test was conducted using RE-25A as the pumping well, and wells R-58A, R-69A, RE-5A, and R-72A as observation wells. Transducers set to record groundwater elevations every minute were placed in each of the 5 wells. A barometric logger was placed on a table in the aboveground treatment system enclosure to concurrently record atmospheric pressure.</li> <li>• 24<sup>th</sup> - Monthly treatment system sampling.</li> </ul>
October	<ul style="list-style-type: none"> <li>• 6<sup>th</sup> – A second pump test was conducted using RE-24A as the pumping well, and wells R-69A, R-72A, and RE-5A as the observation wells. The procedures for the previous pump test were also followed for this pump test.</li> <li>• 13<sup>th</sup> - Normal operation of the groundwater extraction and treatment system resumed.</li> <li>• 14<sup>th</sup> - Meeting attended by Raytheon and EPA.</li> <li>• 15<sup>th</sup> - Monthly treatment system sampling.</li> </ul>

	<ul style="list-style-type: none"> <li>• 30<sup>th</sup> - Submitted third quarter 2008 NPDES report to RWQCB (Locus, 2008g).</li> <li>• 31<sup>st</sup> - Replaced carbon canisters on indoor air purification units in room B104, C110, and from one section of room A112.</li> </ul>
November	<ul style="list-style-type: none"> <li>• 3<sup>rd</sup> - 2,000-lb liquid-phase GAC vessel was changed out; the system was shutdown for approximately 30 hours.</li> <li>• 11<sup>th</sup> to 14<sup>th</sup> – MEW RGRP annual sampling event.</li> <li>• 17<sup>th</sup> - Monthly treatment system sampling.</li> <li>• 17<sup>th</sup> - Replaced carbon canister on air purification unit from 2nd section of room A112.</li> <li>• 20<sup>th</sup> - Measured semiannual water elevations per the regional monitoring program.</li> </ul>
December	<ul style="list-style-type: none"> <li>• 1<sup>st</sup> - Evaluation of Remedial Alternatives and Work Plan for the Pilot test was submitted to EPA (Locus, 2008h).</li> <li>• 3<sup>rd</sup> - MEW All Parties meeting attended by Raytheon and Locus representatives.</li> <li>• 8<sup>th</sup> - Annual site-specific monitoring well sampling.</li> <li>• 15<sup>th</sup> – Evaluation of the Physical and Chemical Properties of the "A" and "B1" Aquifers report was submitted to EPA (Locus, 2008i).</li> <li>• 17<sup>th</sup> - Monthly treatment system sampling.</li> </ul>

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## 2. GROUNDWATER EXTRACTION AND TREATMENT SYSTEM

### 2.1. System Description and Performance

The groundwater treatment system consists of a hydrogen peroxide/ozone oxidation system and a liquid-phase GAC unit. The oxidation system consists of one skid-mounted high-pressure oxidation (HiPOx™) unit, designed and manufactured by Applied Process Technology, Inc., followed by one 2,000-lb liquid-phase GAC vessel. The hydrogen peroxide/ozone oxidation system operates by injecting 25% hydrogen peroxide and ozone generated from liquid oxygen into ten 2-inch pipeline reactors. During the oxidation process, the VOCs and 1,4-dioxane are oxidized. Following oxidation, the treated groundwater flows through a 2,000-lb GAC vessel for final polish. Treated effluent from the groundwater treatment system is conveyed to Stevens Creek for discharge under the NPDES permit.

The oxidation system was installed in late November 2003 and began full operation in December 2003. A start-up report was submitted to the RWQCB and EPA in January 2004. All sampling procedures and start-up procedures were in accordance with the RWQCB's *Self-Monitoring Program for Discharges of Extracted and Treated Groundwater Resulting From the Cleanup of Groundwater Polluted by Volatile Organic Compounds, NPDES No. CAG912003, Order No. 99-051*.

Groundwater is extracted from eight extraction wells and treated at the groundwater treatment system. Five extraction wells are located inside, and three outside, of the slurry wall enclosure (Figures 2 and 3). In 2008, the groundwater treatment system operated at approximately 30 gpm. Groundwater flow rates for the extraction wells and the average monthly treatment system flow rates are presented in Table 1.

#### 2.1.1. Treatment System Sampling and Mass Removal

Monthly treatment system samples are collected from the influent (RAYINF), effluent of the HiPOx™ system (RAYMID), and system effluent (RAYEFT). Monthly samples are analyzed for VOCs using EPA Method 8260B for the EPA 8010 analyte list. The effluent sample collected at RAYEFT in November 2008 was analyzed for 1,4-dioxane and semi-volatile organic compounds using EPA

Methods 8270C-SIM and 8270C, respectively. Results for the system influent and effluent sampling points are presented in Table 2.

Approximately 374 lbs of VOCs were removed by the treatment system in 2008. A total of 14,596 lbs of VOCs have been removed by the groundwater extraction system since 1986. Table 3 and Figures 5 and 6 present a summary of the VOC influent concentration and cumulative VOC mass removed for the Raytheon groundwater treatment system since 1986.

### **2.1.2. System Performance**

The treatment system was shutdown from July 14, 2008, to September 22, 2008, as part of an investigation approved by EPA. The system was also shutdown during the scheduled carbon change-outs, system maintenance, and unexpected shutdowns for well and/or system repairs during 2008.

## **2.2. Treatment System Operations and Maintenance**

Raytheon is conducting long-term monitoring and maintenance activities in accordance with the current operation and maintenance (O&M) manual (Locus, 2004b). The primary activities associated with O&M include:

- Monthly groundwater treatment system sampling, in accordance with NPDES permit requirements. Laboratory analytical reports for sampling conducted in 2008 are included in Appendix B.
- Semiannual groundwater elevation measurements of all accessible monitoring wells, and quarterly groundwater elevation measurements of slurry wall well pairs (defined as a pair of wells, one on the inside and one on the outside of the wall to monitor direction of groundwater gradient across the wall), and vertical well clusters (wells located near each other but screened in different hydraulic units to monitor the direction of the groundwater gradient between the units). Historical well hydrographs are included in Appendix C.
- Groundwater sampling of a network of monitoring wells. Laboratory analytical reports are included in Appendix B. Historical water quality concentrations from 1992 to the present are included in Appendix D for the chemicals of concern. Also included in Appendix D are concentration trend plots for TCE, cis-1,2-DCE and vinyl chloride.
- Inspecting the conditions of the groundwater monitoring and extraction wells (Figures 2 and 3).
- Inspecting and monitoring the treatment system operation.

Soil cleanup was achieved by implementing a SVE system. The system met its cleanup objective and was decommissioned in 2000. In 2004, EPA confirmed that soil cleanup at the MEW site is complete (EPA, 2004). Therefore, there are no ongoing O&M activities for SVE or the soil cleanup actions. The remaining component of the cleanup is groundwater extraction, as chemicals still remain in the groundwater at the site. The primary O&M activities include monitoring the groundwater and inspecting and maintaining the groundwater treatment system.

Raytheon has historically maintained inward hydraulic gradients across the slurry wall. Since 2000, when the property was developed, an outward gradient has been observed across the northern slurry wall. Although outward gradients have been observed, the RAOs will not be impacted for the following reasons:

1. Raytheon has installed extraction wells in the "A" and "B1" Aquifers immediately downgradient of the slurry wall (RAY-1A and RAY-1B1). Capture zone analyses have demonstrated that these wells provide an adequate capture of the groundwater immediately downgradient of the slurry wall.
2. The slurry wall is a low-permeability wall that results in minimal chemical migration across its walls, even if the gradient is outward. The flux of chemicals across a low-permeability wall is small. Furthermore, groundwater and chemicals tend migrate along easier pathways: inside the slurry wall enclosure, chemicals would preferentially move towards extraction wells RE-23A, RE-24A, RE-25A, and RE-5A rather than through the low-permeability slurry wall.

The slurry wall and the pumping activities within its enclosure and the groundwater extraction wells immediately downgradient of the slurry wall physically contain chemicals.

## **2.3. Hydraulic Control and Capture Zone Analysis**

### ***2.3.1. Methodology***

Hydraulic control and groundwater capture at 350 Ellis Street is evaluated according to EPA's 2008 guidance, *A Systematic Approach for Evaluation of Capture Zones at Pump and Treat Systems, Final Project Report* (EPA, 2008a). Multiple lines of evidence are used in this evaluation:

- Groundwater elevations are used to assess slurry wall gradients within the same aquifer and to assess vertical gradients across aquitards;
- Comparison of interpreted capture zone to target capture zone using potentiometric surface maps, capture zone width calculations, and flow budget calculations; and
- Groundwater concentration trends.

### 2.3.2. Estimated Capture Zones

Table 4 summarizes the groundwater level measurement data for this reporting period. Groundwater elevation contours for the semiannual measurements, collected in March and November 2008, are included on Figures 7 through 10 for the "A" and "B1" Aquifers and Figures 11 through 16 for the Upper "B2", Lower "B2", and "B3" Aquifers.

The capture zones for March and November 2008 were estimated using capture zone width calculations (and evaluation of the groundwater elevation contours).

The extent of a capture zone upgradient of an extraction well ( $X_0$ ) is determined by (EPA, 2008a):

$$X_0 = \frac{-Q}{2\pi Ti};$$

Where:

- $Q$  is the well's extraction rate (gpd),
- $T$  is the transmissivity of the aquifer (gpd/ft),
- $i$  is the hydraulic gradient of the aquifer (unitless).

The distance from the well to the lateral extent of the capture zone ( $Y_{well}$ ), perpendicular to the direction of groundwater flow, is determined by (EPA, 2008a):

$$Y_{well} = \frac{\pm Q}{4Ti}.$$

The width of the capture zone at the well location is  $2Y_{well}$ . EPA (2008a) also describes an equation to determine the maximum width of the capture zone. However, this calculation is not applicable to this site because of the presence of the slurry wall upgradient of the well. The results of the capture zone width calculations are shown in Table 5. The capture zones of wells RAY-1A and RAY-1B1 are depicted on Figures 7 through 10.

RAY-1A and RAY-1B1 were placed to capture groundwater along the downgradient boundary of the Raytheon slurry wall (GT, 1995). In general, these wells capture the groundwater along the northern slurry well boundary. In November 2008, the extraction rate from RAY-1A was lower than usual, resulting in a smaller capture zone. During an inspection of the extraction well, field personnel

reported that the well flow meter required maintenance. The meter was replaced immediately after the November water elevation monitoring event, and the pump was replaced in January 2009. These modifications resulted in some improvement in the extraction well flow rate. Additional well maintenance, including redevelopment of the well, is planned for April 2009. After the required maintenance has been performed, the extraction rate at RAY-1A is anticipated to return to previous values, and the capture zone is anticipated to widen to be similar to the March 2008 capture zone.

### ***2.3.2.1. Flow Budget Calculations***

Water balance calculations were performed to verify the estimated capture zones for the 350 Ellis Street site by comparing the groundwater flux flowing into the site with the volume of groundwater removed from extraction wells RAY-1A and RAY-1B1.

Theoretically, inflow to the aquifer could be caused by aerial recharge from precipitation, recharge from surface water bodies, lateral inflow from upgradient areas, or vertical flow between aquifer zones. Outflow is the rate of groundwater flow being removed from the aquifer. Outflow of water from the aquifer system could be caused by vertical leakage between aquifers and groundwater extraction.

As demonstrated in the Feasibility Study for the MEW site (Canonie, 1988), aerial recharge is considered to be negligible at the MEW site because most of the surface is covered by impermeable features such as paving and buildings. Infiltration is further limited by clays, which extend to a depth of approximately 10 to 15 feet at the site. With other inflow pathways being negligible, groundwater flow at the site is mostly attributed to the lateral flow from upgradient areas.

The estimated hydraulic gradients used in the water balance calculations are shown on Figures 7 through 10. The estimated groundwater flow into the aquifer and the estimated pumping required for adequate capture are calculated in Table 6. The estimated flow rate into the capture zone is calculated from (EPA, 2008a):

$$Q = K \cdot (b \cdot w) \cdot i \cdot factor .$$

The variables are defined as follows:

$Q$  = flow rate (gpd);

$K$  = hydraulic conductivity (gpd/ft);

$b$  = saturated aquifer thickness (ft). Note that transmissivity  $T = K \cdot b$  ;

$w$  = width of capture zone (ft);

$i$  = hydraulic gradient (unitless);

*factor* = 1.5 - 2 is the "rule of thumb" value used to account for other contributions to the pumping well, such as flux from a river or induced vertical flow from another groundwater unit.

Because RAY-1A and RAY-1B1 are immediately downgradient of the slurry wall, groundwater removed from these wells must originate from incoming groundwater flux around the slurry wall. Consequently, the "w" factor in the formula above is interpreted as the width of the groundwater pathway to the east and west of the slurry wall that is eventually captured by the wells.

RAY-1A: Pumping rates in March and November were 1.87 gpm and 0.60 gpm, respectively. With an estimated width of the groundwater pathway around the approximately 850-ft wide slurry wall and an assumed factor of 1.5, the interpreted capture zone for March 2008 corresponds to estimated pumping rate of 1.81 gpm, in March is in good agreement with actual pumping rate. The estimated pumping rate for November 2008 based on the capture zone evaluation was approximately 1.11 gpm, which is higher than the measured pumping rate. However, the actual pumping rate for RAY-1A is expected to be higher than the measured flow rate because of the reported problems with the well meter in November (Table 6).

RAY-1B1: In March and November 2008, pumping rates were 3.47 and 5.18 gpm, respectively. The interpreted capture zones correspond to estimated pumping rates of 3.44 gpm in March and 5.46 gpm in November, which is in good agreement with actual pumping rates (Table 6).

### ***2.3.2.2. Well Loss Calculations***

The two factors used to determine well loss are the extraction rate and the well loss coefficient, which is dependent on well condition. RAY-1A and RAY-1B1 were properly designed and well developed, but it is possible that mild deterioration has occurred. Given the conditions of the wells, the well loss coefficient, *C*, is estimated to range from 0.5 – 1 min<sup>2</sup>/m<sup>5</sup>. In 2008, extraction rates ranged from 0.6 to 2.4 gpm in RAY-1A and 3.2 to 18 gpm in RAY-1B1. Table 7 presents potential losses in each well assuming a range of extraction rates and loss coefficients. For all cases, the well losses are not significant and adjustments to groundwater levels in the two extraction wells are not necessary.

### ***2.3.3. Horizontal (Slurry Wall) and Vertical (Aquitard) Groundwater Gradients***

In March, September, and November, groundwater levels were measured to monitor the direction of the groundwater gradient across the slurry wall and the aquitards. A total of 7 well pairs are used to evaluate groundwater gradient directions across the slurry wall, and 15 well pairs are used to evaluate the vertical gradient directions across the aquitards (Figure 17).

Although outward gradients have been observed, the RAOs are not impacted because Raytheon has installed extraction wells in the "A" and "B1" Aquifers immediately downgradient of the slurry wall (RAY-1A and RAY-1B1). Capture zone analyses have demonstrated that these wells provide an adequate capture of the groundwater immediately downgradient of the slurry wall. Furthermore, the slurry wall is a low-permeability wall that results in minimal chemical migration across its walls, even if the gradient is outward. The flux of chemicals across a low-permeability wall is small. Groundwater and chemicals tend migrate along easier pathways: inside the slurry wall enclosure, chemicals would preferentially move towards extraction wells RE-23A, RE-24A, RE-25A, and RE-5A rather than through the low-permeability slurry wall. The slurry wall, the pumping activities within its enclosure, and the groundwater extraction wells immediately downgradient of the slurry wall physically contain chemicals.

Slurry Wall: In March and November, the groundwater extraction system and all eight extraction wells were operating normally. The water level measurements from these months show that an inward gradient across the slurry wall has been maintained except in well pairs R-55A/RE-07A and R-05B1/RP-23B, which are located along the northern slurry wall (Table 8). In September, the water levels were measured during the temporary shutdown of the groundwater extraction system. The water level measurements show an inward gradient across the slurry wall except in well pairs R-55A/RE-07A and R-05B1/RP-23B, which are located along the northern slurry wall, and a nominal outward gradient in well pair R-57A/R-60A, located along the eastern slurry wall. The November data show that the gradient in well pair R-57A/R-60A was corrected, becoming inward, after the groundwater extraction system operation was resumed. Plots of the differences in hydraulic head across the slurry wall are provided on Figures 18 and 19.

Vertical Gradient Directions: The differences in water elevations between the "B1" and "A" Aquifers are shown in Table 9 and on Figure 20. Upward gradients were observed in eight of the ten well pairs that are used to monitor the "A/B1" Aquitard gradient directions in the March, September, and November events. Slight downward gradients are observed in well pairs R-60A/R-63B1, RE-08A/R-67B1 for the March event, and R-67A/R-68B1, and RE-08A/R-67B1 for the November event. In September, the difference in head between R-63B1 and R-60A was 0.00 ft, indicating no gradient. For each event, the gradient across the "B1/B2" Aquitard and between the Upper "B2" and Lower "B2" Aquifers were consistently upward. Onsite, the "A" Aquifer and "B1" Aquifer are entirely enclosed within the slurry wall, and the upward gradients across the "B1/B2" Aquitard (Table 9, Figure 21) and between the upper "B2" and lower "B2" Aquifers (Table 9, Figure 22) indicate that groundwater (and chemicals) will flow upward from the "B2" Aquifer into the "B1" Aquifer, and not downwards from

the "B1" Aquifer to the "B2" Aquifer. Therefore, the chemicals present in the "A" and "B1" Aquifers are contained onsite.

## **2.4. Onsite VOC Concentrations**

Eleven Raytheon site-specific monitoring wells are sampled annually, and twenty-four are sampled on five-year intervals (Table 10). The annual sampling event for the Raytheon site-specific wells was conducted in December 2008. The 5-year "A" Aquifer and "B1" Aquifer site-specific wells inside the slurry wall were sampled in December 2006, and the results were included in the 2007 annual report. The 5-year "B2" Aquifer site-specific wells were sampled on March 31, 2008. The analytical results for the samples are summarized in Table 11. A total of 16 site-specific wells on the monitoring plan were sampled and analyzed for VOCs using EPA Method 8260, following the QA/QC procedures specified in the 1991 Unified Quality Assurance Project Plan (UQAPP).

### ***2.4.1. Chemical Data Evaluation and Trend Analysis***

The concentrations in monitored wells sampled in 2008 are consistent with or lower than the concentrations measured in recent years. Table 11 summarizes the analytical results for the annual sampling event. TCE concentrations and contours for the "A", "B1" and "B2" Aquifers are shown on Figures 23 through 26. Appendix D shows concentration trends for TCE, cis-1,2-dichloroethene, and vinyl chloride for selected wells in each aquifer since 1992.

### ***2.4.2. Historical Data Summary***

Groundwater monitoring has been conducted at Raytheon's former facility since the early 1980s. In general, most concentrations were detected at their highest levels early in the investigation and removal period. These levels were followed by a significant drop in concentrations in the "A", "B1", and "B2" Aquifers as a result of mitigation measures that have contained and/or removed sources in the groundwater and the unsaturated soils.

Influent treatment system data indicate that TCE comprises the majority of the chemicals being treated. Historical VOC concentrations are included in Appendix D.

## **2.5. Quality Assurance/ Quality Control**

A total of 48 water samples, three field blanks, three field duplicates, thirteen trip blanks, and three rinseate blank were collected and analyzed for VOCs using EPA Methods 8260B, during this reporting period. The rinseate blanks were collected from the site-specific well 83A and RGRP wells R-22B1

and R-40B1B2. No rinseate blanks were collected with treatment system samples because no sampling equipment other than the collection container was used to retrieve these samples. All quality assurance/quality control (QA/QC) followed the procedures specified in the 1991 UQAPP (Canonie, 1991). One trip blank was disqualified due to a detection of chloroform. Laboratory contamination was suspected, but not confirmed. The quality of the entire data during this reporting period is still acceptable and valid. Appendix E presents the QA/QC report for this reporting period.

### 3. ADDITIONAL ACTIVITIES CONDUCTED IN 2008

As mentioned in Section 1.4, on August 29, 2008, Raytheon submitted the Remedial Process Optimization Report (RPO) subsequent to a June 5, 2008 request from EPA (Locus, 2008f; EPA, 2008b). The RPO report outlines modifications to the existing groundwater extraction system that could optimize its function, and recommends preparation of a site-specific technology evaluation report with an evaluation of remedial technologies potentially applicable for the Site. To date, Raytheon has not received comments from EPA on this report.

On December 1, 2008, Raytheon submitted *Evaluation of Remedial Alternatives and Work Plan for Pilot Test* to EPA. This report evaluates the alternative remedial technologies discussed in the RPO, and presents a work plan to conduct a pilot test for the selected technology, *in situ* chemical oxidation (ISCO). To date, Raytheon has not received comments from EPA on this report.

The following activities were conducted at the site to prepare these reports:

- With EPA's approval, the groundwater extraction system was shut down from July 14, 2008 to September 22, 2008 to determine steady-state groundwater levels and gradients in the absence of groundwater extraction.
- During the temporary treatment system shutdown, water levels were measured at selected wells on Mondays, Wednesdays, and Fridays until steady-state conditions were reached.
- On September 22, 2008, after site-wide water levels appeared to have reached a steady state, water levels were measured from all of the site-specific wells.
- After the completion of the site-wide groundwater elevation measurements, extraction wells RAY-1B1, I-1B2, RAY-1A, and R-65B1B2 were restarted. The extraction system was adjusted as needed until the treatment system operated continuously. After one week, another set of site-wide groundwater elevation measurements were collected to determine the influence of pumping from these four wells on groundwater elevations in the "A" and "B1" Aquifers inside the slurry wall enclosure.
- Two pump tests were conducted to evaluate the hydraulic properties of the "A" Aquifer at the site, and to determine the maximum yields possible for RE-25A and RE-24A. For the first pump test, well RE-25A was used as the pumping well, and wells R-58A, R-69A, RE-5A, and R-72A were used as observation wells. For the second pump test, well RE-24A was used as the pumping well, and wells R-69A, RE-5A, RE-23A, and RE-25A were used as observations.

Locus submitted the data and analyses from the pump tests to EPA on December 15, 2008 (Locus, 2008i).

- Samples were collected from 14 wells, which include 24A, R-27A, R-58A, R-69A, R-72A, RE-5A, RE-9A, RE-21A, RE-22A, RE-25A, RP-21B, RP-23B, and RP-24B, and were analyzed for geochemical parameters. These analyses were performed to evaluate the "A" Aquifer and "B1" Aquifer conditions important for evaluating potential remedial alternatives. The data for these samples were reported to EPA on December 15, 2008 (Locus, 2008i).

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## 4. PROBLEMS ENCOUNTERED

This section documents specific issues encountered over 2008.

### 4.1. Extraction well flow rates

Over the first half of 2008, decreasing extraction rates were observed in RE-23A and RE-25A. Upon inspection of the wells, field personnel determined that the pumps in those wells needed to be replaced. The pumps were replaced during the temporary system shutdown approved by EPA, minimizing the system's downtime. Recommendations in the RPO include operating RE-25A at a higher flow rate. To increase the extraction capacity in RE-25A, where the highest TCE concentrations in groundwater have been observed, the more powerful pump from well RE-05A was decontaminated and installed in RE-25A. New pumps with capacities similar to the older pumps in RE-23A and RE-25A were installed in wells RE-23A and RE-05A. After the system was restarted, the wells were returned to their previous pumping rates, as Raytheon awaits EPA's approval of the recommendations in the RPO report.

In late October 2008, a reduced flow rate was measured for extraction well RAY-1A. After inspection, this appeared to be caused in part by the flow meter, which was not accurately measuring the extracted volume. The meter was replaced in November, which resulted in improvement to the flow rate measurements. To further increase the flow rate for RAY-1A, the pump was replaced in January 2009, and well redevelopment is planned for April 2009.

### 4.2. Treatment System Operation

With the exception of treatment system shutdown as part of the EPA approved investigation from July 14, 2008, to September 22, 2008, the treatment system operated approximately 87% of the time. On September 22, 2008, the valves in R-65B1B2, I-1B2, RAY-1A, and RAY-1B1 were fully opened for the system startup. Shortly following this modification, the influent filters were getting clogged and needed replacement frequently. This problem is not unusual for a system being reactivated after an extended shutdown period, as some sediment may collect in the wells while they are inactive. After the wells are reactivated, the pumping activities extract the excess sediment from the wells with the groundwater, which quickly clogs the filters. Over time, the excess sediment is removed from the wells, so the filters do not need to be changed as frequently.



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## 5. TECHNICAL ASSESSMENT

### 5.1. Is the Remedy Functioning as Intended?

The review of documents, ARARs, risk assumptions, and the results of the site inspection indicate that the remedy is functioning as intended by the ROD, as modified by the Explanation of Significant Differences. The Feasibility Study (Canonie, 1988) for the MEW site lists the RAOs to be:

1. Protection of potential potable water supply;
2. Remediation or control of relatively elevated concentrations of chemicals present in localized vadose zone soils below the ground surface that could migrate to enter into the shallow groundwater system;
3. Remediation or control of groundwater, which contains elevated concentrations of chemicals, including control of discharge of such groundwater into surface water.

Several mitigation measures have been implemented at the 350 Ellis Street property to protect potential potable water supply in the shallow aquifer zone. The SVE system installed and operated at the 350 Ellis Street property achieved soil cleanup goals by remediating chemicals present in the vadose zone soils. The installation of a slurry wall at 350 Ellis Street effectively isolated the source areas, and, combined with pumping actions, resulted in a significant decrease in concentrations in the areas within and outside the slurry walls. The slurry wall and the pumping activities inside and outside the slurry wall achieved the third RAO by controlling sources.

In January 2003, 1,4-dioxane concentrations above RWQCB criteria were detected in the effluent of the treatment system. The treatment system was modified in the fall of 2003 by replacing the air stripper with an oxidation system that is capable of destroying 1,4-dioxane, and reducing the overall concentrations to below the RWQCB criteria.

The ROD for the MEW site defines cleanup goals for the soils and groundwater. Soil remediation goals were achieved through the implementation of the SVE system. Groundwater remediation goals have not yet been achieved, so groundwater extraction and treatment is ongoing.

## 5.2. Are Capture Zones Adequate?

Comprehensive water level measurements were collected semiannually. Capture zones are determined as recommended in the 2008 EPA guidance, by calculating plume widths, evaluation of flow lines based on groundwater elevation contours, and by water-balance calculations. If a pumping well does not provide adequate capture, the pumping rate is increased. If a capture zone exceeds the design requirements, then the pumping rate may be reduced.

Field measurements of water elevations from monitoring wells reflect site conditions. These data would translate the actual conditions of the aquifer into water elevation data from which water elevation contours and capture zones are estimated. These estimates are dynamic in that they reflect hydrological changes in the aquifer (such as seasonal changes to water elevations and flow direction, and changes to pumping rates in regional and source control recovery wells).

As depicted in Figures 7 through 10, and calculated in Tables 5 and 6, the overall capture of the plume at the former Raytheon facilities continues to be adequate.

## 5.3. Are Vertical Gradients Inside and Gradients Across the Slurry Walls Appropriate?

In general, upward gradients are observed across the "A/B1" Aquitard except in two locations in each of the March, September, and November events, and a difference between the R-63B1/R-60A wells of 0.00 was observed in September. In each event, the gradient across the "B1/B2" Aquitard and between the upper "B2" and Lower "B2" Aquifers were consistently upward. Onsite, the "A" Aquifer and "B1" Aquifer are entirely enclosed within the slurry wall, and the upward gradients across the "B1/B2" Aquitard (Table 9, Figure 21) and between the upper "B2" and lower "B2" Aquifers (Table 9, Figure 22) indicate that water (and chemicals) will flow upward from the "B2" Aquifer into the "B1" Aquifer, and not downwards from the "B1" Aquifer to the "B2" Aquifer. Therefore, the chemicals present in the "A" and "B1" Aquifers are contained onsite.

It is generally desirable that the hydraulic gradient across slurry walls be inward. Until 2000, gradients had been mostly inward with a few exceptions that may have been due to the temporary shutdown of some extraction wells. During property redevelopment in 2000, several extraction wells were relocated. Since then, outward gradients have been observed in well pairs along the northern (downgradient) portion of the slurry wall. Although outward gradients have been observed, the RAOs will not be impacted because Raytheon has installed extraction wells in the "A" and "B1" Aquifers immediately downgradient of the slurry wall (RAY-1A and RAY-1B1). Capture zone analyses have

demonstrated that these wells provide an adequate capture of the groundwater immediately downgradient of the slurry wall. Also, the slurry wall is a low-permeability wall that results in minimal chemical migration across its walls, even if the gradient is outward. The flux of chemicals across a low-permeability wall is small. Furthermore, groundwater and chemicals tend to migrate along easier pathways: inside the slurry wall enclosure, chemicals would preferentially move towards extraction wells RE-23A, RE-24A, RE-25A, and RE-5A rather than through the low-permeability slurry wall.

The slurry wall, the pumping activities within its enclosure, and the groundwater extraction wells immediately downgradient of the slurry wall physically contain chemicals.

#### **5.4. Are Concentrations Decreasing Over Time?**

Decreasing TCE concentrations have been observed in most wells. Increases in TCE concentrations have been observed in four wells in the "B1" Aquifer: R-67B1, RP-19B, RP-21B, and RP-24B. The slurry wall surrounding the site prevents lateral migration of chemicals offsite, and the upward gradient across the "B1/B2" Aquifer indicates that chemicals are unlikely to migrate into the "B2" Aquifer. Thus, the RAOs are not negatively impacted by this observation. Appendix D provides concentration plots for wells on the monitoring schedule.

## 6. CONCLUSIONS AND RECOMMENDATIONS

The current remedial actions at Raytheon's former facilities are protective of human health and the environment. Soil remediation is complete and the ongoing groundwater remediation has removed more than 14,596 pounds of VOCs. Since 2005, the groundwater treatment system has operated approximately 93% of the time. The capture zone evaluations at the site have shown that the extraction wells provide adequate capture. Outward gradients have been observed in the wells pairs along the northern (downgradient) portion of the slurry wall, but inward gradients persist along the west, east, and south walls. Upward gradients are observed across the aquitards and between the upper and lower "B2" Aquifer. In some locations, downward gradients are observed across the "A/B1" Aquitard. The monthly treatment system sampling reveals that the effluent consistently meets NPDES requirements, and there have been no violations since the current treatment system started operations in December 2003. The system also operates within the design flow rate. Overall, the current treatment system is functioning as intended.

In summary, the VOC concentrations in the site have generally decreased, but appear to have reached asymptotic levels in many wells. The rate of removal is expected to decrease annually, and the costs to operate the system are expected to increase by the inflation rate. Therefore, the cost per pound removed is expected to increase in future. The life-cycle assessment of the existing remedy indicates that many decades would be required to achieve the cleanup standards established in the ROD. Therefore, a pilot test of an alternative remedial technology is recommended. A workplan for an ISCO pilot test was submitted to EPA on December 1, 2008 (Locus, 2008h).

Air sampling conducted during February 2008 and July 2008 demonstrated that the TCE concentrations at the site were below EPA's interim action level of  $2.7 \mu\text{g}/\text{m}^3$ , and the implementation of the interim remedial actions targeting the vapor intrusion pathway have reduced indoor air concentrations to below vapor intrusion long-term exposure goals (Locus, 2008b). The results indicate that the interim remedial actions implemented at the Site have successfully reduced the TCE concentrations to below the interim action level (Locus, 2008d).

## 7. ACTIVITIES PLANNED FOR 2009

The following site-specific activities are planned for 2009:

- Continued operation and maintenance of the groundwater treatment system.
- Continued well pair groundwater level measurements to evaluate the direction of the hydraulic gradient across the slurry wall and the aquitards.
- Collection of semiannual groundwater elevation measurements (in March and November) as part of the regional groundwater monitoring program.
- Collection of groundwater samples will be conducted in November for the Raytheon site-specific program and the regional groundwater monitoring program.
- Implementation of RPO recommendations, pending EPA approval.
- Implementation of the ISCO pilot test and associated activities described in the December 1, 2008 workplan (Locus, 2008h), pending EPA approval.

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# TABLES

**TABLE 1**  
**AVERAGE EXTRACTION WELL FLOW RATES**  
**RAYTHEON COMPANY - FORMER FACILITIES**  
**350 ELLIS STREET, MOUNTAIN VIEW, CALIFORNIA**

Extraction Wells	January	February	March	April	May	June	July	August	September	October	November	December
RAY-1A	2.37	2.07	1.92	1.50	1.39	1.32	1.31	*	*	0.70	0.09	0.38
RAY-1B1	3.81	3.67	4.26	4.56	4.61	4.60	4.69	*	*	12.96	5.34	5.28
I-1B2	2.09	1.90	2.19	1.97	2.15	2.70	2.64	*	*	2.94	2.11	2.88
R-65B2	4.13	3.74	4.07	3.97	3.98	4.27	3.24	*	*	5.09	5.06	5.00
RE-05A	13.99	12.89	14.12	13.80	13.72	13.23	13.24	*	*	2.59	5.69	5.66
RE-23A	2.96	2.44	2.39	1.92	1.54	1.25	1.05	*	*	1.72	3.78	3.72
RE-24A	11.22	10.21	10.88	10.41	10.61	10.25	10.93	*	*	9.19	14.04	14.21
RE-25A	4.77	3.23	2.13	1.07	1.20	1.90	1.90	*	*	1.80	2.39	0.73
Average GWTS Discharge Flow Rate	31	28	31	30	30	30	29	*	*	30	31	31

Notes:

1. Flow rates are calculated averages based on the total monthly flow from each well and through the treatment system, in gallons per minute (gpm).

\* The treatment system was shutdown from July 14, 2008 to September 22, 2008, as part of an investigation approved by US EPA.

**TABLE 2**  
**2008 GROUNDWATER TREATMENT SYSTEM ANALYTICAL DATA**  
**RAYTHEON COMPANY - FORMER FACILITIES**  
**350 ELLIS STREET, MOUNTAIN VIEW, CALIFORNIA**

Parameter	Date	1/21/2008	1/21/2008	1/21/2008	2/18/2008	2/18/2008	3/17/2008	3/17/2008	4/16/2008	4/16/2008	5/20/2008	5/20/2008
Locatio	RAYEFT	RAYINF	RAYINF	RAYEFT	RAYINF	RAYEFT	RAYINF	RAYEFT	RAYINF	RAYEFT	RAYINF	RAYINF
Sample	REG	FD	REG									
Units												
<b>Analytical Method: EPA 8260B</b>												
1,1,1,2-TETRACHLOROETHANE	mg/l	NT	ND 0.0005	ND 0.025								
1,1,1-TRICHLOROETHANE	mg/l	ND 0.0005	0.0040	ND 0.025	ND 0.0005	ND 0.025	ND 0.0005	ND 0.020	ND 0.0005	ND 0.020	ND 0.0005	ND 0.025
1,1,2,2-TETRACHLOROETHANE	mg/l	ND 0.0005	ND 0.0005	ND 0.025	ND 0.0005	ND 0.025	ND 0.0005	ND 0.020	ND 0.0005	ND 0.020	ND 0.0005	ND 0.025
1,1,2-TRICHLOROETHANE	mg/l	ND 0.0005	ND 0.0005	ND 0.025	ND 0.0005	ND 0.025	ND 0.0005	ND 0.020	ND 0.0005	ND 0.020	ND 0.0005	ND 0.025
1,1-DICHLOROETHANE	mg/l	ND 0.0005	0.017	ND 0.025	ND 0.0005	ND 0.025	ND 0.0005	ND 0.020	0.0030	ND 0.020	ND 0.0005	ND 0.025
1,1-DICHLOROETHENE	mg/l	ND 0.0005	0.019	ND 0.025	ND 0.0005	ND 0.025	ND 0.0005	ND 0.020	ND 0.0005	ND 0.020	ND 0.0005	ND 0.025
1,1-DICHLOROPROPENE	mg/l	NT	ND 0.0005	ND 0.025								
1,2,3-TRICHLOROBENZENE	mg/l	NT	ND 0.0005	ND 0.025								
1,2,3-TRICHLOROPROPANE	mg/l	NT	ND 0.0005	ND 0.025								
1,2,4-TRICHLOROBENZENE	mg/l	NT	ND 0.0005	ND 0.025								
1,2,4-TRIMETHYLBENZENE	mg/l	NT	ND 0.0005	ND 0.025								
1,2-DIBROMO-3-CHLOROPROPANE	mg/l	NT	ND 0.0005	ND 0.025								
1,2-DIBROMOETHANE	mg/l	NT	ND 0.0005	ND 0.025								
1,2-DICHLOROBENZENE	mg/l	ND 0.0005	0.022	ND 0.025	ND 0.0005	ND 0.025	ND 0.0005	ND 0.020	ND 0.0005	ND 0.020	ND 0.0005	ND 0.025
1,2-DICHLOROETHANE	mg/l	ND 0.0005	ND 0.0005	ND 0.025	ND 0.0005	ND 0.025	ND 0.0005	ND 0.020	ND 0.0005	ND 0.020	ND 0.0005	ND 0.025
1,2-DICHLOROPROPANE	mg/l	ND 0.0005	ND 0.0005	ND 0.025	ND 0.0005	ND 0.025	ND 0.0005	ND 0.020	ND 0.0005	ND 0.020	ND 0.0005	ND 0.025
1,3,5-TRIMETHYLBENZENE	mg/l	NT	ND 0.0005	ND 0.025								
1,3-DICHLOROBENZENE	mg/l	ND 0.0005	0.0007	ND 0.025	ND 0.0005	ND 0.025	ND 0.0005	ND 0.020	ND 0.0005	ND 0.020	ND 0.0005	ND 0.025
1,3-DICHLOROPROPANE	mg/l	NT	ND 0.0005	ND 0.025								
1,4-DICHLOROBENZENE	mg/l	ND 0.0005	0.0050	ND 0.025	ND 0.0005	ND 0.025	ND 0.0005	ND 0.020	ND 0.0005	ND 0.020	ND 0.0005	ND 0.025
2,2-DICHLOROPROPANE	mg/l	NT	ND 0.0005	ND 0.025								
2-BUTANONE	mg/l	NT	ND 0.010	ND 0.50								
2-CHLOROETHYL VINYL ETHER	mg/l	ND 0.0010	ND 0.0010	ND 0.050	ND 0.0010	ND 0.050	ND 0.0010	ND 0.040	ND 0.0010	ND 0.040	ND 0.010	ND 0.50
2-HEXANONE	mg/l	NT	ND 0.010	ND 0.50								
4-CHLOROTOLUENE	mg/l	NT	ND 0.0005	ND 0.025								
4-METHYL-2-PENTANONE	mg/l	NT	ND 0.010	ND 0.50								
ACETONE	mg/l	NT	ND 0.010	ND 0.50								
BENZENE	mg/l	NT	ND 0.0005	ND 0.025								
BROMOBENZENE	mg/l	NT	ND 0.0005	ND 0.025								
BROMOCHLOROMETHANE	mg/l	NT	ND 0.0005	ND 0.025								

**Notes:**

ND - denotes result was below the detection limit  
NT - sample not tested for the given parameter



**TABLE 2**  
**2008 GROUNDWATER TREATMENT SYSTEM ANALYTICAL DATA**  
**RAYTHEON COMPANY - FORMER FACILITIES**  
**350 ELLIS STREET, MOUNTAIN VIEW, CALIFORNIA**

Parameter	Date	1/21/2008	1/21/2008	1/21/2008	2/18/2008	2/18/2008	3/17/2008	3/17/2008	4/16/2008	4/16/2008	5/20/2008	5/20/2008
	Locatio	RAYEFT	RAYINF	RAYINF	RAYEFT	RAYINF	RAYEFT	RAYINF	RAYEFT	RAYINF	RAYEFT	RAYINF
	Sample	REG	FD	REG								
	Units											
<b>Analytical Method: EPA 8260B</b>												
BROMODICHLOROMETHANE	mg/l	ND 0.0005	ND 0.0005	ND 0.025	ND 0.0005	ND 0.025	ND 0.0005	ND 0.020	ND 0.0005	ND 0.020	ND 0.0005	ND 0.025
BROMOFORM	mg/l	ND 0.0005	ND 0.0005	ND 0.025	ND 0.0005	ND 0.025	ND 0.0005	ND 0.020	ND 0.0005	ND 0.020	ND 0.0010	ND 0.050
BROMOMETHANE	mg/l	ND 0.0010	ND 0.0010	ND 0.050	ND 0.0010	ND 0.050	ND 0.0010	ND 0.040	ND 0.0010	ND 0.040	ND 0.0010	ND 0.050
CARBON DISULFIDE	mg/l	NT	ND 0.0005	ND 0.025								
CARBON TETRACHLORIDE	mg/l	ND 0.0005	ND 0.0005	ND 0.025	ND 0.0005	ND 0.025	ND 0.0005	ND 0.020	ND 0.0005	ND 0.020	ND 0.0005	ND 0.025
CHLOROBENZENE	mg/l	ND 0.0005	ND 0.0005	ND 0.025	ND 0.0005	ND 0.025	ND 0.0005	ND 0.020	ND 0.0005	ND 0.020	ND 0.0005	ND 0.025
CHLOROETHANE	mg/l	ND 0.0010	ND 0.0010	ND 0.050	ND 0.0010	ND 0.050	ND 0.0010	ND 0.040	ND 0.0010	ND 0.040	ND 0.0010	ND 0.050
CHLOROFORM	mg/l	ND 0.0005	0.0006	ND 0.025	ND 0.0005	ND 0.025	ND 0.0005	ND 0.020	ND 0.0005	ND 0.020	ND 0.0005	ND 0.025
CHLOROMETHANE	mg/l	ND 0.0010	ND 0.0010	ND 0.050	ND 0.0010	ND 0.050	ND 0.0010	ND 0.040	ND 0.0010	ND 0.040	ND 0.0010	ND 0.050
CIS-1,2-DICHLOROETHENE	mg/l	ND 0.0005	1.0	1.1	ND 0.0005	0.95	ND 0.0005	1.1	ND 0.0005	0.94	ND 0.0005	0.86
CIS-1,3-DICHLOROPROPENE	mg/l	ND 0.0005	ND 0.0005	ND 0.025	ND 0.0005	ND 0.025	ND 0.0005	ND 0.020	ND 0.0005	ND 0.020	ND 0.0005	ND 0.025
DIBROMOCHLOROMETHANE	mg/l	ND 0.0005	ND 0.0005	ND 0.025	ND 0.0005	ND 0.025	ND 0.0005	ND 0.020	ND 0.0005	ND 0.020	ND 0.0005	ND 0.025
DIBROMOMETHANE	mg/l	NT	ND 0.0005	ND 0.025								
DICHLORODIFLUOROMETHANE	mg/l	NT	ND 0.0010	ND 0.050								
ETHYLBENZENE	mg/l	NT	ND 0.0005	ND 0.025								
FREON 113	mg/l	ND 0.0050	0.034	ND 0.25	ND 0.0050	ND 0.25	ND 0.0050	ND 0.20	ND 0.0050	ND 0.20	ND 0.0050	ND 0.25
HEXACHLOROBUTADIENE	mg/l	NT	ND 0.0005	ND 0.025								
ISOPROPYLBENZENE	mg/l	NT	ND 0.0005	ND 0.025								
m,p-XYLENE	mg/l	NT	ND 0.0005	ND 0.025								
METHYL-T-BUTYL ETHER	mg/l	NT	ND 0.0005	ND 0.025								
METHYLENE CHLORIDE	mg/l	ND 0.0050	ND 0.0050	ND 0.25	ND 0.0050	ND 0.25	ND 0.0050	ND 0.20	ND 0.0050	ND 0.20	ND 0.0050	ND 0.25
N-BUTYLBENZENE	mg/l	NT	ND 0.0005	ND 0.025								
N-PROPYLBENZENE	mg/l	NT	ND 0.0005	ND 0.025								
NAPHTHALENE	mg/l	NT	ND 0.0005	ND 0.025								
o-XYLENE	mg/l	NT	ND 0.0005	ND 0.025								
PARA-ISOPROPYL TOLUENE	mg/l	NT	ND 0.0005	ND 0.025								
SEC-BUTYLBENZENE	mg/l	NT	ND 0.0005	ND 0.025								
STYRENE	mg/l	NT	ND 0.0005	ND 0.025								
TERT- BUTYLBENZENE	mg/l	NT	ND 0.0005	ND 0.025								
TETRACHLOROETHENE	mg/l	ND 0.0005	0.0079	ND 0.025	ND 0.0005	ND 0.025	ND 0.0005	ND 0.020	ND 0.0005	ND 0.020	ND 0.0005	ND 0.025

**Notes:**

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**TABLE 2**  
**2008 GROUNDWATER TREATMENT SYSTEM ANALYTICAL DATA**  
**RAYTHEON COMPANY - FORMER FACILITIES**  
**350 ELLIS STREET, MOUNTAIN VIEW, CALIFORNIA**

Parameter	Date	1/21/2008	1/21/2008	1/21/2008	2/18/2008	2/18/2008	3/17/2008	3/17/2008	4/16/2008	4/16/2008	5/20/2008	5/20/2008
	Locatio	RAYEFT	RAYINF	RAYINF	RAYEFT	RAYINF	RAYEFT	RAYINF	RAYEFT	RAYINF	RAYEFT	RAYINF
	Sample	REG	FD	REG								
	Units											
<b><u>Analytical Method: EPA 8260B</u></b>												
TOLUENE	mg/l	NT	ND 0.0005	ND 0.025								
TRANS-1,2-DICHLOROETHENE	mg/l	ND 0.0005	0.094	0.075	ND 0.0005	0.074	ND 0.0005	0.081	ND 0.0005	0.079	ND 0.0005	0.067
TRANS-1,3-DICHLOROPROPENE	mg/l	ND 0.0005	ND 0.0005	ND 0.025	ND 0.0005	ND 0.025	ND 0.0005	ND 0.020	ND 0.0005	ND 0.020	ND 0.0005	ND 0.025
TRICHLOROETHENE	mg/l	ND 0.0005	3.4	3.8	ND 0.0005	3.0	ND 0.0005	3.2	ND 0.0005	3.0	ND 0.0005	2.8
TRICHLOROFLUOROMETHANE	mg/l	ND 0.0010	ND 0.0010	ND 0.050	ND 0.0010	ND 0.050	ND 0.0010	ND 0.040	ND 0.0010	ND 0.040	ND 0.0010	ND 0.050
VINYL ACETATE	mg/l	NT	ND 0.010	ND 0.50								
VINYL CHLORIDE	mg/l	ND 0.0005	0.068	0.078	ND 0.0005	0.034	ND 0.0005	0.035	ND 0.0005	0.058	ND 0.0005	0.059
<b><u>Analytical Method: EPA 8270C-SIM</u></b>												
1,4-DIOXANE	mg/l	NT										
<b><u>Analytical Method: EPA 8270C</u></b>												
1,2,4-TRICHLOROBENZENE	mg/l	NT										
1,2-DICHLOROBENZENE	mg/l	NT										
1,3-DICHLOROBENZENE	mg/l	NT										
1,4-DICHLOROBENZENE	mg/l	NT										
2,4,5-TRICHLOROPHENOL	mg/l	NT										
2,4,6-TRICHLOROPHENOL	mg/l	NT										
2,4-DICHLOROPHENOL	mg/l	NT										
2,4-DIMETHYLPHENOL	mg/l	NT										
2,4-DINITROPHENOL	mg/l	NT										
2,4-DINITROTOLUENE	mg/l	NT										
2,6-DINITROTOLUENE	mg/l	NT										
2-CHLORONAPHTHALENE	mg/l	NT										
2-CHLOROPHENOL	mg/l	NT										
2-METHYLNAPHTHALENE	mg/l	NT										
2-METHYLPHENOL	mg/l	NT										
2-NITROANILINE	mg/l	NT										
2-NITROPHENOL	mg/l	NT										
3,3'-DICHLOROENZIDINE	mg/l	NT										
3-NITROANILINE	mg/l	NT										
4,6-DINITRO-2-METHYLPHENOL	mg/l	NT										
<b>Notes:</b>												
ND - denotes result was below the detection limit												
NT - sample not tested for the given parameter												



TABLE 2  
 2008 GROUNDWATER TREATMENT SYSTEM ANALYTICAL DATA  
 RAYTHEON COMPANY - FORMER FACILITIES  
 350 ELLIS STREET, MOUNTAIN VIEW, CALIFORNIA

Parameter	Date	1/21/2008	1/21/2008	1/21/2008	2/18/2008	2/18/2008	3/17/2008	3/17/2008	4/16/2008	4/16/2008	5/20/2008	5/20/2008
	Locatio	RAYEFT	RAYINF	RAYINF	RAYEFT	RAYINF	RAYEFT	RAYINF	RAYEFT	RAYINF	RAYEFT	RAYINF
	Sample	REG	FD	REG								
	Units											
<b>Analytical Method: EPA 8270C</b>												
4-BROMOPHENYL PHENYL ETHER	mg/l	NT										
4-CHLORO-3-METHYLPHENOL	mg/l	NT										
4-CHLOROANILINE	mg/l	NT										
4-CHLOROPHENYL PHENYL ETHER	mg/l	NT										
4-METHYLPHENOL	mg/l	NT										
4-NITROANILINE	mg/l	NT										
4-NITROPHENOL	mg/l	NT										
ACENAPHTHENE	mg/l	NT										
ACENAPHTHYLENE	mg/l	NT										
ANTHRACENE	mg/l	NT										
AZOBENZENE	mg/l	NT										
BENZO(A)ANTHRACENE	mg/l	NT										
BENZO(A)PYRENE	mg/l	NT										
BENZO(B)FLUORANTHENE	mg/l	NT										
BENZO(GHI)PERYLENE	mg/l	NT										
BENZO(K)FLUORANTHENE	mg/l	NT										
BENZOIC ACID	mg/l	NT										
BENZYL ALCOHOL	mg/l	NT										
BIS(2-CHLOROETHOXY)METHANE	mg/l	NT										
BIS(2-CHLOROETHYL)ETHER	mg/l	NT										
BUTYL BENZYL PHTHALATE	mg/l	NT										
CHRYSENE	mg/l	NT										
DI-N-BUTYL PHTHALATE	mg/l	NT										
DI-N-OCTYL PHTHALATE	mg/l	NT										
DIBENZO(A,H)ANTHRACENE	mg/l	NT										
DIBENZOFURAN	mg/l	NT										
DIETHYL PHTHALATE	mg/l	NT										
DIMETHYL PHTHALATE	mg/l	NT										
FLUORANTHENE	mg/l	NT										
FLUORENE	mg/l	NT										

**Notes:**  
 ND - denotes result was below the detection limit  
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TABLE 2  
 2008 GROUNDWATER TREATMENT SYSTEM ANALYTICAL DATA  
 RAYTHEON COMPANY - FORMER FACILITIES  
 350 ELLIS STREET, MOUNTAIN VIEW, CALIFORNIA

Parameter	Date	1/21/2008	1/21/2008	1/21/2008	2/18/2008	2/18/2008	3/17/2008	3/17/2008	4/16/2008	4/16/2008	5/20/2008	5/20/2008
Locatio	RAYEFT	RAYINF	RAYINF	RAYINF	RAYEFT	RAYINF	RAYEFT	RAYINF	RAYEFT	RAYINF	RAYEFT	RAYINF
Sample	REG	FD	REG									
Units												
<b>Analytical Method: EPA 8270C</b>												
HEXACHLOROBENZENE	mg/l	NT										
HEXACHLOROBUTADIENE	mg/l	NT										
HEXACHLOROCYCLOPENTADIENE	mg/l	NT										
HEXACHLOROETHANE	mg/l	NT										
INDENO(1,2,3-CD)PYRENE	mg/l	NT										
ISOPHORONE	mg/l	NT										
N-NITROSO-DI-N-PROPYLAMINE	mg/l	NT										
N-NITROSODIMETHYLAMINE	mg/l	NT										
N-NITROSODIPHENYLAMINE	mg/l	NT										
NAPHTHALENE	mg/l	NT										
NITROBENZENE	mg/l	NT										
PENTACHLOROPHENOL	mg/l	NT										
PHENANTHRENE	mg/l	NT										
PHENOL	mg/l	NT										
PYRENE	mg/l	NT										

**Notes:**  
 ND - denotes result was below the detection limit  
 NT - sample not tested for the given parameter



**TABLE 2**  
**2008 GROUNDWATER TREATMENT SYSTEM ANALYTICAL DATA**  
**RAYTHEON COMPANY - FORMER FACILITIES**  
**350 ELLIS STREET, MOUNTAIN VIEW, CALIFORNIA**

Parameter	Date	6/16/2008	6/16/2008	7/9/2008	7/9/2008	7/9/2008	9/24/2008	9/24/2008	10/15/2008	10/15/2008	11/17/2008	11/17/2008
	Locatio	RAYEFT	RAYINF	RAYEFT	RAYINF	RAYINF	RAYEFT	RAYINF	RAYEFT	RAYINF	RAYEFT	RAYINF
	Sample	REG	REG	REG	FD	REG	REG	REG	REG	REG	REG	REG
	Units											
<b>Analytical Method: EPA 8260B</b>												
1,1,1,2-TETRACHLOROETHANE	mg/l	NT	NT	NT	NT	NT	NT	NT	NT	NT	ND 0.0005	ND 0.025
1,1,1-TRICHLOROETHANE	mg/l	ND 0.0005	ND 0.025	ND 0.0005	ND 0.020	ND 0.020	ND 0.0005	0.0030	ND 0.0005	ND 0.010	ND 0.0005	ND 0.025
1,1,2,2-TETRACHLOROETHANE	mg/l	ND 0.0005	ND 0.025	ND 0.0005	ND 0.020	ND 0.020	ND 0.0005	ND 0.0005	ND 0.0005	ND 0.010	ND 0.0005	ND 0.025
1,1,2-TRICHLOROETHANE	mg/l	ND 0.0005	ND 0.025	ND 0.0005	ND 0.020	ND 0.020	ND 0.0005	ND 0.0005	ND 0.0005	ND 0.010	ND 0.0005	ND 0.025
1,1-DICHLOROETHANE	mg/l	ND 0.0005	ND 0.025	ND 0.0005	ND 0.020	ND 0.020	ND 0.0005	0.0037	ND 0.0005	ND 0.010	ND 0.0005	ND 0.025
1,1-DICHLOROETHENE	mg/l	ND 0.0005	ND 0.025	ND 0.0005	ND 0.020	ND 0.020	ND 0.0005	0.0063	ND 0.0005	0.022	ND 0.0005	ND 0.025
1,1-DICHLOROPROPENE	mg/l	NT	NT	NT	NT	NT	NT	NT	NT	NT	ND 0.0005	ND 0.025
1,2,3-TRICHLOROBENZENE	mg/l	NT	NT	NT	NT	NT	NT	NT	NT	NT	ND 0.0005	ND 0.025
1,2,3-TRICHLOROPROPANE	mg/l	NT	NT	NT	NT	NT	NT	NT	NT	NT	ND 0.0005	ND 0.025
1,2,4-TRICHLOROBENZENE	mg/l	NT	NT	NT	NT	NT	NT	NT	NT	NT	ND 0.0005	ND 0.025
1,2,4-TRIMETHYLBENZENE	mg/l	NT	NT	NT	NT	NT	NT	NT	NT	NT	ND 0.0005	ND 0.025
1,2-DIBROMO-3-CHLOROPROPANE	mg/l	NT	NT	NT	NT	NT	NT	NT	NT	NT	ND 0.0005	ND 0.025
1,2-DIBROMOETHANE	mg/l	NT	NT	NT	NT	NT	NT	NT	NT	NT	ND 0.0005	ND 0.025
1,2-DICHLOROBENZENE	mg/l	ND 0.0005	ND 0.025	ND 0.0005	ND 0.020	ND 0.020	ND 0.0005	ND 0.0005	ND 0.0005	ND 0.025	ND 0.0005	ND 0.025
1,2-DICHLOROETHANE	mg/l	ND 0.0005	ND 0.025	ND 0.0005	ND 0.020	ND 0.020	ND 0.0005	ND 0.0005	ND 0.0005	ND 0.010	ND 0.0005	ND 0.025
1,2-DICHLOROPROPANE	mg/l	ND 0.0005	ND 0.025	ND 0.0005	ND 0.020	ND 0.020	ND 0.0005	ND 0.0005	ND 0.0005	ND 0.010	ND 0.0005	ND 0.025
1,3,5-TRIMETHYLBENZENE	mg/l	NT	NT	NT	NT	NT	NT	NT	NT	NT	ND 0.0005	ND 0.025
1,3-DICHLOROBENZENE	mg/l	ND 0.0005	ND 0.025	ND 0.0005	ND 0.020	ND 0.020	ND 0.0005	ND 0.0005	ND 0.0005	ND 0.010	ND 0.0005	ND 0.025
1,3-DICHLOROPROPANE	mg/l	NT	NT	NT	NT	NT	NT	NT	NT	NT	ND 0.0005	ND 0.025
1,4-DICHLOROBENZENE	mg/l	ND 0.0005	ND 0.025	ND 0.0005	ND 0.020	ND 0.020	ND 0.0005	ND 0.0005	ND 0.0005	ND 0.010	ND 0.0005	ND 0.025
2,2-DICHLOROPROPANE	mg/l	NT	NT	NT	NT	NT	NT	NT	NT	NT	ND 0.0005	ND 0.025
2-BUTANONE	mg/l	NT	NT	NT	NT	NT	NT	NT	NT	NT	ND 0.010	ND 0.50
2-CHLOROETHYL VINYL ETHER	mg/l	ND 0.0010	ND 0.050	ND 0.0010	ND 0.040	ND 0.040	ND 0.0010	ND 0.0010	ND 0.0010	ND 0.020	ND 0.010	ND 0.50
2-HEXANONE	mg/l	NT	NT	NT	NT	NT	NT	NT	NT	NT	ND 0.010	ND 0.50
4-CHLOROTOLUENE	mg/l	NT	NT	NT	NT	NT	NT	NT	NT	NT	ND 0.0005	ND 0.025
4-METHYL-2-PENTANONE	mg/l	NT	NT	NT	NT	NT	NT	NT	NT	NT	ND 0.010	ND 0.50
ACETONE	mg/l	NT	NT	NT	NT	NT	NT	NT	NT	NT	ND 0.010	ND 0.50
BENZENE	mg/l	NT	NT	NT	NT	NT	NT	NT	NT	NT	ND 0.0005	ND 0.025
BROMOBENZENE	mg/l	NT	NT	NT	NT	NT	NT	NT	NT	NT	ND 0.0005	ND 0.025
BROMOCHLOROMETHANE	mg/l	NT	NT	NT	NT	NT	NT	NT	NT	NT	ND 0.0005	ND 0.025

**Notes:**

ND - denotes result was below the detection limit  
NT - sample not tested for the given parameter



**TABLE 2**  
**2008 GROUNDWATER TREATMENT SYSTEM ANALYTICAL DATA**  
**RAYTHEON COMPANY - FORMER FACILITIES**  
**350 ELLIS STREET, MOUNTAIN VIEW, CALIFORNIA**

Parameter	Date	6/16/2008	6/16/2008	7/9/2008	7/9/2008	7/9/2008	9/24/2008	9/24/2008	10/15/2008	10/15/2008	11/17/2008	11/17/2008
Locatio	RAYEFT	RAYINF	RAYEFT	RAYINF	RAYINF	RAYINF	RAYEFT	RAYINF	RAYEFT	RAYINF	RAYEFT	RAYINF
Sample	REG	REG	REG	FD	REG	REG	REG	REG	REG	REG	REG	REG
Units												
<b>Analytical Method: EPA 8260B</b>												
BROMODICHLOROMETHANE	mg/l	ND 0.0005	ND 0.025	ND 0.0005	ND 0.020	ND 0.020	ND 0.0005	ND 0.0005	ND 0.0005	ND 0.010	ND 0.0005	ND 0.025
BROMOFORM	mg/l	ND 0.0005	ND 0.025	ND 0.0005	ND 0.020	ND 0.020	ND 0.0005	ND 0.0005	ND 0.0005	ND 0.010	ND 0.0010	ND 0.050
BROMOMETHANE	mg/l	ND 0.0010	ND 0.050	ND 0.0010	ND 0.040	ND 0.040	ND 0.0010	ND 0.0010	ND 0.0010	ND 0.020	ND 0.0010	ND 0.050
CARBON DISULFIDE	mg/l	NT	NT	NT	NT	NT	NT	NT	NT	NT	ND 0.0005	ND 0.025
CARBON TETRACHLORIDE	mg/l	ND 0.0005	ND 0.025	ND 0.0005	ND 0.020	ND 0.020	ND 0.0005	ND 0.0005	ND 0.0005	ND 0.010	ND 0.0005	ND 0.025
CHLOROBENZENE	mg/l	ND 0.0005	ND 0.025	ND 0.0005	ND 0.020	ND 0.020	ND 0.0005	ND 0.0005	ND 0.0005	ND 0.010	ND 0.0005	ND 0.025
CHLOROETHANE	mg/l	ND 0.0010	ND 0.050	ND 0.0010	ND 0.040	ND 0.040	ND 0.0010	ND 0.0010	ND 0.0010	ND 0.020	ND 0.0010	ND 0.050
CHLOROFORM	mg/l	ND 0.0005	ND 0.025	ND 0.0005	ND 0.020	ND 0.020	ND 0.0005	ND 0.0005	ND 0.0005	ND 0.010	ND 0.0005	ND 0.025
CHLOROMETHANE	mg/l	ND 0.0010	ND 0.050	ND 0.0010	ND 0.040	ND 0.040	ND 0.0010	ND 0.0010	ND 0.0010	ND 0.020	ND 0.0010	ND 0.050
CIS-1,2-DICHLOROETHENE	mg/l	ND 0.0005	0.92	ND 0.0005	0.66	0.71	ND 0.0005	0.064	ND 0.0005	1.2	ND 0.0005	1.6
CIS-1,3-DICHLOROPROPENE	mg/l	ND 0.0005	ND 0.025	ND 0.0005	ND 0.020	ND 0.020	ND 0.0005	ND 0.0005	ND 0.0005	ND 0.010	ND 0.0005	ND 0.025
DIBROMOCHLOROMETHANE	mg/l	ND 0.0005	ND 0.025	ND 0.0005	ND 0.020	ND 0.020	ND 0.0005	ND 0.0005	ND 0.0005	ND 0.010	ND 0.0005	ND 0.025
DIBROMOMETHANE	mg/l	NT	NT	NT	NT	NT	NT	NT	NT	NT	ND 0.0005	ND 0.025
DICHLORODIFLUOROMETHANE	mg/l	NT	NT	NT	NT	NT	NT	NT	NT	NT	ND 0.0010	ND 0.050
ETHYLBENZENE	mg/l	NT	NT	NT	NT	NT	NT	NT	NT	NT	ND 0.0005	ND 0.025
FREON 113	mg/l	ND 0.0050	ND 0.25	ND 0.0050	ND 0.20	ND 0.20	ND 0.0050	ND 0.0050	ND 0.0050	ND 0.10	ND 0.0050	ND 0.25
HEXACHLOROBUTADIENE	mg/l	NT	NT	NT	NT	NT	NT	NT	NT	NT	ND 0.0005	ND 0.025
ISOPROPYLBENZENE	mg/l	NT	NT	NT	NT	NT	NT	NT	NT	NT	ND 0.0005	ND 0.025
m,p-XYLENE	mg/l	NT	NT	NT	NT	NT	NT	NT	NT	NT	ND 0.0005	ND 0.025
METHYL-T-BUTYL ETHER	mg/l	NT	NT	NT	NT	NT	NT	NT	NT	NT	ND 0.0005	ND 0.025
METHYLENE CHLORIDE	mg/l	ND 0.0050	ND 0.25	ND 0.0050	ND 0.20	ND 0.20	ND 0.0050	ND 0.0050	ND 0.0050	ND 0.10	ND 0.0050	ND 0.25
N-BUTYLBENZENE	mg/l	NT	NT	NT	NT	NT	NT	NT	NT	NT	ND 0.0005	ND 0.025
N-PROPYLBENZENE	mg/l	NT	NT	NT	NT	NT	NT	NT	NT	NT	ND 0.0005	ND 0.025
NAPHTHALENE	mg/l	NT	NT	NT	NT	NT	NT	NT	NT	NT	ND 0.0005	ND 0.025
o-XYLENE	mg/l	NT	NT	NT	NT	NT	NT	NT	NT	NT	ND 0.0005	ND 0.025
PARA-ISOPROPYL TOLUENE	mg/l	NT	NT	NT	NT	NT	NT	NT	NT	NT	ND 0.0005	ND 0.025
SEC-BUTYLBENZENE	mg/l	NT	NT	NT	NT	NT	NT	NT	NT	NT	ND 0.0005	ND 0.025
STYRENE	mg/l	NT	NT	NT	NT	NT	NT	NT	NT	NT	ND 0.0005	ND 0.025
TERT- BUTYLBENZENE	mg/l	NT	NT	NT	NT	NT	NT	NT	NT	NT	ND 0.0005	ND 0.025
TETRACHLOROETHENE	mg/l	ND 0.0005	ND 0.025	ND 0.0005	ND 0.020	ND 0.020	ND 0.0005	ND 0.0005	ND 0.0005	ND 0.010	ND 0.0005	ND 0.025

**Notes:**

ND - denotes result was below the detection limit  
NT - sample not tested for the given parameter



**TABLE 2**  
**2008 GROUNDWATER TREATMENT SYSTEM ANALYTICAL DATA**  
**RAYTHEON COMPANY - FORMER FACILITIES**  
**350 ELLIS STREET, MOUNTAIN VIEW, CALIFORNIA**

Parameter	Date	6/16/2008	6/16/2008	7/9/2008	7/9/2008	7/9/2008	9/24/2008	9/24/2008	10/15/2008	10/15/2008	11/17/2008	11/17/2008
	Locatio	RAYEFT	RAYINF	RAYEFT	RAYINF	RAYINF	RAYEFT	RAYINF	RAYEFT	RAYINF	RAYEFT	RAYINF
	Sample	REG	REG	REG	FD	REG	REG	REG	REG	REG	REG	REG
	Units											
<b><u>Analytical Method: EPA 8260B</u></b>												
TOLUENE	mg/l	NT	NT	NT	NT	NT	NT	NT	NT	NT	ND 0.0005	ND 0.025
TRANS-1,2-DICHLOROETHENE	mg/l	ND 0.0005	0.062	ND 0.0005	0.048	0.051	ND 0.0005	0.0006	ND 0.0005	0.092	ND 0.0005	0.089
TRANS-1,3-DICHLOROPROPENE	mg/l	ND 0.0005	ND 0.025	ND 0.0005	ND 0.020	ND 0.020	ND 0.0005	ND 0.0005	ND 0.0005	ND 0.010	ND 0.0005	ND 0.025
TRICHLOROETHENE	mg/l	ND 0.0005	2.6	ND 0.0005	2.5	2.8	ND 0.0005	0.51	ND 0.0005	3.0	ND 0.0005	4.3
TRICHLOROFLUOROMETHANE	mg/l	ND 0.0010	ND 0.050	ND 0.0010	ND 0.040	ND 0.040	ND 0.0010	ND 0.0010	ND 0.0010	ND 0.020	ND 0.0010	ND 0.050
VINYL ACETATE	mg/l	NT	NT	NT	NT	NT	NT	NT	NT	NT	ND 0.010	ND 0.50
VINYL CHLORIDE	mg/l	ND 0.0005	0.062	ND 0.0005	0.068	0.076	ND 0.0005	ND 0.0005	ND 0.0005	0.18	ND 0.0005	0.14
<b><u>Analytical Method: EPA 8270C-SIM</u></b>												
1,4-DIOXANE	mg/l	NT	NT	NT	NT	NT	NT	NT	NT	NT	ND 0.0009	NT
<b><u>Analytical Method: EPA 8270C</u></b>												
1,2,4-TRICHLOROBENZENE	mg/l	NT	NT	NT	NT	NT	NT	NT	NT	NT	ND 0.0094	NT
1,2-DICHLOROBENZENE	mg/l	NT	NT	NT	NT	NT	NT	NT	NT	NT	ND 0.0094	NT
1,3-DICHLOROBENZENE	mg/l	NT	NT	NT	NT	NT	NT	NT	NT	NT	ND 0.0094	NT
1,4-DICHLOROBENZENE	mg/l	NT	NT	NT	NT	NT	NT	NT	NT	NT	ND 0.0094	NT
2,4,5-TRICHLOROPHENOL	mg/l	NT	NT	NT	NT	NT	NT	NT	NT	NT	ND 0.0094	NT
2,4,6-TRICHLOROPHENOL	mg/l	NT	NT	NT	NT	NT	NT	NT	NT	NT	ND 0.0094	NT
2,4-DICHLOROPHENOL	mg/l	NT	NT	NT	NT	NT	NT	NT	NT	NT	ND 0.0094	NT
2,4-DIMETHYLPHENOL	mg/l	NT	NT	NT	NT	NT	NT	NT	NT	NT	ND 0.0094	NT
2,4-DINITROPHENOL	mg/l	NT	NT	NT	NT	NT	NT	NT	NT	NT	ND 0.019	NT
2,4-DINITROTOLUENE	mg/l	NT	NT	NT	NT	NT	NT	NT	NT	NT	ND 0.0094	NT
2,6-DINITROTOLUENE	mg/l	NT	NT	NT	NT	NT	NT	NT	NT	NT	ND 0.0094	NT
2-CHLORONAPHTHALENE	mg/l	NT	NT	NT	NT	NT	NT	NT	NT	NT	ND 0.0094	NT
2-CHLOROPHENOL	mg/l	NT	NT	NT	NT	NT	NT	NT	NT	NT	ND 0.0094	NT
2-METHYLNAPHTHALENE	mg/l	NT	NT	NT	NT	NT	NT	NT	NT	NT	ND 0.0094	NT
2-METHYLPHENOL	mg/l	NT	NT	NT	NT	NT	NT	NT	NT	NT	ND 0.0094	NT
2-NITROANILINE	mg/l	NT	NT	NT	NT	NT	NT	NT	NT	NT	ND 0.019	NT
2-NITROPHENOL	mg/l	NT	NT	NT	NT	NT	NT	NT	NT	NT	ND 0.019	NT
3,3'-DICHLOROENZIDINE	mg/l	NT	NT	NT	NT	NT	NT	NT	NT	NT	ND 0.019	NT
3-NITROANILINE	mg/l	NT	NT	NT	NT	NT	NT	NT	NT	NT	ND 0.019	NT
4,6-DINITRO-2-METHYLPHENOL	mg/l	NT	NT	NT	NT	NT	NT	NT	NT	NT	ND 0.019	NT
<b>Notes:</b>												
ND - denotes result was below the detection limit												
NT - sample not tested for the given parameter												



TABLE 2  
 2008 GROUNDWATER TREATMENT SYSTEM ANALYTICAL DATA  
 RAYTHEON COMPANY - FORMER FACILITIES  
 350 ELLIS STREET, MOUNTAIN VIEW, CALIFORNIA

Parameter	Date	6/16/2008	6/16/2008	7/9/2008	7/9/2008	7/9/2008	9/24/2008	9/24/2008	10/15/2008	10/15/2008	11/17/2008	11/17/2008
Locatio	RAYEFT	RAYINF	RAYEFT	RAYINF	RAYINF	RAYINF	RAYEFT	RAYINF	RAYEFT	RAYINF	RAYEFT	RAYINF
Sample	REG	REG	REG	FD	REG	REG	REG	REG	REG	REG	REG	REG
Units												
<b>Analytical Method: EPA 8270C</b>												
4-BROMOPHENYL PHENYL ETHER	mg/l	NT	NT	NT	NT	NT	NT	NT	NT	NT	ND 0.0094	NT
4-CHLORO-3-METHYLPHENOL	mg/l	NT	NT	NT	NT	NT	NT	NT	NT	NT	ND 0.0094	NT
4-CHLOROANILINE	mg/l	NT	NT	NT	NT	NT	NT	NT	NT	NT	ND 0.0094	NT
4-CHLOROPHENYL PHENYL ETHER	mg/l	NT	NT	NT	NT	NT	NT	NT	NT	NT	ND 0.0094	NT
4-METHYLPHENOL	mg/l	NT	NT	NT	NT	NT	NT	NT	NT	NT	ND 0.0094	NT
4-NITROANILINE	mg/l	NT	NT	NT	NT	NT	NT	NT	NT	NT	ND 0.019	NT
4-NITROPHENOL	mg/l	NT	NT	NT	NT	NT	NT	NT	NT	NT	ND 0.019	NT
ACENAPHTHENE	mg/l	NT	NT	NT	NT	NT	NT	NT	NT	NT	ND 0.0094	NT
ACENAPHTHYLENE	mg/l	NT	NT	NT	NT	NT	NT	NT	NT	NT	ND 0.0094	NT
ANTHRACENE	mg/l	NT	NT	NT	NT	NT	NT	NT	NT	NT	ND 0.0094	NT
AZOBENZENE	mg/l	NT	NT	NT	NT	NT	NT	NT	NT	NT	ND 0.0094	NT
BENZO(A)ANTHRACENE	mg/l	NT	NT	NT	NT	NT	NT	NT	NT	NT	ND 0.0094	NT
BENZO(A)PYRENE	mg/l	NT	NT	NT	NT	NT	NT	NT	NT	NT	ND 0.0094	NT
BENZO(B)FLUORANTHENE	mg/l	NT	NT	NT	NT	NT	NT	NT	NT	NT	ND 0.0094	NT
BENZO(GHI)PERYLENE	mg/l	NT	NT	NT	NT	NT	NT	NT	NT	NT	ND 0.0094	NT
BENZO(K)FLUORANTHENE	mg/l	NT	NT	NT	NT	NT	NT	NT	NT	NT	ND 0.0094	NT
BENZOIC ACID	mg/l	NT	NT	NT	NT	NT	NT	NT	NT	NT	ND 0.047	NT
BENZYL ALCOHOL	mg/l	NT	NT	NT	NT	NT	NT	NT	NT	NT	ND 0.0094	NT
BIS(2-CHLOROETHOXY)METHANE	mg/l	NT	NT	NT	NT	NT	NT	NT	NT	NT	ND 0.0094	NT
BIS(2-CHLOROETHYL)ETHER	mg/l	NT	NT	NT	NT	NT	NT	NT	NT	NT	ND 0.0094	NT
BUTYL BENZYL PHTHALATE	mg/l	NT	NT	NT	NT	NT	NT	NT	NT	NT	ND 0.0094	NT
CHRYSENE	mg/l	NT	NT	NT	NT	NT	NT	NT	NT	NT	ND 0.0094	NT
DI-N-BUTYL PHTHALATE	mg/l	NT	NT	NT	NT	NT	NT	NT	NT	NT	ND 0.0094	NT
DI-N-OCTYL PHTHALATE	mg/l	NT	NT	NT	NT	NT	NT	NT	NT	NT	ND 0.0094	NT
DIBENZO(A,H)ANTHRACENE	mg/l	NT	NT	NT	NT	NT	NT	NT	NT	NT	ND 0.0094	NT
DIBENZOFURAN	mg/l	NT	NT	NT	NT	NT	NT	NT	NT	NT	ND 0.0094	NT
DIETHYL PHTHALATE	mg/l	NT	NT	NT	NT	NT	NT	NT	NT	NT	ND 0.0094	NT
DIMETHYL PHTHALATE	mg/l	NT	NT	NT	NT	NT	NT	NT	NT	NT	ND 0.0094	NT
FLUORANTHENE	mg/l	NT	NT	NT	NT	NT	NT	NT	NT	NT	ND 0.0094	NT
FLUORENE	mg/l	NT	NT	NT	NT	NT	NT	NT	NT	NT	ND 0.0094	NT

**Notes:**  
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 NT - sample not tested for the given parameter



TABLE 2  
 2008 GROUNDWATER TREATMENT SYSTEM ANALYTICAL DATA  
 RAYTHEON COMPANY - FORMER FACILITIES  
 350 ELLIS STREET, MOUNTAIN VIEW, CALIFORNIA

Parameter	Date	6/16/2008	6/16/2008	7/9/2008	7/9/2008	7/9/2008	9/24/2008	9/24/2008	10/15/2008	10/15/2008	11/17/2008	11/17/2008
Locatio	RAYEFT	RAYINF	RAYEFT	RAYINF	RAYINF	RAYINF	RAYEFT	RAYINF	RAYEFT	RAYINF	RAYEFT	RAYINF
Sample	REG	REG	REG	FD	REG	REG	REG	REG	REG	REG	REG	REG
Units												
<b>Analytical Method: EPA 8270C</b>												
HEXACHLOROBENZENE	mg/l	NT	NT	NT	NT	NT	NT	NT	NT	NT	ND 0.0094	NT
HEXACHLOROBUTADIENE	mg/l	NT	NT	NT	NT	NT	NT	NT	NT	NT	ND 0.0094	NT
HEXACHLOROCYCLOPENTADIENE	mg/l	NT	NT	NT	NT	NT	NT	NT	NT	NT	ND 0.019	NT
HEXACHLOROETHANE	mg/l	NT	NT	NT	NT	NT	NT	NT	NT	NT	ND 0.0094	NT
INDENO(1,2,3-CD)PYRENE	mg/l	NT	NT	NT	NT	NT	NT	NT	NT	NT	ND 0.0094	NT
ISOPHORONE	mg/l	NT	NT	NT	NT	NT	NT	NT	NT	NT	ND 0.0094	NT
N-NITROSO-DI-N-PROPYLAMINE	mg/l	NT	NT	NT	NT	NT	NT	NT	NT	NT	ND 0.0094	NT
N-NITROSODIMETHYLAMINE	mg/l	NT	NT	NT	NT	NT	NT	NT	NT	NT	ND 0.0094	NT
N-NITROSODIPHENYLAMINE	mg/l	NT	NT	NT	NT	NT	NT	NT	NT	NT	ND 0.0094	NT
NAPHTHALENE	mg/l	NT	NT	NT	NT	NT	NT	NT	NT	NT	ND 0.0094	NT
NITROBENZENE	mg/l	NT	NT	NT	NT	NT	NT	NT	NT	NT	ND 0.0094	NT
PENTACHLOROPHENOL	mg/l	NT	NT	NT	NT	NT	NT	NT	NT	NT	ND 0.019	NT
PHENANTHRENE	mg/l	NT	NT	NT	NT	NT	NT	NT	NT	NT	ND 0.0094	NT
PHENOL	mg/l	NT	NT	NT	NT	NT	NT	NT	NT	NT	ND 0.0094	NT
PYRENE	mg/l	NT	NT	NT	NT	NT	NT	NT	NT	NT	ND 0.0094	NT

**Notes:**  
 ND - denotes result was below the detection limit  
 NT - sample not tested for the given parameter



TABLE 2  
 2008 GROUNDWATER TREATMENT SYSTEM ANALYTICAL DATA  
 RAYTHEON COMPANY - FORMER FACILITIES  
 350 ELLIS STREET, MOUNTAIN VIEW, CALIFORNIA

Parameter	Units	Date 12/17/2008	12/17/2008
		Locatio RAYEFT	RAYINF
		Sample REG	REG
<b>Analytical Method: EPA 8260B</b>			
1,1,1,2-TETRACHLOROETHANE	mg/l	NT	NT
1,1,1-TRICHLOROETHANE	mg/l	ND 0.0005	0.0029
1,1,2,2-TETRACHLOROETHANE	mg/l	ND 0.0005	ND 0.0005
1,1,2-TRICHLOROETHANE	mg/l	ND 0.0005	ND 0.0005
1,1-DICHLOROETHANE	mg/l	0.0016	0.012
1,1-DICHLOROETHENE	mg/l	ND 0.0005	0.014
1,1-DICHLOROPROPENE	mg/l	NT	NT
1,2,3-TRICHLOROBENZENE	mg/l	NT	NT
1,2,3-TRICHLOROPROPANE	mg/l	NT	NT
1,2,4-TRICHLOROBENZENE	mg/l	NT	NT
1,2,4-TRIMETHYLBENZENE	mg/l	NT	NT
1,2-DIBROMO-3-CHLOROPROPANE	mg/l	NT	NT
1,2-DIBROMOETHANE	mg/l	NT	NT
1,2-DICHLOROBENZENE	mg/l	ND 0.0005	0.016
1,2-DICHLOROETHANE	mg/l	ND 0.0005	ND 0.0005
1,2-DICHLOROPROPANE	mg/l	ND 0.0005	ND 0.0005
1,3,5-TRIMETHYLBENZENE	mg/l	NT	NT
1,3-DICHLOROBENZENE	mg/l	ND 0.0005	ND 0.0005
1,3-DICHLOROPROPANE	mg/l	NT	NT
1,4-DICHLOROBENZENE	mg/l	ND 0.0005	0.0030
2,2-DICHLOROPROPANE	mg/l	NT	NT
2-BUTANONE	mg/l	NT	NT
2-CHLOROETHYL VINYL ETHER	mg/l	ND 0.0010	ND 0.0010
2-HEXANONE	mg/l	NT	NT
4-CHLOROTOLUENE	mg/l	NT	NT
4-METHYL-2-PENTANONE	mg/l	NT	NT
ACETONE	mg/l	NT	NT
BENZENE	mg/l	NT	NT
BROMOBENZENE	mg/l	NT	NT
BROMOCHLOROMETHANE	mg/l	NT	NT
<b>Notes:</b>			
ND - denotes result was below the detection			
NT - sample not tested for the given paramet			



TABLE 2  
 2008 GROUNDWATER TREATMENT SYSTEM ANALYTICAL DATA  
 RAYTHEON COMPANY - FORMER FACILITIES  
 350 ELLIS STREET, MOUNTAIN VIEW, CALIFORNIA

Parameter	Units	Date 12/17/2008	12/17/2008
		Locatio RAYEFT	RAYINF
		Sample REG	REG
<b>Analytical Method: EPA 8260B</b>			
BROMODICHLOROMETHANE	mg/l	ND 0.0005	ND 0.0005
BROMOFORM	mg/l	ND 0.0005	ND 0.0005
BROMOMETHANE	mg/l	ND 0.0010	ND 0.0010
CARBON DISULFIDE	mg/l	NT	NT
CARBON TETRACHLORIDE	mg/l	ND 0.0005	ND 0.0005
CHLOROBENZENE	mg/l	ND 0.0005	ND 0.0005
CHLOROETHANE	mg/l	ND 0.0010	ND 0.0010
CHLOROFORM	mg/l	ND 0.0005	ND 0.0005
CHLOROMETHANE	mg/l	ND 0.0010	ND 0.0010
CIS-1,2-DICHLOROETHENE	mg/l	ND 0.0005	0.77
CIS-1,3-DICHLOROPROPENE	mg/l	ND 0.0005	ND 0.0005
DIBROMOCHLOROMETHANE	mg/l	ND 0.0005	ND 0.0005
DIBROMOMETHANE	mg/l	NT	NT
DICHLORODIFLUOROMETHANE	mg/l	NT	NT
ETHYLBENZENE	mg/l	NT	NT
FREON 113	mg/l	ND 0.0050	0.024
HEXACHLOROBUTADIENE	mg/l	NT	NT
ISOPROPYLBENZENE	mg/l	NT	NT
m,p-XYLENE	mg/l	NT	NT
METHYL-T-BUTYL ETHER	mg/l	NT	NT
METHYLENE CHLORIDE	mg/l	ND 0.0050	ND 0.0050
N-BUTYLBENZENE	mg/l	NT	NT
N-PROPYLBENZENE	mg/l	NT	NT
NAPHTHALENE	mg/l	NT	NT
o-XYLENE	mg/l	NT	NT
PARA-ISOPROPYL TOLUENE	mg/l	NT	NT
SEC-BUTYLBENZENE	mg/l	NT	NT
STYRENE	mg/l	NT	NT
TERT- BUTYLBENZENE	mg/l	NT	NT
TETRACHLOROETHENE	mg/l	ND 0.0005	0.0054
<b>Notes:</b>			
ND - denotes result was below the detection			
NT - sample not tested for the given paramet			



TABLE 2  
 2008 GROUNDWATER TREATMENT SYSTEM ANALYTICAL DATA  
 RAYTHEON COMPANY - FORMER FACILITIES  
 350 ELLIS STREET, MOUNTAIN VIEW, CALIFORNIA

Parameter	Date	12/17/2008	12/17/2008
Units	Locatio	RAYEFT	RAYINF
	Sample	REG	REG
<b>Analytical Method: EPA 8260B</b>			
TOLUENE	mg/l	NT	NT
TRANS-1,2-DICHLOROETHENE	mg/l	ND 0.0005	0.069
TRANS-1,3-DICHLOROPROPENE	mg/l	ND 0.0005	ND 0.0005
TRICHLOROETHENE	mg/l	ND 0.0005	3.0
TRICHLOROFLUOROMETHANE	mg/l	ND 0.0010	ND 0.0010
VINYL ACETATE	mg/l	NT	NT
VINYL CHLORIDE	mg/l	ND 0.0005	0.074
<b>Analytical Method: EPA 8270C-SIM</b>			
1,4-DIOXANE	mg/l	NT	NT
<b>Analytical Method: EPA 8270C</b>			
1,2,4-TRICHLOROBENZENE	mg/l	NT	NT
1,2-DICHLOROBENZENE	mg/l	NT	NT
1,3-DICHLOROBENZENE	mg/l	NT	NT
1,4-DICHLOROBENZENE	mg/l	NT	NT
2,4,5-TRICHLOROPHENOL	mg/l	NT	NT
2,4,6-TRICHLOROPHENOL	mg/l	NT	NT
2,4-DICHLOROPHENOL	mg/l	NT	NT
2,4-DIMETHYLPHENOL	mg/l	NT	NT
2,4-DINITROPHENOL	mg/l	NT	NT
2,4-DINITROTOLUENE	mg/l	NT	NT
2,6-DINITROTOLUENE	mg/l	NT	NT
2-CHLORONAPHTHALENE	mg/l	NT	NT
2-CHLOROPHENOL	mg/l	NT	NT
2-METHYLNAPHTHALENE	mg/l	NT	NT
2-METHYLPHENOL	mg/l	NT	NT
2-NITROANILINE	mg/l	NT	NT
2-NITROPHENOL	mg/l	NT	NT
3,3'-DICHLOROBENZIDINE	mg/l	NT	NT
3-NITROANILINE	mg/l	NT	NT
4,6-DINITRO-2-METHYLPHENOL	mg/l	NT	NT
<b>Notes:</b>			
ND - denotes result was below the detection			
NT - sample not tested for the given paramet			



TABLE 2  
 2008 GROUNDWATER TREATMENT SYSTEM ANALYTICAL DATA  
 RAYTHEON COMPANY - FORMER FACILITIES  
 350 ELLIS STREET, MOUNTAIN VIEW, CALIFORNIA

Parameter	Date	12/17/2008	12/17/2008
	Locatio	RAYEFT	RAYINF
	Sample	REG	REG
	Units		
<b>Analytical Method: EPA 8270C</b>			
4-BROMOPHENYL PHENYL ETHER	mg/l	NT	NT
4-CHLORO-3-METHYLPHENOL	mg/l	NT	NT
4-CHLOROANILINE	mg/l	NT	NT
4-CHLOROPHENYL PHENYL ETHER	mg/l	NT	NT
4-METHYLPHENOL	mg/l	NT	NT
4-NITROANILINE	mg/l	NT	NT
4-NITROPHENOL	mg/l	NT	NT
ACENAPHTHENE	mg/l	NT	NT
ACENAPHTHYLENE	mg/l	NT	NT
ANTHRACENE	mg/l	NT	NT
AZOBENZENE	mg/l	NT	NT
BENZO(A)ANTHRACENE	mg/l	NT	NT
BENZO(A)PYRENE	mg/l	NT	NT
BENZO(B)FLUORANTHENE	mg/l	NT	NT
BENZO(GHI)PERYLENE	mg/l	NT	NT
BENZO(K)FLUORANTHENE	mg/l	NT	NT
BENZOIC ACID	mg/l	NT	NT
BENZYL ALCOHOL	mg/l	NT	NT
BIS(2-CHLOROETHOXY)METHANE	mg/l	NT	NT
BIS(2-CHLOROETHYL)ETHER	mg/l	NT	NT
BUTYL BENZYL PHTHALATE	mg/l	NT	NT
CHRYSENE	mg/l	NT	NT
DI-N-BUTYL PHTHALATE	mg/l	NT	NT
DI-N-OCTYL PHTHALATE	mg/l	NT	NT
DIBENZO(A,H)ANTHRACENE	mg/l	NT	NT
DIBENZOFURAN	mg/l	NT	NT
DIETHYL PHTHALATE	mg/l	NT	NT
DIMETHYL PHTHALATE	mg/l	NT	NT
FLUORANTHENE	mg/l	NT	NT
FLUORENE	mg/l	NT	NT
<b>Notes:</b>			
ND - denotes result was below the detection			
NT - sample not tested for the given paramet			



TABLE 2  
 2008 GROUNDWATER TREATMENT SYSTEM ANALYTICAL DATA  
 RAYTHEON COMPANY - FORMER FACILITIES  
 350 ELLIS STREET, MOUNTAIN VIEW, CALIFORNIA

Parameter	Date	12/17/2008	12/17/2008
	Locatio	RAYEFT	RAYINF
	Sample	REG	REG
	Units		
<b><u>Analytical Method: EPA 8270C</u></b>			
HEXACHLOROBENZENE	mg/l	NT	NT
HEXACHLOROBUTADIENE	mg/l	NT	NT
HEXACHLOROCYCLOPENTADIENE	mg/l	NT	NT
HEXACHLOROETHANE	mg/l	NT	NT
INDENO(1,2,3-CD)PYRENE	mg/l	NT	NT
ISOPHORONE	mg/l	NT	NT
N-NITROSO-DI-N-PROPYLAMINE	mg/l	NT	NT
N-NITROSODIMETHYLAMINE	mg/l	NT	NT
N-NITROSODIPHENYLAMINE	mg/l	NT	NT
NAPHTHALENE	mg/l	NT	NT
NITROBENZENE	mg/l	NT	NT
PENTACHLOROPHENOL	mg/l	NT	NT
PHENANTHRENE	mg/l	NT	NT
PHENOL	mg/l	NT	NT
PYRENE	mg/l	NT	NT
<b>Notes:</b>			
ND - denotes result was below the detection			
NT - sample not tested for the given paramet			



**TABLE 3**  
**CUMULATIVE VOC MASS REMOVAL**  
**RAYTHEON COMPANY - FORMER FACILITIES**  
**350 ELLIS STREET, MOUNTAIN VIEW, CALIFORNIA**

<b>Date</b>	<b>VOC Concentration (mg/L)</b>	<b>Total Flow (gallons per month)</b>	<b>Mass Removed (lbs)</b>	<b>Cumulative Mass Removed (lbs)</b>
10/17/1986	12.37	2,473,490	0	0
10/27/1986	6.15	2,473,490	41.73	42
10/28/1986	4.59	2,473,490	3.11	45
10/29/1986	5.10	2,473,490	3.46	48
11/5/1986	5.05	3,452,400	33.46	82
11/12/1986	5.39	3,452,400	35.74	118
12/1/1986	5.00	2,787,540	72.64	190
12/29/1986	9.51	2,787,540	203.52	394
12/31/1986	6.36	2,787,540	9.72	403
1/19/1987	6.52	1,930,153	65.58	469
1/28/1987	7.16	1,930,153	34.09	503
2/23/1987	21.70	1,206,884	186.70	690
3/2/1987	13.24	3,775,862	95.95	786
3/13/1987	9.49	3,775,862	108.07	894
4/9/1987	9.25	3,078,120	210.78	1,105
4/22/1987	8.56	3,078,120	93.92	1,198
5/8/1987	4.88	1,837,494	39.34	1,238
5/28/1987	4.02	1,837,494	40.51	1,278
6/3/1987	4.19	2,527,500	17.42	1,296
6/8/1987	4.71	2,527,500	16.32	1,312
6/17/1987	5.42	2,527,500	33.80	1,346
6/25/1987	5.69	2,527,500	31.55	1,377
7/13/1987	4.16	3,866,196	79.38	1,457
7/31/1987	5.12	3,866,196	97.69	1,554
8/13/1987	3.86	3,740,305	51.46	1,606
8/27/1987	4.95	3,740,305	71.07	1,677
5/20/1988	4.10	217,000	65.13	1,742
6/7/1988	2.90	210,000	3.01	1,745
6/28/1988	2.80	210,000	3.39	1,749
10/3/1988	3.33	442,835	39.22	1,788
12/22/1988	2.80	442,835	27.20	1,815
3/28/1989	2.40	378,200	23.89	1,839
6/20/1989	2.80	474,000	30.57	1,869
9/21/1989	2.90	447,000	33.05	1,902
12/15/1989	2.00	461,900	21.53	1,924
3/30/1990	1.90	162,967	8.91	1,933
6/29/1990	1.80	438,000	19.67	1,953
9/28/1990	2.80	213,720	14.93	1,967
12/7/1990	1.05	1,116,000	22.49	1,990
3/28/1991	0.80	1,054,000	25.73	2,016
6/18/1991	0.66	733,740	10.89	2,027
9/16/1991	0.95	673,560	15.71	2,042
12/19/1991	0.63	737,862	11.98	2,054
3/26/1992	0.36	794,437	7.77	2,062
6/26/1992	0.48	747,060	8.97	2,071
9/24/1992	4.24	706,860	73.96	2,145
12/8/1992	8.39	846,920	146.07	2,291

**TABLE 3**  
**CUMULATIVE VOC MASS REMOVAL**  
**RAYTHEON COMPANY - FORMER FACILITIES**  
**350 ELLIS STREET, MOUNTAIN VIEW, CALIFORNIA**

<b>Date</b>	<b>VOC Concentration (mg/L)</b>	<b>Total Flow (gallons per month)</b>	<b>Mass Removed (lbs)</b>	<b>Cumulative Mass Removed (lbs)</b>
2/18/1993	5.93	1,011,164	118.37	2,409
3/11/1993	5.64	1,358,947	44.13	2,454
4/14/1993	4.66	1,460,100	63.43	2,517
5/25/1993	4.55	1,154,874	59.07	2,576
6/23/1993	5.24	1,353,270	56.38	2,632
7/22/1993	5.55	1,215,572	53.64	2,686
8/24/1993	6.04	1,085,279	59.31	2,745
9/23/1993	5.69	879,840	41.18	2,787
10/28/1993	6.00	877,021	50.50	2,837
11/24/1993	6.78	772,680	38.78	2,876
12/26/1993	7.48	822,988	54.01	2,930
1/13/1994	7.61	1,020,985	38.35	2,968
2/4/1994	7.47	804,160	36.23	3,004
3/4/1994	6.82	1,099,353	57.56	3,062
4/14/1994	7.19	1,035,300	83.68	3,146
5/12/1994	7.10	942,555	51.38	3,197
6/9/1994	7.11	911,880	49.77	3,247
7/14/1994	7.08	956,877	65.01	3,312
8/11/1994	5.28	1,098,640	44.53	3,356
9/15/1994	5.59	779,940	41.84	3,398
10/12/1994	5.33	877,393	34.62	3,433
11/10/1994	3.89	706,080	21.84	3,455
12/15/1994	6.10	791,926	46.36	3,501
1/6/1995	5.35	809,007	26.11	3,527
2/9/1995	4.55	975,912	41.39	3,569
3/9/1995	5.16	1,080,226	42.79	3,611
4/6/1995	5.13	967,170	38.09	3,649
5/15/1995	4.39	997,425	46.82	3,696
6/15/1995	5.04	966,390	41.40	3,738
7/13/1995	4.79	1,130,350	41.57	3,779
8/10/1995	5.54	906,720	38.56	3,818
9/18/1995	5.08	886,970	48.18	3,866
10/12/1995	5.58	830,380	30.49	3,896
11/9/1995	4.98	796,640	30.46	3,927
12/4/1995	6.23	826,780	35.31	3,962
1/31/1996	4.72	626,360	47.01	4,009
2/29/1996	5.65	705,320	31.69	4,041
3/31/1996	5.33	721,450	32.68	4,074
4/30/1996	5.56	827,560	37.85	4,111
5/23/1996	6.49	856,930	35.07	4,147
6/14/1996	4.88	1,299,060	38.24	4,185
7/11/1996	3.98	1,577,150	46.47	4,231
8/8/1996	4.43	1,068,297	36.33	4,268
9/27/1996	8.94	1,739,434	213.18	4,481
10/17/1996	6.01	2,309,683	76.12	4,557
11/17/1996	4.92	1,976,504	82.65	4,640
12/17/1996	4.33	1,704,181	60.70	4,700

**TABLE 3**  
**CUMULATIVE VOC MASS REMOVAL**  
**RAYTHEON COMPANY - FORMER FACILITIES**  
**350 ELLIS STREET, MOUNTAIN VIEW, CALIFORNIA**

<b>Date</b>	<b>VOC Concentration (mg/L)</b>	<b>Total Flow (gallons per month)</b>	<b>Mass Removed (lbs)</b>	<b>Cumulative Mass Removed (lbs)</b>
1/24/1997	4.64	1,874,988	236.15	4,793
2/13/1997	4.53	2,001,712	49.72	4,843
3/18/1997	4.76	2,428,607	104.60	4,947
4/16/1997	4.16	2,136,780	70.68	5,018
5/14/1997	4.57	2,280,782	80.02	5,098
6/19/1997	4.79	2,065,358	97.65	5,196
7/16/1997	5.21	2,294,318	88.49	5,284
8/20/1997	3.15	2,117,259	64.00	5,348
9/8/1997	7.11	2,382,011	88.23	5,436
10/2/1997	5.41	2,583,099	91.96	5,528
11/12/1997	4.91	2,059,288	113.66	5,642
12/11/1997	5.43	2,335,012	100.82	5,743
1/16/1998	4.34	2,320,835	99.42	5,842
2/25/1998	4.54	2,322,241	115.63	5,958
3/25/1998	4.38	2,322,667	78.10	6,036
4/10/1998	5.92	2,125,955	55.21	6,091
5/11/1998	6.66	2,181,943	123.51	6,215
6/8/1998	5.95	2,192,143	100.13	6,315
7/9/1998	2.96	2,187,687	55.04	6,370
8/4/1998	5.65	1,909,016	76.89	6,447
9/10/1998	6.31	1,837,103	117.60	6,564
10/30/1998	5.09	2,168,118	151.29	6,716
11/3/1998	5.23	2,050,814	11.76	6,727
12/3/1998	6.37	2,036,071	106.68	6,834
1/6/1999	9.38	2,371,413	207.36	7,041
2/1/1999	8.70	1,425,421	88.40	7,130
3/3/1999	6.00	1,657,431	81.80	7,212
4/6/1999	9.90	2,160,686	199.41	7,411
5/4/1999	6.34	2,113,299	102.86	7,514
6/9/1999	4.37	2,268,609	97.85	7,612
7/6/1999	6.00	1,961,659	87.13	7,699
8/3/1999	6.00	1,934,139	89.09	7,788
9/9/1999	6.00	2,474,267	150.60	7,939
10/4/1999	6.00	1,813,012	74.56	8,013
11/2/1999	6.00	1,845,816	88.06	8,101
12/6/1999	6.00	2,262,708	126.56	8,228
1/1/2000	6.00	1,539,993	65.87	8,294
3/3/2000	1.26	1,095,810	23.42	8,317
3/8/2000	1.61	1,095,810	2.42	8,320
3/22/2000	2.56	1,095,810	10.77	8,330
3/28/2000	0.84	1,095,810	1.51	8,332
5/9/2000	1.56	1,726,160	30.93	8,363
6/5/2000	1.02	838,365	6.35	8,369
6/21/2000	1.80	838,365	6.61	8,376
8/1/2000	1.52	838,365	14.31	8,390
9/5/2000	2.82	1,619,800	43.77	8,434
10/10/2000	1.35	1,947,460	25.23	8,459
11/6/2000	8.69	1,574,200	101.24	8,560
12/1/2000	10.00	1,411,950	96.80	8,657

**TABLE 3**  
**CUMULATIVE VOC MASS REMOVAL**  
**RAYTHEON COMPANY - FORMER FACILITIES**  
**350 ELLIS STREET, MOUNTAIN VIEW, CALIFORNIA**

<b>Date</b>	<b>VOC Concentration (mg/L)</b>	<b>Total Flow (gallons per month)</b>	<b>Mass Removed (lbs)</b>	<b>Cumulative Mass Removed (lbs)</b>
1/1/2001	3.80	1,080,750	34.31	8,691
2/1/2001	9.46	970,100	76.60	8,768
3/1/2001	8.01	1,182,000	79.04	8,847
4/1/2001	14.28	1,504,700	179.32	9,026
5/1/2001	9.90	937,150	77.43	9,104
6/1/2001	6.14	913,450	46.81	9,151
7/1/2001	6.80	575,185	32.64	9,183
8/1/2001	10.40	1,142,485	99.16	9,282
9/1/2001	10.00	1,107,530	92.43	9,375
10/1/2001	7.49	1,755,400	109.72	9,484
11/1/2001	7.35	1,453,700	89.17	9,574
12/1/2001	7.39	1,452,270	89.57	9,663
1/1/2002	7.48	1,706,930	106.55	9,770
2/1/2002	7.88	943,350	62.04	9,832
3/1/2002	5.95	1,039,650	51.58	9,883
4/1/2002	8.10	1,030,550	69.64	9,953
5/1/2002	7.86	1,395,950	91.57	10,045
6/1/2002	8.66	1,530,800	110.68	10,155
7/1/2002	9.55	957,600	76.32	10,232
8/1/2002	5.29	1,216,500	53.71	10,285
9/1/2002	6.21	1,310,900	67.94	10,353
10/1/2002	5.75	1,157,100	55.52	10,409
11/1/2002	8.05	1,086,575	73.00	10,482
12/1/2002	10.92	1,128,975	102.89	10,585
1/1/2003	9.99	1,355,675	113.03	10,698
2/1/2003	11.67	1,288,075	125.48	10,823
3/1/2003	11.07	1,434,490	132.55	10,956
4/1/2003	11.62	1,123,510	108.91	11,065
5/1/2003	8.48	663,730	46.95	11,112
6/1/2003	11.66	1,100,130	107.06	11,219
7/1/2003	10.78	993,850	89.41	11,308
8/1/2003	10.65	782,000	69.50	11,378
9/1/2003	4.14	1,208,490	41.75	11,419
10/1/2003	5.04	817,220	34.37	11,454
11/1/2003	-	0	0.00	11,497
12/1/2003	7.92	514,730	34.00	11,531
1/19/2004	7.17	896,910	53.67	11,585
2/24/2004	7.69	897,850	57.62	11,642
3/15/2004	7.52	922,240	57.88	11,700
4/26/2004	6.57	1,209,520	66.32	11,766
5/17/2004	7.02	1,024,285	60.01	11,826
6/21/2004	5.91	816,920	40.32	11,867
7/19/2004	3.35	586,065	16.40	11,883
8/17/2004	6.60	1,387,020	76.43	11,960
9/21/2004	6.24	1,751,543	91.15	12,051
10/19/2004	5.89	1,662,937	81.70	12,133
11/15/2004	4.10	1,343,380	46.01	12,179
12/20/2004	3.86	1,810,315	58.24	12,237

**TABLE 3  
CUMULATIVE VOC MASS REMOVAL  
RAYTHEON COMPANY - FORMER FACILITIES  
350 ELLIS STREET, MOUNTAIN VIEW, CALIFORNIA**

<b>Date</b>	<b>VOC Concentration (mg/L)</b>	<b>Total Flow (gallons per month)</b>	<b>Mass Removed (lbs)</b>	<b>Cumulative Mass Removed (lbs)</b>
1/19/2005	5.13	1,131,215	43.96	12,281
2/23/2005	4.29	1,283,835	52.75	12,333
3/21/2005	4.99	1,593,115	60.55	12,394
4/18/2005	4.95	1,672,165	69.33	12,463
5/16/2005	4.66	1,721,575	68.65	12,532
6/20/2005	4.78	1,540,810	60.53	12,593
7/18/2005	4.53	1,480,250	57.84	12,650
8/15/2005	4.43	1,801,230	67.17	12,718
9/19/2005	4.21	1,444,838	52.27	12,770
10/19/2005	4.72	1,463,479	53.23	12,823
11/21/2005	4.19	1,603,611	60.49	12,884
12/20/2005	3.81	1,377,038	46.41	12,930
1/16/2006	3.44	1,523,394	45.77	12,976
2/7/2006	3.76	1,348,990	41.69	13,017
3/15/2006	3.49	1,074,920	32.57	13,050
4/18/2006	3.22	1,328,115	37.74	13,088
5/16/2006	5.55	1,775,355	65.85	13,154
6/27/2006	5.44	1,445,663	66.78	13,220
7/20/2006	5.35	1,806,782	66.97	13,287
8/23/2006	4.70	1,262,105	68.57	13,356
9/22/2006	5.67	1,163,583	47.35	13,403
10/19/2006	5.63	1,815,987	85.61	13,489
11/15/2006	5.82	1,617,622	77.39	13,566
12/18/2006	5.33	1,649,200	77.35	13,644
1/15/2007	4.34	1,460,498	71.85	13,715
2/21/2007	4.11	1,494,310	67.55	13,783
3/20/2007	4.11	1,650,136	69.36	13,852
4/19/2007	4.44	1,427,088	71.49	13,924
5/21/2007	4.33	1,496,597	54.85	13,979
6/21/2007	4.35	1,036,802	37.46	14,016
7/18/2007	4.04	1,166,521	41.23	14,057
8/16/2007	3.38	1,658,509	52.08	14,109
9/17/2007	4.37	1,105,795	34.99	14,144
10/15/2007	4.11	1,554,429	54.95	14,199
11/21/2007	3.99	524,276	17.95	14,217
12/26/2007	3.92	145,473	4.84	14,222
1/21/2008	5.05	1,095,626	40.15	14,262
2/18/2008	4.06	991,811	39.71	14,302
3/17/2008	4.42	1,185,466	41.53	14,344
4/16/2008	4.08	1,529,220	54.31	14,398
5/20/2008	3.79	1,074,870	35.56	14,433
6/16/2008	3.64	1,185,285	32.75	14,466
7/9/2008	3.64	507,936	15.42	14,482
9/24/2008	0.59	247,343	0.19	14,482
10/15/2008	4.47	1,387,745	40.00	14,522
11/17/2008	6.13	1,086,198	49.00	14,571
12/17/2008	3.94	1,164,878	25.00	14,596

**TABLE 4**  
**2008 GROUNDWATER ELEVATIONS**  
**RAYTHEON COMPANY - FORMER FACILITIES**  
**350 ELLIS STREET, MOUNTAIN VIEW, CALIFORNIA**

Location	Date	Groundwater Elevation	Depth to Water	Reference Elevation	Depth Units
100A	3/27/2008	34.13	13.89	48.02	ft
100A	8/14/2008	33.99	14.03	48.02	ft
100A	8/21/2008	33.95	14.07	48.02	ft
100A	9/17/2008	33.9	14.12	48.02	ft
100A	9/19/2008	33.88	14.14	48.02	ft
100A	9/22/2008	33.89	14.13	48.02	ft
100A	9/29/2008	33.78	14.24	48.02	ft
100A	11/20/2008	33.37	14.65	48.02	ft
<hr/>					
101B1	3/27/2008	43.46	11.46	54.92	ft
101B1	11/20/2008	42.17	12.75	54.92	ft
<hr/>					
106A	3/27/2008	33.88	15.39	49.27	ft
106A	8/14/2008	33.55	15.72	49.27	ft
106A	8/21/2008	33.51	15.76	49.27	ft
106A	9/17/2008	33.31	15.96	49.27	ft
106A	9/19/2008	33.3	15.97	49.27	ft
106A	9/22/2008	33.31	15.96	49.27	ft
106A	9/29/2008	33.11	16.16	49.27	ft
106A	11/20/2008	33.08	16.19	49.27	ft
<hr/>					
114B1	3/27/2008	35.06	11.84	46.9	ft
114B1	8/14/2008	34.93	11.97	46.9	ft
114B1	8/21/2008	34.89	12.01	46.9	ft
114B1	9/17/2008	34.6	12.3	46.9	ft
114B1	9/19/2008	34.6	12.3	46.9	ft
114B1	9/22/2008	34.6	12.3	46.9	ft
114B1	9/29/2008	33.56	13.34	46.9	ft
114B1	11/20/2008	34.21	12.69	46.9	ft
<hr/>					
132B2	3/27/2008	34.47	14.74	49.21	ft
132B2	8/14/2008	34.2	15.01	49.21	ft
132B2	8/21/2008	34.15	15.06	49.21	ft
132B2	9/17/2008	34.03	15.18	49.21	ft
132B2	9/19/2008	34.03	15.18	49.21	ft
132B2	9/22/2008	34.02	15.19	49.21	ft
132B2	9/29/2008	32.31	16.9	49.21	ft
132B2	11/20/2008	33.41	15.8	49.21	ft
<hr/>					
134B2	3/27/2008	37.27	10.58	47.85	ft
134B2	8/14/2008	36.82	11.03	47.85	ft
134B2	8/21/2008	36.82	11.03	47.85	ft
134B2	9/17/2008	36.62	11.23	47.85	ft
134B2	9/19/2008	36.62	11.23	47.85	ft
134B2	9/22/2008	36.63	11.22	47.85	ft
134B2	9/29/2008	36.17	11.68	47.85	ft
134B2	11/20/2008	36.42	11.43	47.85	ft
<hr/>					
145B1	3/27/2008	39.39	14.61	54	ft
145B1	11/20/2008	38.72	15.28	54	ft
<hr/>					
156B1	3/27/2008	39.59	11.32	50.91	ft

**Notes:**

This table includes the water level measurements collected during the steady state investigation when the treatment system was shutdown from July 14 to September 22, 2008.



TABLE 4  
 2008 GROUNDWATER ELEVATIONS  
 RAYTHEON COMPANY - FORMER FACILITIES  
 350 ELLIS STREET, MOUNTAIN VIEW, CALIFORNIA

Location	Date	Groundwater Elevation	Depth to Water	Reference Elevation	Depth Units
156B1	8/14/2008	39.18	11.73	50.91	ft
156B1	8/21/2008	39.15	11.76	50.91	ft
156B1	9/17/2008	38.85	12.06	50.91	ft
156B1	9/19/2008	38.87	12.04	50.91	ft
156B1	9/22/2008	38.86	12.05	50.91	ft
156B1	9/29/2008	38.59	12.32	50.91	ft
156B1	11/20/2008	37.45	13.46	50.91	ft
<hr/>					
24A	3/27/2008	34.53	13.89	48.42	ft
24A	8/14/2008	34.2	14.22	48.42	ft
24A	8/21/2008	34.17	14.25	48.42	ft
24A	9/17/2008	34.44	13.98	48.42	ft
24A	9/19/2008	34.43	13.99	48.42	ft
24A	9/22/2008	34.43	13.99	48.42	ft
24A	9/29/2008	34.7	13.72	48.42	ft
24A	11/20/2008	33.72	14.7	48.42	ft
<hr/>					
26A	3/27/2008	37.42	9.78	47.2	ft
26A	8/14/2008	37.21	9.99	47.2	ft
26A	8/21/2008	37.17	10.03	47.2	ft
26A	9/17/2008	37.07	10.13	47.2	ft
26A	9/19/2008	37.05	10.15	47.2	ft
26A	9/22/2008	37.06	10.14	47.2	ft
26A	9/29/2008	36.98	10.22	47.2	ft
26A	11/20/2008	36.81	10.39	47.2	ft
<hr/>					
7B1	3/27/2008	34.33	14.28	48.61	ft
7B1	8/14/2008	34.3	14.31	48.61	ft
7B1	8/21/2008	34.28	14.33	48.61	ft
7B1	9/17/2008	33.99	14.62	48.61	ft
7B1	9/19/2008	33.96	14.65	48.61	ft
7B1	9/22/2008	34	14.61	48.61	ft
7B1	9/29/2008	32.25	16.36	48.61	ft
7B1	11/20/2008	33.41	15.2	48.61	ft
<hr/>					
94B1	3/27/2008	34.23	13.76	47.99	ft
94B1	8/14/2008	34.72	13.27	47.99	ft
94B1	8/21/2008	34.72	13.27	47.99	ft
94B1	9/17/2008	34.46	13.53	47.99	ft
94B1	9/19/2008	34.46	13.53	47.99	ft
94B1	9/22/2008	34.45	13.54	47.99	ft
94B1	9/29/2008	33.28	14.71	47.99	ft
94B1	11/20/2008	33.94	14.05	47.99	ft
<hr/>					
97B1	3/27/2008	34.38	14.78	49.16	ft
97B1	8/14/2008	34.34	14.82	49.16	ft
97B1	8/21/2008	34.33	14.83	49.16	ft
97B1	9/17/2008	34.06	15.1	49.16	ft
97B1	9/19/2008	34.05	15.11	49.16	ft
97B1	9/22/2008	34.06	15.1	49.16	ft
97B1	9/29/2008	32.5	16.66	49.16	ft
97B1	11/20/2008	33.41	15.75	49.16	ft

Notes:

This table includes the water level measurements collected during the steady state investigation when the treatment system was shutdown from July 14 to September 22, 2008.



TABLE 4  
 2008 GROUNDWATER ELEVATIONS  
 RAYTHEON COMPANY - FORMER FACILITIES  
 350 ELLIS STREET, MOUNTAIN VIEW, CALIFORNIA

Location	Date	Groundwater Elevation	Depth to Water	Reference Elevation	Depth Units
98B1	3/27/2008	41.71	12.39	54.1	ft
98B1	5/22/2008	41.8	12.3	54.1	ft
98B1	8/28/2008	41.15	12.95	54.1	ft
98B1	11/20/2008	40.46	13.64	54.1	ft
99B1	3/27/2008	34.39	14.72	49.11	ft
99B1	8/14/2008	34.31	14.8	49.11	ft
99B1	8/21/2008	34.29	14.82	49.11	ft
99B1	9/17/2008	34.02	15.09	49.11	ft
99B1	9/19/2008	34.02	15.09	49.11	ft
99B1	9/22/2008	34.01	15.1	49.11	ft
99B1	9/29/2008	32.39	16.72	49.11	ft
99B1	11/20/2008	33.31	15.8	49.11	ft
C-2	3/27/2008	46.45	16.85	63.3	ft
C-2	11/20/2008	45.63	17.67	63.3	ft
C-3	3/27/2008	46.07	12.07	58.14	ft
C-3	11/20/2008	45.31	12.83	58.14	ft
EW-1	3/27/2008	35.8	21.59	57.39	ft
EW-1	11/20/2008	36.78	20.61	57.39	ft
EW-2	3/27/2008	45.57	14.47	60.04	ft
EW-2	11/20/2008	44.36	15.68	60.04	ft
EW-3	3/27/2008	45.91	13.64	59.55	ft
EW-3	11/20/2008	45.2	14.35	59.55	ft
EW-4	3/27/2008	46.28	14.55	60.83	ft
EW-4	11/20/2008	45.49	15.34	60.83	ft
I-1B2	3/27/2008	42.68	16.08	58.76	ft
I-1B2	8/14/2008	50.87	7.89	58.76	ft
I-1B2	8/21/2008	50.88	7.88	58.76	ft
I-1B2	9/17/2008	50.48	8.28	58.76	ft
I-1B2	9/19/2008	50.48	8.28	58.76	ft
I-1B2	9/22/2008	50.46	8.3	58.76	ft
I-1B2	9/29/2008	30.42	28.34	58.76	ft
I-1B2	11/20/2008	29.36	29.4	58.76	ft
IE10A	3/27/2008	45.4	14.59	59.99	ft
IE10A	5/22/2008	45.6	14.39	59.99	ft
IE10A	8/28/2008	45.2	14.79	59.99	ft
IE10A	11/20/2008	44.55	15.44	59.99	ft
IE24B1	3/27/2008	45.43	15.19	60.62	ft
IE24B1	5/22/2008	45.72	14.9	60.62	ft
IE24B1	8/28/2008	45	15.62	60.62	ft
IE24B1	11/20/2008	44.27	16.35	60.62	ft

Notes:

This table includes the water level measurements collected during the steady state investigation when the treatment system was shutdown from July 14 to September 22, 2008.



TABLE 4  
 2008 GROUNDWATER ELEVATIONS  
 RAYTHEON COMPANY - FORMER FACILITIES  
 350 ELLIS STREET, MOUNTAIN VIEW, CALIFORNIA

Location	Date	Groundwater Elevation	Depth to Water	Reference Elevation	Depth Units
IE6A	3/27/2008	46.4	17.43	63.83	ft
IE6A	5/22/2008	46.66	17.17	63.83	ft
IE6A	8/28/2008	46.18	17.65	63.83	ft
IE6A	11/20/2008	45.41	18.42	63.83	ft
IE7A	3/27/2008	46.39	17.56	63.95	ft
IE7A	5/22/2008	46.65	17.3	63.95	ft
IE7A	8/28/2008	46.16	17.79	63.95	ft
IE7A	11/20/2008	45.4	18.55	63.95	ft
IE9A	3/27/2008	45.41	15.7	61.11	ft
IE9A	5/22/2008	45.58	15.53	61.11	ft
IE9A	8/28/2008	45.18	15.93	61.11	ft
IE9A	11/20/2008	44.51	16.6	61.11	ft
IM10B(2)	3/27/2008	53.28	6.99	60.27	ft
IM10B(2)	5/22/2008	53.62	6.65	60.27	ft
IM10B(2)	8/28/2008	52.63	7.64	60.27	ft
IM10B(2)	11/20/2008	51.06	9.21	60.27	ft
IM18A	3/27/2008	46.11	15.28	61.39	ft
IM18A	5/22/2008	46.35	15.04	61.39	ft
IM18A	8/28/2008	45.88	15.51	61.39	ft
IM18A	11/20/2008	45.13	16.26	61.39	ft
IM19A	3/27/2008	46.35	17.2	63.55	ft
IM19A	5/22/2008	46.62	16.93	63.55	ft
IM19A	8/28/2008	46.15	17.4	63.55	ft
IM19A	11/20/2008	45.4	18.15	63.55	ft
IM19B(1)	3/27/2008	46.74	16.98	63.72	ft
IM19B(1)	5/22/2008	47.1	16.62	63.72	ft
IM19B(1)	8/28/2008	46.28	17.44	63.72	ft
IM19B(1)	11/20/2008	45.32	18.4	63.72	ft
IM1A	3/27/2008	47.61	10.82	58.43	ft
IM1A	5/22/2008	47.79	10.64	58.43	ft
IM1A	8/14/2008	47.64	10.79	58.43	ft
IM1A	8/21/2008	47.58	10.85	58.43	ft
IM1A	8/28/2008	47.31	11.12	58.43	ft
IM1A	9/17/2008	47.33	11.1	58.43	ft
IM1A	9/19/2008	47.3	11.13	58.43	ft
IM1A	9/22/2008	47.28	11.15	58.43	ft
IM1A	9/29/2008	47.23	11.2	58.43	ft
IM1A	11/20/2008	46.83	11.6	58.43	ft
IM6A	3/27/2008	44.99	13.6	58.59	ft
IM6A	5/22/2008	45.22	13.37	58.59	ft
IM6A	8/28/2008	44.71	13.88	58.59	ft
IM6A	11/20/2008	44.01	14.58	58.59	ft
IM6B(1)	3/27/2008	45.12	13.87	58.99	ft

Notes:

This table includes the water level measurements collected during the steady state investigation when the treatment system was shutdown from July 14 to September 22, 2008.



TABLE 4  
 2008 GROUNDWATER ELEVATIONS  
 RAYTHEON COMPANY - FORMER FACILITIES  
 350 ELLIS STREET, MOUNTAIN VIEW, CALIFORNIA

Location	Date	Groundwater Elevation	Depth to Water	Reference Elevation	Depth Units
IM6B(1)	5/22/2008	45.43	13.56	58.99	ft
IM6B(1)	8/28/2008	44.81	14.18	58.99	ft
IM6B(1)	11/20/2008	44.08	14.91	58.99	ft
IM7A	3/27/2008	45.9	12.62	58.52	ft
IM7A	3/27/2008	45.98	12.41	58.39	ft
IM7A	5/22/2008	46.16	12.23	58.39	ft
IM7A	8/28/2008	45.86	12.53	58.39	ft
IM7A	11/20/2008	45.1	13.42	58.52	ft
IM7A	11/20/2008	45.19	13.2	58.39	ft
IM7B(1)	3/27/2008	46.88	11.77	58.65	ft
IM7B(1)	5/22/2008	47.25	11.4	58.65	ft
IM7B(1)	8/28/2008	46.71	11.94	58.65	ft
IM7B(1)	11/20/2008	45.93	12.72	58.65	ft
IM8B(1)	3/27/2008	46.59	17.36	63.95	ft
IM8B(1)	5/22/2008	46.94	17.01	63.95	ft
IM8B(1)	8/28/2008	46.36	17.59	63.95	ft
IM8B(1)	11/20/2008	45.56	18.39	63.95	ft
IOW1A	3/27/2008	45.37	14.46	59.83	ft
IOW1A	5/22/2008	45.55	14.28	59.83	ft
IOW1A	8/28/2008	45.08	14.75	59.83	ft
IOW1A	11/20/2008	44.41	15.42	59.83	ft
IOW1B1	3/27/2008	48.29	11.55	59.84	ft
IOW1B1	5/22/2008	48.69	11.15	59.84	ft
IOW1B1	8/28/2008	47.51	12.33	59.84	ft
IOW1B1	11/20/2008	46.72	13.12	59.84	ft
IOW3A	3/27/2008	44.81	13.93	58.74	ft
IOW3A	5/22/2008	45.04	13.7	58.74	ft
IOW3A	8/28/2008	44.52	14.22	58.74	ft
IOW3A	11/20/2008	43.82	14.92	58.74	ft
IOW3B1	3/27/2008	44.64	14.11	58.75	ft
IOW3B1	5/22/2008	44.88	13.87	58.75	ft
IOW3B1	8/28/2008	44.21	14.54	58.75	ft
IOW3B1	11/20/2008	43.43	15.32	58.75	ft
ME1A	3/27/2008	45.83	12.17	58	ft
ME1A	3/27/2008	45.85	12.15	58	ft
ME1A	11/20/2008	45.04	12.96	58	ft
ME1A	11/20/2008	45.16	12.84	58	ft
ME1B1	3/27/2008	49.14	8.86	58	ft
ME1B1	11/20/2008	48.02	9.98	58	ft
PW-1	3/27/2008	46.65	16.39	63.04	ft
PW-1	5/22/2008	46.91	16.13	63.04	ft
PW-1	8/28/2008	46.36	16.68	63.04	ft

Notes:

This table includes the water level measurements collected during the steady state investigation when the treatment system was shutdown from July 14 to September 22, 2008.



TABLE 4  
 2008 GROUNDWATER ELEVATIONS  
 RAYTHEON COMPANY - FORMER FACILITIES  
 350 ELLIS STREET, MOUNTAIN VIEW, CALIFORNIA

Location	Date	Groundwater Elevation	Depth to Water	Reference Elevation	Depth Units
PW-1	11/20/2008	43.32	19.72	63.04	ft
PW-2	3/27/2008	45.74	15.74	61.48	ft
PW-2	5/22/2008	45.96	15.52	61.48	ft
PW-2	8/28/2008	45.57	15.91	61.48	ft
PW-2	11/20/2008	44.83	16.65	61.48	ft
PW-3	3/27/2008	45.36	13.66	59.02	ft
PW-3	5/22/2008	45.05	13.97	59.02	ft
PW-3	8/28/2008	45.19	13.83	59.02	ft
PW-3	11/20/2008	44.48	14.54	59.02	ft
PW-4	3/27/2008	41.41	17.55	58.96	ft
PW-4	5/22/2008	45.68	13.28	58.96	ft
PW-4	8/28/2008	44.93	14.03	58.96	ft
PW-4	11/20/2008	44.19	14.77	58.96	ft
PW-5	3/27/2008	45.25	14.98	60.23	ft
PW-5	5/22/2008	45.54	14.69	60.23	ft
PW-5	8/28/2008	44.86	15.37	60.23	ft
PW-5	11/20/2008	44.07	16.16	60.23	ft
R10A	3/27/2008	38.14	13.69	51.83	ft
R10A	8/14/2008	37.6	14.23	51.83	ft
R10A	8/21/2008	37.57	14.26	51.83	ft
R10A	9/17/2008	37.35	14.48	51.83	ft
R10A	9/19/2008	37.33	14.5	51.83	ft
R10A	9/22/2008	37.33	14.5	51.83	ft
R10A	9/29/2008	37.2	14.63	51.83	ft
R10A	11/20/2008	37.05	14.78	51.83	ft
R14A	3/27/2008	45.73	9.68	55.41	ft
R14A	8/14/2008	45.79	9.62	55.41	ft
R14A	8/21/2008	45.73	9.68	55.41	ft
R14A	9/17/2008	45.45	9.96	55.41	ft
R14A	9/19/2008	45.43	9.98	55.41	ft
R14A	9/22/2008	45.41	10	55.41	ft
R14A	9/29/2008	45.36	10.05	55.41	ft
R14A	11/20/2008	44.94	10.47	55.41	ft
R15A	3/27/2008	46.03	10.91	56.94	ft
R15A	11/20/2008	45.31	11.63	56.94	ft
R17B2	3/27/2008	49.12	11.57	60.69	ft
R17B2	8/14/2008	51.64	9.05	60.69	ft
R17B2	8/21/2008	51.5	9.19	60.69	ft
R17B2	9/17/2008	51.09	9.6	60.69	ft
R17B2	9/19/2008	51.09	9.6	60.69	ft
R17B2	9/22/2008	51.05	9.64	60.69	ft
R17B2	9/29/2008	45.3	15.39	60.69	ft
R17B2	11/20/2008	44.92	15.77	60.69	ft

Notes:

This table includes the water level measurements collected during the steady state investigation when the treatment system was shutdown from July 14 to September 22, 2008.



**TABLE 4**  
**2008 GROUNDWATER ELEVATIONS**  
**RAYTHEON COMPANY - FORMER FACILITIES**  
**350 ELLIS STREET, MOUNTAIN VIEW, CALIFORNIA**

Location	Date	Groundwater Elevation	Depth to Water	Reference Elevation	Depth Units
R18B3	3/27/2008	53.93	-2.27	51.66	ft
R18B3	11/20/2008	52.33	-0.67	51.66	ft
R1B1	3/27/2008	41.22	10.65	51.87	ft
R1B1	8/14/2008	40.84	11.03	51.87	ft
R1B1	8/21/2008	40.81	11.06	51.87	ft
R1B1	9/17/2008	40.52	11.35	51.87	ft
R1B1	9/19/2008	40.54	11.33	51.87	ft
R1B1	9/22/2008	40.52	11.35	51.87	ft
R1B1	9/29/2008	40.2	11.67	51.87	ft
R1B1	11/20/2008	40.13	11.74	51.87	ft
R20A	3/27/2008	46.05	10.95	57	ft
R20A	11/20/2008	45.32	11.68	57	ft
R21A	3/27/2008	46.78	17.37	64.15	ft
R21A	11/20/2008	45.98	18.17	64.15	ft
R22B1	3/27/2008	49.15	13.58	62.73	ft
R22B1	11/20/2008	48.17	14.56	62.73	ft
R25A	3/27/2008	44.48	14.72	59.2	ft
R25A	11/20/2008	43.85	15.35	59.2	ft
R27A	3/27/2008	34.33	13.37	47.7	ft
R27A	7/14/2008	33.5	14.2	47.7	ft
R27A	7/16/2008	33.58	14.12	47.7	ft
R27A	7/18/2008	33.67	14.03	47.7	ft
R27A	7/21/2008	33.53	14.17	47.7	ft
R27A	7/23/2008	33.5	14.2	47.7	ft
R27A	7/25/2008	33.48	14.22	47.7	ft
R27A	7/28/2008	33.42	14.28	47.7	ft
R27A	7/30/2008	33.45	14.25	47.7	ft
R27A	8/1/2008	33.49	14.21	47.7	ft
R27A	8/4/2008	33.47	14.23	47.7	ft
R27A	8/6/2008	33.49	14.21	47.7	ft
R27A	8/8/2008	33.53	14.17	47.7	ft
R27A	8/11/2008	33.52	14.18	47.7	ft
R27A	8/13/2008	33.48	14.22	47.7	ft
R27A	8/14/2008	33.33	14.37	47.7	ft
R27A	8/18/2008	33.33	14.37	47.7	ft
R27A	8/20/2008	33.32	14.38	47.7	ft
R27A	8/21/2008	33.31	14.39	47.7	ft
R27A	8/25/2008	33.37	14.33	47.7	ft
R27A	8/27/2008	33.35	14.35	47.7	ft
R27A	8/29/2008	33.31	14.39	47.7	ft
R27A	9/3/2008	33.19	14.51	47.7	ft
R27A	9/5/2008	33.15	14.55	47.7	ft
R27A	9/8/2008	33.17	14.53	47.7	ft
R27A	9/10/2008	33.16	14.54	47.7	ft
R27A	9/12/2008	33.18	14.52	47.7	ft
R27A	9/15/2008	33.15	14.55	47.7	ft

**Notes:**

This table includes the water level measurements collected during the steady state investigation when the treatment system was shutdown from July 14 to September 22, 2008.



**TABLE 4**  
**2008 GROUNDWATER ELEVATIONS**  
**RAYTHEON COMPANY - FORMER FACILITIES**  
**350 ELLIS STREET, MOUNTAIN VIEW, CALIFORNIA**

Location	Date	Groundwater Elevation	Depth to Water	Reference Elevation	Depth Units
R27A	9/17/2008	33.16	14.54	47.7	ft
R27A	9/19/2008	33.15	14.55	47.7	ft
R27A	9/22/2008	33.17	14.53	47.7	ft
R27A	9/29/2008	36.97	10.73	47.7	ft
R27A	11/20/2008	33.17	14.53	47.7	ft
R27B2	3/27/2008	46.09	5.57	51.66	ft
R27B2	8/14/2008	46.81	4.85	51.66	ft
R27B2	8/21/2008	47.78	3.88	51.66	ft
R27B2	9/17/2008	47.79	3.87	51.66	ft
R27B2	9/19/2008	47.79	3.87	51.66	ft
R27B2	9/22/2008	47.78	3.88	51.66	ft
R27B2	9/29/2008	46.31	5.35	51.66	ft
R27B2	11/20/2008	45.99	5.67	51.66	ft
R27B3	3/27/2008	52.29	-0.92	51.37	ft
R27B3	11/20/2008	50.15	1.22	51.37	ft
R28B2	3/27/2008	54.9	2.67	57.57	ft
R28B2	8/14/2008	54.59	2.98	57.57	ft
R28B2	8/21/2008	54.53	3.04	57.57	ft
R28B2	9/17/2008	54.09	3.48	57.57	ft
R28B2	9/19/2008	54.05	3.52	57.57	ft
R28B2	9/22/2008	54.05	3.52	57.57	ft
R28B2	9/29/2008	53.03	4.54	57.57	ft
R28B2	11/20/2008	52.8	4.77	57.57	ft
R2A	3/27/2008	38.35	19.5	57.85	ft
R2A	8/14/2008	40.9	16.95	57.85	ft
R2A	8/21/2008	41.12	16.73	57.85	ft
R2A	8/25/2008	41.22	16.63	57.85	ft
R2A	9/17/2008	41.64	16.21	57.85	ft
R2A	9/19/2008	41.64	16.21	57.85	ft
R2A	9/22/2008	41.64	16.21	57.85	ft
R2A	9/29/2008	42.9	14.95	57.85	ft
R2A	11/20/2008	39.7	18.15	57.85	ft
R30B2	3/27/2008	50.18	12.82	63	ft
R30B2	11/20/2008	48.9	14.1	63	ft
R33B2	3/27/2008	48.74	7.9	56.64	ft
R33B2	11/20/2008	47.6	9.04	56.64	ft
R36A	3/27/2008	36.59	17.4	53.99	ft
R36A	8/14/2008	37.92	16.07	53.99	ft
R36A	8/21/2008	38.15	15.84	53.99	ft
R36A	8/25/2008	38.28	15.71	53.99	ft
R36A	9/17/2008	38.86	15.13	53.99	ft
R36A	9/19/2008	38.91	15.08	53.99	ft
R36A	9/22/2008	38.99	15	53.99	ft
R36A	9/29/2008	39.14	14.85	53.99	ft
R36A	11/20/2008	38.07	15.92	53.99	ft

**Notes:**

This table includes the water level measurements collected during the steady state investigation when the treatment system was shutdown from July 14 to September 22, 2008.



TABLE 4  
 2008 GROUNDWATER ELEVATIONS  
 RAYTHEON COMPANY - FORMER FACILITIES  
 350 ELLIS STREET, MOUNTAIN VIEW, CALIFORNIA

Location	Date	Groundwater Elevation	Depth to Water	Reference Elevation	Depth Units
R36B1	3/27/2008	46.08	12.67	58.75	ft
R36B1	11/20/2008	45.07	13.68	58.75	ft
R37B3	3/27/2008	60.17	0.35	60.52	ft
R37B3	11/20/2008	57.95	2.57	60.52	ft
R39B2	3/27/2008	47.33	3.74	51.07	ft
R39B2	7/14/2008	48.52	2.55	51.07	ft
R39B2	7/16/2008	48.69	2.38	51.07	ft
R39B2	7/18/2008	48.66	2.41	51.07	ft
R39B2	7/21/2008	48.54	2.53	51.07	ft
R39B2	7/23/2008	48.57	2.5	51.07	ft
R39B2	7/25/2008	48.56	2.51	51.07	ft
R39B2	7/28/2008	48.68	2.39	51.07	ft
R39B2	7/30/2008	48.64	2.43	51.07	ft
R39B2	8/1/2008	48.65	2.42	51.07	ft
R39B2	8/4/2008	48.63	2.44	51.07	ft
R39B2	8/6/2008	48.58	2.49	51.07	ft
R39B2	8/8/2008	48.6	2.47	51.07	ft
R39B2	8/11/2008	48.64	2.43	51.07	ft
R39B2	8/13/2008	48.61	2.46	51.07	ft
R39B2	8/14/2008	48.61	2.46	51.07	ft
R39B2	8/18/2008	48.53	2.54	51.07	ft
R39B2	8/20/2008	48.6	2.47	51.07	ft
R39B2	8/21/2008	48.6	2.47	51.07	ft
R39B2	8/25/2008	48.57	2.5	51.07	ft
R39B2	8/27/2008	48.64	2.43	51.07	ft
R39B2	8/29/2008	48.6	2.47	51.07	ft
R39B2	9/3/2008	48.62	2.45	51.07	ft
R39B2	9/5/2008	48.75	2.32	51.07	ft
R39B2	9/8/2008	48.57	2.5	51.07	ft
R39B2	9/10/2008	48.53	2.54	51.07	ft
R39B2	9/12/2008	48.56	2.51	51.07	ft
R39B2	9/15/2008	48.55	2.52	51.07	ft
R39B2	9/17/2008	48.56	2.51	51.07	ft
R39B2	9/19/2008	48.57	2.5	51.07	ft
R39B2	9/22/2008	48.55	2.52	51.07	ft
R39B2	9/29/2008	47.35	3.72	51.07	ft
R39B2	11/20/2008	46.86	4.21	51.07	ft
R3B1	3/27/2008	35.23	11.93	47.16	ft
R3B1	8/14/2008	41.35	5.81	47.16	ft
R3B1	8/15/2008	34.65	12.51	47.16	ft
R3B1	8/21/2008	34.62	12.54	47.16	ft
R3B1	9/17/2008	34.4	12.76	47.16	ft
R3B1	9/19/2008	34.39	12.77	47.16	ft
R3B1	9/22/2008	34.41	12.75	47.16	ft
R3B1	9/29/2008	32.31	14.85	47.16	ft
R3B1	11/20/2008	33.9	13.26	47.16	ft
R40B1(B2)	3/27/2008	38.72	15.34	54.06	ft

Notes:

This table includes the water level measurements collected during the steady state investigation when the treatment system was shutdown from July 14 to September 22, 2008.



TABLE 4  
 2008 GROUNDWATER ELEVATIONS  
 RAYTHEON COMPANY - FORMER FACILITIES  
 350 ELLIS STREET, MOUNTAIN VIEW, CALIFORNIA

Location	Date	Groundwater Elevation	Depth to Water	Reference Elevation	Depth Units
R40B1(B2)	7/14/2008	39.61	14.45	54.06	ft
R40B1(B2)	7/16/2008	39.73	14.33	54.06	ft
R40B1(B2)	7/18/2008	38.84	15.22	54.06	ft
R40B1(B2)	7/21/2008	38.7	15.36	54.06	ft
R40B1(B2)	7/23/2008	38.83	15.23	54.06	ft
R40B1(B2)	7/25/2008	38.73	15.33	54.06	ft
R40B1(B2)	7/28/2008	38.82	15.24	54.06	ft
R40B1(B2)	7/30/2008	38.73	15.33	54.06	ft
R40B1(B2)	8/1/2008	38.69	15.37	54.06	ft
R40B1(B2)	8/4/2008	38.66	15.4	54.06	ft
R40B1(B2)	8/6/2008	38.57	15.49	54.06	ft
R40B1(B2)	8/8/2008	38.63	15.43	54.06	ft
R40B1(B2)	8/11/2008	38.63	15.43	54.06	ft
R40B1(B2)	8/13/2008	38.6	15.46	54.06	ft
R40B1(B2)	8/14/2008	38.56	15.5	54.06	ft
R40B1(B2)	8/18/2008	38.53	15.53	54.06	ft
R40B1(B2)	8/20/2008	38.54	15.52	54.06	ft
R40B1(B2)	8/21/2008	38.55	15.51	54.06	ft
R40B1(B2)	8/25/2008	38.48	15.58	54.06	ft
R40B1(B2)	8/27/2008	38.55	15.51	54.06	ft
R40B1(B2)	8/29/2008	38.45	15.61	54.06	ft
R40B1(B2)	9/3/2008	38.79	15.27	54.06	ft
R40B1(B2)	9/5/2008	38.55	15.51	54.06	ft
R40B1(B2)	9/8/2008	38.45	15.61	54.06	ft
R40B1(B2)	9/10/2008	38.32	15.74	54.06	ft
R40B1(B2)	9/12/2008	38.44	15.62	54.06	ft
R40B1(B2)	9/15/2008	38.3	15.76	54.06	ft
R40B1(B2)	9/17/2008	38.32	15.74	54.06	ft
R40B1(B2)	9/19/2008	38.31	15.75	54.06	ft
R40B1(B2)	9/22/2008	38.3	15.76	54.06	ft
R40B1(B2)	9/29/2008	37.54	16.52	54.06	ft
R40B1(B2)	11/20/2008	37.72	16.34	54.06	ft
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R41A	3/27/2008	36.59	14.41	51	ft
R41A	8/14/2008	38.39	12.61	51	ft
R41A	8/21/2008	38.58	12.42	51	ft
R41A	8/25/2008	38.69	12.31	51	ft
R41A	9/17/2008	39.08	11.92	51	ft
R41A	9/19/2008	39.09	11.91	51	ft
R41A	9/22/2008	39.1	11.9	51	ft
R41A	9/29/2008	39.33	11.67	51	ft
R41A	11/20/2008	37.93	13.07	51	ft
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R41B2	3/27/2008	48.47	8.53	57	ft
R41B2	11/20/2008	47.22	9.78	57	ft
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R42B1	3/27/2008	45.91	10.7	56.61	ft
R42B1	11/20/2008	45.6	11.01	56.61	ft
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R44A	3/27/2008	45.88	11.78	57.66	ft
R44A	11/20/2008	45.16	12.5	57.66	ft

Notes:

This table includes the water level measurements collected during the steady state investigation when the treatment system was shutdown from July 14 to September 22, 2008.



TABLE 4  
 2008 GROUNDWATER ELEVATIONS  
 RAYTHEON COMPANY - FORMER FACILITIES  
 350 ELLIS STREET, MOUNTAIN VIEW, CALIFORNIA

Location	Date	Groundwater Elevation	Depth to Water	Reference Elevation	Depth Units
R46B1	3/27/2008	45.69	12.31	58	ft
R46B1	11/20/2008	44.75	13.25	58	ft
R48A	3/27/2008	47.05	19.81	66.86	ft
R48A	11/20/2008	46.28	20.58	66.86	ft
R50A	3/27/2008	45.53	14.9	60.43	ft
R50A	3/27/2008	45.68	14.75	60.43	ft
R50A	11/20/2008	44.46	15.97	60.43	ft
R50B2	3/27/2008	55.38	4.62	60	ft
R50B2	11/20/2008	53.28	6.72	60	ft
R51A	3/27/2008	46.23	13.77	60	ft
R51A	11/20/2008	45.48	14.52	60	ft
R51B3	3/27/2008	60.72	-0.86	59.86	ft
R51B3	11/20/2008	58.59	1.27	59.86	ft
R52A	3/27/2008	46.04	17.96	64	ft
R52A	11/20/2008	45.28	18.72	64	ft
R52B2	3/27/2008	51.02	13.22	64.24	ft
R52B2	11/20/2008	49.34	14.9	64.24	ft
R53A	3/27/2008	42.93	15.67	58.6	ft
R53A	11/20/2008	42.33	16.27	58.6	ft
R53B2	3/27/2008	62.34	1.75	64.09	ft
R53B2	11/20/2008	59.57	4.52	64.09	ft
R54A	3/27/2008	43.3	13.88	57.18	ft
R54A	11/20/2008	42.69	14.49	57.18	ft
R54B3	3/27/2008	63.91	0.61	64.52	ft
R54B3	11/20/2008	61.37	3.15	64.52	ft
R55A	3/27/2008	33.89	13.87	47.76	ft
R55A	8/14/2008	33.46	14.3	47.76	ft
R55A	8/21/2008	33.42	14.34	47.76	ft
R55A	9/17/2008	33.19	14.57	47.76	ft
R55A	9/19/2008	33.19	14.57	47.76	ft
R55A	9/22/2008	33.21	14.55	47.76	ft
R55A	9/29/2008	32.99	14.77	47.76	ft
R55A	11/20/2008	33.03	14.73	47.76	ft
R55B2	3/27/2008	54.64	9.57	64.21	ft
R55B2	11/20/2008	52.36	11.85	64.21	ft
R56B3	3/27/2008	61.22	2.91	64.13	ft
R56B3	11/20/2008	58.37	5.76	64.13	ft

Notes:

This table includes the water level measurements collected during the steady state investigation when the treatment system was shutdown from July 14 to September 22, 2008.



**TABLE 4**  
**2008 GROUNDWATER ELEVATIONS**  
**RAYTHEON COMPANY - FORMER FACILITIES**  
**350 ELLIS STREET, MOUNTAIN VIEW, CALIFORNIA**

Location	Date	Groundwater Elevation	Depth to Water	Reference Elevation	Depth Units
R57A	3/27/2008	42.76	10.95	53.71	ft
R57A	8/14/2008	42.66	11.05	53.71	ft
R57A	8/21/2008	42.64	11.07	53.71	ft
R57A	9/17/2008	42.4	11.31	53.71	ft
R57A	9/19/2008	42.39	11.32	53.71	ft
R57A	9/22/2008	42.38	11.33	53.71	ft
R57A	9/29/2008	42.28	11.43	53.71	ft
R57A	11/20/2008	41.98	11.73	53.71	ft
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R57B3	3/27/2008	56.29	0.71	57	ft
R57B3	11/20/2008	55.05	1.95	57	ft
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R58A	3/27/2008	40.01	13.76	53.77	ft
R58A	7/14/2008	39.76	14.01	53.77	ft
R58A	7/16/2008	39.81	13.96	53.77	ft
R58A	7/18/2008	39.98	13.79	53.77	ft
R58A	7/21/2008	40.05	13.72	53.77	ft
R58A	7/23/2008	40.2	13.57	53.77	ft
R58A	7/25/2008	40.27	13.5	53.77	ft
R58A	7/28/2008	40.38	13.39	53.77	ft
R58A	7/30/2008	40.5	13.27	53.77	ft
R58A	8/1/2008	40.57	13.2	53.77	ft
R58A	8/4/2008	40.66	13.11	53.77	ft
R58A	8/6/2008	40.74	13.03	53.77	ft
R58A	8/8/2008	40.81	12.96	53.77	ft
R58A	8/11/2008	40.94	12.83	53.77	ft
R58A	8/13/2008	41.05	12.72	53.77	ft
R58A	8/14/2008	41.07	12.7	53.77	ft
R58A	8/18/2008	41.2	12.57	53.77	ft
R58A	8/20/2008	41.29	12.48	53.77	ft
R58A	8/21/2008	41.33	12.44	53.77	ft
R58A	8/25/2008	41.38	12.39	53.77	ft
R58A	8/27/2008	41.46	12.31	53.77	ft
R58A	8/29/2008	41.47	12.3	53.77	ft
R58A	9/3/2008	41.56	12.21	53.77	ft
R58A	9/5/2008	41.62	12.15	53.77	ft
R58A	9/8/2008	41.69	12.08	53.77	ft
R58A	9/10/2008	41.75	12.02	53.77	ft
R58A	9/12/2008	41.78	11.99	53.77	ft
R58A	9/15/2008	41.76	12.01	53.77	ft
R58A	9/17/2008	41.93	11.84	53.77	ft
R58A	9/19/2008	41.99	11.78	53.77	ft
R58A	9/22/2008	42.06	11.71	53.77	ft
R58A	9/29/2008	42.21	11.56	53.77	ft
R58A	11/20/2008	41.01	12.76	53.77	ft
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R58B2	3/27/2008	43.98	6.6	50.58	ft
R58B2	7/14/2008	43.54	7.04	50.58	ft
R58B2	7/16/2008	43.97	6.61	50.58	ft
R58B2	7/18/2008	43.72	6.86	50.58	ft
R58B2	7/21/2008	43.62	6.96	50.58	ft
R58B2	7/23/2008	43.47	7.11	50.58	ft

**Notes:**

This table includes the water level measurements collected during the steady state investigation when the treatment system was shutdown from July 14 to September 22, 2008.



TABLE 4  
 2008 GROUNDWATER ELEVATIONS  
 RAYTHEON COMPANY - FORMER FACILITIES  
 350 ELLIS STREET, MOUNTAIN VIEW, CALIFORNIA

Location	Date	Groundwater Elevation	Depth to Water	Reference Elevation	Depth Units
R58B2	7/25/2008	43.4	7.18	50.58	ft
R58B2	7/28/2008	43.8	6.78	50.58	ft
R58B2	7/30/2008	43.63	6.95	50.58	ft
R58B2	8/1/2008	43.51	7.07	50.58	ft
R58B2	8/4/2008	43.37	7.21	50.58	ft
R58B2	8/6/2008	43.31	7.27	50.58	ft
R58B2	8/8/2008	43.21	7.37	50.58	ft
R58B2	8/11/2008	43.16	7.42	50.58	ft
R58B2	8/13/2008	43.09	7.49	50.58	ft
R58B2	8/14/2008	43.02	7.56	50.58	ft
R58B2	8/18/2008	43.27	7.31	50.58	ft
R58B2	8/20/2008	43.17	7.41	50.58	ft
R58B2	8/21/2008	43.12	7.46	50.58	ft
R58B2	8/25/2008	43.14	7.44	50.58	ft
R58B2	8/27/2008	43.15	7.43	50.58	ft
R58B2	8/29/2008	43.09	7.49	50.58	ft
R58B2	9/3/2008	43.1	7.48	50.58	ft
R58B2	9/5/2008	43.25	7.33	50.58	ft
R58B2	9/8/2008	43.13	7.45	50.58	ft
R58B2	9/10/2008	42.93	7.65	50.58	ft
R58B2	9/12/2008	43.01	7.57	50.58	ft
R58B2	9/15/2008	42.92	7.66	50.58	ft
R58B2	9/17/2008	42.93	7.65	50.58	ft
R58B2	9/19/2008	42.92	7.66	50.58	ft
R58B2	9/22/2008	42.92	7.66	50.58	ft
R58B2	9/29/2008	41.98	8.6	50.58	ft
R58B2	11/20/2008	42.35	8.23	50.58	ft
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R59A	3/27/2008	44.7	9.99	54.69	ft
R59A	8/14/2008	44.63	10.06	54.69	ft
R59A	8/21/2008	44.59	10.1	54.69	ft
R59A	9/17/2008	44.45	10.24	54.69	ft
R59A	9/19/2008	44.41	10.28	54.69	ft
R59A	9/22/2008	44.41	10.28	54.69	ft
R59A	9/29/2008	44.37	10.32	54.69	ft
R59A	11/20/2008	44.16	10.53	54.69	ft
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R59B2	3/27/2008	50.49	0.8	51.29	ft
R59B2	8/14/2008	49.96	1.33	51.29	ft
R59B2	8/21/2008	49.88	1.41	51.29	ft
R59B2	9/17/2008	49.52	1.77	51.29	ft
R59B2	9/19/2008	49.51	1.78	51.29	ft
R59B2	9/22/2008	49.51	1.78	51.29	ft
R59B2	9/29/2008	49.7	1.59	51.29	ft
R59B2	11/20/2008	48.82	2.47	51.29	ft
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R5B1	3/27/2008	34.39	13.05	47.44	ft
R5B1	7/14/2008	34.81	12.63	47.44	ft
R5B1	7/16/2008	34.89	12.55	47.44	ft
R5B1	7/18/2008	34.56	12.88	47.44	ft
R5B1	7/21/2008	33.94	13.5	47.44	ft
R5B1	7/23/2008	34.48	12.96	47.44	ft

Notes:

This table includes the water level measurements collected during the steady state investigation when the treatment system was shutdown from July 14 to September 22, 2008.



TABLE 4  
 2008 GROUNDWATER ELEVATIONS  
 RAYTHEON COMPANY - FORMER FACILITIES  
 350 ELLIS STREET, MOUNTAIN VIEW, CALIFORNIA

Location	Date	Groundwater Elevation	Depth to Water	Reference Elevation	Depth Units
R5B1	7/25/2008	34.44	13	47.44	ft
R5B1	7/28/2008	34.73	12.71	47.44	ft
R5B1	7/30/2008	34.47	12.97	47.44	ft
R5B1	8/1/2008	34.41	13.03	47.44	ft
R5B1	8/4/2008	34.39	13.05	47.44	ft
R5B1	8/6/2008	34.29	13.15	47.44	ft
R5B1	8/8/2008	34.39	13.05	47.44	ft
R5B1	8/11/2008	34.36	13.08	47.44	ft
R5B1	8/13/2008	34.33	13.11	47.44	ft
R5B1	8/14/2008	34.29	13.15	47.44	ft
R5B1	8/18/2008	34.43	13.01	47.44	ft
R5B1	8/20/2008	34.27	13.17	47.44	ft
R5B1	8/21/2008	34.27	13.17	47.44	ft
R5B1	8/25/2008	34.19	13.25	47.44	ft
R5B1	8/27/2008	34.46	12.98	47.44	ft
R5B1	8/29/2008	34.17	13.27	47.44	ft
R5B1	9/3/2008	34.33	13.11	47.44	ft
R5B1	9/5/2008	34.37	13.07	47.44	ft
R5B1	9/8/2008	34.25	13.19	47.44	ft
R5B1	9/10/2008	34.05	13.39	47.44	ft
R5B1	9/12/2008	34.07	13.37	47.44	ft
R5B1	9/15/2008	34.04	13.4	47.44	ft
R5B1	9/17/2008	34.05	13.39	47.44	ft
R5B1	9/19/2008	34.05	13.39	47.44	ft
R5B1	9/22/2008	34.06	13.38	47.44	ft
R5B1	9/29/2008	32.82	14.62	47.44	ft
R5B1	11/20/2008	33.51	13.93	47.44	ft
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R5B2	3/27/2008	50.39	0.07	50.46	ft
R5B2	8/14/2008	50.36	0.1	50.46	ft
R5B2	8/21/2008	50.35	0.11	50.46	ft
R5B2	9/17/2008	49.53	0.93	50.46	ft
R5B2	9/19/2008	49.54	0.92	50.46	ft
R5B2	9/22/2008	49.53	0.93	50.46	ft
R5B2	9/29/2008	48.82	1.64	50.46	ft
R5B2	11/20/2008	48.75	1.71	50.46	ft
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R5B3	3/27/2008	52.65	-2.45	50.2	ft
R5B3	11/20/2008	50.87	-0.67	50.2	ft
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R60A	3/27/2008	39.85	16.59	56.44	ft
R60A	8/14/2008	41.54	14.9	56.44	ft
R60A	8/21/2008	41.73	14.71	56.44	ft
R60A	8/25/2008	41.82	14.62	56.44	ft
R60A	9/17/2008	42.29	14.15	56.44	ft
R60A	9/19/2008	42.33	14.11	56.44	ft
R60A	9/22/2008	42.4	14.04	56.44	ft
R60A	9/29/2008	42.49	13.95	56.44	ft
R60A	11/20/2008	41.37	15.07	56.44	ft
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R60B1	3/27/2008	50.76	7.25	58.01	ft
R60B1	7/14/2008	51	7.01	58.01	ft

Notes:

This table includes the water level measurements collected during the steady state investigation when the treatment system was shutdown from July 14 to September 22, 2008.



TABLE 4  
 2008 GROUNDWATER ELEVATIONS  
 RAYTHEON COMPANY - FORMER FACILITIES  
 350 ELLIS STREET, MOUNTAIN VIEW, CALIFORNIA

Location	Date	Groundwater Elevation	Depth to Water	Reference Elevation	Depth Units
R60B1	7/16/2008	50.96	7.05	58.01	ft
R60B1	7/18/2008	50.99	7.02	58.01	ft
R60B1	7/21/2008	50.84	7.17	58.01	ft
R60B1	7/23/2008	50.92	7.09	58.01	ft
R60B1	7/25/2008	50.88	7.13	58.01	ft
R60B1	7/28/2008	50.89	7.12	58.01	ft
R60B1	7/30/2008	50.88	7.13	58.01	ft
R60B1	8/1/2008	50.84	7.17	58.01	ft
R60B1	8/4/2008	50.8	7.21	58.01	ft
R60B1	8/6/2008	50.78	7.23	58.01	ft
R60B1	8/8/2008	50.78	7.23	58.01	ft
R60B1	8/11/2008	50.78	7.23	58.01	ft
R60B1	8/13/2008	50.73	7.28	58.01	ft
R60B1	8/14/2008	50.73	7.28	58.01	ft
R60B1	8/18/2008	50.66	7.35	58.01	ft
R60B1	8/20/2008	50.68	7.33	58.01	ft
R60B1	8/21/2008	50.71	7.3	58.01	ft
R60B1	8/25/2008	50.55	7.46	58.01	ft
R60B1	8/27/2008	50.56	7.45	58.01	ft
R60B1	8/29/2008	50.5	7.51	58.01	ft
R60B1	9/3/2008	50.51	7.5	58.01	ft
R60B1	9/5/2008	50.44	7.57	58.01	ft
R60B1	9/8/2008	50.39	7.62	58.01	ft
R60B1	9/10/2008	50.32	7.69	58.01	ft
R60B1	9/12/2008	50.29	7.72	58.01	ft
R60B1	9/15/2008	50.28	7.73	58.01	ft
R60B1	9/17/2008	50.28	7.73	58.01	ft
R60B1	9/19/2008	50.27	7.74	58.01	ft
R60B1	9/22/2008	50.25	7.76	58.01	ft
R60B1	9/29/2008	50.01	8	58.01	ft
R60B1	11/20/2008	49.57	8.44	58.01	ft
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R61B3	3/27/2008	59.06	-0.65	58.41	ft
R61B3	11/20/2008	57.09	1.32	58.41	ft
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R62A	3/27/2008	36.78	10.81	47.59	ft
R62A	7/14/2008	36.56	11.03	47.59	ft
R62A	7/16/2008	36.56	11.03	47.59	ft
R62A	7/18/2008	36.61	10.98	47.59	ft
R62A	7/21/2008	36.57	11.02	47.59	ft
R62A	7/23/2008	36.58	11.01	47.59	ft
R62A	7/25/2008	36.59	11	47.59	ft
R62A	7/28/2008	36.59	11	47.59	ft
R62A	7/30/2008	36.58	11.01	47.59	ft
R62A	8/1/2008	36.59	11	47.59	ft
R62A	8/4/2008	36.57	11.02	47.59	ft
R62A	8/6/2008	36.56	11.03	47.59	ft
R62A	8/8/2008	36.56	11.03	47.59	ft
R62A	8/11/2008	36.55	11.04	47.59	ft
R62A	8/13/2008	36.57	11.02	47.59	ft
R62A	8/14/2008	36.54	11.05	47.59	ft
R62A	8/18/2008	36.54	11.05	47.59	ft

Notes:

This table includes the water level measurements collected during the steady state investigation when the treatment system was shutdown from July 14 to September 22, 2008.



TABLE 4  
 2008 GROUNDWATER ELEVATIONS  
 RAYTHEON COMPANY - FORMER FACILITIES  
 350 ELLIS STREET, MOUNTAIN VIEW, CALIFORNIA

Location	Date	Groundwater Elevation	Depth to Water	Reference Elevation	Depth Units
R62A	8/20/2008	36.54	11.05	47.59	ft
R62A	8/21/2008	36.54	11.05	47.59	ft
R62A	8/25/2008	36.55	11.04	47.59	ft
R62A	8/27/2008	36.5	11.09	47.59	ft
R62A	8/29/2008	36.46	11.13	47.59	ft
R62A	9/3/2008	36.42	11.17	47.59	ft
R62A	9/5/2008	36.44	11.15	47.59	ft
R62A	9/8/2008	36.43	11.16	47.59	ft
R62A	9/10/2008	36.39	11.2	47.59	ft
R62A	9/12/2008	36.4	11.19	47.59	ft
R62A	9/15/2008	36.4	11.19	47.59	ft
R62A	9/17/2008	36.41	11.18	47.59	ft
R62A	9/19/2008	36.42	11.17	47.59	ft
R62A	9/22/2008	36.41	11.18	47.59	ft
R62A	9/29/2008	36.28	11.31	47.59	ft
R62A	11/20/2008	36.14	11.45	47.59	ft
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R62B2	3/27/2008	54.78	2.13	56.91	ft
R62B2	7/14/2008	55.04	1.87	56.91	ft
R62B2	7/16/2008	55.27	1.64	56.91	ft
R62B2	7/18/2008	55.07	1.84	56.91	ft
R62B2	7/21/2008	55.68	1.23	56.91	ft
R62B2	7/23/2008	54.89	2.02	56.91	ft
R62B2	7/25/2008	54.84	2.07	56.91	ft
R62B2	7/28/2008	54.86	2.05	56.91	ft
R62B2	7/30/2008	54.81	2.1	56.91	ft
R62B2	8/1/2008	54.77	2.14	56.91	ft
R62B2	8/4/2008	54.71	2.2	56.91	ft
R62B2	8/6/2008	54.66	2.25	56.91	ft
R62B2	8/8/2008	54.63	2.28	56.91	ft
R62B2	8/11/2008	54.6	2.31	56.91	ft
R62B2	8/13/2008	54.54	2.37	56.91	ft
R62B2	8/14/2008	54.56	2.35	56.91	ft
R62B2	8/18/2008	54.49	2.42	56.91	ft
R62B2	8/20/2008	54.47	2.44	56.91	ft
R62B2	8/21/2008	54.48	2.43	56.91	ft
R62B2	8/25/2008	54.34	2.57	56.91	ft
R62B2	8/27/2008	54.4	2.51	56.91	ft
R62B2	8/29/2008	54.35	2.56	56.91	ft
R62B2	9/3/2008	54.38	2.53	56.91	ft
R62B2	9/5/2008	54.41	2.5	56.91	ft
R62B2	9/8/2008	54.19	2.72	56.91	ft
R62B2	9/10/2008	54.13	2.78	56.91	ft
R62B2	9/12/2008	54.14	2.77	56.91	ft
R62B2	9/15/2008	54.08	2.83	56.91	ft
R62B2	9/17/2008	54.05	2.86	56.91	ft
R62B2	9/19/2008	54.02	2.89	56.91	ft
R62B2	9/22/2008	54	2.91	56.91	ft
R62B2	9/29/2008	53	3.91	56.91	ft
R62B2	11/20/2008	52.79	4.12	56.91	ft
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R63A	3/27/2008	39.87	18.46	58.33	ft

Notes:

This table includes the water level measurements collected during the steady state investigation when the treatment system was shutdown from July 14 to September 22, 2008.



TABLE 4  
 2008 GROUNDWATER ELEVATIONS  
 RAYTHEON COMPANY - FORMER FACILITIES  
 350 ELLIS STREET, MOUNTAIN VIEW, CALIFORNIA

Location	Date	Groundwater Elevation	Depth to Water	Reference Elevation	Depth Units
R63A	7/14/2008	39.91	18.42	58.33	ft
R63A	7/16/2008	39.94	18.39	58.33	ft
R63A	7/18/2008	40.06	18.27	58.33	ft
R63A	7/21/2008	40.15	18.18	58.33	ft
R63A	7/23/2008	40.27	18.06	58.33	ft
R63A	7/25/2008	40.36	17.97	58.33	ft
R63A	7/28/2008	40.5	17.83	58.33	ft
R63A	7/30/2008	40.53	17.8	58.33	ft
R63A	8/1/2008	40.63	17.7	58.33	ft
R63A	8/4/2008	40.73	17.6	58.33	ft
R63A	8/6/2008	40.78	17.55	58.33	ft
R63A	8/8/2008	40.87	17.46	58.33	ft
R63A	8/11/2008	41.02	17.31	58.33	ft
R63A	8/13/2008	41.07	17.26	58.33	ft
R63A	8/14/2008	41.13	17.2	58.33	ft
R63A	8/18/2008	41.22	17.11	58.33	ft
R63A	8/20/2008	41.27	17.06	58.33	ft
R63A	8/21/2008	41.36	16.97	58.33	ft
R63A	8/25/2008	41.43	16.9	58.33	ft
R63A	8/27/2008	41.5	16.83	58.33	ft
R63A	8/29/2008	41.59	16.74	58.33	ft
R63A	9/3/2008	41.7	16.63	58.33	ft
R63A	9/5/2008	41.76	16.57	58.33	ft
R63A	9/8/2008	41.83	16.5	58.33	ft
R63A	9/10/2008	41.84	16.49	58.33	ft
R63A	9/12/2008	41.91	16.42	58.33	ft
R63A	9/15/2008	42.01	16.32	58.33	ft
R63A	9/17/2008	42.08	16.25	58.33	ft
R63A	9/19/2008	42.11	16.22	58.33	ft
R63A	9/22/2008	42.18	16.15	58.33	ft
R63A	9/29/2008	42.35	15.98	58.33	ft
R63A	11/20/2008	41.36	16.97	58.33	ft
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R63B1	3/27/2008	39.62	16.9	56.52	ft
R63B1	8/14/2008	41.16	15.36	56.52	ft
R63B1	8/21/2008	41.99	14.53	56.52	ft
R63B1	8/25/2008	41.86	14.66	56.52	ft
R63B1	9/17/2008	42.26	14.26	56.52	ft
R63B1	9/19/2008	42.32	14.2	56.52	ft
R63B1	9/22/2008	42.4	14.12	56.52	ft
R63B1	9/29/2008	42.36	14.16	56.52	ft
R63B1	11/20/2008	46.27	10.25	56.52	ft
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R64B1	3/27/2008	47.35	9.3	56.65	ft
R64B1	8/14/2008	47.13	9.52	56.65	ft
R64B1	8/21/2008	47.12	9.53	56.65	ft
R64B1	9/17/2008	46.78	9.87	56.65	ft
R64B1	9/19/2008	46.77	9.88	56.65	ft
R64B1	9/22/2008	46.74	9.91	56.65	ft
R64B1	9/29/2008	46.52	10.13	56.65	ft
R64B1	11/20/2008	46.33	10.32	56.65	ft

Notes:

This table includes the water level measurements collected during the steady state investigation when the treatment system was shutdown from July 14 to September 22, 2008.



TABLE 4  
 2008 GROUNDWATER ELEVATIONS  
 RAYTHEON COMPANY - FORMER FACILITIES  
 350 ELLIS STREET, MOUNTAIN VIEW, CALIFORNIA

Location	Date	Groundwater Elevation	Depth to Water	Reference Elevation	Depth Units
R65B1(B2)	3/27/2008	50.35	2.65	53	ft
R65B1(B2)	7/14/2008	53.48	-0.48	53	ft
R65B1(B2)	7/16/2008	53.48	-0.48	53	ft
R65B1(B2)	7/18/2008	53.48	-0.48	53	ft
R65B1(B2)	7/21/2008	53.48	-0.48	53	ft
R65B1(B2)	7/23/2008	53.48	-0.48	53	ft
R65B1(B2)	7/25/2008	53.48	-0.48	53	ft
R65B1(B2)	7/28/2008	53.48	-0.48	53	ft
R65B1(B2)	7/30/2008	53.48	-0.48	53	ft
R65B1(B2)	8/1/2008	53.48	-0.48	53	ft
R65B1(B2)	8/4/2008	53.46	-0.46	53	ft
R65B1(B2)	8/6/2008	53.48	-0.48	53	ft
R65B1(B2)	8/8/2008	53.48	-0.48	53	ft
R65B1(B2)	8/11/2008	53.48	-0.48	53	ft
R65B1(B2)	8/13/2008	53.48	-0.48	53	ft
R65B1(B2)	8/14/2008	53.48	-0.48	53	ft
R65B1(B2)	8/18/2008	53.48	-0.48	53	ft
R65B1(B2)	8/20/2008	53.46	-0.46	53	ft
R65B1(B2)	8/21/2008	53.47	-0.47	53	ft
R65B1(B2)	8/25/2008	53.46	-0.46	53	ft
R65B1(B2)	8/27/2008	53.05	-0.05	53	ft
R65B1(B2)	8/29/2008	53.47	-0.47	53	ft
R65B1(B2)	9/3/2008	53.5	-0.5	53	ft
R65B1(B2)	9/5/2008	53.52	-0.52	53	ft
R65B1(B2)	9/8/2008	53.51	-0.51	53	ft
R65B1(B2)	9/10/2008	53.51	-0.51	53	ft
R65B1(B2)	9/12/2008	53.51	-0.51	53	ft
R65B1(B2)	9/15/2008	53.5	-0.5	53	ft
R65B1(B2)	9/17/2008	52.89	0.11	53	ft
R65B1(B2)	9/19/2008	52.88	0.12	53	ft
R65B1(B2)	9/22/2008	52.88	0.12	53	ft
R65B1(B2)	9/29/2008	48.63	4.37	53	ft
R65B1(B2)	11/20/2008	48.18	4.82	53	ft
<hr/>					
R66B1	3/27/2008	36.87	11.85	48.72	ft
R66B1	8/14/2008	38.82	9.9	48.72	ft
R66B1	8/21/2008	39.05	9.67	48.72	ft
R66B1	8/25/2008	39.14	9.58	48.72	ft
R66B1	9/17/2008	39.55	9.17	48.72	ft
R66B1	9/19/2008	39.56	9.16	48.72	ft
R66B1	9/22/2008	39.54	9.18	48.72	ft
R66B1	9/29/2008	39.61	9.11	48.72	ft
R66B1	11/20/2008	37.93	10.79	48.72	ft
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R67A	3/27/2008	40.02	17.56	57.58	ft
R67A	8/14/2008	41.27	16.31	57.58	ft
R67A	8/21/2008	41.51	16.07	57.58	ft
R67A	8/25/2008	41.63	15.95	57.58	ft
R67A	9/17/2008	42.23	15.35	57.58	ft
R67A	9/19/2008	42.27	15.31	57.58	ft
R67A	9/22/2008	42.36	15.22	57.58	ft
R67A	9/29/2008	42.5	15.08	57.58	ft

Notes:

This table includes the water level measurements collected during the steady state investigation when the treatment system was shutdown from July 14 to September 22, 2008.



TABLE 4  
 2008 GROUNDWATER ELEVATIONS  
 RAYTHEON COMPANY - FORMER FACILITIES  
 350 ELLIS STREET, MOUNTAIN VIEW, CALIFORNIA

Location	Date	Groundwater Elevation	Depth to Water	Reference Elevation	Depth Units
R67A	11/20/2008	41.52	16.06	57.58	ft
R67B1	3/27/2008	36.95	12.11	49.06	ft
R67B1	7/14/2008	37.29	11.77	49.06	ft
R67B1	7/16/2008	37.65	11.41	49.06	ft
R67B1	7/18/2008	37.93	11.13	49.06	ft
R67B1	7/21/2008	37.99	11.07	49.06	ft
R67B1	7/23/2008	38.18	10.88	49.06	ft
R67B1	7/25/2008	38.25	10.81	49.06	ft
R67B1	7/28/2008	38.36	10.7	49.06	ft
R67B1	7/30/2008	38.47	10.59	49.06	ft
R67B1	8/1/2008	38.53	10.53	49.06	ft
R67B1	8/4/2008	38.6	10.46	49.06	ft
R67B1	8/6/2008	38.64	10.42	49.06	ft
R67B1	8/8/2008	38.75	10.31	49.06	ft
R67B1	8/11/2008	38.87	10.19	49.06	ft
R67B1	8/13/2008	38.92	10.14	49.06	ft
R67B1	8/14/2008	38.89	10.17	49.06	ft
R67B1	8/18/2008	39.02	10.04	49.06	ft
R67B1	8/20/2008	39.11	9.95	49.06	ft
R67B1	8/21/2008	39.14	9.92	49.06	ft
R67B1	8/25/2008	39.19	9.87	49.06	ft
R67B1	8/27/2008	39.21	9.85	49.06	ft
R67B1	8/29/2008	39.29	9.77	49.06	ft
R67B1	9/3/2008	39.35	9.71	49.06	ft
R67B1	9/5/2008	39.41	9.65	49.06	ft
R67B1	9/8/2008	39.46	9.6	49.06	ft
R67B1	9/10/2008	39.48	9.58	49.06	ft
R67B1	9/12/2008	39.49	9.57	49.06	ft
R67B1	9/15/2008	39.45	9.61	49.06	ft
R67B1	9/17/2008	39.43	9.63	49.06	ft
R67B1	9/19/2008	39.43	9.63	49.06	ft
R67B1	9/22/2008	39.41	9.65	49.06	ft
R67B1	9/29/2008	39.68	9.38	49.06	ft
R67B1	11/20/2008	37.93	11.13	49.06	ft
R68A	3/27/2008	39.28	18.16	57.44	ft
R68A	7/14/2008	39.54	17.9	57.44	ft
R68A	7/16/2008	39.79	17.65	57.44	ft
R68A	7/18/2008	40.02	17.42	57.44	ft
R68A	7/21/2008	40.18	17.26	57.44	ft
R68A	7/23/2008	40.32	17.12	57.44	ft
R68A	7/25/2008	40.44	17	57.44	ft
R68A	7/28/2008	40.58	16.86	57.44	ft
R68A	7/30/2008	40.66	16.78	57.44	ft
R68A	8/1/2008	40.75	16.69	57.44	ft
R68A	8/4/2008	40.84	16.6	57.44	ft
R68A	8/6/2008	40.88	16.56	57.44	ft
R68A	8/8/2008	41.95	15.49	57.44	ft
R68A	8/11/2008	41.03	16.41	57.44	ft
R68A	8/13/2008	41.08	16.36	57.44	ft
R68A	8/14/2008	41.08	16.36	57.44	ft

Notes:

This table includes the water level measurements collected during the steady state investigation when the treatment system was shutdown from July 14 to September 22, 2008.



TABLE 4  
 2008 GROUNDWATER ELEVATIONS  
 RAYTHEON COMPANY - FORMER FACILITIES  
 350 ELLIS STREET, MOUNTAIN VIEW, CALIFORNIA

Location	Date	Groundwater Elevation	Depth to Water	Reference Elevation	Depth Units
R68A	8/18/2008	41.22	16.22	57.44	ft
R68A	8/20/2008	41.28	16.16	57.44	ft
R68A	8/21/2008	41.28	16.16	57.44	ft
R68A	8/25/2008	41.43	16.01	57.44	ft
R68A	8/27/2008	41.44	16	57.44	ft
R68A	8/29/2008	41.48	15.96	57.44	ft
R68A	9/3/2008	41.55	15.89	57.44	ft
R68A	9/5/2008	41.6	15.84	57.44	ft
R68A	9/8/2008	41.66	15.78	57.44	ft
R68A	9/10/2008	41.72	15.72	57.44	ft
R68A	9/12/2008	41.72	15.72	57.44	ft
R68A	9/15/2008	41.79	15.65	57.44	ft
R68A	9/17/2008	41.79	15.65	57.44	ft
R68A	9/19/2008	41.79	15.65	57.44	ft
R68A	9/22/2008	41.8	15.64	57.44	ft
R68A	9/29/2008	42.05	15.39	57.44	ft
R68A	11/20/2008	40.63	16.81	57.44	ft
<hr/>					
R68B1	3/27/2008	39.46	17.5	56.96	ft
R68B1	7/14/2008	39.77	17.19	56.96	ft
R68B1	7/16/2008	40.12	16.84	56.96	ft
R68B1	7/18/2008	40.41	16.55	56.96	ft
R68B1	7/21/2008	40.46	16.5	56.96	ft
R68B1	7/23/2008	40.64	16.32	56.96	ft
R68B1	7/25/2008	40.7	16.26	56.96	ft
R68B1	7/28/2008	40.82	16.14	56.96	ft
R68B1	7/30/2008	40.93	16.03	56.96	ft
R68B1	8/1/2008	40.99	15.97	56.96	ft
R68B1	8/4/2008	41.07	15.89	56.96	ft
R68B1	8/6/2008	41.12	15.84	56.96	ft
R68B1	8/8/2008	41.2	15.76	56.96	ft
R68B1	8/11/2008	41.34	15.62	56.96	ft
R68B1	8/13/2008	41.39	15.57	56.96	ft
R68B1	8/14/2008	41.4	15.56	56.96	ft
R68B1	8/18/2008	41.5	15.46	56.96	ft
R68B1	8/20/2008	41.6	15.36	56.96	ft
R68B1	8/21/2008	41.65	15.31	56.96	ft
R68B1	8/25/2008	41.68	15.28	56.96	ft
R68B1	8/27/2008	41.71	15.25	56.96	ft
R68B1	8/29/2008	41.79	15.17	56.96	ft
R68B1	9/3/2008	41.82	15.14	56.96	ft
R68B1	9/5/2008	41.89	15.07	56.96	ft
R68B1	9/8/2008	41.89	15.07	56.96	ft
R68B1	9/10/2008	41.97	14.99	56.96	ft
R68B1	9/12/2008	41.99	14.97	56.96	ft
R68B1	9/15/2008	42.07	14.89	56.96	ft
R68B1	9/17/2008	42.11	14.85	56.96	ft
R68B1	9/19/2008	42.17	14.79	56.96	ft
R68B1	9/22/2008	42.23	14.73	56.96	ft
R68B1	9/29/2008			56.96	ft
R68B1	11/20/2008	40.5	16.46	56.96	ft

Notes:

This table includes the water level measurements collected during the steady state investigation when the treatment system was shutdown from July 14 to September 22, 2008.



TABLE 4  
 2008 GROUNDWATER ELEVATIONS  
 RAYTHEON COMPANY - FORMER FACILITIES  
 350 ELLIS STREET, MOUNTAIN VIEW, CALIFORNIA

Location	Date	Groundwater Elevation	Depth to Water	Reference Elevation	Depth Units
R68B2	3/27/2008	55.33	-0.42	54.91	ft
R68B2	8/14/2008	53.34	1.57	54.91	ft
R68B2	8/21/2008	53.51	1.4	54.91	ft
R68B2	9/17/2008	53.41	1.5	54.91	ft
R68B2	9/19/2008	53.4	1.51	54.91	ft
R68B2	9/22/2008	53.4	1.51	54.91	ft
R68B2	9/29/2008	53.39	1.52	54.91	ft
R68B2	11/20/2008	53.06	1.85	54.91	ft
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R69A	3/28/2008	37.77	18.45	56.22	ft
R69A	8/14/2008	40.86	15.36	56.22	ft
R69A	8/21/2008	41.06	15.16	56.22	ft
R69A	8/25/2008	41.16	15.06	56.22	ft
R69A	9/17/2008	41.52	14.7	56.22	ft
R69A	9/19/2008	41.52	14.7	56.22	ft
R69A	9/22/2008	41.51	14.71	56.22	ft
R69A	9/29/2008	41.81	14.41	56.22	ft
R69A	11/20/2008	38.89	17.33	56.22	ft
<hr/>					
R69B1	3/27/2008	39.5	17.78	57.28	ft
R69B1	7/14/2008	39.83	17.45	57.28	ft
R69B1	7/16/2008	40.21	17.07	57.28	ft
R69B1	7/18/2008	40.5	16.78	57.28	ft
R69B1	7/21/2008	40.56	16.72	57.28	ft
R69B1	7/23/2008	40.72	16.56	57.28	ft
R69B1	7/25/2008	40.83	16.45	57.28	ft
R69B1	7/28/2008	40.94	16.34	57.28	ft
R69B1	7/30/2008	41.05	16.23	57.28	ft
R69B1	8/1/2008	41.11	16.17	57.28	ft
R69B1	8/4/2008	41.19	16.09	57.28	ft
R69B1	8/6/2008	41.22	16.06	57.28	ft
R69B1	8/8/2008	41.32	15.96	57.28	ft
R69B1	8/11/2008	41.44	15.84	57.28	ft
R69B1	8/13/2008	41.48	15.8	57.28	ft
R69B1	8/14/2008	41.48	15.8	57.28	ft
R69B1	8/18/2008	41.61	15.67	57.28	ft
R69B1	8/20/2008	41.69	15.59	57.28	ft
R69B1	8/21/2008	41.72	15.56	57.28	ft
R69B1	8/25/2008	41.77	15.51	57.28	ft
R69B1	8/27/2008	41.81	15.47	57.28	ft
R69B1	8/29/2008	41.88	15.4	57.28	ft
R69B1	9/3/2008	41.92	15.36	57.28	ft
R69B1	9/5/2008	42	15.28	57.28	ft
R69B1	9/8/2008	42.07	15.21	57.28	ft
R69B1	9/10/2008	42.05	15.23	57.28	ft
R69B1	9/12/2008	42.09	15.19	57.28	ft
R69B1	9/15/2008	42.16	15.12	57.28	ft
R69B1	9/17/2008	42.18	15.1	57.28	ft
R69B1	9/19/2008	42.17	15.11	57.28	ft
R69B1	9/22/2008	42.19	15.09	57.28	ft
R69B1	9/29/2008			57.28	ft
R69B1	11/20/2008	40.58	16.7	57.28	ft

Notes:

This table includes the water level measurements collected during the steady state investigation when the treatment system was shutdown from July 14 to September 22, 2008.



TABLE 4  
 2008 GROUNDWATER ELEVATIONS  
 RAYTHEON COMPANY - FORMER FACILITIES  
 350 ELLIS STREET, MOUNTAIN VIEW, CALIFORNIA

Location	Date	Groundwater Elevation	Depth to Water	Reference Elevation	Depth Units
R69B2	3/27/2008	48.24	6.61	54.85	ft
R69B2	7/14/2008	48.36	6.49	54.85	ft
R69B2	7/16/2008	48.78	6.07	54.85	ft
R69B2	7/18/2008	48.94	5.91	54.85	ft
R69B2	7/21/2008	48.95	5.9	54.85	ft
R69B2	7/23/2008	49.03	5.82	54.85	ft
R69B2	7/25/2008	49.02	5.83	54.85	ft
R69B2	7/28/2008	49.03	5.82	54.85	ft
R69B2	7/30/2008	49.01	5.84	54.85	ft
R69B2	8/1/2008	49.03	5.82	54.85	ft
R69B2	8/4/2008	49.01	5.84	54.85	ft
R69B2	8/6/2008	49.02	5.83	54.85	ft
R69B2	8/8/2008	49.01	5.84	54.85	ft
R69B2	8/11/2008	49.09	5.76	54.85	ft
R69B2	8/13/2008	49.08	5.77	54.85	ft
R69B2	8/14/2008	49.08	5.77	54.85	ft
R69B2	8/18/2008	49.1	5.75	54.85	ft
R69B2	8/20/2008	49.17	5.68	54.85	ft
R69B2	8/21/2008	49.13	5.72	54.85	ft
R69B2	8/25/2008	47.84	7.01	54.85	ft
R69B2	8/27/2008	49.18	5.67	54.85	ft
R69B2	8/29/2008	49.13	5.72	54.85	ft
R69B2	9/3/2008	49.1	5.75	54.85	ft
R69B2	9/5/2008	49.11	5.74	54.85	ft
R69B2	9/8/2008	49.08	5.77	54.85	ft
R69B2	9/10/2008	49.08	5.77	54.85	ft
R69B2	9/12/2008	49.09	5.76	54.85	ft
R69B2	9/15/2008	49.08	5.77	54.85	ft
R69B2	9/17/2008	49.08	5.77	54.85	ft
R69B2	9/19/2008	49.08	5.77	54.85	ft
R69B2	9/22/2008	49.07	5.78	54.85	ft
R69B2	9/29/2008	48.84	6.01	54.85	ft
R69B2	11/20/2008	48.48	6.37	54.85	ft
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R6A	3/27/2008	46.47	9.17	55.64	ft
R6A	7/14/2008	46.68	8.96	55.64	ft
R6A	7/16/2008	46.64	9	55.64	ft
R6A	7/18/2008	46.71	8.93	55.64	ft
R6A	7/21/2008	46.59	9.05	55.64	ft
R6A	7/23/2008	46.66	8.98	55.64	ft
R6A	7/25/2008	46.63	9.01	55.64	ft
R6A	7/28/2008	46.61	9.03	55.64	ft
R6A	7/30/2008	46.63	9.01	55.64	ft
R6A	8/1/2008	46.59	9.05	55.64	ft
R6A	8/4/2008	46.54	9.1	55.64	ft
R6A	8/6/2008	46.54	9.1	55.64	ft
R6A	8/8/2008	46.53	9.11	55.64	ft
R6A	8/11/2008	46.57	9.07	55.64	ft
R6A	8/13/2008	46.53	9.11	55.64	ft
R6A	8/14/2008	46.54	9.1	55.64	ft
R6A	8/18/2008	46.44	9.2	55.64	ft

Notes:

This table includes the water level measurements collected during the steady state investigation when the treatment system was shutdown from July 14 to September 22, 2008.



**TABLE 4**  
**2008 GROUNDWATER ELEVATIONS**  
**RAYTHEON COMPANY - FORMER FACILITIES**  
**350 ELLIS STREET, MOUNTAIN VIEW, CALIFORNIA**

Location	Date	Groundwater Elevation	Depth to Water	Reference Elevation	Depth Units
R6A	8/20/2008	46.47	9.17	55.64	ft
R6A	8/21/2008	46.5	9.14	55.64	ft
R6A	8/25/2008	46.4	9.24	55.64	ft
R6A	8/27/2008	46.39	9.25	55.64	ft
R6A	8/29/2008	46.37	9.27	55.64	ft
R6A	9/3/2008	46.31	9.33	55.64	ft
R6A	9/5/2008	46.29	9.35	55.64	ft
R6A	9/8/2008	46.24	9.4	55.64	ft
R6A	9/10/2008	46.21	9.43	55.64	ft
R6A	9/12/2008	46.2	9.44	55.64	ft
R6A	9/15/2008	46.17	9.47	55.64	ft
R6A	9/17/2008	46.14	9.5	55.64	ft
R6A	9/19/2008	46.12	9.52	55.64	ft
R6A	9/22/2008	46.07	9.57	55.64	ft
R6A	9/29/2008	46.01	9.63	55.64	ft
R6A	11/20/2008	45.57	10.07	55.64	ft
<hr/>					
R70A	3/27/2008	38.88	18.45	57.33	ft
R70A	8/14/2008	41.15	16.18	57.33	ft
R70A	8/21/2008	41.37	15.96	57.33	ft
R70A	8/25/2008	41.48	15.85	57.33	ft
R70A	9/17/2008	41.88	15.45	57.33	ft
R70A	9/19/2008	41.88	15.45	57.33	ft
R70A	9/22/2008	41.87	15.46	57.33	ft
R70A	9/29/2008			57.33	ft
R70A	11/20/2008	40.13	17.2	57.33	ft
<hr/>					
R70B1	3/27/2008	39.66	16.59	56.25	ft
R70B1	8/14/2008	41.64	14.61	56.25	ft
R70B1	8/21/2008	41.86	14.39	56.25	ft
R70B1	8/25/2008	41.92	14.33	56.25	ft
R70B1	9/17/2008	42.29	13.96	56.25	ft
R70B1	9/19/2008	42.29	13.96	56.25	ft
R70B1	9/22/2008	42.3	13.95	56.25	ft
R70B1	9/29/2008	42.4	13.85	56.25	ft
R70B1	11/20/2008	40.65	15.6	56.25	ft
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R70B2	3/27/2008	47.3	7.38	54.68	ft
R70B2	8/14/2008	47.09	7.59	54.68	ft
R70B2	8/21/2008	47.06	7.62	54.68	ft
R70B2	9/17/2008	46.8	7.88	54.68	ft
R70B2	9/19/2008	46.8	7.88	54.68	ft
R70B2	9/22/2008	46.79	7.89	54.68	ft
R70B2	9/29/2008	46.49	8.19	54.68	ft
R70B2	11/20/2008	46.35	8.33	54.68	ft
<hr/>					
R71A	3/27/2008	38.3	16.23	54.53	ft
R71A	8/14/2008	40.95	13.58	54.53	ft
R71A	8/21/2008	41.12	13.41	54.53	ft
R71A	8/25/2008	41.2	13.33	54.53	ft
R71A	9/17/2008	41.65	12.88	54.53	ft
R71A	9/19/2008	41.64	12.89	54.53	ft

**Notes:**

This table includes the water level measurements collected during the steady state investigation when the treatment system was shutdown from July 14 to September 22, 2008.



TABLE 4  
 2008 GROUNDWATER ELEVATIONS  
 RAYTHEON COMPANY - FORMER FACILITIES  
 350 ELLIS STREET, MOUNTAIN VIEW, CALIFORNIA

Location	Date	Groundwater Elevation	Depth to Water	Reference Elevation	Depth Units
R71A	9/22/2008	41.66	12.87	54.53	ft
R71A	9/29/2008	41.9	12.63	54.53	ft
R71A	11/20/2008	39.78	14.75	54.53	ft
R71B2	3/27/2008	51.94	5.51	57.45	ft
R71B2	8/14/2008	52.05	5.4	57.45	ft
R71B2	8/21/2008	52.02	5.43	57.45	ft
R71B2	9/17/2008	51.56	5.89	57.45	ft
R71B2	9/19/2008	51.55	5.9	57.45	ft
R71B2	9/22/2008	51.52	5.93	57.45	ft
R71B2	9/29/2008	50.9	6.55	57.45	ft
R71B2	11/20/2008	50.52	6.93	57.45	ft
R72A	3/27/2008	37.7	18.77	56.47	ft
R72A	8/14/2008	39.44	17.03	56.47	ft
R72A	8/21/2008	40.4	16.07	56.47	ft
R72A	8/25/2008	40.48	15.99	56.47	ft
R72A	9/17/2008	40.97	15.5	56.47	ft
R72A	9/19/2008	41.05	15.42	56.47	ft
R72A	9/22/2008	41.11	15.36	56.47	ft
R72A	9/29/2008	41.23	15.24	56.47	ft
R72A	11/20/2008	39.6	16.87	56.47	ft
R72B2	3/27/2008	47.71	9.4	57.11	ft
R72B2	7/14/2008	48.4	8.71	57.11	ft
R72B2	7/16/2008	48.59	8.52	57.11	ft
R72B2	7/18/2008	48.68	8.43	57.11	ft
R72B2	7/21/2008	48.62	8.49	57.11	ft
R72B2	7/23/2008	48.7	8.41	57.11	ft
R72B2	7/25/2008	48.69	8.42	57.11	ft
R72B2	7/28/2008	48.73	8.38	57.11	ft
R72B2	7/30/2008	48.75	8.36	57.11	ft
R72B2	8/1/2008	48.78	8.33	57.11	ft
R72B2	8/4/2008	48.76	8.35	57.11	ft
R72B2	8/6/2008	48.75	8.36	57.11	ft
R72B2	8/8/2008	48.78	8.33	57.11	ft
R72B2	8/11/2008	48.82	8.29	57.11	ft
R72B2	8/13/2008	48.81	8.3	57.11	ft
R72B2	8/14/2008	48.82	8.29	57.11	ft
R72B2	8/18/2008	48.83	8.28	57.11	ft
R72B2	8/20/2008	48.83	8.28	57.11	ft
R72B2	8/21/2008	48.88	8.23	57.11	ft
R72B2	8/25/2008	48.8	8.31	57.11	ft
R72B2	8/27/2008	48.84	8.27	57.11	ft
R72B2	8/29/2008	48.83	8.28	57.11	ft
R72B2	9/3/2008	48.84	8.27	57.11	ft
R72B2	9/5/2008	48.93	8.18	57.11	ft
R72B2	9/8/2008	48.8	8.31	57.11	ft
R72B2	9/10/2008	48.78	8.33	57.11	ft
R72B2	9/12/2008	48.8	8.31	57.11	ft
R72B2	9/15/2008	48.79	8.32	57.11	ft
R72B2	9/17/2008	48.8	8.31	57.11	ft

Notes:

This table includes the water level measurements collected during the steady state investigation when the treatment system was shutdown from July 14 to September 22, 2008.



TABLE 4  
 2008 GROUNDWATER ELEVATIONS  
 RAYTHEON COMPANY - FORMER FACILITIES  
 350 ELLIS STREET, MOUNTAIN VIEW, CALIFORNIA

Location	Date	Groundwater Elevation	Depth to Water	Reference Elevation	Depth Units
R72B2	9/19/2008	48.79	8.32	57.11	ft
R72B2	9/22/2008	48.82	8.29	57.11	ft
R72B2	9/29/2008	47.64	9.47	57.11	ft
R72B2	11/20/2008	46.87	10.24	57.11	ft
R73A	3/27/2008	39.26	19.93	59.19	ft
R73A	8/14/2008	41.22	17.97	59.19	ft
R73A	8/21/2008	41.47	17.72	59.19	ft
R73A	8/25/2008	41.58	17.61	59.19	ft
R73A	9/17/2008	41.98	17.21	59.19	ft
R73A	9/19/2008	42.19	17	59.19	ft
R73A	9/22/2008	42.23	16.96	59.19	ft
R73A	9/29/2008	42.38	16.81	59.19	ft
R73A	11/20/2008	40.67	18.52	59.19	ft
R73B2	3/27/2008	49.21	7.94	57.15	ft
R73B2	8/14/2008	51.08	6.07	57.15	ft
R73B2	8/21/2008	51.08	6.07	57.15	ft
R73B2	9/17/2008	50.79	6.36	57.15	ft
R73B2	9/19/2008	50.78	6.37	57.15	ft
R73B2	9/22/2008	50.77	6.38	57.15	ft
R73B2	9/29/2008	48.17	8.98	57.15	ft
R73B2	11/20/2008	47.64	9.51	57.15	ft
R74A	3/27/2008	39.34	18.5	57.84	ft
R74A	7/14/2008	39.62	18.22	57.84	ft
R74A	7/16/2008	39.82	18.02	57.84	ft
R74A	7/18/2008	40.05	17.79	57.84	ft
R74A	7/21/2008	40.13	17.71	57.84	ft
R74A	7/23/2008	40.48	17.36	57.84	ft
R74A	7/25/2008	40.38	17.46	57.84	ft
R74A	7/28/2008	40.49	17.35	57.84	ft
R74A	7/30/2008	40.58	17.26	57.84	ft
R74A	8/1/2008	40.66	17.18	57.84	ft
R74A	8/4/2008	40.68	17.16	57.84	ft
R74A	8/6/2008	40.78	17.06	57.84	ft
R74A	8/8/2008	40.87	16.97	57.84	ft
R74A	8/11/2008	40.98	16.86	57.84	ft
R74A	8/13/2008	41.03	16.81	57.84	ft
R74A	8/14/2008	41.05	16.79	57.84	ft
R74A	8/18/2008	41.14	16.7	57.84	ft
R74A	8/20/2008	41.25	16.59	57.84	ft
R74A	8/21/2008	41.28	16.56	57.84	ft
R74A	8/25/2008	41.36	16.48	57.84	ft
R74A	8/27/2008	41.38	16.46	57.84	ft
R74A	8/29/2008	41.47	16.37	57.84	ft
R74A	9/3/2008	41.53	16.31	57.84	ft
R74A	9/5/2008	41.58	16.26	57.84	ft
R74A	9/8/2008	41.68	16.16	57.84	ft
R74A	9/10/2008	41.68	16.16	57.84	ft
R74A	9/12/2008	41.7	16.14	57.84	ft
R74A	9/15/2008	41.69	16.15	57.84	ft

Notes:

This table includes the water level measurements collected during the steady state investigation when the treatment system was shutdown from July 14 to September 22, 2008.



TABLE 4  
 2008 GROUNDWATER ELEVATIONS  
 RAYTHEON COMPANY - FORMER FACILITIES  
 350 ELLIS STREET, MOUNTAIN VIEW, CALIFORNIA

Location	Date	Groundwater Elevation	Depth to Water	Reference Elevation	Depth Units
R74A	9/17/2008	41.85	15.99	57.84	ft
R74A	9/19/2008	41.9	15.94	57.84	ft
R74A	9/22/2008	41.98	15.86	57.84	ft
R74A	9/29/2008	42.08	15.76	57.84	ft
R74A	11/20/2008	40.64	17.2	57.84	ft
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R7B1	3/27/2008	39.71	16.76	56.47	ft
R7B1	8/14/2008	41.66	14.81	56.47	ft
R7B1	8/21/2008	41.9	14.57	56.47	ft
R7B1	8/25/2008	41.96	14.51	56.47	ft
R7B1	9/17/2008	42.38	14.09	56.47	ft
R7B1	9/19/2008	42.43	14.04	56.47	ft
R7B1	9/22/2008	42.5	13.97	56.47	ft
R7B1	9/29/2008	42.46	14.01	56.47	ft
R7B1	11/20/2008	41.69	14.78	56.47	ft
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RAY-1A	3/27/2008	33.12	12.09	45.21	ft
RAY-1A	7/14/2008	33.43	11.78	45.21	ft
RAY-1A	7/16/2008	33.46	11.75	45.21	ft
RAY-1A	7/18/2008	33.52	11.69	45.21	ft
RAY-1A	7/21/2008	33.44	11.77	45.21	ft
RAY-1A	7/23/2008	33.46	11.75	45.21	ft
RAY-1A	7/25/2008	33.46	11.75	45.21	ft
RAY-1A	7/28/2008	33.5	11.71	45.21	ft
RAY-1A	7/30/2008	33.45	11.76	45.21	ft
RAY-1A	8/1/2008	33.44	11.77	45.21	ft
RAY-1A	8/4/2008	33.39	11.82	45.21	ft
RAY-1A	8/6/2008	33.39	11.82	45.21	ft
RAY-1A	8/8/2008	33.4	11.81	45.21	ft
RAY-1A	8/11/2008	33.44	11.77	45.21	ft
RAY-1A	8/13/2008	33.42	11.79	45.21	ft
RAY-1A	8/14/2008	33.39	11.82	45.21	ft
RAY-1A	8/18/2008	33.38	11.83	45.21	ft
RAY-1A	8/20/2008	33.35	11.86	45.21	ft
RAY-1A	8/21/2008		11.87	45.21	ft
RAY-1A	8/25/2008	33.34	11.87	45.21	ft
RAY-1A	8/27/2008	33.35	11.86	45.21	ft
RAY-1A	8/29/2008	33.32	11.89	45.21	ft
RAY-1A	9/3/2008	33.26	11.95	45.21	ft
RAY-1A	9/5/2008	33.26	11.95	45.21	ft
RAY-1A	9/8/2008	33.23	11.98	45.21	ft
RAY-1A	9/10/2008	33.19	12.02	45.21	ft
RAY-1A	9/12/2008	33.17	12.04	45.21	ft
RAY-1A	9/15/2008	33.18	12.03	45.21	ft
RAY-1A	9/17/2008	33.02	12.19	45.21	ft
RAY-1A	9/19/2008	33.01	12.2	45.21	ft
RAY-1A	9/22/2008	33.01	12.2	45.21	ft
RAY-1A	9/29/2008	32.4	12.81	45.21	ft
RAY-1A	11/20/2008	32.9	12.31	45.21	ft
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RAY-1B1	3/27/2008	32.85	12.92	45.77	ft
RAY-1B1	7/14/2008	34.16	11.61	45.77	ft

Notes:

This table includes the water level measurements collected during the steady state investigation when the treatment system was shutdown from July 14 to September 22, 2008.



TABLE 4  
 2008 GROUNDWATER ELEVATIONS  
 RAYTHEON COMPANY - FORMER FACILITIES  
 350 ELLIS STREET, MOUNTAIN VIEW, CALIFORNIA

Location	Date	Groundwater Elevation	Depth to Water	Reference Elevation	Depth Units
RAY-1B1	7/16/2008	34.25	11.52	45.77	ft
RAY-1B1	7/18/2008	33.86	11.91	45.77	ft
RAY-1B1	7/21/2008	33.69	12.08	45.77	ft
RAY-1B1	7/23/2008	33.76	12.01	45.77	ft
RAY-1B1	7/25/2008	33.7	12.07	45.77	ft
RAY-1B1	7/28/2008	34.07	11.7	45.77	ft
RAY-1B1	7/30/2008	33.7	12.07	45.77	ft
RAY-1B1	8/1/2008	33.68	12.09	45.77	ft
RAY-1B1	8/4/2008	33.64	12.13	45.77	ft
RAY-1B1	8/6/2008	33.53	12.24	45.77	ft
RAY-1B1	8/8/2008	33.63	12.14	45.77	ft
RAY-1B1	8/11/2008	33.6	12.17	45.77	ft
RAY-1B1	8/13/2008	34.55	11.22	45.77	ft
RAY-1B1	8/14/2008	33.42	12.35	45.77	ft
RAY-1B1	8/18/2008	33.73	12.04	45.77	ft
RAY-1B1	8/20/2008	33.52	12.25	45.77	ft
RAY-1B1	8/21/2008	33.52	12.25	45.77	ft
RAY-1B1	8/25/2008	33.44	12.33	45.77	ft
RAY-1B1	8/27/2008	33.77	12	45.77	ft
RAY-1B1	8/29/2008	33.44	12.33	45.77	ft
RAY-1B1	9/3/2008	33.6	12.17	45.77	ft
RAY-1B1	9/5/2008	33.72	12.05	45.77	ft
RAY-1B1	9/8/2008	33.58	12.19	45.77	ft
RAY-1B1	9/10/2008	33.29	12.48	45.77	ft
RAY-1B1	9/12/2008	33.27	12.5	45.77	ft
RAY-1B1	9/15/2008	33.28	12.49	45.77	ft
RAY-1B1	9/17/2008	33.43	12.34	45.77	ft
RAY-1B1	9/19/2008	33.42	12.35	45.77	ft
RAY-1B1	9/22/2008	33.42	12.35	45.77	ft
RAY-1B1	9/29/2008	27.2	18.57	45.77	ft
RAY-1B1	11/20/2008	31.55	14.22	45.77	ft
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RE10A	3/27/2008	39.46	19.19	58.65	ft
RE10A	8/14/2008	41.82	16.83	58.65	ft
RE10A	8/21/2008	42.1	16.55	58.65	ft
RE10A	8/25/2008	42.24	16.41	58.65	ft
RE10A	9/17/2008	42.79	15.86	58.65	ft
RE10A	9/19/2008	42.83	15.82	58.65	ft
RE10A	9/22/2008	42.88	15.77	58.65	ft
RE10A	9/29/2008	42.93	15.72	58.65	ft
RE10A	11/20/2008	42.97	15.68	58.65	ft
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RE11A	3/27/2008	35.19	13.56	48.75	ft
RE11A	7/14/2008	35.89	12.86	48.75	ft
RE11A	7/16/2008	36.73	12.02	48.75	ft
RE11A	7/18/2008	37.02	11.73	48.75	ft
RE11A	7/21/2008	37.13	11.62	48.75	ft
RE11A	7/23/2008	37.29	11.46	48.75	ft
RE11A	7/25/2008	37.38	11.37	48.75	ft
RE11A	7/28/2008	37.52	11.23	48.75	ft
RE11A	7/30/2008	37.6	11.15	48.75	ft
RE11A	8/1/2008	37.68	11.07	48.75	ft

Notes:

This table includes the water level measurements collected during the steady state investigation when the treatment system was shutdown from July 14 to September 22, 2008.



TABLE 4  
 2008 GROUNDWATER ELEVATIONS  
 RAYTHEON COMPANY - FORMER FACILITIES  
 350 ELLIS STREET, MOUNTAIN VIEW, CALIFORNIA

Location	Date	Groundwater Elevation	Depth to Water	Reference Elevation	Depth Units
RE11A	8/4/2008	37.73	11.02	48.75	ft
RE11A	8/6/2008	37.8	10.95	48.75	ft
RE11A	8/8/2008	37.88	10.87	48.75	ft
RE11A	8/11/2008	38	10.75	48.75	ft
RE11A	8/13/2008	38.05	10.7	48.75	ft
RE11A	8/14/2008	38.07	10.68	48.75	ft
RE11A	8/18/2008	38.18	10.57	48.75	ft
RE11A	8/20/2008	38.27	10.48	48.75	ft
RE11A	8/21/2008	38.3	10.45	48.75	ft
RE11A	8/25/2008	38.37	10.38	48.75	ft
RE11A	8/27/2008	38.4	10.35	48.75	ft
RE11A	8/29/2008	38.45	10.3	48.75	ft
RE11A	9/3/2008	38.48	10.27	48.75	ft
RE11A	9/5/2008	38.53	10.22	48.75	ft
RE11A	9/8/2008	38.62	10.13	48.75	ft
RE11A	9/10/2008	38.67	10.08	48.75	ft
RE11A	9/12/2008	38.68	10.07	48.75	ft
RE11A	9/15/2008	38.65	10.1	48.75	ft
RE11A	9/17/2008	38.65	10.1	48.75	ft
RE11A	9/19/2008	38.66	10.09	48.75	ft
RE11A	9/22/2008	38.64	10.11	48.75	ft
RE11A	9/29/2008	39.02	9.73	48.75	ft
RE11A	11/20/2008	36.38	12.37	48.75	ft
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RE12A	3/27/2008	36.56	12.08	48.64	ft
RE12A	8/14/2008	38.36	10.28	48.64	ft
RE12A	8/21/2008	38.55	10.09	48.64	ft
RE12A	8/25/2008	38.67	9.97	48.64	ft
RE12A	9/17/2008	39.05	9.59	48.64	ft
RE12A	9/19/2008	39.05	9.59	48.64	ft
RE12A	9/22/2008	39.04	9.6	48.64	ft
RE12A	9/29/2008	39.02	9.62	48.64	ft
RE12A	11/20/2008	37.85	10.79	48.64	ft
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RE1B2	3/27/2008	48.56	4.32	52.88	ft
RE1B2	8/14/2008	50.28	2.6	52.88	ft
RE1B2	8/21/2008	50.47	2.41	52.88	ft
RE1B2	9/17/2008	51.31	1.57	52.88	ft
RE1B2	9/19/2008	51.32	1.56	52.88	ft
RE1B2	9/22/2008	51.32	1.56	52.88	ft
RE1B2	9/29/2008	51.31	1.57	52.88	ft
RE1B2	11/20/2008	49.01	3.87	52.88	ft
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RE21A	3/27/2008	36.23	13.65	49.88	ft
RE21A	7/14/2008	36.44	13.44	49.88	ft
RE21A	7/16/2008	36.86	13.02	49.88	ft
RE21A	7/18/2008	37.19	12.69	49.88	ft
RE21A	7/21/2008	37.33	12.55	49.88	ft
RE21A	7/23/2008	37.49	12.39	49.88	ft
RE21A	7/25/2008	37.6	12.28	49.88	ft
RE21A	7/28/2008	37.72	12.16	49.88	ft
RE21A	7/30/2008	37.8	12.08	49.88	ft

Notes:

This table includes the water level measurements collected during the steady state investigation when the treatment system was shutdown from July 14 to September 22, 2008.



TABLE 4  
 2008 GROUNDWATER ELEVATIONS  
 RAYTHEON COMPANY - FORMER FACILITIES  
 350 ELLIS STREET, MOUNTAIN VIEW, CALIFORNIA

Location	Date	Groundwater Elevation	Depth to Water	Reference Elevation	Depth Units
RE21A	8/1/2008	37.89	11.99	49.88	ft
RE21A	8/4/2008	37.96	11.92	49.88	ft
RE21A	8/6/2008	38.01	11.87	49.88	ft
RE21A	8/8/2008	38.08	11.8	49.88	ft
RE21A	8/11/2008	38.18	11.7	49.88	ft
RE21A	8/13/2008	38.25	11.63	49.88	ft
RE21A	8/14/2008	38.25	11.63	49.88	ft
RE21A	8/18/2008	38.36	11.52	49.88	ft
RE21A	8/20/2008	38.43	11.45	49.88	ft
RE21A	8/21/2008	38.46	11.42	49.88	ft
RE21A	8/25/2008	38.56	11.32	49.88	ft
RE21A	8/27/2008	38.59	11.29	49.88	ft
RE21A	8/29/2008	38.65	11.23	49.88	ft
RE21A	9/3/2008	38.71	11.17	49.88	ft
RE21A	9/5/2008	38.76	11.12	49.88	ft
RE21A	9/8/2008	38.84	11.04	49.88	ft
RE21A	9/10/2008	38.85	11.03	49.88	ft
RE21A	9/12/2008	38.87	11.01	49.88	ft
RE21A	9/15/2008	38.83	11.05	49.88	ft
RE21A	9/17/2008	38.81	11.07	49.88	ft
RE21A	9/19/2008	38.8	11.08	49.88	ft
RE21A	9/22/2008	38.81	11.07	49.88	ft
RE21A	9/29/2008	39.17	10.71	49.88	ft
RE21A	11/20/2008	37.86	12.02	49.88	ft
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RE22A	3/27/2008	35.18	14.63	49.81	ft
RE22A	8/14/2008	38.08	11.73	49.81	ft
RE22A	8/21/2008	38.27	11.54	49.81	ft
RE22A	8/25/2008	38.38	11.43	49.81	ft
RE22A	9/17/2008	38.79	11.02	49.81	ft
RE22A	9/19/2008	38.78	11.03	49.81	ft
RE22A	9/22/2008	38.8	11.01	49.81	ft
RE22A	9/29/2008	39.04	10.77	49.81	ft
RE22A	11/20/2008	36.27	13.54	49.81	ft
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RE23A	3/27/2008	37.24	16.42	53.66	ft
RE23A	7/14/2008	38.57	15.09	53.66	ft
RE23A	7/16/2008	39.46	14.2	53.66	ft
RE23A	7/18/2008	39.77	13.89	53.66	ft
RE23A	7/21/2008	39.87	13.79	53.66	ft
RE23A	7/23/2008	40.04	13.62	53.66	ft
RE23A	7/25/2008	40.14	13.52	53.66	ft
RE23A	7/28/2008	40.26	13.4	53.66	ft
RE23A	7/30/2008	40.36	13.3	53.66	ft
RE23A	8/1/2008	40.43	13.23	53.66	ft
RE23A	8/4/2008	40.49	13.17	53.66	ft
RE23A	8/6/2008	40.56	13.1	53.66	ft
RE23A	8/8/2008	40.65	13.01	53.66	ft
RE23A	8/11/2008	40.77	12.89	53.66	ft
RE23A	8/13/2008	40.83	12.83	53.66	ft
RE23A	8/14/2008	40.85	12.81	53.66	ft
RE23A	8/18/2008	40.96	12.7	53.66	ft

Notes:

This table includes the water level measurements collected during the steady state investigation when the treatment system was shutdown from July 14 to September 22, 2008.



TABLE 4  
 2008 GROUNDWATER ELEVATIONS  
 RAYTHEON COMPANY - FORMER FACILITIES  
 350 ELLIS STREET, MOUNTAIN VIEW, CALIFORNIA

Location	Date	Groundwater Elevation	Depth to Water	Reference Elevation	Depth Units
RE23A	8/20/2008	41.06	12.6	53.66	ft
RE23A	8/21/2008	41.09	12.57	53.66	ft
RE23A	8/25/2008	41.13	12.53	53.66	ft
RE23A	8/27/2008	41.18	12.48	53.66	ft
RE23A	8/29/2008	41.23	12.43	53.66	ft
RE23A	9/3/2008	41.29	12.37	53.66	ft
RE23A	9/5/2008	41.33	12.33	53.66	ft
RE23A	9/8/2008	41.39	12.27	53.66	ft
RE23A	9/10/2008	41.45	12.21	53.66	ft
RE23A	9/12/2008	41.43	12.23	53.66	ft
RE23A	9/15/2008	41.46	12.2	53.66	ft
RE23A	9/17/2008	41.53	12.13	53.66	ft
RE23A	9/19/2008	41.51	12.15	53.66	ft
RE23A	9/22/2008	41.52	12.14	53.66	ft
RE23A	9/29/2008	41.79	11.87	53.66	ft
RE23A	11/20/2008	37.99	15.67	53.66	ft
<hr/>					
RE24A	3/27/2008	35.09	20.15	55.24	ft
RE24A	7/14/2008	38.17	17.07	55.24	ft
RE24A	7/16/2008	39.17	16.07	55.24	ft
RE24A	7/18/2008	39.48	15.76	55.24	ft
RE24A	7/21/2008	39.58	15.66	55.24	ft
RE24A	7/23/2008	39.76	15.48	55.24	ft
RE24A	7/25/2008	39.86	15.38	55.24	ft
RE24A	7/28/2008	39.98	15.26	55.24	ft
RE24A	7/30/2008	40.07	15.17	55.24	ft
RE24A	8/1/2008	40.17	15.07	55.24	ft
RE24A	8/4/2008	40.23	15.01	55.24	ft
RE24A	8/6/2008	40.28	14.96	55.24	ft
RE24A	8/8/2008	40.35	14.89	55.24	ft
RE24A	8/11/2008	40.47	14.77	55.24	ft
RE24A	8/13/2008	40.55	14.69	55.24	ft
RE24A	8/14/2008	40.56	14.68	55.24	ft
RE24A	8/18/2008	40.67	14.57	55.24	ft
RE24A	8/20/2008	40.77	14.47	55.24	ft
RE24A	8/21/2008	40.78	14.46	55.24	ft
RE24A	8/25/2008	40.84	14.4	55.24	ft
RE24A	8/27/2008	40.9	14.34	55.24	ft
RE24A	8/29/2008	40.93	14.31	55.24	ft
RE24A	9/3/2008	41.02	14.22	55.24	ft
RE24A	9/5/2008	41.03	14.21	55.24	ft
RE24A	9/8/2008	41.07	14.17	55.24	ft
RE24A	9/10/2008	41.17	14.07	55.24	ft
RE24A	9/12/2008	41.18	14.06	55.24	ft
RE24A	9/15/2008	41.16	14.08	55.24	ft
RE24A	9/17/2008	41.26	13.98	55.24	ft
RE24A	9/19/2008	41.25	13.99	55.24	ft
RE24A	9/22/2008	41.25	13.99	55.24	ft
RE24A	9/29/2008	41.52	13.72	55.24	ft
RE24A	11/20/2008	35.72	19.52	55.24	ft
<hr/>					
RE25A	3/27/2008	36.7	20.3	57	ft

Notes:

This table includes the water level measurements collected during the steady state investigation when the treatment system was shutdown from July 14 to September 22, 2008.



TABLE 4  
 2008 GROUNDWATER ELEVATIONS  
 RAYTHEON COMPANY - FORMER FACILITIES  
 350 ELLIS STREET, MOUNTAIN VIEW, CALIFORNIA

Location	Date	Groundwater Elevation	Depth to Water	Reference Elevation	Depth Units
RE25A	7/14/2008	38.82	18.18	57	ft
RE25A	7/16/2008	40.1	16.9	57	ft
RE25A	7/18/2008	40.4	16.6	57	ft
RE25A	7/21/2008	40.47	16.53	57	ft
RE25A	7/23/2008	40.68	16.32	57	ft
RE25A	7/25/2008	40.76	16.24	57	ft
RE25A	7/28/2008	40.92	16.08	57	ft
RE25A	7/30/2008	41.01	15.99	57	ft
RE25A	8/1/2008	41.08	15.92	57	ft
RE25A	8/4/2008	41.18	15.82	57	ft
RE25A	8/6/2008	41.29	15.71	57	ft
RE25A	8/8/2008	41.56	15.44	57	ft
RE25A	8/11/2008	41.7	15.3	57	ft
RE25A	8/13/2008	41.1	15.9	57	ft
RE25A	8/14/2008	41.91	15.09	57	ft
RE25A	8/18/2008	42.01	14.99	57	ft
RE25A	8/20/2008	42.1	14.9	57	ft
RE25A	8/21/2008	42.02	14.98	57	ft
RE25A	8/25/2008	41.91	15.09	57	ft
RE25A	8/27/2008	41.91	15.09	57	ft
RE25A	8/29/2008	41.97	15.03	57	ft
RE25A	9/3/2008	41.98	15.02	57	ft
RE25A	9/5/2008	42.02	14.98	57	ft
RE25A	9/8/2008	42.09	14.91	57	ft
RE25A	9/10/2008	42.17	14.83	57	ft
RE25A	9/12/2008	42.2	14.8	57	ft
RE25A	9/15/2008	42.18	14.82	57	ft
RE25A	9/17/2008	42.23	14.77	57	ft
RE25A	9/19/2008	42.21	14.79	57	ft
RE25A	9/22/2008	42.24	14.76	57	ft
RE25A	9/29/2008	42.47	14.53	57	ft
RE25A	11/20/2008	24.27	32.73	57	ft
<hr/>					
RE3B1	3/27/2008	36.8	11.91	48.71	ft
RE3B1	8/14/2008	38.8	9.91	48.71	ft
RE3B1	8/21/2008	39.04	9.67	48.71	ft
RE3B1	8/25/2008	39.12	9.59	48.71	ft
RE3B1	9/17/2008	39.52	9.19	48.71	ft
RE3B1	9/19/2008	39.53	9.18	48.71	ft
RE3B1	9/22/2008	39.53	9.18	48.71	ft
RE3B1	9/29/2008	39.64	9.07	48.71	ft
RE3B1	11/20/2008	37.86	10.85	48.71	ft
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RE5A	3/27/2008	36.88	19.97	56.85	ft
RE5A	7/14/2008	38.71	18.14	56.85	ft
RE5A	7/16/2008	39.6	17.25	56.85	ft
RE5A	7/18/2008	39.88	16.97	56.85	ft
RE5A	7/21/2008	39.99	16.86	56.85	ft
RE5A	7/23/2008	40.15	16.7	56.85	ft
RE5A	7/25/2008	40.25	16.6	56.85	ft
RE5A	7/28/2008	40.41	16.44	56.85	ft
RE5A	7/30/2008	40.48	16.37	56.85	ft

Notes:

This table includes the water level measurements collected during the steady state investigation when the treatment system was shutdown from July 14 to September 22, 2008.



TABLE 4  
 2008 GROUNDWATER ELEVATIONS  
 RAYTHEON COMPANY - FORMER FACILITIES  
 350 ELLIS STREET, MOUNTAIN VIEW, CALIFORNIA

Location	Date	Groundwater Elevation	Depth to Water	Reference Elevation	Depth Units
RE5A	8/1/2008	40.56	16.29	56.85	ft
RE5A	8/4/2008	40.63	16.22	56.85	ft
RE5A	8/6/2008	40.69	16.16	56.85	ft
RE5A	8/8/2008	40.76	16.09	56.85	ft
RE5A	8/11/2008	40.86	15.99	56.85	ft
RE5A	8/13/2008	40.92	15.93	56.85	ft
RE5A	8/14/2008	40.96	15.89	56.85	ft
RE5A	8/18/2008	41.06	15.79	56.85	ft
RE5A	8/20/2008	41.16	15.69	56.85	ft
RE5A	8/21/2008	41.19	15.66	56.85	ft
RE5A	8/25/2008	41.26	15.59	56.85	ft
RE5A	8/27/2008	41.28	15.57	56.85	ft
RE5A	8/29/2008	41.33	15.52	56.85	ft
RE5A	9/3/2008	41.41	15.44	56.85	ft
RE5A	9/5/2008	41.44	15.41	56.85	ft
RE5A	9/8/2008	41.55	15.3	56.85	ft
RE5A	9/10/2008	41.57	15.28	56.85	ft
RE5A	9/12/2008	41.55	15.3	56.85	ft
RE5A	9/15/2008	41.56	15.29	56.85	ft
RE5A	9/17/2008	41.69	15.16	56.85	ft
RE5A	9/19/2008	41.67	15.18	56.85	ft
RE5A	9/22/2008	41.67	15.18	56.85	ft
RE5A	9/29/2008	41.94	14.91	56.85	ft
RE5A	11/20/2008	39.18	17.67	56.85	ft
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RE7A	3/27/2008	36.01	12.6	48.61	ft
RE7A	8/14/2008	38.3	10.31	48.61	ft
RE7A	8/21/2008	38.51	10.1	48.61	ft
RE7A	8/25/2008	38.63	9.98	48.61	ft
RE7A	9/17/2008	39.04	9.57	48.61	ft
RE7A	9/19/2008	39.04	9.57	48.61	ft
RE7A	9/22/2008	39.03	9.58	48.61	ft
RE7A	9/29/2008	39.26	9.35	48.61	ft
RE7A	11/20/2008	37.3	11.31	48.61	ft
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RE8A	3/27/2008	38.03	13.63	51.66	ft
RE8A	8/14/2008	39.22	12.44	51.66	ft
RE8A	8/21/2008	39.39	12.27	51.66	ft
RE8A	8/25/2008	39.41	12.25	51.66	ft
RE8A	9/17/2008	39.58	12.08	51.66	ft
RE8A	9/19/2008	39.59	12.07	51.66	ft
RE8A	9/22/2008	39.57	12.09	51.66	ft
RE8A	9/29/2008	39.69	11.97	51.66	ft
RE8A	11/20/2008	38.19	13.47	51.66	ft
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RE9A	3/27/2008	38.98	19.75	58.73	ft
RE9A	8/14/2008	40.2	18.53	58.73	ft
RE9A	8/21/2008	41.3	17.43	58.73	ft
RE9A	8/25/2008	41.66	17.07	58.73	ft
RE9A	9/17/2008	41.88	16.85	58.73	ft
RE9A	9/19/2008	42.19	16.54	58.73	ft
RE9A	9/22/2008	42.27	16.46	58.73	ft

Notes:

This table includes the water level measurements collected during the steady state investigation when the treatment system was shutdown from July 14 to September 22, 2008.



**TABLE 4**  
**2008 GROUNDWATER ELEVATIONS**  
**RAYTHEON COMPANY - FORMER FACILITIES**  
**350 ELLIS STREET, MOUNTAIN VIEW, CALIFORNIA**

Location	Date	Groundwater Elevation	Depth to Water	Reference Elevation	Depth Units
RE9A	9/29/2008	42.17	16.56	58.73	ft
RE9A	11/20/2008	41.53	17.2	58.73	ft
RH1A	3/27/2008	46.25	16.14	62.39	ft
RH1A	11/20/2008	45.4	16.99	62.39	ft
RP16B	3/28/2008	48.92	9.71	58.63	ft
RP16B	8/14/2008	48.66	9.97	58.63	ft
RP16B	8/21/2008	48.68	9.95	58.63	ft
RP16B	9/17/2008	48.28	10.35	58.63	ft
RP16B	9/19/2008	48.31	10.32	58.63	ft
RP16B	9/22/2008	48.25	10.38	58.63	ft
RP16B	9/29/2008	48.16	10.47	58.63	ft
RP16B	11/20/2008	47.68	10.95	58.63	ft
RP19B	3/27/2008	40.39	16.08	56.47	ft
RP19B	7/14/2008	40.31	16.16	56.47	ft
RP19B	7/16/2008	40.64	15.83	56.47	ft
RP19B	7/18/2008	40.93	15.54	56.47	ft
RP19B	7/21/2008	40.93	15.54	56.47	ft
RP19B	7/23/2008	41.2	15.27	56.47	ft
RP19B	7/25/2008	41.3	15.17	56.47	ft
RP19B	7/28/2008	41.4	15.07	56.47	ft
RP19B	7/30/2008	41.47	15	56.47	ft
RP19B	8/1/2008	41.55	14.92	56.47	ft
RP19B	8/4/2008	41.6	14.87	56.47	ft
RP19B	8/6/2008	41.62	14.85	56.47	ft
RP19B	8/8/2008	41.77	14.7	56.47	ft
RP19B	8/11/2008	41.89	14.58	56.47	ft
RP19B	8/13/2008	41.95	14.52	56.47	ft
RP19B	8/14/2008	41.97	14.5	56.47	ft
RP19B	8/18/2008	42.05	14.42	56.47	ft
RP19B	8/20/2008	42.12	14.35	56.47	ft
RP19B	8/21/2008	42.19	14.28	56.47	ft
RP19B	8/25/2008	42.23	14.24	56.47	ft
RP19B	8/27/2008	42.29	14.18	56.47	ft
RP19B	8/29/2008	42.33	14.14	56.47	ft
RP19B	9/3/2008	42.39	14.08	56.47	ft
RP19B	9/5/2008	42.44	14.03	56.47	ft
RP19B	9/8/2008	42.5	13.97	56.47	ft
RP19B	9/10/2008	42.55	13.92	56.47	ft
RP19B	9/12/2008	42.57	13.9	56.47	ft
RP19B	9/15/2008	42.56	13.91	56.47	ft
RP19B	9/17/2008	42.68	13.79	56.47	ft
RP19B	9/19/2008	42.73	13.74	56.47	ft
RP19B	9/22/2008	42.81	13.66	56.47	ft
RP19B	9/29/2008	42.76	13.71	56.47	ft
RP19B	11/20/2008	41.64	14.83	56.47	ft
RP21B	3/27/2008	39.59	13.75	53.34	ft
RP21B	8/14/2008	41.54	11.8	53.34	ft
RP21B	8/21/2008	41.79	11.55	53.34	ft

**Notes:**

This table includes the water level measurements collected during the steady state investigation when the treatment system was shutdown from July 14 to September 22, 2008.



TABLE 4  
 2008 GROUNDWATER ELEVATIONS  
 RAYTHEON COMPANY - FORMER FACILITIES  
 350 ELLIS STREET, MOUNTAIN VIEW, CALIFORNIA

Location	Date	Groundwater Elevation	Depth to Water	Reference Elevation	Depth Units
RP21B	8/25/2008	41.86	11.48	53.34	ft
RP21B	9/17/2008	42.26	11.08	53.34	ft
RP21B	9/19/2008	42.24	11.1	53.34	ft
RP21B	9/22/2008	42.25	11.09	53.34	ft
RP21B	9/29/2008	42.36	10.98	53.34	ft
RP21B	11/20/2008	40.67	12.67	53.34	ft
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RP22B	3/27/2008	47.83	16.24	64.07	ft
RP22B	11/20/2008	46.88	17.19	64.07	ft
<hr/>					
RP23B	3/27/2008	39.5	15.17	54.67	ft
RP23B	8/14/2008	41.04	13.63	54.67	ft
RP23B	8/21/2008	41.6	13.07	54.67	ft
RP23B	8/25/2008	41.74	12.93	54.67	ft
RP23B	9/17/2008	42.07	12.6	54.67	ft
RP23B	9/19/2008	42.06	12.61	54.67	ft
RP23B	9/22/2008	42.05	12.62	54.67	ft
RP23B	9/29/2008	42.17	12.5	54.67	ft
RP23B	11/20/2008	40.71	13.96	54.67	ft
<hr/>					
RP24B	3/27/2008	39.27	15.72	54.99	ft
RP24B	8/14/2008	41.34	13.65	54.99	ft
RP24B	8/21/2008	41.57	13.42	54.99	ft
RP24B	8/25/2008	41.63	13.36	54.99	ft
RP24B	9/17/2008	42.01	12.98	54.99	ft
RP24B	9/19/2008	42.01	12.98	54.99	ft
RP24B	9/22/2008	42.02	12.97	54.99	ft
RP24B	9/29/2008	42.12	12.87	54.99	ft
RP24B	11/20/2008	40.11	14.88	54.99	ft
<hr/>					
RP41B	3/27/2008	39.8	17.55	57.35	ft
RP41B	8/14/2008	41.56	15.79	57.35	ft
RP41B	8/21/2008	41.84	15.51	57.35	ft
RP41B	8/25/2008	41.88	15.47	57.35	ft
RP41B	9/17/2008	42.33	15.02	57.35	ft
RP41B	9/19/2008	42.4	14.95	57.35	ft
RP41B	9/22/2008	42.47	14.88	57.35	ft
RP41B	9/29/2008	42.52	14.83	57.35	ft
RP41B	11/20/2008	40.85	16.5	57.35	ft
<hr/>					
RP42B	3/27/2008	39.51	22.19	61.7	ft
RP42B	8/14/2008	40.42	21.28	61.7	ft
RP42B	8/21/2008	41.65	20.05	61.7	ft
RP42B	8/25/2008	42.05	19.65	61.7	ft
RP42B	9/17/2008	42.74	18.96	61.7	ft
RP42B	9/19/2008	42.88	18.82	61.7	ft
RP42B	9/22/2008	42.81	18.89	61.7	ft
RP42B	9/29/2008	42.76	18.94	61.7	ft
RP42B	11/20/2008	42.73	18.97	61.7	ft
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RP43B	3/27/2008	39.37	17.91	57.28	ft
RP43B	8/14/2008	40.82	16.46	57.28	ft

Notes:

This table includes the water level measurements collected during the steady state investigation when the treatment system was shutdown from July 14 to September 22, 2008.



TABLE 4  
 2008 GROUNDWATER ELEVATIONS  
 RAYTHEON COMPANY - FORMER FACILITIES  
 350 ELLIS STREET, MOUNTAIN VIEW, CALIFORNIA

Location	Date	Groundwater Elevation	Depth to Water	Reference Elevation	Depth Units
RP43B	8/21/2008	41.7	15.58	57.28	ft
RP43B	8/25/2008	41.86	15.42	57.28	ft
RP43B	9/17/2008	42.01	15.27	57.28	ft
RP43B	9/19/2008	42.09	15.19	57.28	ft
RP43B	9/22/2008	42.17	15.11	57.28	ft
RP43B	9/29/2008	42.22	15.06	57.28	ft
RP43B	11/20/2008	40.77	16.51	57.28	ft
SOPZ-1	3/27/2008	46.39	15.91	62.3	ft
SOPZ-1	11/20/2008	45.66	16.64	62.3	ft
SOPZ-2	3/27/2008	46.31	14.35	60.66	ft
SOPZ-2	11/20/2008	45.56	15.1	60.66	ft
SOPZ-3	3/27/2008	46.11	15.67	61.78	ft
SOPZ-3	11/20/2008	45.37	16.41	61.78	ft

Notes:

This table includes the water level measurements collected during the steady state investigation when the treatment system was shutdown from July 14 to September 22, 2008.



**TABLE 5**  
**2008 CAPTURE ZONE WIDTH CALCULATION**  
**RAYTHEON COMPANY - FORMER FACILITIES**  
**350 ELLIS STREET, MOUNTAIN VIEW, CALIFORNIA**

Well	Extraction Rate Q (gpm)	Transmissivity <sup>1</sup> (gpd/ft)	Hydraulic Gradient <sup>2</sup> (ft/ft)	Distance from well to Capture Zone <sup>3</sup> X <sub>o</sub> (ft)	Width of Capture Zone <sup>4</sup> Y <sub>well</sub> (ft)
<b>27 March 2008</b>					
RAY-1A	1.87	3940	0.010	10.88	17.09
RAY-1B1	3.47	3230	0.010	24.14	37.92
<b>20 November 2008</b>					
RAY-1A	0.60	3940	0.016	2.18	3.43
RAY-1B1	5.18	3230	0.012	29.88	46.94

Notes:

1. The transmissivities used in the calculations were those calculated for the MEW aquifers in the 2-year evaluation report. (Note: Transmissivity, T=K\*b)
2. The hydraulic gradient is calculated for each groundwater level event.
3. The distance is measured from the well to the downgradient end of the capture zone along the central line of the flow direction (calculated based on January 2008 EPA guidance on capture zone analysis).
4. The calculation is based on January 2008 EPA guidance on capture zone analysis. Y<sub>well</sub> is the capture zone width at the location of well from the central line of the plume.

**TABLE 6**  
**2008 WATER BALANCE RESULTS**  
**RAYTHEON COMPANY - FORMER FACILITIES**  
**350 ELLIS STREET, MOUNTAIN VIEW, CALIFORNIA**

Well	Upgradient Width of Incoming Groundwater Flux <sup>1</sup> (ft)	Transmissivity <sup>2</sup> (gpd/ft)	Hydraulic Gradient <sup>3</sup> (ft/ft)	Estimated Pumping Rate <sup>4</sup> (gpm)	Actual Pumping Rate (gpm)
<b>27 March 2008</b>					
RAY-1A	44	3940	0.010	1.81	1.87
RAY-1B1	102	3230	0.010	3.44	3.47
<b>20 November 2008</b>					
RAY-1A	17	3940	0.016	1.11	0.60
RAY-1B1	132	3230	0.012	5.46	5.18

Notes:

1. The width of the controlled area is determined from the most recent concentration contours and capture zone maps.
2. The transmissivities used in the calculations were those calculated for the MEW aquifers in the 2-year evaluation report. (Note: (Transmissivity,  $T=K*b$ )
3. The hydraulic gradient is calculated for each groundwater level event.
4. The estimated flow rate is calculated based on January 2008 EPA guidance on capture zone analysis, the estimated flow rate into capture zone is calculated using the equation :  $Q= K \times (b \times w) \times i \times \text{factor}$  . A factor of 1.5 - 2 is the "rule of thumb" value used to account for other contributions to a pumping well such as flux from a river or induced vertical flow from another groundwater unit.

**TABLE 7**  
**WELL LOSS CALCULATIONS**  
**RAYTHEON COMPANY - FORMER FACILITIES**  
**350 ELLIS STREET, MOUNTAIN VIEW, CALIFORNIA**

Well Loss Coefficient C (min <sup>2</sup> /m <sup>5</sup> )	Well Extraction Rate Q (gpm)	Calculated Well Loss S <sub>L</sub> = CQ <sup>2</sup> (feet)
0.5	1.5	5.29E-05
1	1.5	1.06E-04
4	1.5	4.23E-04
0.5	2	9.40E-05
1	2	1.88E-04
4	2	7.52E-04
0.5	2.5	1.47E-04
1	2.5	2.94E-04
4	2.5	1.18E-03
0.5	3	2.12E-04
1	3	4.23E-04
4	3	1.69E-03
0.5	4.5	4.76E-04
1	4.5	9.52E-04
4	4.5	3.81E-03
0.5	6	8.46E-04
1	6	1.69E-03
4	6	6.77E-03
0.5	7.5	1.32E-03
1	7.5	2.64E-03
4	7.5	1.06E-02
0.5	9	1.90E-03
1	9	3.81E-03
4	9	1.52E-02
0.5	10.5	2.59E-03
1	10.5	5.18E-03
4	10.5	2.07E-02
0.5	12	3.38E-03
1	12	6.77E-03
4	12	2.71E-02
0.5	13.5	4.28E-03
1	13.5	8.57E-03
4	13.5	3.43E-02
0.5	15	5.29E-03
1	15	1.06E-02
4	15	4.23E-02
0.5	16.5	6.40E-03
1	16.5	1.28E-02
4	16.5	5.12E-02
0.5	18	7.61E-03
1	18	1.52E-02
4	18	6.09E-02

**TABLE 8**  
**DIFFERENTIAL WATER LEVELS IN WELL PAIRS ACROSS THE SLURRY WALL**  
**RAYTHEON COMPANY - FORMER FACILITIES**  
**350 ELLIS STREET, MOUNTAIN VIEW, CALIFORNIA**

Well NO.	3/27/2008		9/22/2008 <sup>a</sup>		11/20/2008	
	Water Elevation (ft, MSL)	Difference (ft)	Water Elevation (ft MSL)	Difference (ft)	Water Elevation (ft, MSL)	Difference (ft)
R-06A	46.47	9.88	46.07	7.08	45.57	7.50
R-36A	36.59		38.99		38.07	
R-59A	44.70	4.69	44.41	2.35	44.16	3.15
R-58A	40.01		42.06		41.01	
R-57A	42.76	2.91	42.38	-0.02	41.98	0.61
R-60A	39.85		42.40		41.37	
R-64B1	47.35	7.73	46.74	4.34	46.33	0.06
R-63B1	39.62		42.40		46.27	
R-60B1	50.76	11.05	50.25	7.75	49.57	7.88
R-07B1	39.71		42.50		41.69	
R-55A	33.89	-2.12	33.21	-5.82	33.03	-4.27
RE-07A	36.01		39.03		37.30	
R-05B1	34.39	-5.11	34.06	-7.99	33.51	-7.20
RP-23B	39.50		42.05		40.71	

Notes:

- A positive difference indicates an inward gradient.
- a - Measurements represent non-pumping conditions.

**TABLE 9**  
**DIFFERENTIAL WATER LEVELS IN WELL PAIRS ACROSS THE AQUITARD**  
**RAYTHEON COMPANY - FORMER FACILITIES**  
**350 ELLIS STREET, MOUNTAIN VIEW, CALIFORNIA**

Well NO.	3/27/2008		9/22/2008 <sup>a</sup>		11/20/2008	
	Water Elevation (ft MSL)	Difference (ft)	Water Elevation (ft MSL)	Difference (ft)	Water Elevation (ft MSL)	Difference (ft)
RP-21B	39.59	3.00	42.25	3.15	40.67	2.74
R-41A	36.59		39.10		37.93	
R-59B2 (l)	50.49	3.16	49.51	0.96	49.82	2.96
R-39B2 (u)	47.33		48.55		46.86	
R-65B1B2	50.35	10.34	52.88	10.82	48.18	7.17
R-58A	40.01		42.06		41.01	
R-07B1	39.71	3.12	42.50	3.51	41.69	3.62
R-36A	36.59		38.99		38.07	
R-62B2 (l)	54.78	7.07	54.00	5.18	52.79	5.92
R-72B2 (u)	47.71		48.82		46.87	
R-63B1	39.62	-0.23	42.40	0.00	46.27	4.90
R-60A	39.85		42.40		41.37	
R-68B2 (l)	55.33	7.09	53.40	4.33	53.06	4.58
R-69B2 (u)	48.24		49.07		48.48	
R-73B2	49.21	8.71	50.77	8.54	47.64	8.18
R-68B1	40.50		42.23		39.46	
R-68B1	40.50	0.48	42.23	-0.13	39.46	-2.06
R-67A	40.02		42.36		41.52	
RP-19B	40.39	0.54	42.81	0.41	41.64	0.27
R-60A	39.85		42.40		41.37	
RP-42B	39.51	0.25	42.81	0.58	42.73	2.06
R-73A	39.26		42.23		40.67	
RP-43B	39.37	1.67	42.17	1.06	40.77	1.17
R-72A	37.70		41.11		39.60	
R-67B1	36.95	1.77	39.41	0.61	37.93	1.66
RE-22A	35.18		38.80		36.27	
R-67B1	36.95	-1.08	39.41	-0.16	37.93	-0.26
RE-08A	38.03		39.57		38.19	
R-70B1	39.66	1.89	42.30	0.79	40.65	1.76
R-69A	37.77		41.51		38.89	

Notes:

- A positive difference indicates an upward gradient.
- a - Measurements represent non-pumping conditions.

**TABLE 10**  
**MONITORING AND REPORTING SCHEDULES**  
**RAYTHEON COMPANY - FORMER FACILITIES**  
**350 ELLIS STREET, MOUNTAIN VIEW, CALIFORNIA**

<b>Wells Monitored Annually</b>		
<b>"A" Aquifer</b>	<b>"B1" Aquifer</b>	<b>"B2" Aquifer</b>
24A	007B1	I-1B2
83A	94B1	R-17B2
100A	97B1	
R-52A	RAY-1B1	
RAY-1A		

<b>Wells Monitored Every Five Years</b>		
<b>"A" Aquifer</b>	<b>"B1" Aquifer</b>	<b>"B2" Aquifer</b>
R-36A	R-7B1	R-27B2
R-41A	R-67B1	R-39B2
R-60A	RP-19B	R-65B1B2
R-72A	RP-21B	R-68B2
RE-07A	RP-23B	RE-1B2
RE-08A	RP-24B	
RE-09A	RP-41B	
RE-10A	RP-43B	
RE-23A		
RE-24A		
RE-25A		

<b>Reporting Schedule</b>		
<b>Report</b>	<b>Agency</b>	<b>Frequency</b>
NPDES	RWQCB	Quarterly (Submitted on the 30th day of January, April, July and October of each year)
Annual Progress Report	US EPA	Annually (submitted in April of each year)

**TABLE 11**  
**SUMMARY OF 2008 SITE-SPECIFIC MONITORING WELL VOC DATA**  
**RAYTHEON COMPANY - FORMER FACILITIES**  
**350 ELLIS STREET, MOUNTAIN VIEW, CALIFORNIA**

Location	100A	24A	24A	7B1	83A	94B1	97B1	I-1B2	R-17B2	R-17B2	R-27B2	R-39B2	R-52A	R-68B2	RAY-1A	RAY-1B1	RE-1B2
Date	12/8/2008	12/8/2008	12/8/2008	12/9/2008	12/8/2008	12/9/2008	12/9/2008	12/9/2008	11/14/2008	12/9/2008	3/31/2008	3/31/2008	12/8/2008	3/31/2008	12/9/2008	12/9/2008	3/28/2008
Sample Purpose	REG	FD	REG	REG	REG	REG	REG	REG	REG	REG	REG						
Parameter																	
1,1,1-TRICHLOROETHANE	ND 0.0013	ND 0.0083	ND 0.0071	ND 0.0005	0.0074	0.0029	0.0047	ND 0.0025	ND 0.0025	ND 0.0008	ND 0.0013	ND 0.0005	ND 0.0005	ND 0.0005	0.0096	ND 0.0042	ND 0.0005
1,1,2-TRICHLOROETHANE	ND 0.0013	ND 0.0083	ND 0.0071	ND 0.0005	ND 0.0005	ND 0.0025	ND 0.0025	ND 0.0025	ND 0.0025	ND 0.0008	ND 0.0013	ND 0.0005	ND 0.0005	ND 0.0005	ND 0.0017	ND 0.0042	ND 0.0005
1,1-DICHLOROETHANE	0.0043	ND 0.0083	ND 0.0071	ND 0.0005	0.0049	ND 0.0025	0.0045	ND 0.0025	ND 0.0025	ND 0.0008	ND 0.0013	ND 0.0005	ND 0.0005	ND 0.0005	0.0078	ND 0.0042	ND 0.0005
1,1-DICHLOROETHENE	0.0035	ND 0.0083	ND 0.0071	ND 0.0005	0.0061	0.0025	0.0055	ND 0.0025	ND 0.0025	ND 0.0008	ND 0.0013	ND 0.0005	ND 0.0005	ND 0.0005	0.0057	0.0049	ND 0.0005
1,2-DICHLOROETHANE	ND 0.0013	ND 0.0083	ND 0.0071	ND 0.0005	ND 0.0005	ND 0.0025	ND 0.0025	ND 0.0025	ND 0.0025	ND 0.0008	ND 0.0013	ND 0.0005	ND 0.0005	ND 0.0005	ND 0.0017	ND 0.0042	ND 0.0005
1,2-DICHLOROETHANE	ND 0.0013	ND 0.0083	ND 0.0071	ND 0.0005	ND 0.0005	ND 0.0025	ND 0.0025	ND 0.0025	ND 0.0025	ND 0.0008	ND 0.0013	ND 0.0005	ND 0.0005	ND 0.0005	ND 0.0017	ND 0.0042	ND 0.0005
1,2-DICHLOROPROPANE	ND 0.0013	ND 0.0083	ND 0.0071	ND 0.0005	ND 0.0005	ND 0.0025	ND 0.0025	ND 0.0025	ND 0.0025	ND 0.0008	ND 0.0013	ND 0.0005	ND 0.0005	ND 0.0005	ND 0.0017	ND 0.0042	ND 0.0005
1,3-DICHLOROETHANE	ND 0.0013	ND 0.0083	ND 0.0071	ND 0.0005	ND 0.0005	ND 0.0025	ND 0.0025	ND 0.0025	ND 0.0025	ND 0.0008	ND 0.0013	ND 0.0005	ND 0.0005	ND 0.0005	ND 0.0017	ND 0.0042	ND 0.0005
1,4-DICHLOROETHANE	ND 0.0013	ND 0.0083	ND 0.0071	ND 0.0005	ND 0.0005	ND 0.0025	ND 0.0025	ND 0.0025	ND 0.0025	ND 0.0008	ND 0.0013	ND 0.0005	ND 0.0005	ND 0.0005	ND 0.0017	ND 0.0042	ND 0.0005
2-CHLOROETHYL VINYL ETHER	ND 0.0025	ND 0.017	ND 0.014	ND 0.0010	ND 0.0010	ND 0.0050	ND 0.0050	ND 0.0050	ND 0.0050	ND 0.0017	ND 0.0025	ND 0.0010	ND 0.0010	ND 0.0010	ND 0.0033	ND 0.0083	ND 0.0010
BROMODICHLOROMETHANE	ND 0.0013	ND 0.0083	ND 0.0071	ND 0.0005	ND 0.0005	ND 0.0025	ND 0.0025	ND 0.0025	ND 0.0025	ND 0.0008	ND 0.0013	ND 0.0005	ND 0.0005	ND 0.0005	ND 0.0017	ND 0.0042	ND 0.0005
BROMOFORM	ND 0.0013	ND 0.0083	ND 0.0071	ND 0.0005	ND 0.0005	ND 0.0025	ND 0.0025	ND 0.0025	ND 0.0025	ND 0.0008	ND 0.0013	ND 0.0005	ND 0.0005	ND 0.0005	ND 0.0017	ND 0.0042	ND 0.0005
BROMOMETHANE	ND 0.0025	ND 0.017	ND 0.014	ND 0.0010	ND 0.0010	ND 0.0050	ND 0.0050	ND 0.0050	ND 0.0050	ND 0.0017	ND 0.0025	ND 0.0010	ND 0.0010	ND 0.0010	ND 0.0033	ND 0.0083	ND 0.0010
CARBON TETRACHLORIDE	ND 0.0013	ND 0.0083	ND 0.0071	ND 0.0005	ND 0.0005	ND 0.0025	ND 0.0025	ND 0.0025	ND 0.0025	ND 0.0008	ND 0.0013	ND 0.0005	ND 0.0005	ND 0.0005	ND 0.0017	ND 0.0042	ND 0.0005
CHLOROBENZENE	ND 0.0013	ND 0.0083	ND 0.0071	ND 0.0005	ND 0.0005	ND 0.0025	ND 0.0025	ND 0.0025	ND 0.0025	ND 0.0008	ND 0.0013	ND 0.0005	ND 0.0005	ND 0.0005	ND 0.0017	ND 0.0042	ND 0.0005
CHLOROETHANE	ND 0.0025	ND 0.017	ND 0.014	ND 0.0010	ND 0.0010	ND 0.0050	ND 0.0050	ND 0.0050	ND 0.0050	ND 0.0017	ND 0.0025	ND 0.0010	ND 0.0010	ND 0.0010	ND 0.0033	ND 0.0083	ND 0.0010
CHLOROFORM	ND 0.0013	ND 0.0083	ND 0.0071	ND 0.0005	ND 0.0005	ND 0.0025	ND 0.0025	ND 0.0025	ND 0.0025	ND 0.0008	ND 0.0013	ND 0.0005	ND 0.0005	ND 0.0005	ND 0.0017	ND 0.0042	ND 0.0005
CHLOROMETHANE	ND 0.0025	ND 0.017	ND 0.014	ND 0.0010	ND 0.0010	ND 0.0050	ND 0.0050	ND 0.0050	ND 0.0050	ND 0.0017	ND 0.0025	ND 0.0010	ND 0.0010	ND 0.0010	ND 0.0033	ND 0.0083	ND 0.0010
CIS-1,2-DICHLOROETHENE	0.18	0.52	0.59	0.027	0.098	0.030	0.072	ND 0.0025	0.0026	0.0022	0.0048	ND 0.0005	0.0009	ND 0.0005	0.053	0.055	ND 0.0005
CIS-1,3-DICHLOROPROPENE	ND 0.0013	ND 0.0083	ND 0.0071	ND 0.0005	ND 0.0005	ND 0.0025	ND 0.0025	ND 0.0025	ND 0.0025	ND 0.0008	ND 0.0013	ND 0.0005	ND 0.0005	ND 0.0005	ND 0.0017	ND 0.0042	ND 0.0005
DIBROMOCHLOROMETHANE	ND 0.0013	ND 0.0083	ND 0.0071	ND 0.0005	ND 0.0005	ND 0.0025	ND 0.0025	ND 0.0025	ND 0.0025	ND 0.0008	ND 0.0013	ND 0.0005	ND 0.0005	ND 0.0005	ND 0.0017	ND 0.0042	ND 0.0005
FREON 113	ND 0.013	ND 0.083	ND 0.071	ND 0.0050	0.021	ND 0.025	ND 0.025	ND 0.025	ND 0.0025	ND 0.0083	ND 0.013	ND 0.0050	ND 0.0050	ND 0.0050	ND 0.017	ND 0.042	ND 0.0050
METHYLENE CHLORIDE	ND 0.013	ND 0.083	ND 0.071	ND 0.0050	ND 0.0050	ND 0.025	ND 0.025	ND 0.025	ND 0.10	ND 0.0083	ND 0.013	ND 0.0050	ND 0.0050	ND 0.0050	ND 0.017	ND 0.042	ND 0.0050
TETRACHLOROETHENE	ND 0.0013	ND 0.0083	ND 0.0071	ND 0.0005	ND 0.0005	ND 0.0025	ND 0.0025	ND 0.0025	ND 0.0025	ND 0.0008	ND 0.0013	ND 0.0005	ND 0.0005	ND 0.0005	ND 0.0017	ND 0.0042	ND 0.0005
TRANS-1,2-DICHLOROETHENE	0.0052	0.0095	0.012	ND 0.0005	0.0010	0.0029	0.0051	ND 0.0025	ND 0.0025	ND 0.0008	ND 0.0013	ND 0.0005	ND 0.0005	ND 0.0005	ND 0.0017	ND 0.0042	ND 0.0005
TRANS-1,3-DICHLOROPROPENE	ND 0.0013	ND 0.0083	ND 0.0071	ND 0.0005	ND 0.0005	ND 0.0025	ND 0.0025	ND 0.0025	ND 0.0025	ND 0.0008	ND 0.0013	ND 0.0005	ND 0.0005	ND 0.0005	ND 0.0017	ND 0.0042	ND 0.0005
TRICHLOROETHENE	0.0059	1.7	2.2	0.0035	0.21	0.39	0.90	0.24	0.39	0.41	0.35	ND 0.0005	0.069	ND 0.0005	0.25	0.44	ND 0.0005
TRICHLOROFLUOROMETHANE	ND 0.0025	ND 0.017	ND 0.014	ND 0.0010	ND 0.0010	ND 0.0050	ND 0.0050	ND 0.0050	ND 0.0050	ND 0.0017	ND 0.0025	ND 0.0010	ND 0.0010	ND 0.0010	ND 0.0033	ND 0.0083	ND 0.0010
VINYL CHLORIDE	0.0023	ND 0.0083	0.0099	ND 0.0005	ND 0.0005	ND 0.0025	ND 0.0025	ND 0.0025	ND 0.0025	ND 0.0008	ND 0.0013	ND 0.0005	ND 0.0005	ND 0.0005	ND 0.0017	ND 0.0042	ND 0.0005

**Notes:**

Data are reported in milligrams per liter (mg/L)  
 ND - denotes result was below the reporting limit  
 REG - regular (primary) sample  
 FD - field duplicate



**TABLE 12**  
**TCE CONCENTRATION COMPARISONS**  
**RAYTHEON COMPANY - FORMER FACILITIES**  
**350 ELLIS STREET, MOUNTAIN VIEW, CALIFORNIA**

Aquifer/ Location	Average Annual Concentration (mg/L)																	Concentration Comparisons								
	1986/87	1992	1995	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2006/ 1986-87	2007/ 1986-87	2008/ 1986-87	2006/ 1997	2007/ 1997	2008/ 1997	2006/ 1998	2007/ 1998	2008/ 1998		
<b>A Aquifer Within Slurry Wall</b>																										
Wells Sample	19	0	15	13	0	18	4	7	13	8	0	0	18	0	0	-80.81%	NA	NA	NA	NA	NA	NA	NA	NA	NA	
Average Con	19.63	-	23.58	10.33	-	6.45	44.45	9.06	5.95	3.53	-	-	3.77	-	-											
<b>B1 Aquifer Within Slurry Wall</b>																										
Wells Sample	14	0	14	8	1	12	0	1	6	3	0	0	9	0	0	-67.50%	NA	NA	40.03%	NA	NA	NA	NA	NA	NA	
Average Con	2.11	-	1.22	0.49	0.00	0.23	-	0.38	0.43	0.00	-	-	0.69	-	-											
<b>B2 Aquifer</b>																										
Wells Sample	9	0	8	5	0	9	1	0	5	1	0	0	1	0	4	87.31%	NA	-23.27%	NA	NA	NA	NA	NA	NA	NA	
Average Con	0.11	-	0.11	0.06	-	0.23	0.22	-	0.06	0.36	-	-	0.21	-	0.09											
<b>A Aquifer Outside Slurry Wall</b>																										
Wells Sample	3	2	0	2	4	4	4	4	4	3	4	4	3	4	3	-96.60%	-46.60%	NA	NA	-23.04%	NA	50.60%	-48.29%	42.16%		
Average Con	22.93	0.50	-	0.35	0.52	0.73	0.74	0.76	0.55	0.91	1.13	0.39	0.78	0.27	0.74											
<b>B1 Aquifer Outside Slurry Wall</b>																										
Wells Sample	3	1	0	4	4	4	4	4	4	4	4	4	4	4	4	-88.16%	-70.24%	NA	NA	NA	-24.74%	-88.16%	-24.74%	-26.93%		
Average Con	3.08	1.50	-	0.30	0.59	0.68	0.52	0.44	0.64	0.43	0.40	0.40	0.36	0.45	0.43											

**TABLE 13**  
**2008 AIR SAMPLING RESULTS**  
**350 - 380 ELLIS STREET, MOUNTAIN VIEW, CA**

Location	Time	Date	Parameter Units Analytical Method	1,1,1-TCA	1,1-DCA	1,1-DCE	1,2-DCB	CHLORO- FORM	CIS-1,2- DCE	FREON 113	PCE	TRANS-1,2- DCE	TCE	VINYL CHLORIDE
				µg/m3	µg/m3	µg/m3	µg/m3	µg/m3	µg/m3	µg/m3	µg/m3	µg/m3	µg/m3	µg/m3
<b>Building A</b>														
370AMB1A (GRAB)	10:47	2/20/2008	EPA 8021	NT	NT	NT	NT	NT	ND 50	NT	ND 5.0	ND 50	ND 3.0	NT
370AMB1A (GRAB)	13:33	2/20/2008	EPA 8021	NT	NT	NT	NT	NT	ND 50	NT	ND 5.0	ND 50	ND 3.0	NT
370AMB1A (GRAB)	16:08	2/20/2008	EPA 8021	NT	NT	NT	NT	NT	ND 50	NT	ND 5.0	ND 50	ND 3.0	NT
370AMB1A		2/20/2008	TO-15 SIM	ND 0.18	ND 0.13	ND 0.065	ND 0.20	ND 0.16	ND 0.13	0.92	ND 0.22	ND 0.65	ND 0.18	ND 0.042
370AMB2A		2/20/2008	TO-15 SIM	ND 0.16	ND 0.12	ND 0.060	ND 0.18	ND 0.15	ND 0.12	0.89	ND 0.21	ND 0.60	ND 0.16	ND 0.039
370AMB3A		2/20/2008	TO-15 SIM	ND 0.18	ND 0.14	ND 0.067	ND 0.20	ND 0.16	ND 0.13	0.97	ND 0.23	ND 0.67	ND 0.18	ND 0.043
370AMB4A (GRAB)	11:16	2/20/2008	EPA 8021	NT	NT	NT	NT	NT	ND 50	NT	ND 5.0	ND 50	3.0	NT
370AMB4A (GRAB)	14:02	2/20/2008	EPA 8021	NT	NT	NT	NT	NT	ND 50	NT	ND 5.0	ND 50	ND 3.0	NT
370AMB4A (GRAB)	16:28	2/20/2008	EPA 8021	NT	NT	NT	NT	NT	ND 50	NT	ND 5.0	ND 50	ND 3.0	NT
370AMB4A		2/20/2008	TO-15 SIM	ND 0.18	ND 0.13	ND 0.065	ND 0.20	0.40	ND 0.13	0.86	ND 0.22	ND 0.65	0.41	ND 0.042
370HVAC1A		2/20/2008	TO-15 SIM	ND 0.18	ND 0.13	ND 0.065	ND 0.20	ND 0.16	ND 0.13	0.93	ND 0.22	ND 0.65	ND 0.18	ND 0.042
370HVAC2A		2/20/2008	TO-15 SIM	ND 0.16	ND 0.12	ND 0.059	ND 0.18	ND 0.14	ND 0.12	0.80	ND 0.20	ND 0.59	ND 0.16	ND 0.038
370PATH1A (FD)		2/20/2008	TO-15 SIM	0.26	ND 0.14	ND 0.068	ND 0.20	0.55	ND 0.14	0.86	ND 0.23	ND 0.68	1.2	ND 0.044
370PATH1A (GRAB)	11:05	2/20/2008	EPA 8021	NT	NT	NT	NT	NT	ND 50	NT	ND 5.0	ND 50	ND 3.0	NT
370PATH1A (GRAB)	13:56	2/20/2008	EPA 8021	NT	NT	NT	NT	NT	ND 50	NT	ND 5.0	ND 50	ND 3.0	NT
370PATH1A (GRAB)	16:18	2/20/2008	EPA 8021	NT	NT	NT	NT	NT	ND 50	NT	ND 5.0	ND 50	ND 3.0	NT
370PATH1A		2/20/2008	TO-15 SIM	ND 0.18	ND 0.13	ND 0.065	ND 0.20	0.57	ND 0.13	0.84	ND 0.22	ND 0.65	ND 0.18	ND 0.042
370PATH2A (GRAB)	11:31	2/20/2008	EPA 8021	NT	NT	NT	NT	NT	ND 50	NT	ND 5.0	ND 50	4.0	NT
370PATH2A (GRAB)	14:11	2/20/2008	EPA 8021	NT	NT	NT	NT	NT	ND 50	NT	ND 5.0	ND 50	ND 3.0	NT
370PATH2A (GRAB)	16:38	2/20/2008	EPA 8021	NT	NT	NT	NT	NT	ND 50	NT	ND 5.0	ND 50	ND 3.0	NT
370PATH2A		2/20/2008	TO-15 SIM	0.39	ND 0.14	ND 0.068	ND 0.20	0.21	2.3	2.3	2.4	ND 0.68	1.0	ND 0.044
<b>Building B</b>														
370AMB1B		2/20/2008	TO-15 SIM	0.23	ND 0.13	ND 0.065	ND 0.20	ND 0.16	ND 0.13	0.89	ND 0.22	ND 0.65	0.30	ND 0.042
370AMB2B		2/20/2008	TO-15 SIM	ND 0.19	ND 0.14	ND 0.068	ND 0.20	ND 0.17	ND 0.14	0.87	ND 0.23	ND 0.68	ND 0.18	ND 0.044
370AMB3B		2/20/2008	TO-15 SIM	ND 0.18	ND 0.14	ND 0.067	ND 0.20	0.16	ND 0.13	0.89	ND 0.23	ND 0.67	ND 0.18	ND 0.043
370AMB4B (GRAB)	11:25	2/20/2008	EPA 8021	NT	NT	NT	NT	NT	ND 50	NT	ND 5.0	ND 50	ND 3.0	NT
370AMB4B (GRAB)	14:18	2/20/2008	EPA 8021	NT	NT	NT	NT	NT	ND 50	NT	ND 5.0	ND 50	ND 3.0	NT
370AMB4B (GRAB)	16:47	2/20/2008	EPA 8021	NT	NT	NT	NT	NT	ND 50	NT	ND 5.0	ND 50	ND 3.0	NT
370AMB4B		2/20/2008	TO-15 SIM	ND 0.18	ND 0.13	ND 0.065	ND 0.20	ND 0.16	ND 0.13	0.82	ND 0.22	ND 0.65	ND 0.18	ND 0.042
370HVAC1B		2/20/2008	TO-15 SIM	ND 0.15	ND 0.11	ND 0.055	ND 0.17	ND 0.14	ND 0.11	0.90	ND 0.19	ND 0.55	ND 0.15	ND 0.036
370HVAC2B		2/20/2008	TO-15 SIM	ND 0.19	ND 0.14	ND 0.069	ND 0.21	0.24	ND 0.14	0.74	0.95	ND 0.69	ND 0.19	ND 0.045
370PATH1B		2/20/2008	TO-15 SIM	ND 0.18	ND 0.13	ND 0.065	ND 0.20	0.21	ND 0.13	0.87	2.8	ND 0.65	0.20	ND 0.042
370PATH2B		2/20/2008	TO-15 SIM	ND 0.15	ND 0.11	ND 0.054	ND 0.16	0.15	ND 0.11	0.90	ND 0.18	ND 0.54	0.47	ND 0.035

**TABLE 13**  
**2008 AIR SAMPLING RESULTS**  
**350 - 380 ELLIS STREET, MOUNTAIN VIEW, CA**

Location	Time	Date	Parameter Units Analytical Method	1,1,1-TCA	1,1-DCA	1,1-DCE	1,2-DCB	CHLORO- FORM	CIS-1,2- DCE	FREON 113	PCE	TRANS-1,2- DCE	TCE	VINYL CHLORIDE
				µg/m3	µg/m3	µg/m3	µg/m3	µg/m3	µg/m3	µg/m3	µg/m3	µg/m3	µg/m3	µg/m3
<b>Building C</b>														
380AMB-HALL2Ce		2/20/2008	TO-15 SIM	ND 0.19	ND 0.14	ND 0.069	ND 0.21	ND 0.17	ND 0.14	0.84	ND 0.24	ND 0.69	ND 0.19	ND 0.045
380AMB1Ce		2/20/2008	TO-15 SIM	ND 0.18	ND 0.13	ND 0.064	ND 0.19	ND 0.16	ND 0.13	0.88	ND 0.22	ND 0.64	ND 0.17	ND 0.041
380AMB2Ce		2/20/2008	TO-15 SIM	ND 0.18	ND 0.13	ND 0.065	ND 0.20	0.22	ND 0.13	0.80	ND 0.22	ND 0.65	0.23	ND 0.042
380AMB3Ce		2/20/2008	TO-15 SIM	ND 0.20	ND 0.14	ND 0.071	ND 0.22	ND 0.17	ND 0.14	0.78	ND 0.24	ND 0.71	ND 0.19	ND 0.046
380AMB4Ce		2/20/2008	TO-15 SIM	ND 0.18	ND 0.14	ND 0.067	ND 0.20	ND 0.16	ND 0.13	0.87	ND 0.23	ND 0.67	ND 0.18	ND 0.043
380HVAC1Ce		2/20/2008	TO-15 SIM	ND 0.18	ND 0.14	ND 0.067	ND 0.20	ND 0.16	ND 0.13	0.90	ND 0.23	ND 0.67	ND 0.18	ND 0.043
380HVAC2Ce		2/20/2008	TO-15 SIM	ND 0.18	ND 0.13	0.093	ND 0.19	0.43	ND 0.13	0.87	ND 0.22	ND 0.64	ND 0.17	0.51
380PATH1Ce (GRAB)	11:10	2/20/2008	EPA 8021	NT	NT	NT	NT	NT	ND 50	NT	ND 5.0	ND 50	ND 3.0	NT
380PATH1Ce (GRAB)	14:29	2/20/2008	EPA 8021	NT	NT	NT	NT	NT	ND 50	NT	ND 5.0	ND 50	ND 3.0	NT
380PATH1Ce (GRAB)	17:06	2/20/2008	EPA 8021	NT	NT	NT	NT	NT	ND 50	NT	ND 5.0	ND 50	ND 3.0	NT
380PATH1Ce		2/20/2008	TO-15 SIM	0.26	ND 0.14	0.070	ND 0.20	0.18	ND 0.13	2.0	ND 0.23	ND 0.67	0.25	ND 0.043
380PATH2Ce		2/20/2008	TO-15 SIM	ND 0.18	ND 0.13	ND 0.064	ND 0.19	0.17	ND 0.13	0.79	ND 0.22	ND 0.64	1.0	ND 0.041
380AMB1Cw		2/20/2008	TO-15 SIM	ND 0.16	ND 0.12	ND 0.060	ND 0.18	ND 0.15	ND 0.12	0.61	ND 0.21	ND 0.60	ND 0.16	ND 0.039
380AMB2Cw		2/20/2008	TO-15 SIM	ND 0.20	ND 0.15	ND 0.074	ND 0.22	ND 0.18	ND 0.15	0.79	ND 0.25	ND 0.74	ND 0.20	ND 0.048
380AMB3Cw		2/20/2008	TO-15 SIM	ND 0.19	ND 0.14	ND 0.069	ND 0.21	ND 0.17	ND 0.14	0.84	ND 0.24	ND 0.69	ND 0.19	ND 0.045
380AMB4Cw		2/20/2008	TO-15 SIM	ND 0.20	ND 0.15	ND 0.072	ND 0.22	0.64	ND 0.14	0.93	ND 0.25	ND 0.72	ND 0.20	ND 0.047
380HVAC1Cw (FD)		2/20/2008	TO-15 SIM	ND 0.19	ND 0.14	ND 0.068	ND 0.20	ND 0.17	ND 0.14	0.82	ND 0.23	ND 0.68	ND 0.18	ND 0.044
380HVAC1Cw		2/20/2008	TO-15 SIM	ND 0.19	ND 0.14	ND 0.068	ND 0.20	ND 0.17	ND 0.14	0.79	ND 0.23	ND 0.68	ND 0.18	ND 0.044
380PATH1Cw		2/20/2008	TO-15 SIM	ND 0.20	ND 0.15	ND 0.074	ND 0.22	0.21	ND 0.15	0.82	ND 0.25	ND 0.74	ND 0.20	ND 0.048
380ROOF1Cw		2/20/2008	TO-15 SIM	ND 0.18	ND 0.13	ND 0.065	ND 0.20	ND 0.16	ND 0.13	0.77	ND 0.22	ND 0.65	ND 0.18	ND 0.042
<b>Building D</b>														
380PATH1D		2/20/2008	TO-15 SIM	ND 0.18	ND 0.13	ND 0.064	ND 0.19	ND 0.16	ND 0.13	0.97	ND 0.22	ND 0.64	1.1	ND 0.041
380PATH2D		2/20/2008	TO-15 SIM	ND 0.18	ND 0.13	ND 0.064	ND 0.19	0.17	0.20	1.1	0.22	ND 0.64	6.4	ND 0.041
380PATH2D		7/09/2008	TO-15 SIM	ND 0.19	ND 0.14	ND 0.069	ND 0.21	0.25	ND 0.14	0.73	0.40	ND 0.69	1.7	ND 0.045
<b>Building E</b>														
350AMB1 (GRAB)	10:34	2/20/2008	EPA 8021	NT	NT	NT	NT	NT	ND 50	NT	ND 5.0	ND 50	ND 3.0	NT
350AMB1 (GRAB)	13:24	2/20/2008	EPA 8021	NT	NT	NT	NT	NT	ND 50	NT	ND 5.0	ND 50	ND 3.0	NT
350AMB1 (GRAB)	16:33	2/20/2008	EPA 8021	NT	NT	NT	NT	NT	ND 50	NT	ND 5.0	ND 50	ND 3.0	NT
350AMB1		2/20/2008	TO-15 SIM	ND 0.18	ND 0.13	ND 0.064	ND 0.19	0.16	ND 0.13	0.93	ND 0.22	ND 0.64	ND 0.17	ND 0.041
350AMB2 (GRAB)	10:53	2/20/2008	EPA 8021	NT	NT	NT	NT	NT	ND 50	NT	ND 5.0	ND 50	ND 3.0	NT
350AMB2 (GRAB)	13:38	2/20/2008	EPA 8021	NT	NT	NT	NT	NT	ND 50	NT	ND 5.0	ND 50	ND 3.0	NT
350AMB2 (GRAB)	16:13	2/20/2008	EPA 8021	NT	NT	NT	NT	NT	ND 50	NT	ND 5.0	ND 50	ND 3.0	NT
350AMB2		2/20/2008	TO-15 SIM	ND 0.16	ND 0.12	ND 0.058	ND 0.18	0.15	ND 0.12	1.0	ND 0.20	ND 0.58	ND 0.16	ND 0.037

**TABLE 13**  
**2008 AIR SAMPLING RESULTS**  
**350 - 380 ELLIS STREET, MOUNTAIN VIEW, CA**

Location	Time	Date	Parameter Units Analytical Method	1,1,1-TCA	1,1-DCA	1,1-DCE	1,2-DCB	CHLORO- FORM	CIS-1,2- DCE	FREON 113	PCE	TRANS-1,2- DCE	TCE	VINYL CHLORIDE
				µg/m3	µg/m3	µg/m3	µg/m3	µg/m3	µg/m3	µg/m3	µg/m3	µg/m3	µg/m3	µg/m3
<b>Building E</b>														
350AMB3 (FD)		2/20/2008	TO-15 SIM	ND 0.18	ND 0.14	ND 0.067	ND 0.20	0.37	ND 0.13	0.99	ND 0.23	ND 0.67	ND 0.18	ND 0.043
350AMB3 (GRAB)	9:41	2/20/2008	EPA 8021	NT	NT	NT	NT	NT	ND 50	NT	ND 5.0	ND 50	ND 3.0	NT
350AMB3 (GRAB)	13:50	2/20/2008	EPA 8021	NT	NT	NT	NT	NT	ND 50	NT	ND 5.0	ND 50	ND 3.0	NT
350AMB3 (GRAB)	16:42	2/20/2008	EPA 8021	NT	NT	NT	NT	NT	ND 50	NT	ND 5.0	ND 50	ND 3.0	NT
350AMB3		2/20/2008	TO-15 SIM	ND 0.29	ND 0.22	ND 0.11	ND 0.32	0.46	ND 0.21	1.0	ND 0.36	ND 1.1	ND 0.29	ND 0.068
350AMB4 (GRAB)	10:03	2/20/2008	EPA 8021	NT	NT	NT	NT	NT	ND 50	NT	ND 5.0	ND 50	ND 3.0	NT
350AMB4 (GRAB)	14:07	2/20/2008	EPA 8021	NT	NT	NT	NT	NT	ND 50	NT	ND 5.0	ND 50	ND 3.0	NT
350AMB4 (GRAB)	16:53	2/20/2008	EPA 8021	NT	NT	NT	NT	NT	ND 50	NT	ND 5.0	ND 50	ND 3.0	NT
350AMB4		2/20/2008	TO-15 SIM	ND 0.19	ND 0.14	ND 0.069	ND 0.21	ND 0.17	ND 0.14	0.84	ND 0.24	ND 0.69	ND 0.19	ND 0.045
350HVAC1		2/20/2008	TO-15 SIM	ND 0.20	ND 0.14	ND 0.071	ND 0.22	ND 0.17	ND 0.14	0.82	ND 0.24	ND 0.71	ND 0.19	ND 0.046
350HVAC2		2/20/2008	TO-15 SIM	ND 0.18	ND 0.13	ND 0.064	ND 0.19	ND 0.16	ND 0.13	0.91	ND 0.22	ND 0.64	0.20	ND 0.041
350PATH1 (GRAB)	10:09	2/20/2008	EPA 8021	NT	NT	NT	NT	NT	ND 50	NT	ND 5.0	ND 50	ND 3.0	NT
350PATH1 (GRAB)	14:23	2/20/2008	EPA 8021	NT	NT	NT	NT	NT	ND 50	NT	ND 5.0	ND 50	ND 3.0	NT
350PATH1 (GRAB)	17:11	2/20/2008	EPA 8021	NT	NT	NT	NT	NT	ND 50	NT	ND 5.0	ND 50	ND 3.0	NT
350PATH1		2/20/2008	TO-15 SIM	ND 0.19	ND 0.14	ND 0.069	ND 0.21	ND 0.17	ND 0.14	1.0	ND 0.24	ND 0.69	ND 0.19	ND 0.045
350PATH2 (GRAB)	10:23	2/20/2008	EPA 8021	NT	NT	NT	NT	NT	ND 50	NT	ND 5.0	ND 50	ND 3.0	NT
350PATH2 (GRAB)	13:10	2/20/2008	EPA 8021	NT	NT	NT	NT	NT	ND 50	NT	ND 5.0	ND 50	ND 3.0	NT
350PATH2 (GRAB)	16:23	2/20/2008	EPA 8021	NT	NT	NT	NT	NT	ND 50	NT	ND 5.0	ND 50	ND 3.0	NT
350PATH2		2/20/2008	TO-15 SIM	0.21	ND 0.14	ND 0.069	ND 0.21	0.17	ND 0.14	1.9	0.97	ND 0.69	1.1	ND 0.045

SHORT-TERM EXPOSURE GOALS (µg/m3)

Acute	10092	NA	NA	NA	488	NA	NA	1356	794	10740	1280
Intermediate	3822	NA	79.4	NA	244	NA	NA	NA	794	537	77

LONG-TERM EXPOSURE GOALS (µg/m3)

Commercial	4370	988	400	400	0.23 - 23	70	58900	0.9 - 90	139	2.7	1.2 - 120
CAL-Modified		3.4 - 340			0.98 - 98						

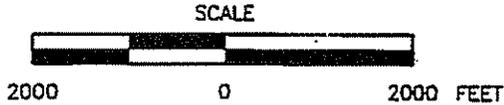
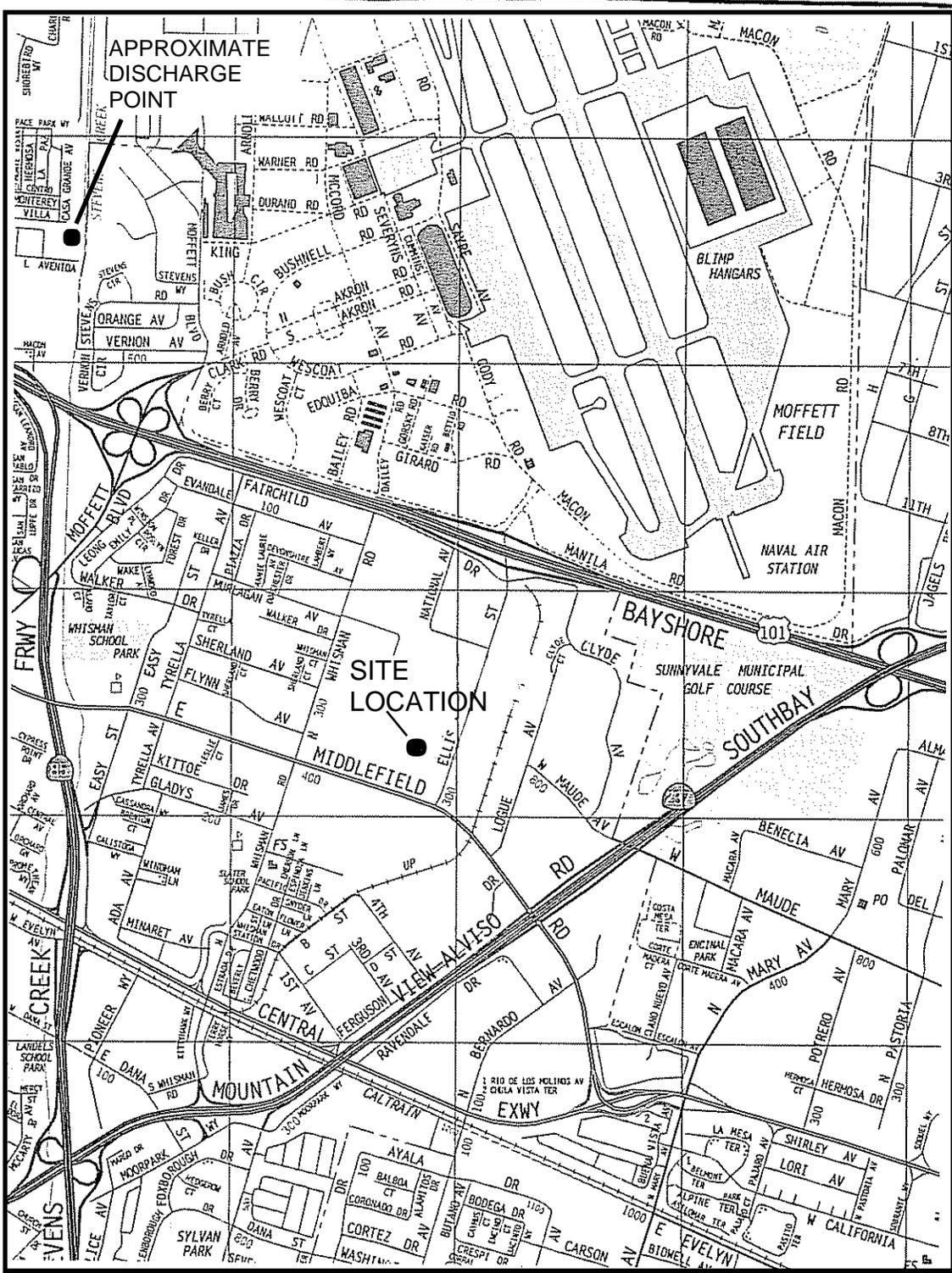
Notes:

- NA - Not Available
- ND - denotes result was below the detection limit
- NT - sample not tested for the given parameter
- FD - Field Duplicate
- Grab samples were analyzed by an onsite mobile laboratory
- Laboratory duplicates are not presented in this table



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# FIGURES



**SITE LOCATION MAP**  
**350 ELLIS STREET**  
**MOUNTAIN VIEW, CALIFORNIA**

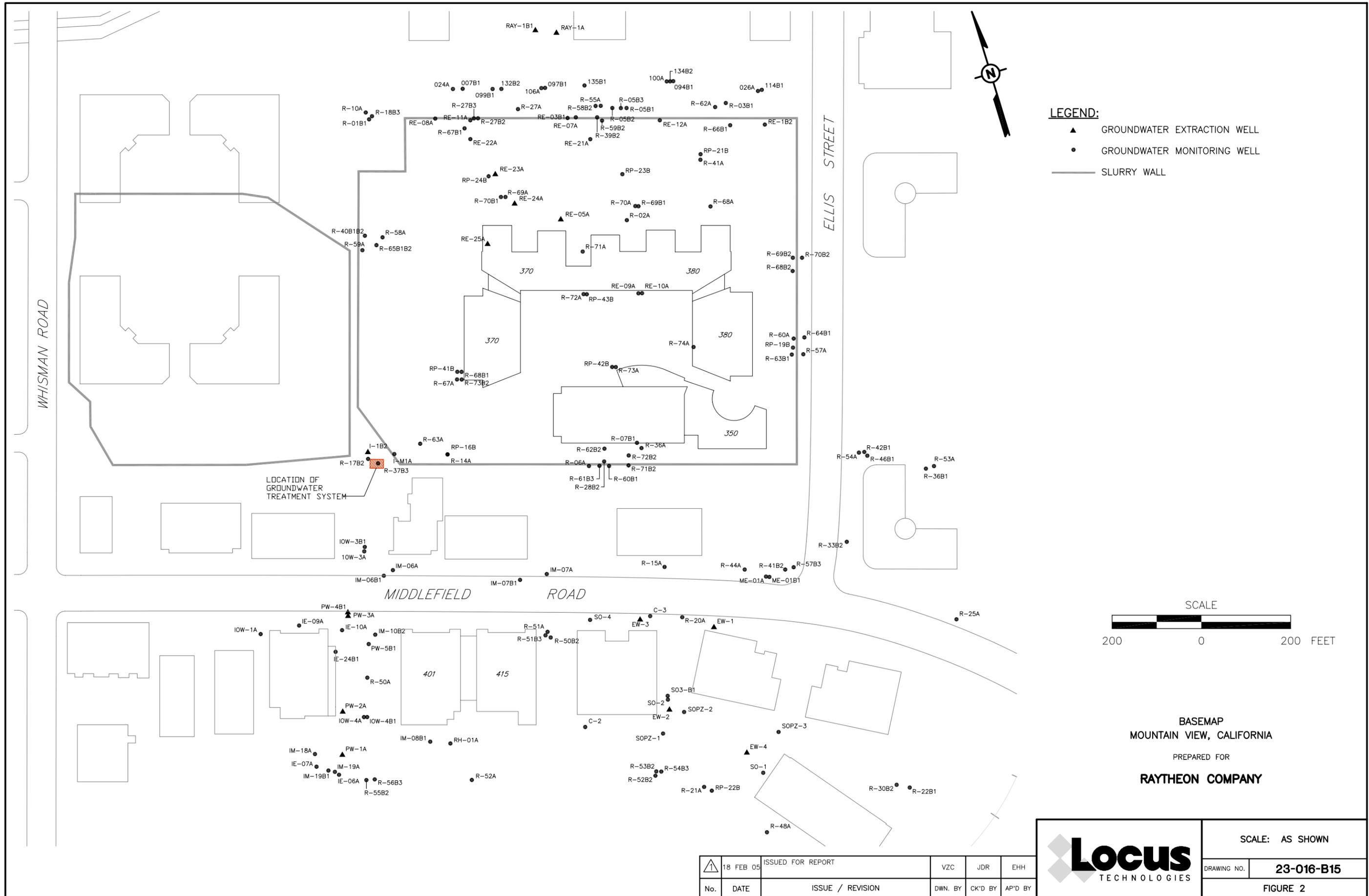
PREPARED FOR  
**RAYTHEON COMPANY**

REFERENCE: 1998 THOMAS GUIDE,  
 SANTA CLARA/SAN MATEO COUNTIES.

▲	13 AUG 03	ISSUED FOR REPORT	VZC
No.	DATE	ISSUE / REVISION	OWN. BY/CK'D BY/AP'D BY



DRAWING NO.	23-016-A38
FIGURE 1	



**LEGEND:**  
 ▲ GROUNDWATER EXTRACTION WELL  
 ● GROUNDWATER MONITORING WELL  
 — SLURRY WALL



BASEMAP  
 MOUNTAIN VIEW, CALIFORNIA  
 PREPARED FOR  
**RAYTHEON COMPANY**

▲	18 FEB 05	ISSUED FOR REPORT	VZC	JDR	EHH
No.	DATE	ISSUE / REVISION	DWN. BY	CK'D BY	AP'D BY

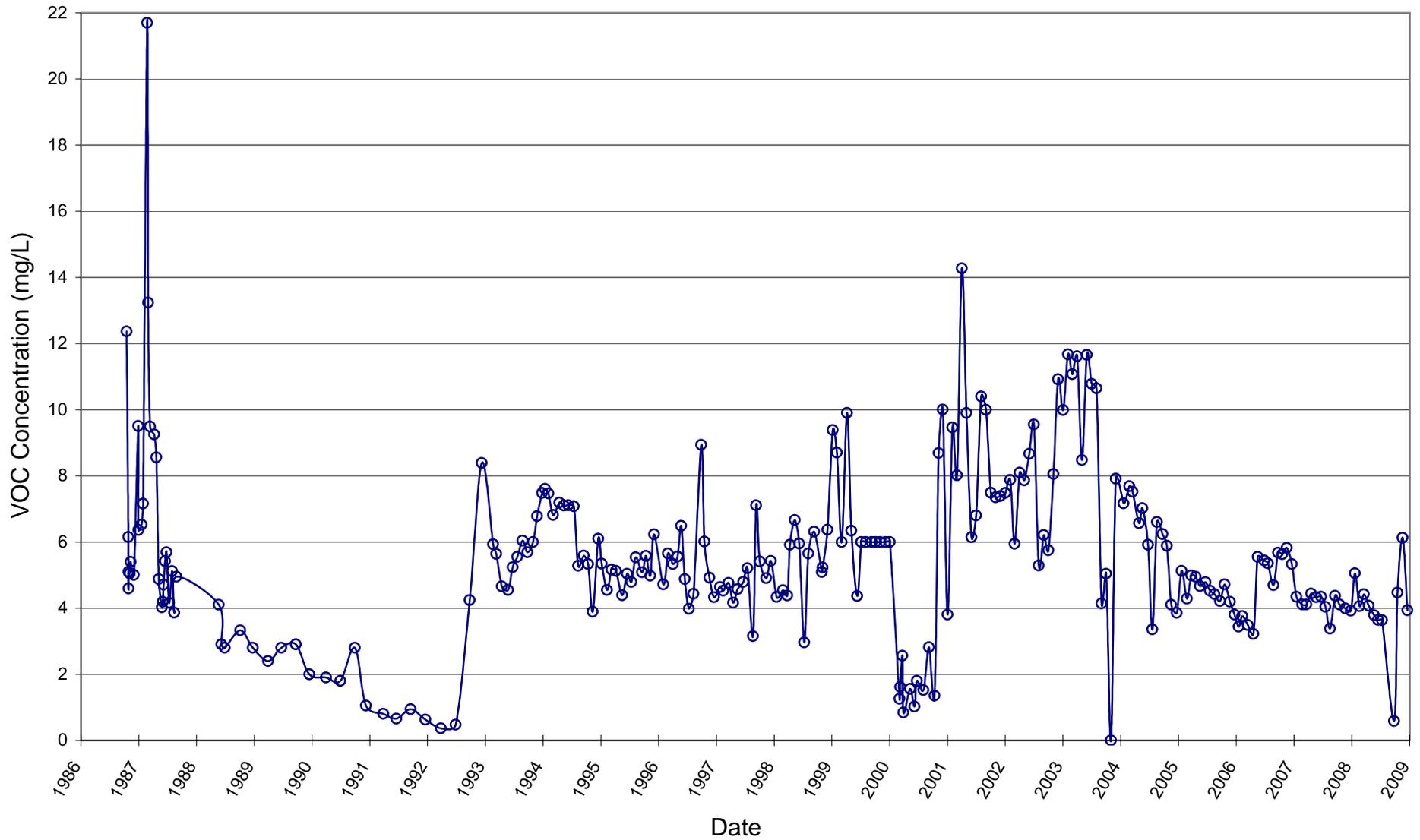


SCALE: AS SHOWN	
DRAWING NO.	<b>23-016-B15</b>
FIGURE 2	

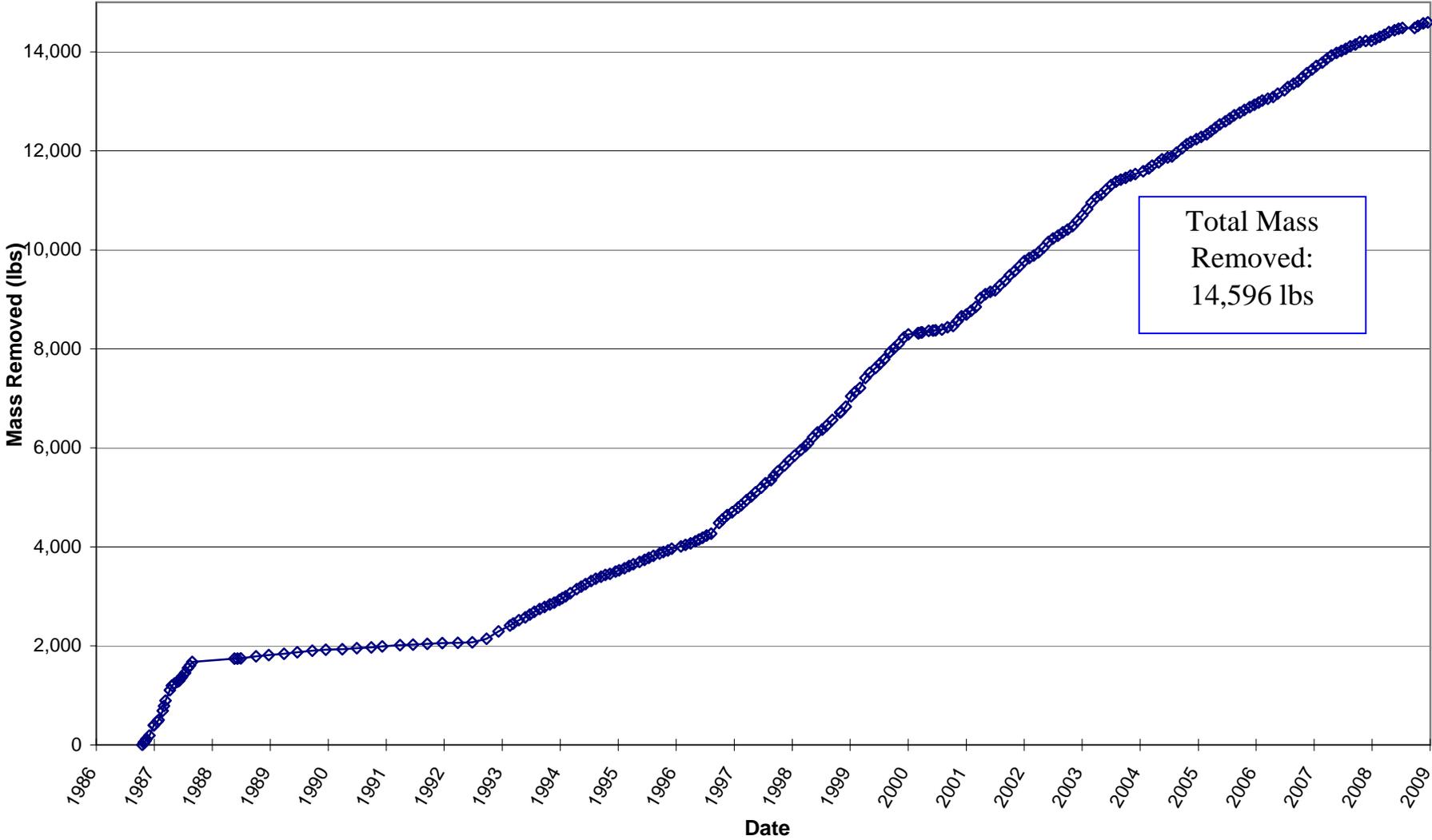




**FIGURE 5**  
**TOTAL INFLUENT GROUNDWATER CONCENTRATIONS**  
**RAYTHEON COMPANY**  
**350 ELLIS STREET, MOUNTAIN VIEW, CALIFORNIA**



**FIGURE 6**  
**CUMULATIVE VOC MASS REMOVAL**  
**RAYTHEON COMPANY**  
**350 ELLIS STREET, MOUNTAIN VIEW, CALIFORNIA**



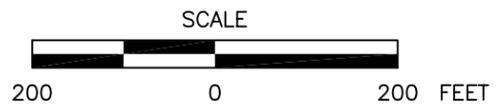


- LEGEND:**
- ▲ GROUNDWATER EXTRACTION WELL
  - GROUNDWATER MONITORING WELL
  - ▬ SLURRY WALL
  - 35 POTENTIOMETRIC SURFACE CONTOUR
  - 37.87 POTENTIOMETRIC SURFACE ELEVATION (FEET ABOVE MEAN SEA LEVEL)
  - ⊖ GROUNDWATER DEPRESSION
  - NM NOT MEASURED
  - \* DATA NOT USED IN CONTOURING
  - ⊕ CAPTURE ZONE
  - ⊗⊗⊗ TARGET CAPTURE ZONE

**EXTRACTION WELL FLOWRATES (GPM)**

RAY-1A	1.87
RE-05A	14.09
RE-23A	2.25
RE-24A	10.82
RE-25A	1.82

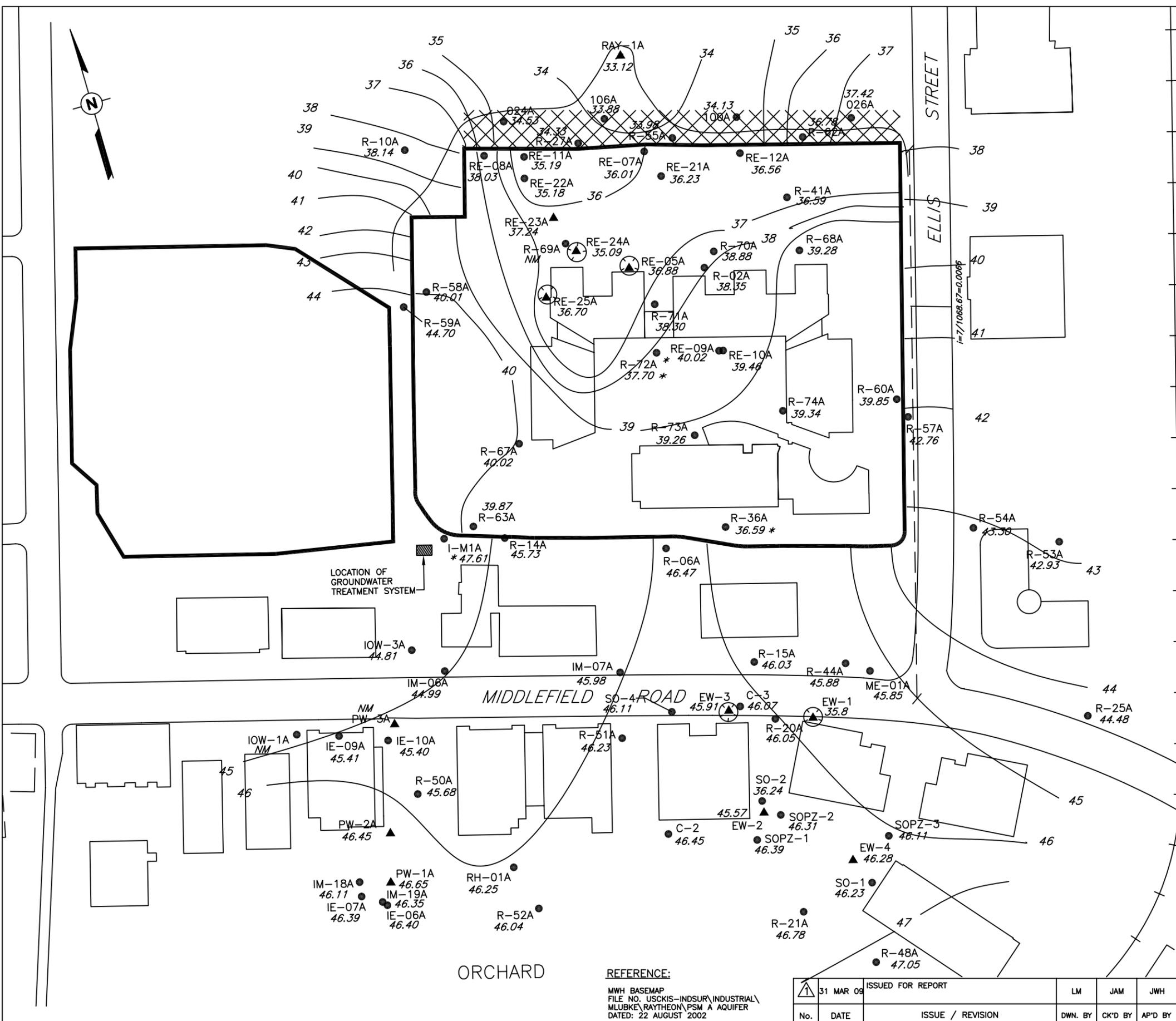
- NOTES:**
- AVERAGE ONSITE HYDRAULIC GRADIENT,  $i=0.010$



POTENTIOMETRIC SURFACE MAP  
 "A" AQUIFER  
 27 MARCH 2008  
 350 ELLIS STREET  
 MOUNTAIN VIEW, CALIFORNIA  
 PREPARED FOR  
 RAYTHEON COMPANY

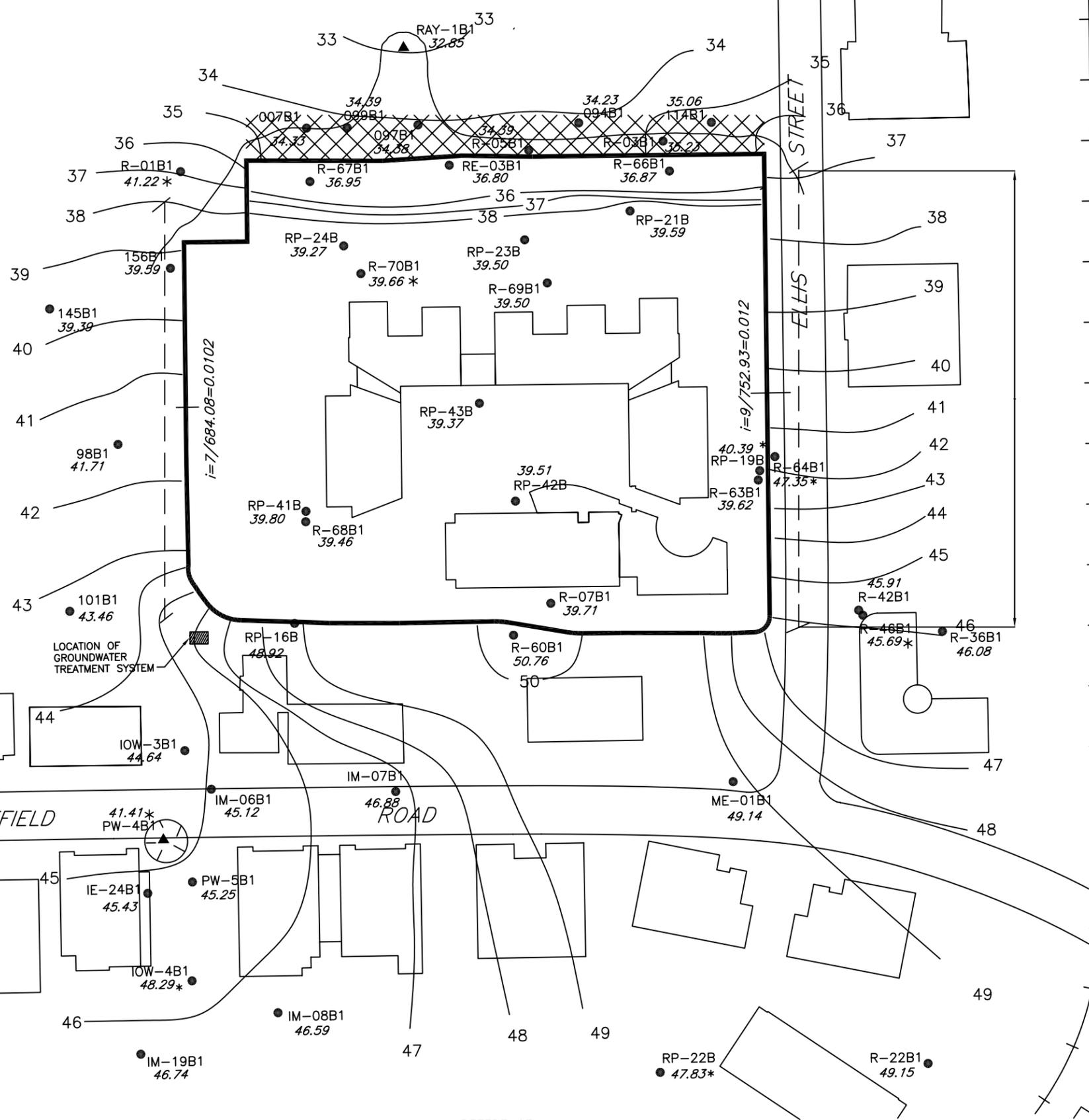
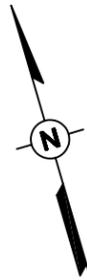


SCALE: AS SHOWN	
DRAWING NO.	<b>23-016-B171</b>
FIGURE 7	



**REFERENCE:**  
 MWH BASEMAP  
 FILE NO. USCKIS-INDSUR\INDUSTRIAL\  
 MLUBKE\RAYTHEON\PSM A AQUIFER  
 DATED: 22 AUGUST 2002

No.	DATE	ISSUE / REVISION	DWN. BY	CK'D BY	AP'D BY
1	31 MAR 08	ISSUED FOR REPORT	LM	JAM	JWH



- LEGEND:**
- ▲ GROUNDWATER EXTRACTION WELL
  - GROUNDWATER MONITORING WELL
  - ▬ SLURRY WALL
  - 35 POTENTIOMETRIC SURFACE CONTOUR
  - 36.89 POTENTIOMETRIC SURFACE ELEVATION (FEET ABOVE MEAN SEA LEVEL)
  - GROUNDWATER DEPRESSION
  - MM NOT MEASURED
  - \* DATA NOT USED IN CONTOURING
  - ⊕ CAPTURE ZONE
  - ⊗ TARGET CAPTURE ZONE

EXTRACTION WELL FLOWRATE (GPM)

RAY-1B1	3.47
---------	------

- NOTES:**
- AVERAGE ONSITE HYDRAULIC GRADIENT,  $i=0.0102$



POTENTIOMETRIC SURFACE MAP  
 "B1" AQUIFER  
 27 MARCH 2008  
 350 ELLIS STREET  
 MOUNTAIN VIEW, CALIFORNIA  
 PREPARED FOR  
 RAYTHEON COMPANY

**REFERENCE:**  
 MWH BASEMAP  
 FILE NO. USCKIS-INDSUR\INDUSTRIAL\MLUBKE\RAYTHEON\PSM B1 AQUIFER  
 DATED: 22 AUGUST 2002

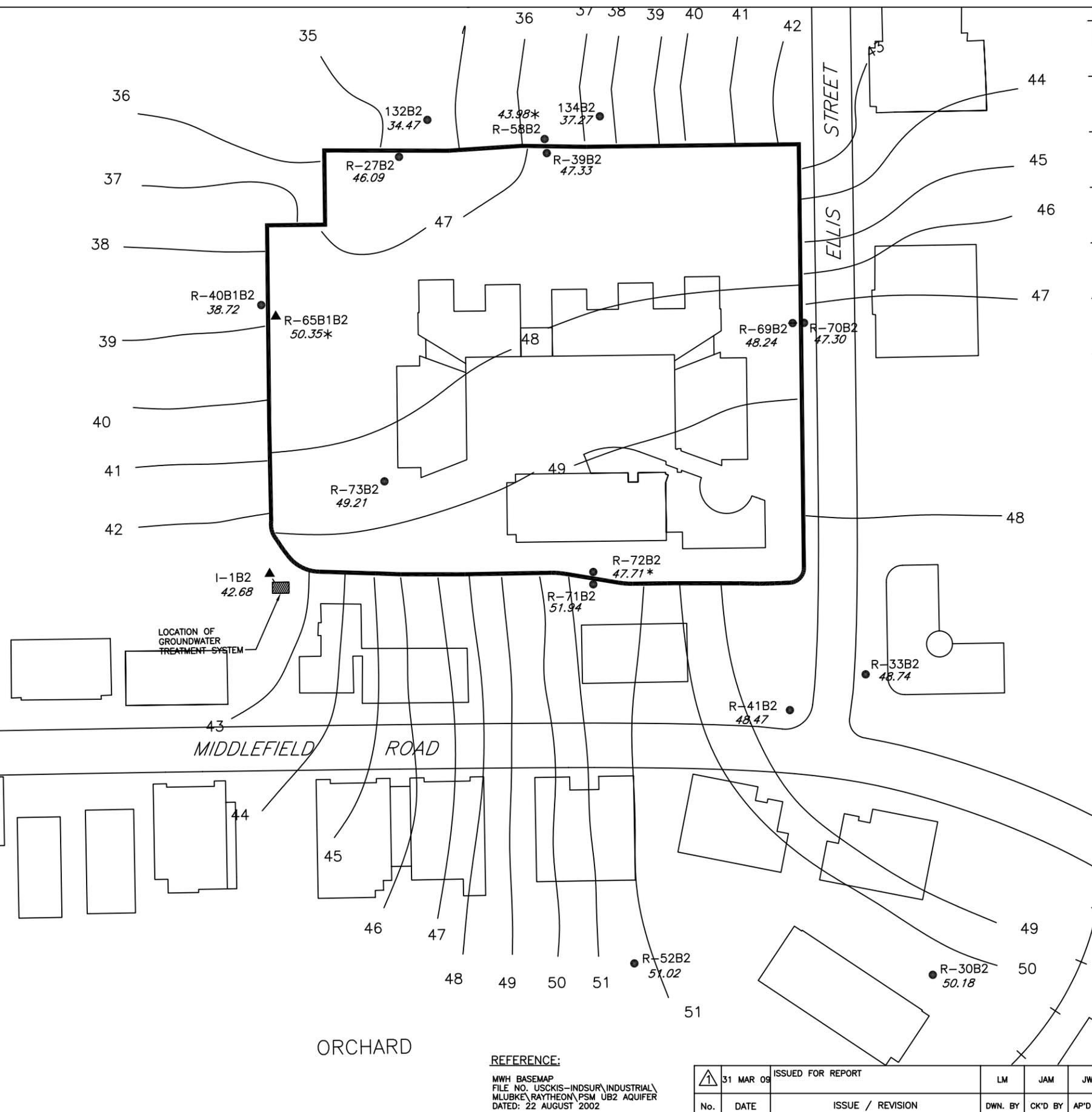
▲	31 MAR 08	ISSUED FOR REPORT	LM	JAM	JWH
No.	DATE	ISSUE / REVISION	DWN. BY	CK'D BY	AP'D BY



SCALE: AS SHOWN	
DRAWING NO.	23-016-B172
FIGURE 8	







- LEGEND:**
- ▲ GROUNDWATER EXTRACTION WELL
  - GROUNDWATER MONITORING WELL
  - SLURRY WALL
  - - - POTENTIOMETRIC SURFACE CONTOUR (DASHED WHERE INFERRED)
  - 49.59 POTENTIOMETRIC SURFACE ELEVATION (FEET ABOVE MEAN SEA LEVEL)
  - ⊗ GROUNDWATER DEPRESSION
  - NM NOT MEASURED
  - \* DATA NOT USED IN CONTOURING

**EXTRACTION WELL FLOWRATES (GPM)**

I-1B2	2.19
R-65B1B2	4.07

**NOTES:**

1. R-65B1B2 IS LOCATED IN THE LOWER B2 AQUIFER.



POTENTIOMETRIC SURFACE MAP  
 UPPER "B2" AQUIFER  
 27 MARCH 2008  
 350 ELLIS STREET  
 MOUNTAIN VIEW, CALIFORNIA  
 PREPARED FOR  
 RAYTHEON COMPANY

**REFERENCE:**

MWH BASEMAP  
 FILE NO. USCKIS-INDSUR\INDUSTRIAL\  
 MLUBKE\RAYTHEON\PSM UB2 AQUIFER  
 DATED: 22 AUGUST 2002

▲	31 MAR 08	ISSUED FOR REPORT	LM	JAM	JWH
No.	DATE	ISSUE / REVISION	DWN. BY	CK'D BY	AP'D BY



SCALE: AS SHOWN	
DRAWING NO.	<b>23-016-B175</b>
FIGURE 11	



- LEGEND:**
- ▲ GROUNDWATER EXTRACTION WELL
  - GROUNDWATER MONITORING WELL
  - SLURRY WALL
  - 52 POTENTIOMETRIC SURFACE CONTOUR (DASHED WHERE INFERRED)
  - 50.62 POTENTIOMETRIC SURFACE ELEVATION (FEET ABOVE MEAN SEA LEVEL)
  - ⊖ GROUNDWATER DEPRESSION
  - \* DATA NOT USED IN CONTOURING

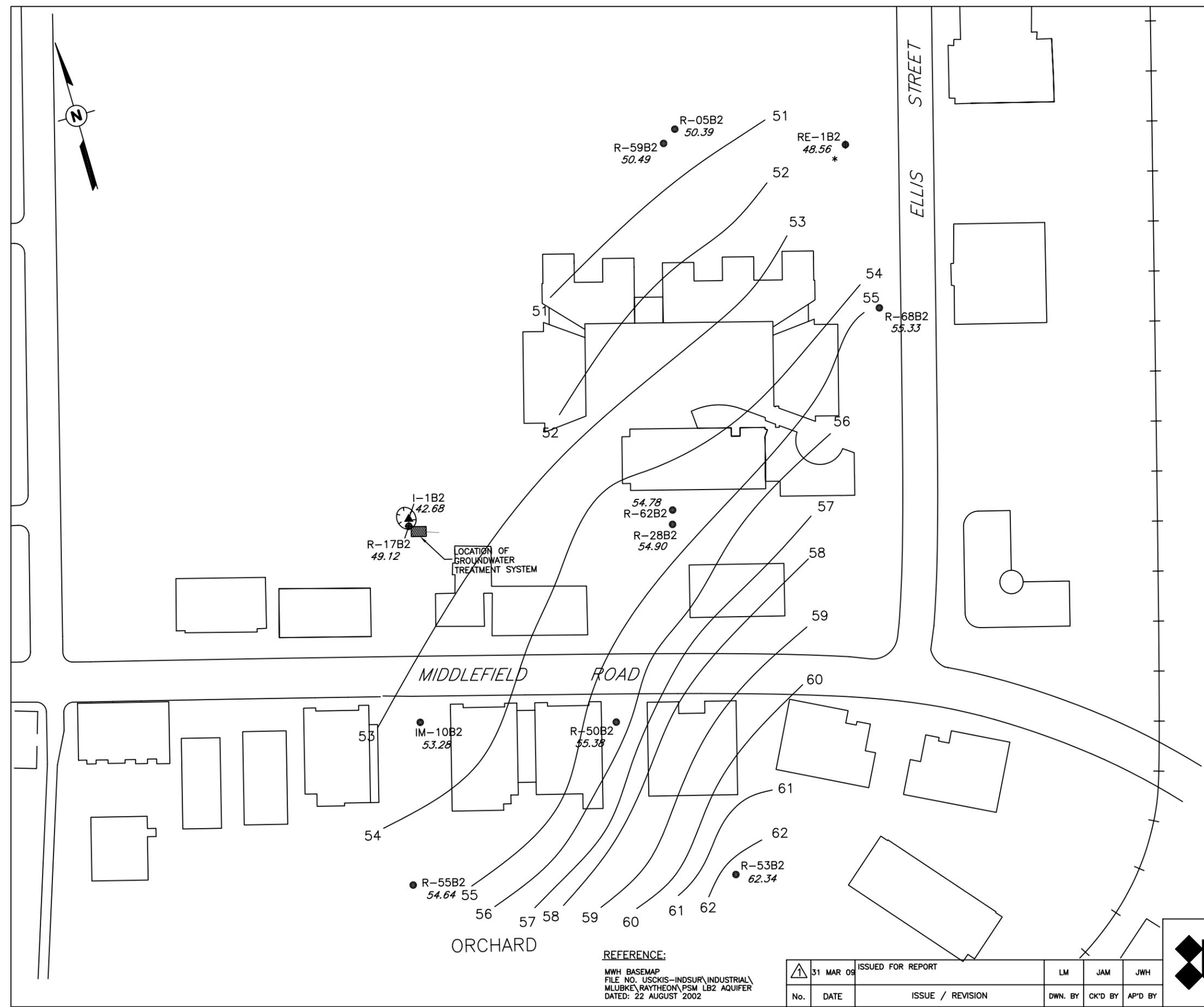
EXTRACTION WELL FLOWRATE (GPM)

I-1B2	2.19
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POTENTIOMETRIC SURFACE MAP  
 WELLS IN LOWER "B2" AQUIFER  
 27 MARCH 2008  
 350 ELLIS STREET  
 MOUNTAIN VIEW, CALIFORNIA

PREPARED FOR  
 RAYTHEON COMPANY

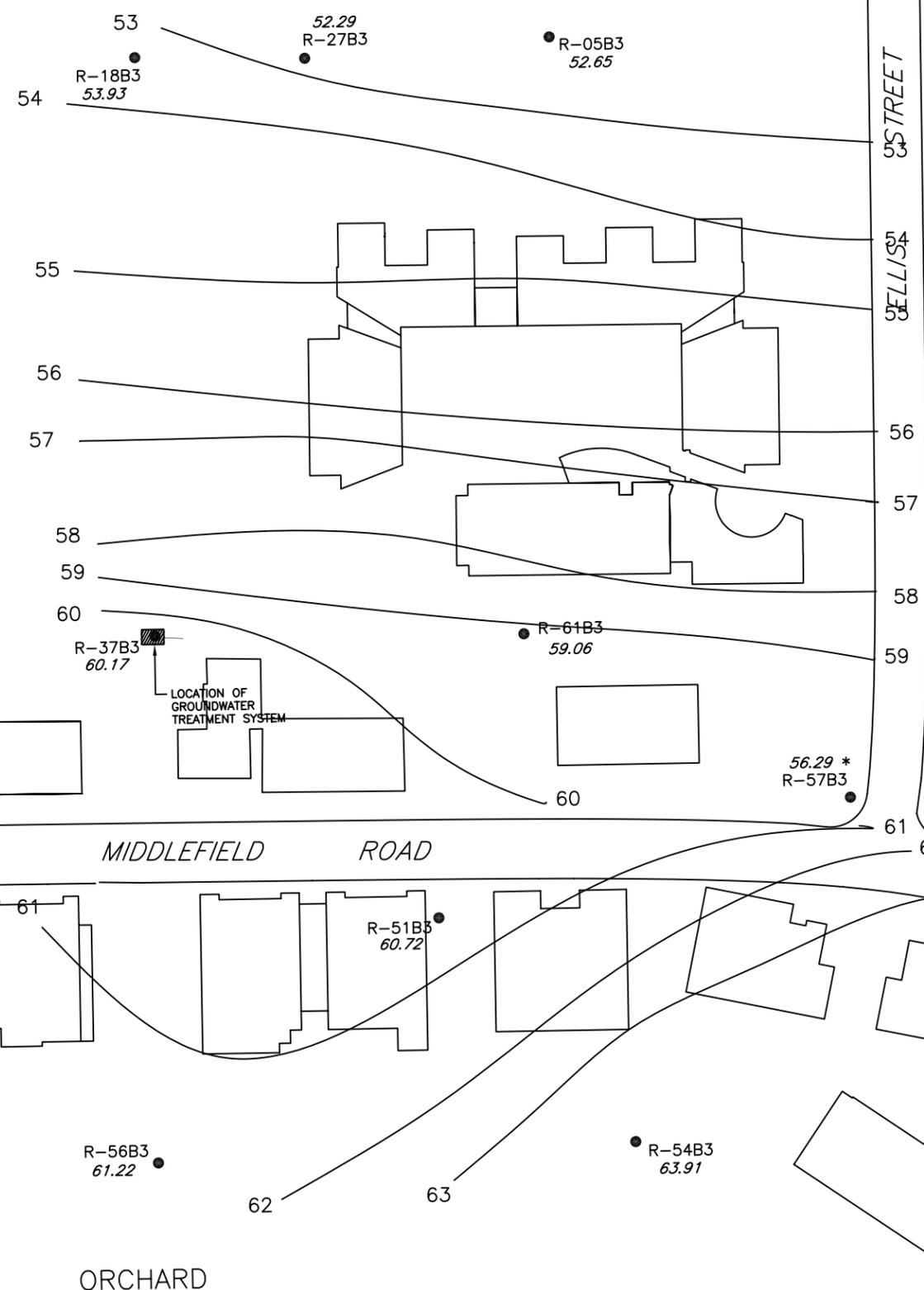
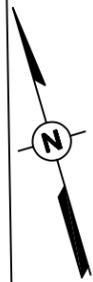


**REFERENCE:**  
 MWH BASEMAP  
 FILE NO. USCKIS-INDSUR\INDUSTRIAL\  
 MLUBKE\RAYTHEON\PSM LB2 AQUIFER  
 DATED: 22 AUGUST 2002

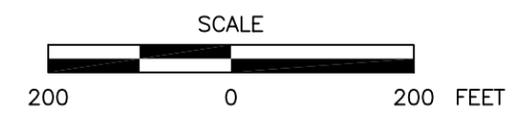
▲	31 MAR 09	ISSUED FOR REPORT	LM	JAM	JWH
No.	DATE	ISSUE / REVISION	DWN. BY	CK'D BY	AP'D BY



SCALE: AS SHOWN	
DRAWING NO.	<b>23-016-B176</b>
FIGURE 12	



- LEGEND:**
- GROUNDWATER MONITORING WELL
  - 56 POTENTIOMETRIC SURFACE CONTOUR (DASHED WHERE INFERRED)
  - 53.21 POTENTIOMETRIC SURFACE ELEVATION (FEET ABOVE MEAN SEA LEVEL)
  - \* DATA NOT INCLUDED IN CONTOURING



POTENTIOMETRIC SURFACE MAP  
 WELLS IN "B3" AQUIFER  
 27 MARCH 2008  
 350 ELLIS STREET  
 MOUNTAIN VIEW, CALIFORNIA  
 PREPARED FOR  
 RAYTHEON COMPANY

**REFERENCE:**

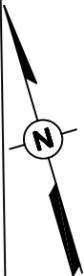
MWH BASEMAP  
 FILE NO. USCKIS-INDSUR\INDUSTRIAL\  
 MLUBKE\RAYTHEON\PSM B3 AQUIFER  
 DATED: 22 AUGUST 2002

▲	31 MAR 08	ISSUED FOR REPORT	LM	JAM	JWH
No.	DATE	ISSUE / REVISION	DWN. BY	CK'D BY	AP'D BY



SCALE: AS SHOWN	
DRAWING NO.	<b>23-016-B177</b>
FIGURE 13	





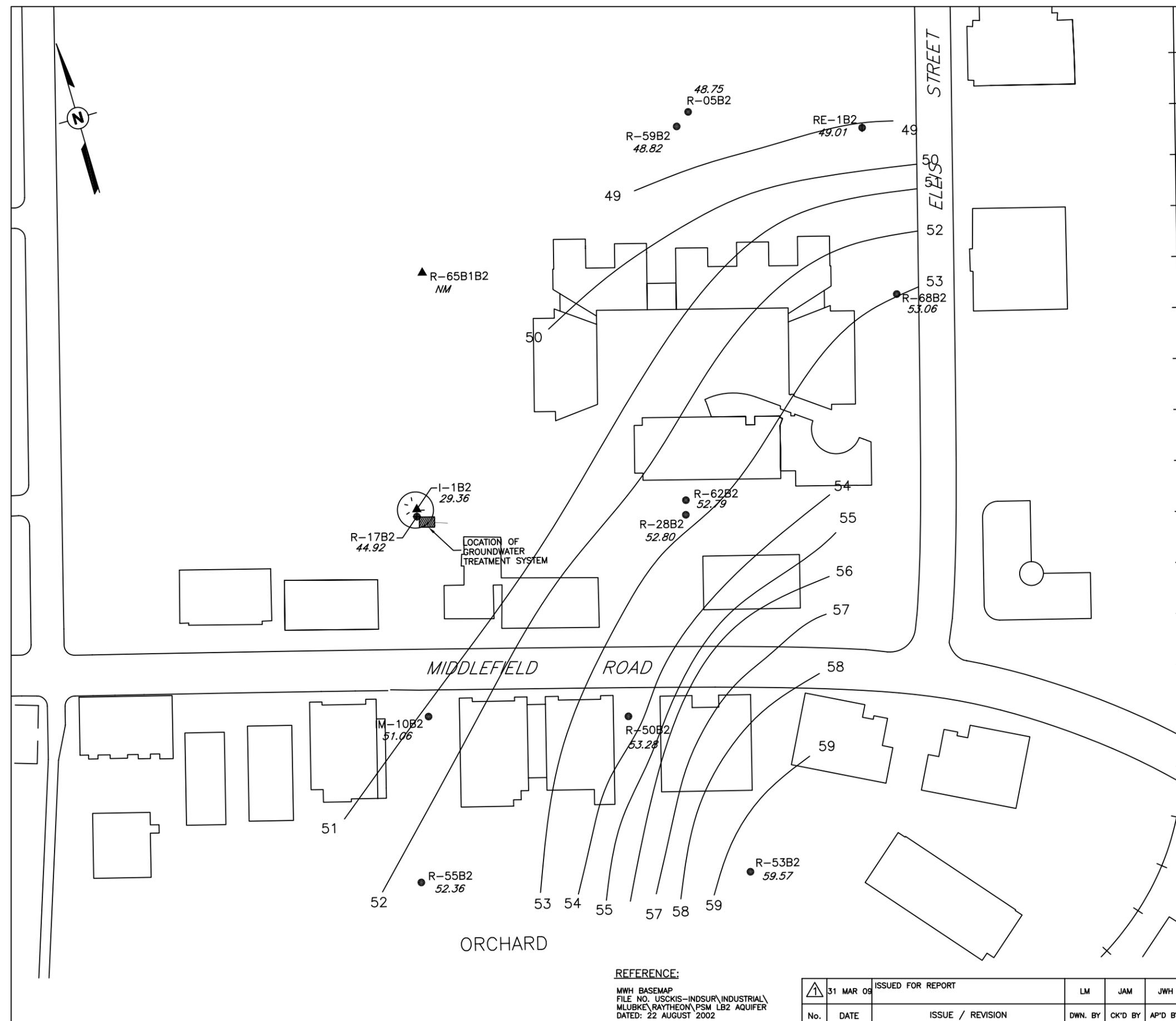
- LEGEND:**
- ▲ GROUNDWATER EXTRACTION WELL
  - GROUNDWATER MONITORING WELL
  - ▬ SLURRY WALL
  - 51 POTENTIOMETRIC SURFACE CONTOUR (DASHED WHERE INFERRED)
  - 50.61 POTENTIOMETRIC SURFACE ELEVATION (FEET ABOVE MEAN SEA LEVEL)
  - ⊖ GROUNDWATER DEPRESSION
  - NM NOT MEASURED

EXTRACTION WELL FLOWRATE (GPM)

I-1B2	3.02
R-65BIB2	5.07



POTENTIOMETRIC SURFACE MAP  
 WELLS IN LOWER "B2" AQUIFER  
 20 NOVEMBER 2008  
 350 ELLIS STREET  
 MOUNTAIN VIEW, CALIFORNIA  
 PREPARED FOR  
 RAYTHEON COMPANY

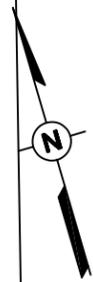


**REFERENCE:**  
 MWH BASEMAP  
 FILE NO. USCKIS-INDSUR\INDUSTRIAL\  
 MLUBKE\RAYTHEON\PSM LB2 AQUIFER  
 DATED: 22 AUGUST 2002

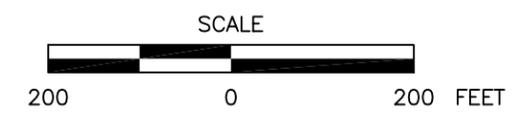
▲	31 MAR 09	ISSUED FOR REPORT	LM	JAM	JWH
No.	DATE	ISSUE / REVISION	DWN. BY	CK'D BY	AP'D BY



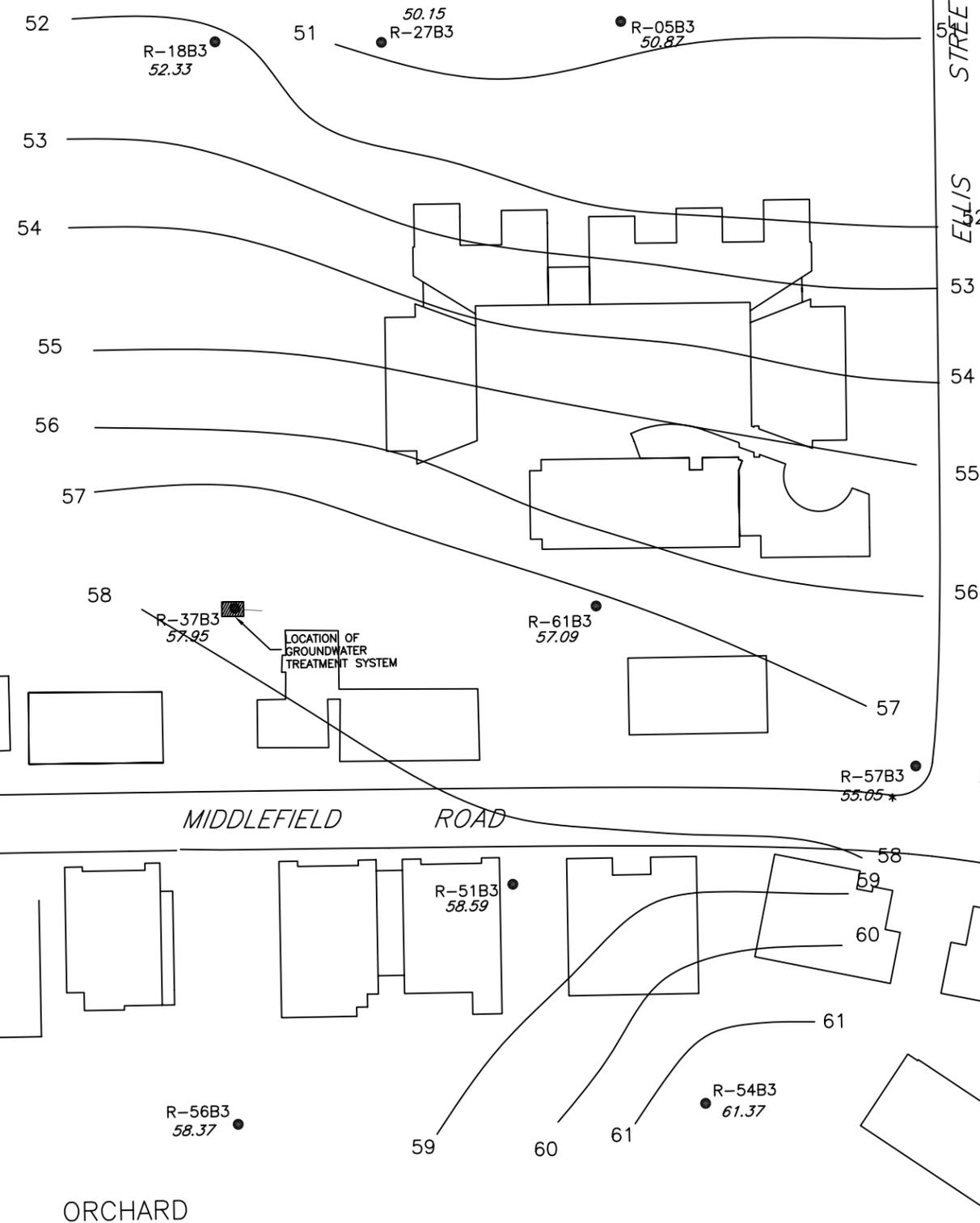
SCALE: AS SHOWN	
DRAWING NO.	<b>23-016-B179</b>
FIGURE 15	



- LEGEND:**
- GROUNDWATER MONITORING WELL
  - 53 POTENTIOMETRIC SURFACE CONTOUR (DASHED WHERE INFERRED)
  - 53.58 POTENTIOMETRIC SURFACE ELEVATION (FEET ABOVE MEAN SEA LEVEL)
  - \* DATA NOT USED FOR CONTOURING



POTENTIOMETRIC SURFACE MAP  
 WELLS IN "B3" AQUIFER  
 20 NOVEMBER 2008  
 350 ELLIS STREET  
 MOUNTAIN VIEW, CALIFORNIA  
 PREPARED FOR  
 RAYTHEON COMPANY



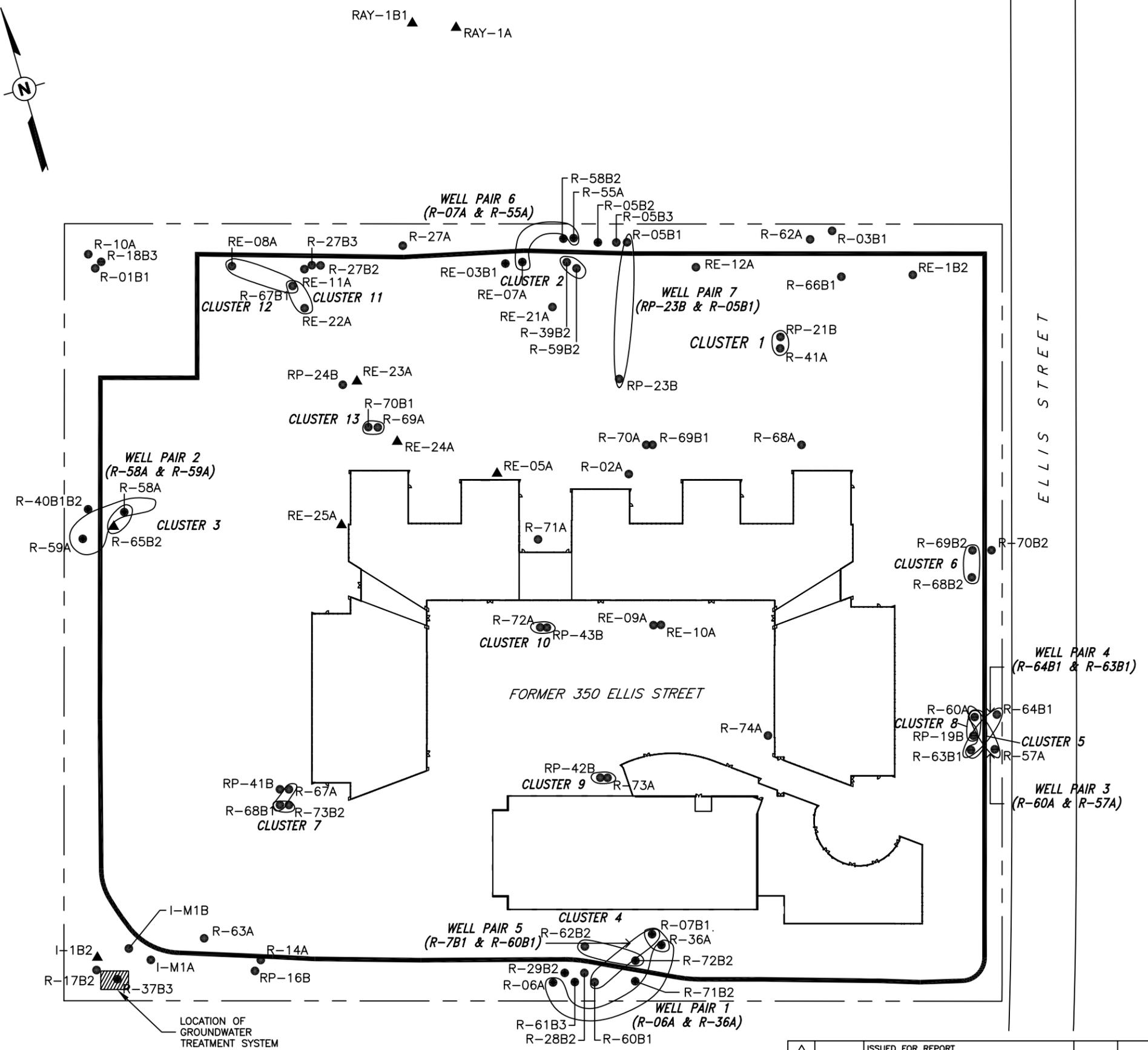
**REFERENCE:**

MWH BASEMAP  
 FILE NO. USCKIS-INDSUR\INDUSTRIAL\  
 MLUBKE\RAYTHEON\PSM B3 AQUIFER  
 DATED: 22 AUGUST 2002

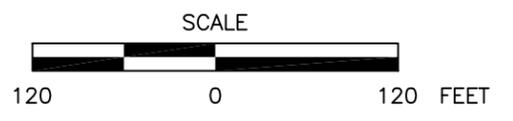
▲	31 MAR 09	ISSUED FOR REPORT	LM	JAM	JWH
No.	DATE	ISSUE / REVISION	DWN. BY	CK'D BY	AP'D BY



SCALE: AS SHOWN	
DRAWING NO.	<b>23-016-B180</b>
FIGURE 16	



- LEGEND:**
- ▲ GROUNDWATER EXTRACTION WELL
  - GROUNDWATER MONITORING WELL
  - - - PROPERTY BOUNDARY
  - ▬ SLURRY WALL



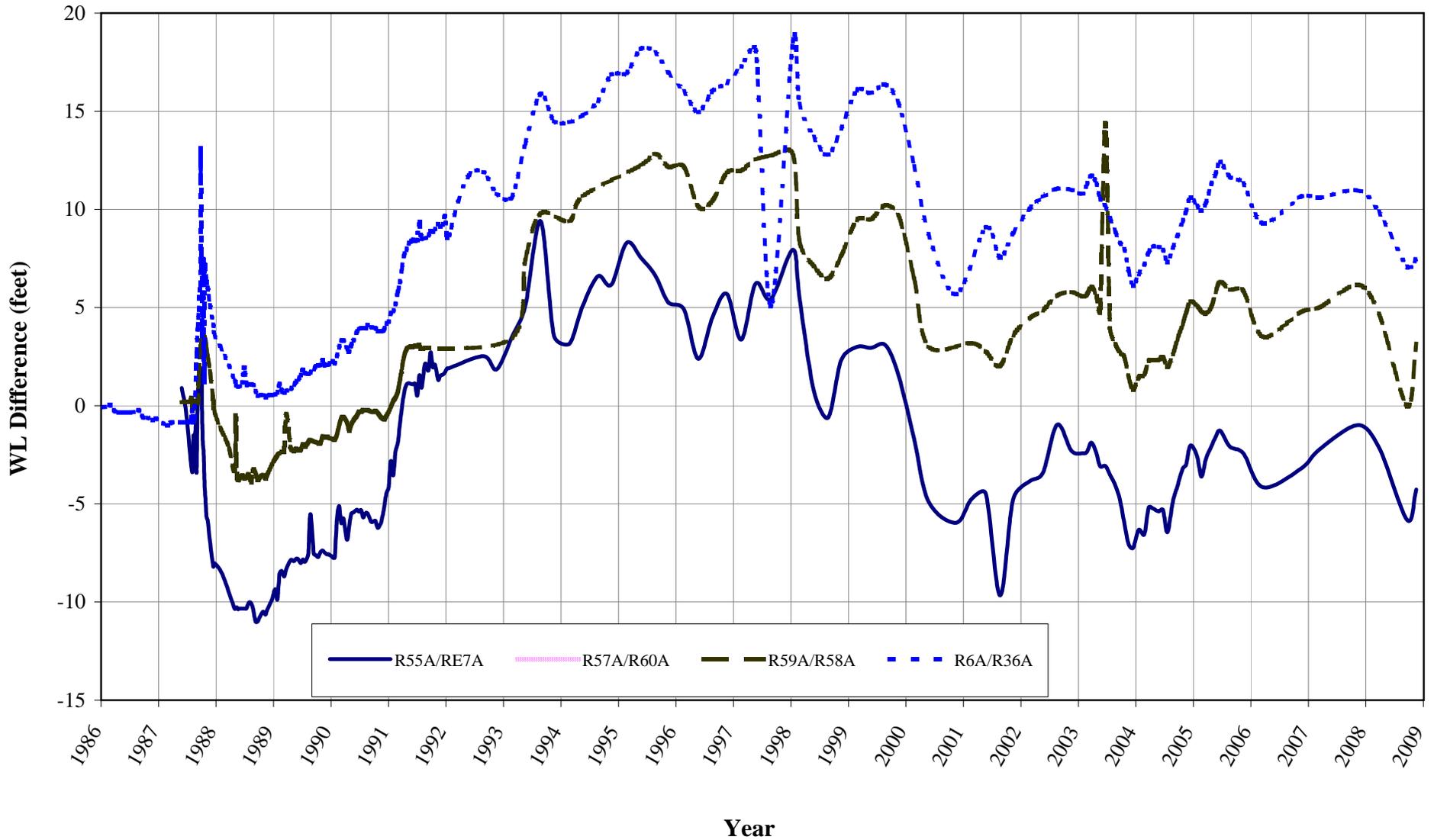
WELL CLUSTER AND WELL PAIR MAP  
 350 ELLIS STREET  
 MOUNTAIN VIEW, CALIFORNIA  
 PREPARED FOR  
 RAYTHEON COMPANY



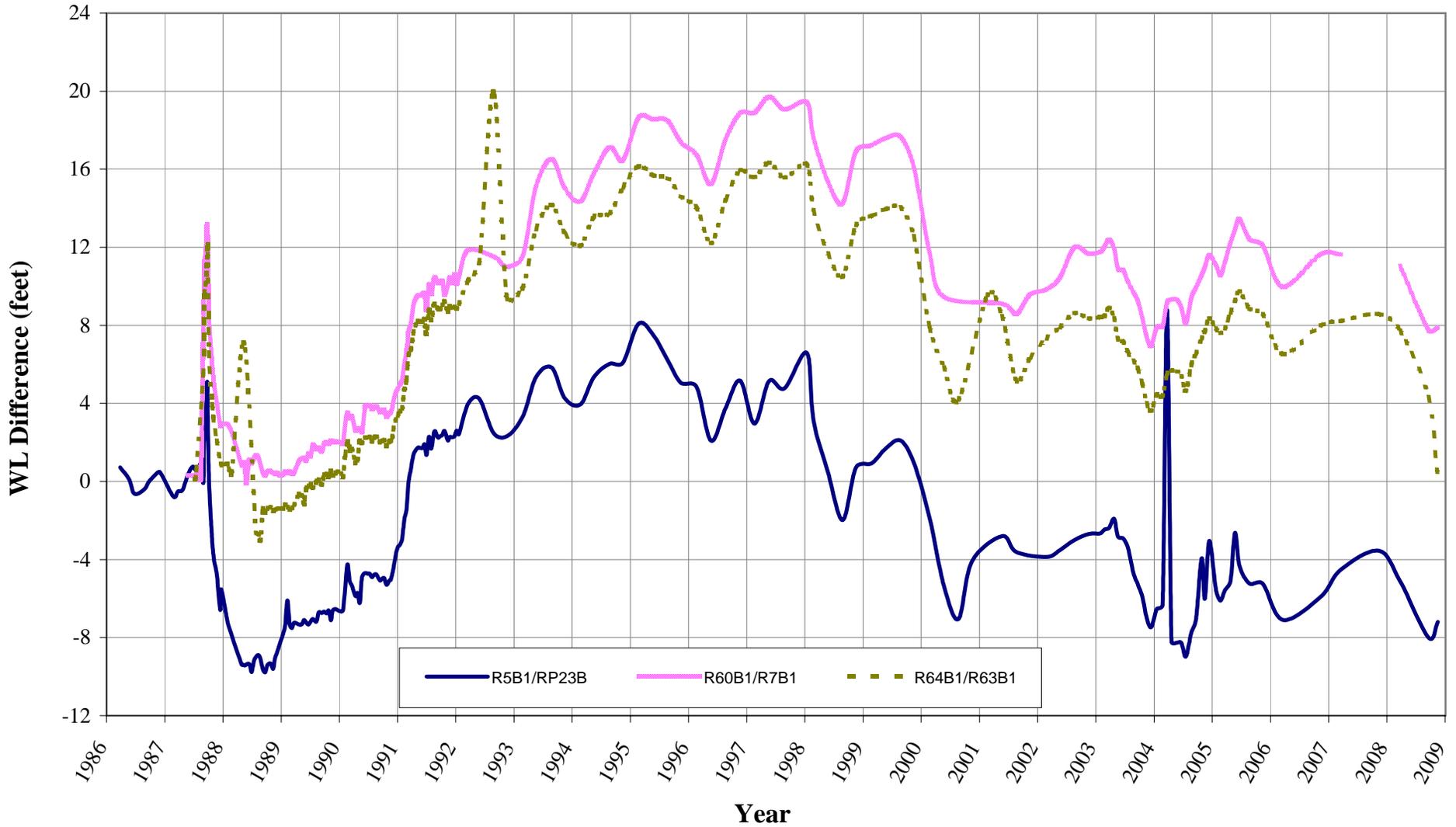
SCALE: AS SHOWN	
DRAWING NO.	<b>23-016-B31</b>
FIGURE 17	

No.	31 MAR 08	ISSUED FOR REPORT	LM	JAM	JWH
	DATE	ISSUE / REVISION	DWN. BY	CK'D BY	AP'D BY

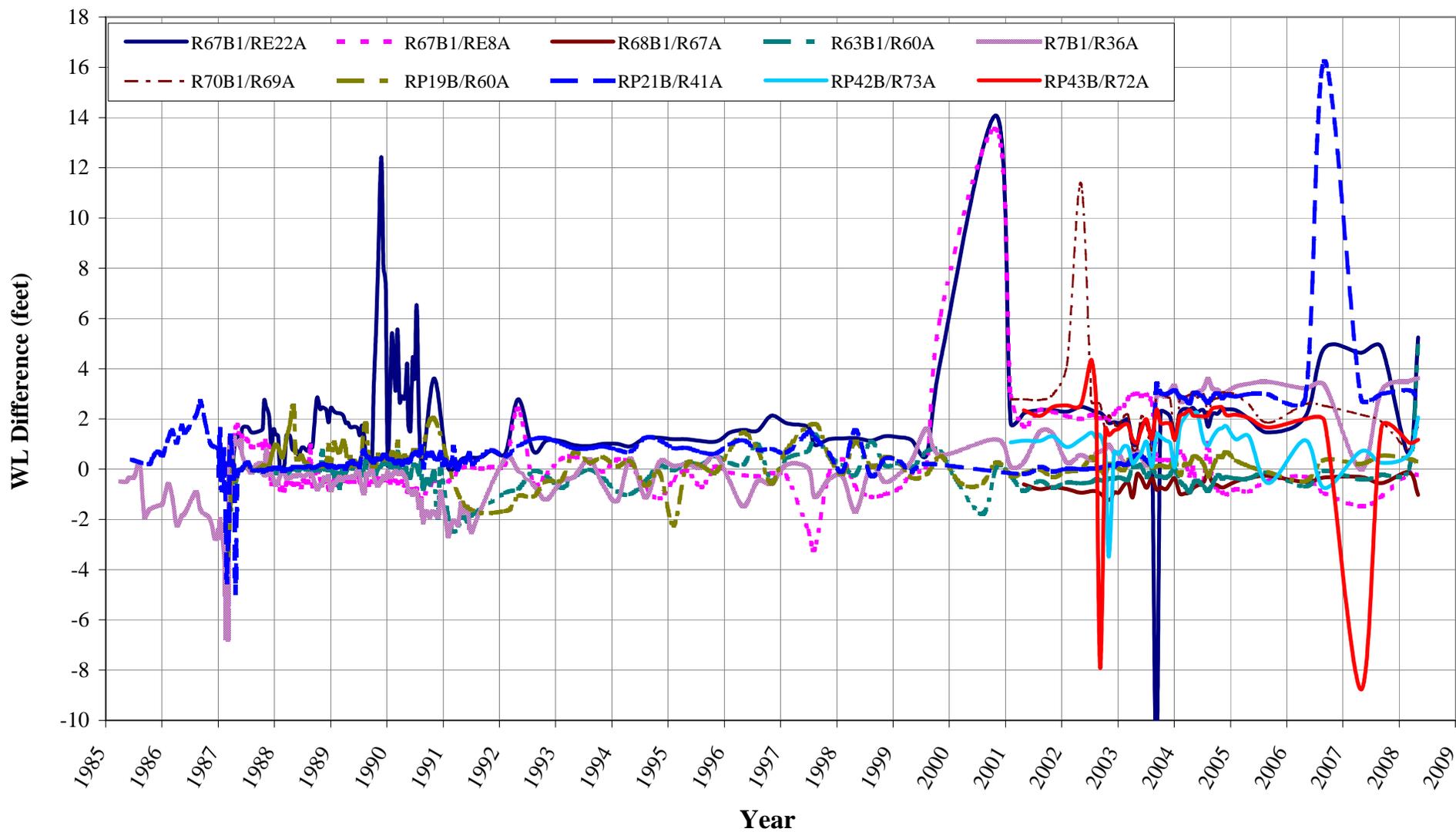
**Figure 18**  
**Water Elevation Differences Across the Slurry Wall in the "A" Aquifer**  
**350 Ellis Street Site, Mountain View, California**



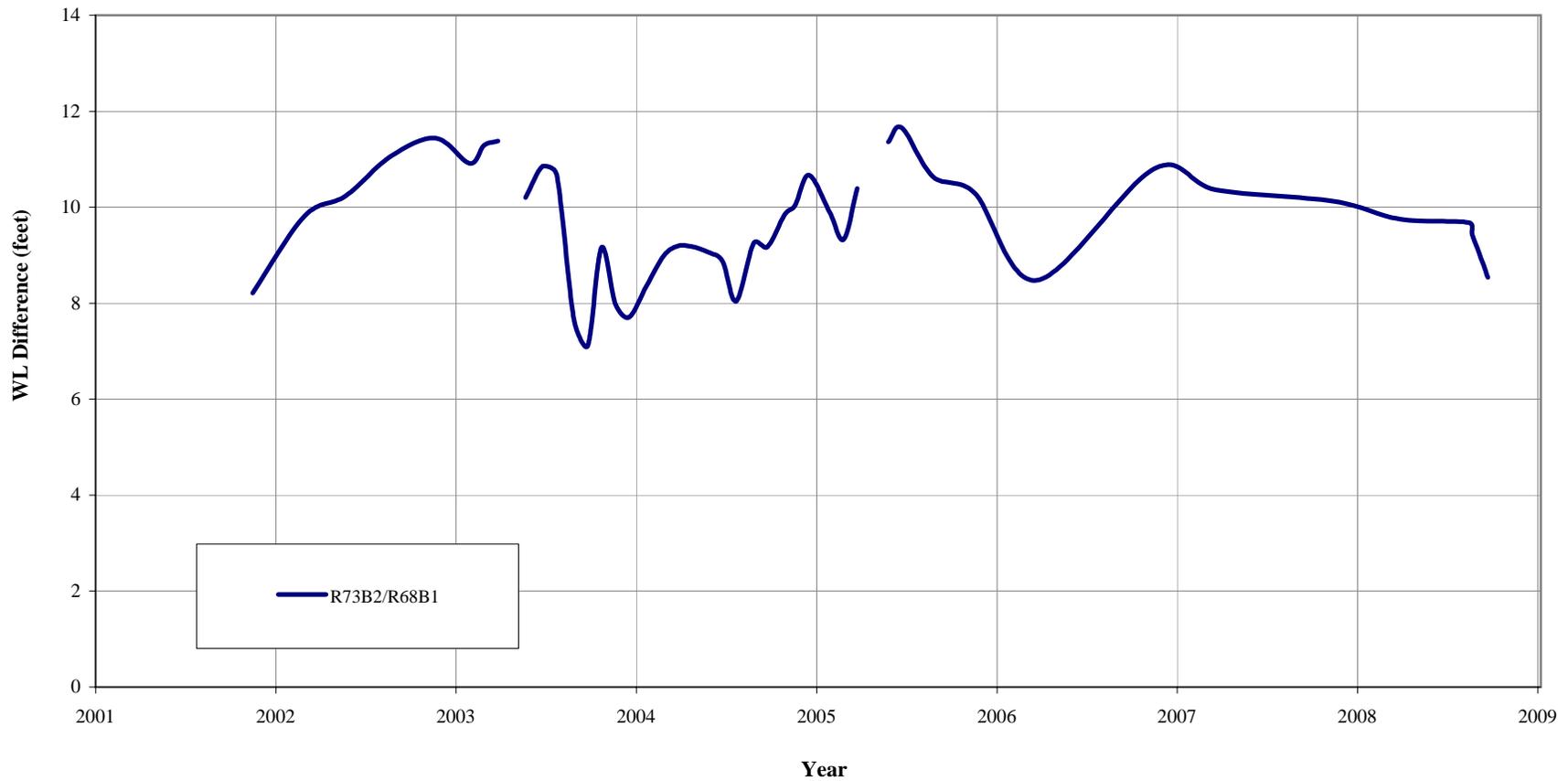
**Figure 19**  
**Water Elevation Differences Across the Slurry Wall in the "B1" Aquifer**  
**350 Ellis Street Site, Mountain View, California**



**Figure 20**  
**Water Elevation Differences Across A/B1 Aquitard**  
**350 Ellis Street Site, Mountain View, California**

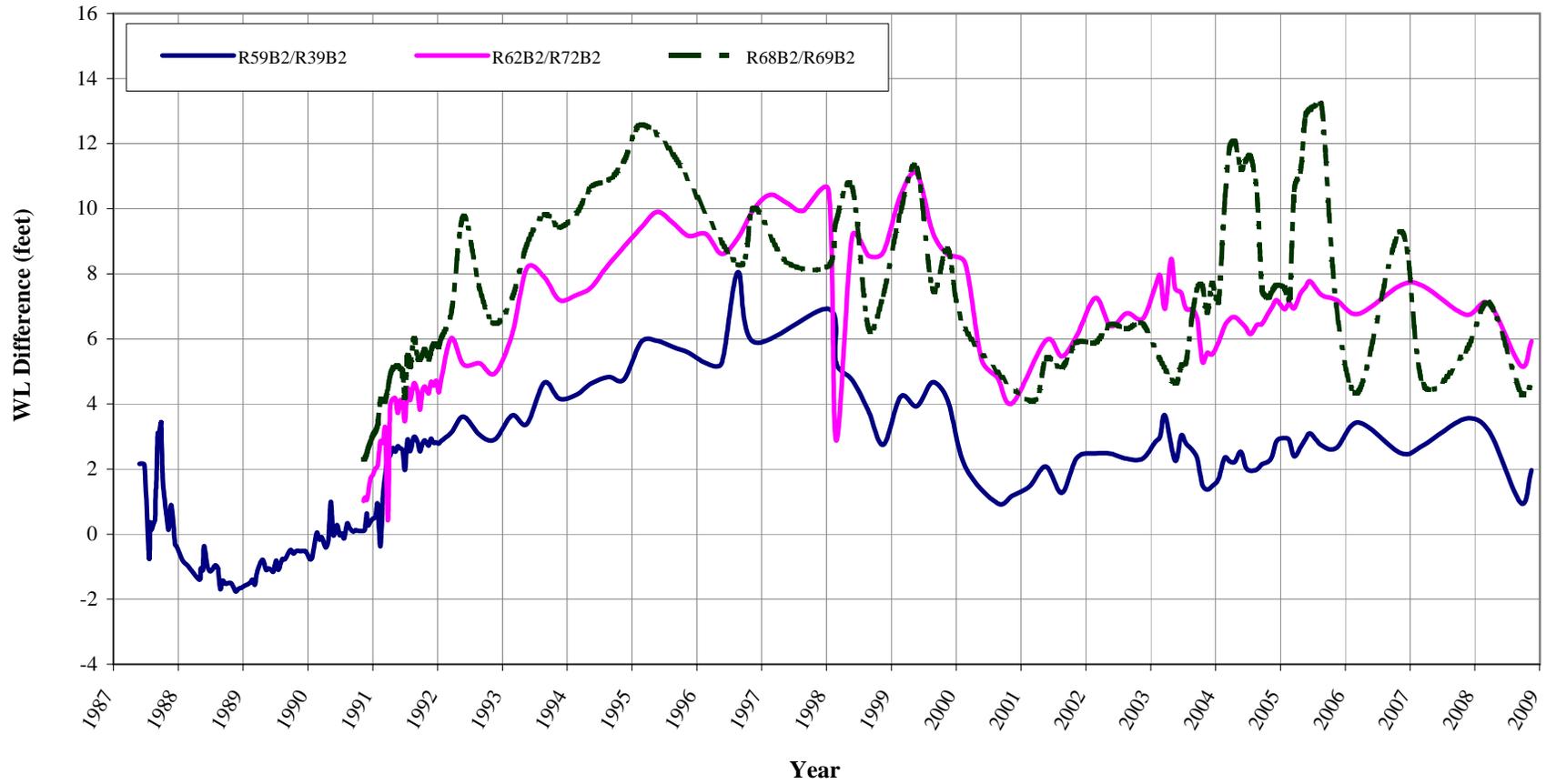


**Figure 21**  
**Water Elevation Differences Across B1/B2 Aquitard**  
**350 Ellis Street Site, Mountain View, California**



**Note: A positive WL difference indicates an upward gradient.**

**Figure 22**  
**Water Elevation Differences Between the Upper and Lower B2 Aquifers**  
**350 Ellis Street Site, Mountain View, California**



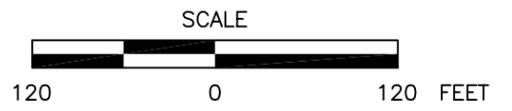


**LEGEND:**

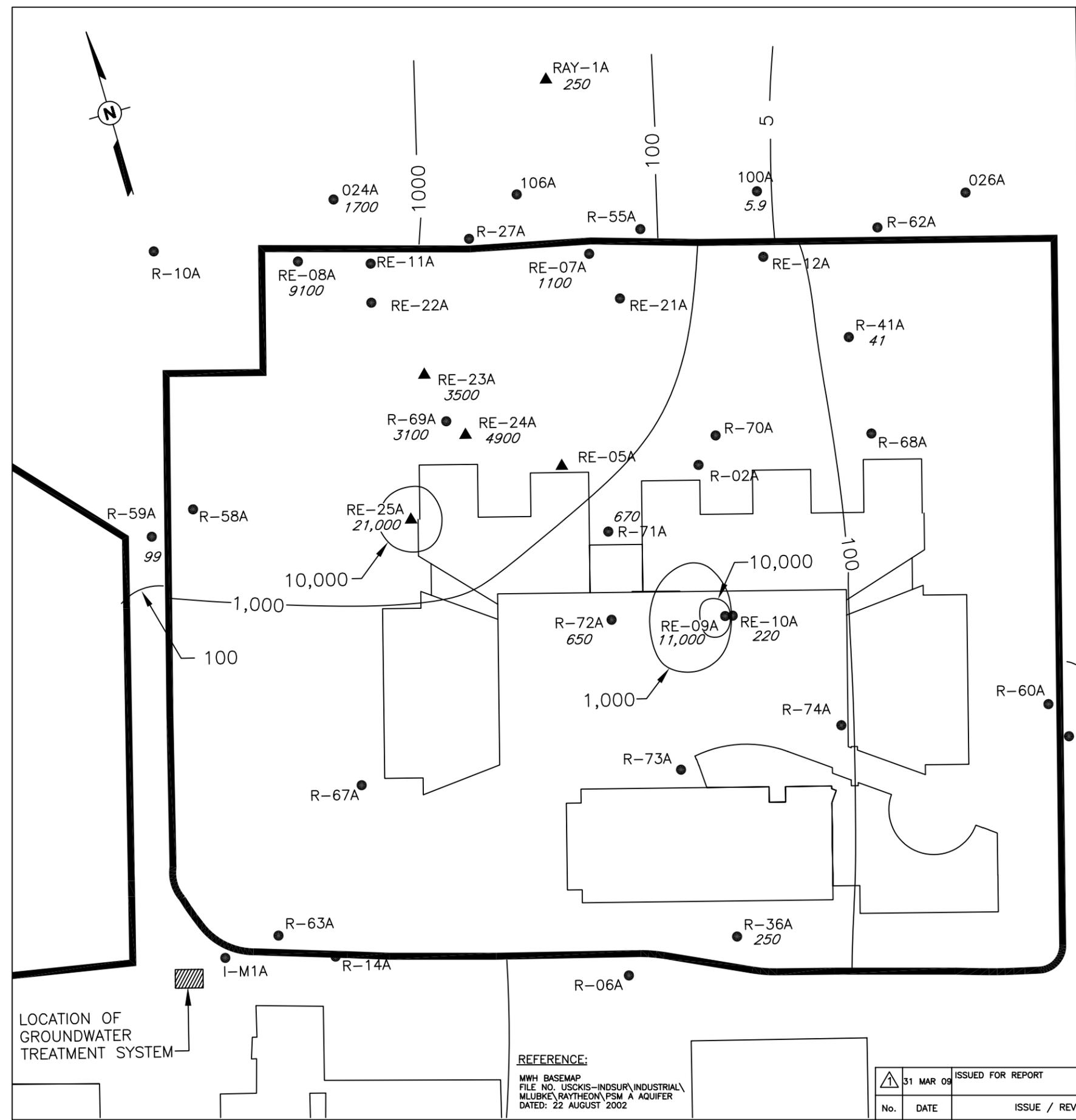
- ▲ GROUNDWATER EXTRACTION WELL
- GROUNDWATER MONITORING WELL
- SLURRY WALL
- 100 TCE CONCENTRATION CONTOUR (?g/L)
- 330 TCE CONCENTRATION (?g/L)
- ND NOT DETECTED

**NOTES:**

1. TCE CONCENTRATION CONTOURS WITHIN THE SLURRY WALL ARE BASED ON THE MOST RECENT GROUNDWATER CONCENTRATIONS, 2006.



2008 TCE CONCENTRATIONS  
 "A" AQUIFER  
 350 ELLIS STREET  
 MOUNTAIN VIEW, CALIFORNIA  
 PREPARED FOR  
 RAYTHEON COMPANY

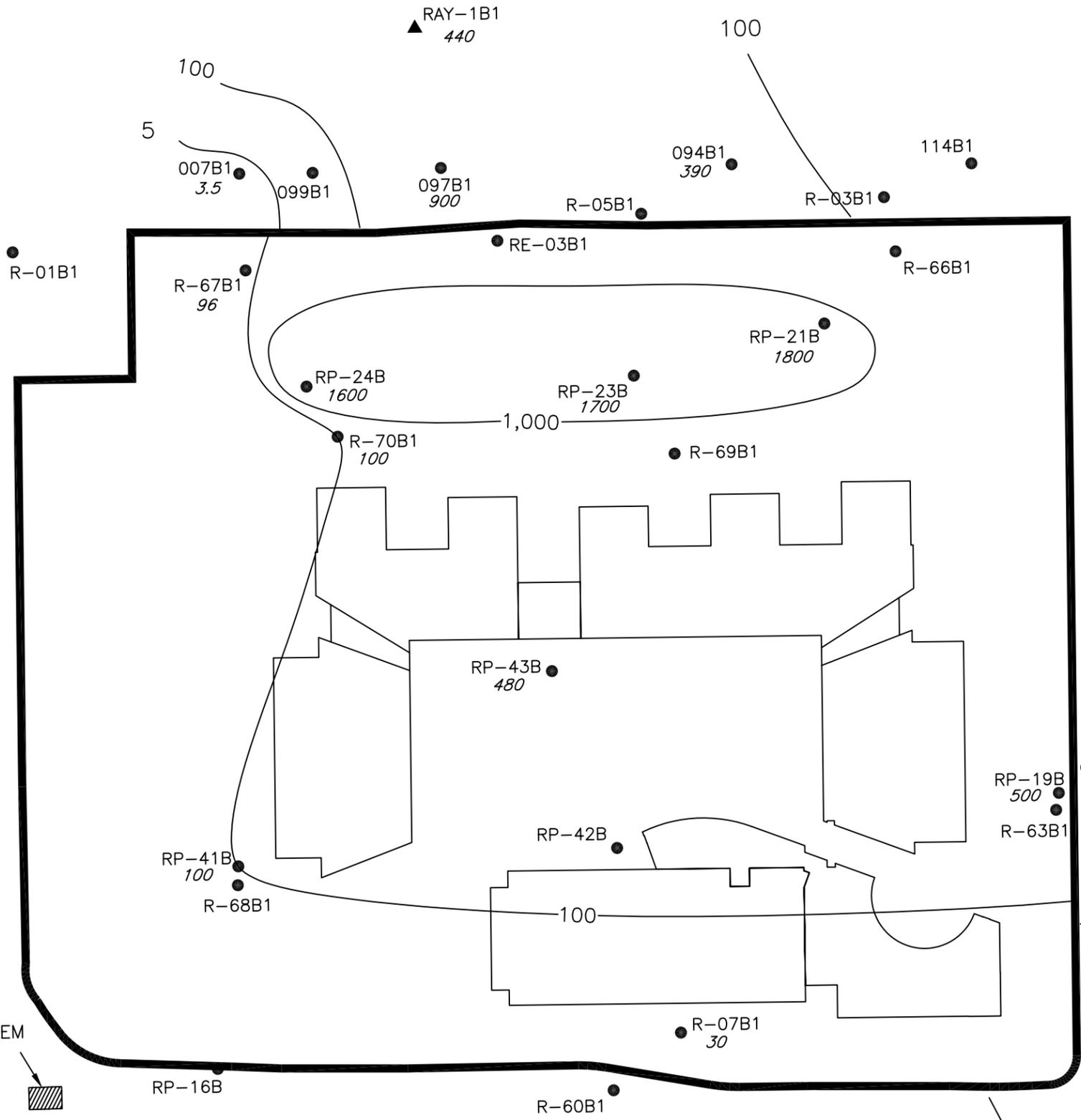
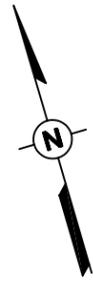


**REFERENCE:**  
 MWH BASEMAP  
 FILE NO. USCKIS-INDSUR\INDUSTRIAL\  
 MLUBKE\RAYTHEON\PSM A AQUIFER  
 DATED: 22 AUGUST 2002

No.	DATE	ISSUE / REVISION	DWN. BY	CK'D BY	AP'D BY
1	31 MAR 09	ISSUED FOR REPORT	LM	JAM	JWH



SCALE: AS SHOWN	
DRAWING NO.	23-016-B181
FIGURE 23	

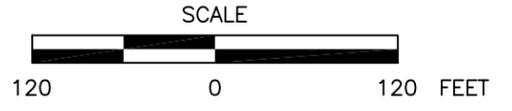


**LEGEND:**

- ▲ GROUNDWATER EXTRACTION WELL
- GROUNDWATER MONITORING WELL
- SLURRY WALL
- 100 TCE CONCENTRATION CONTOUR ( $\mu\text{g/L}$ )
- 330 TCE CONCENTRATION ( $\mu\text{g/L}$ )
- ND NOT DETECTED

**NOTES:**

1. TCE CONCENTRATION CONTOURS WITHIN THE SLURRY WALL ARE BASED ON THE MOST RECENT GROUNDWATER CONCENTRATIONS, 2006.



2008 TCE CONCENTRATIONS  
 "B1" AQUIFER  
 350 ELLIS STREET  
 MOUNTAIN VIEW, CALIFORNIA  
 PREPARED FOR  
 RAYTHEON COMPANY

LOCATION OF GROUNDWATER TREATMENT SYSTEM

**REFERENCE:**

MWH BASEMAP  
 FILE NO. USCKIS-INDSUR\INDUSTRIAL\  
 MLUBKE\RAYTHEON\PSM B1 AQUIFER  
 DATED: 22 AUGUST 2002

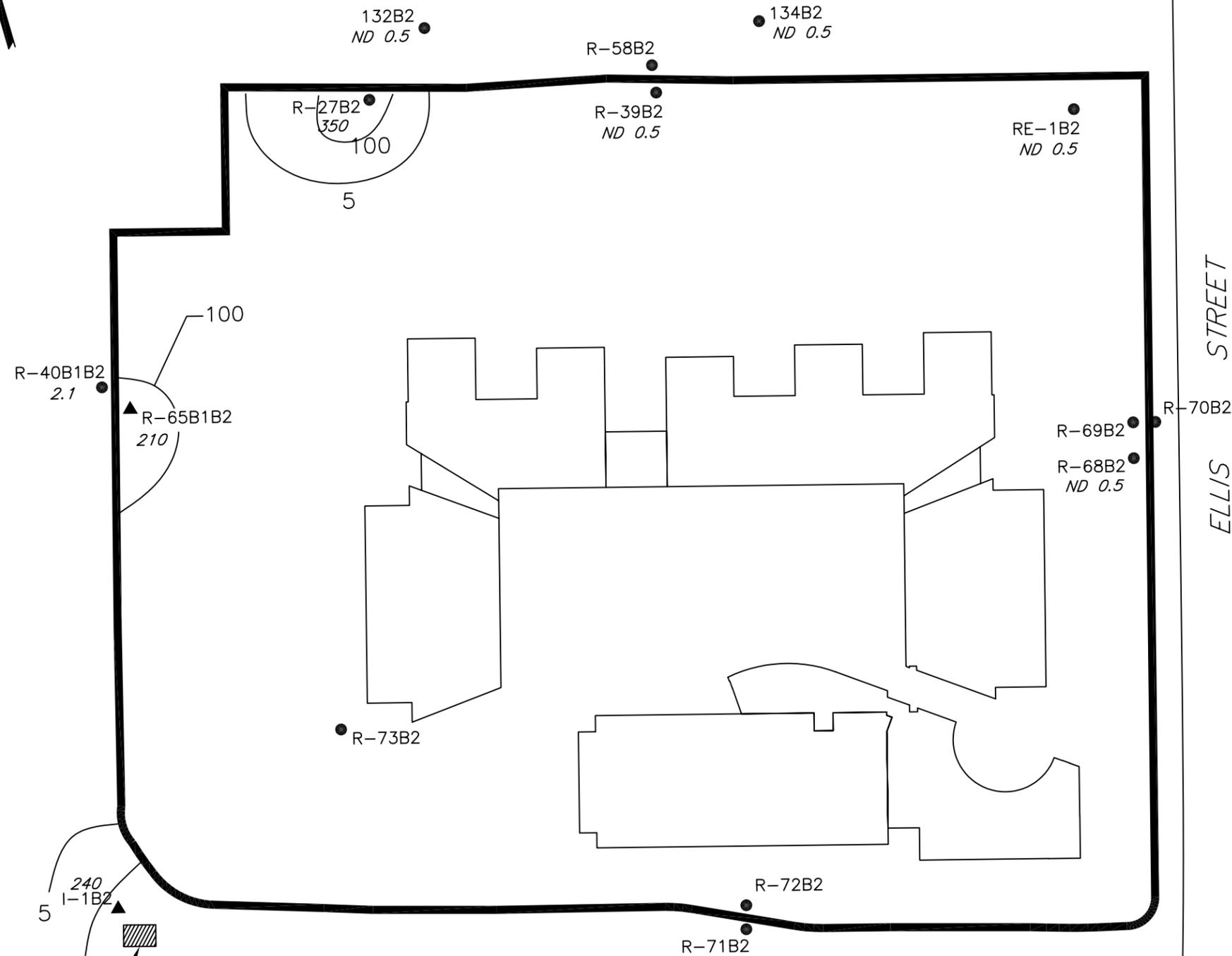
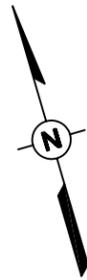
▲	31 MAR 09	ISSUED FOR REPORT	LM	JAM	JWH
No.	DATE	ISSUE / REVISION	DWN. BY	CK'D BY	AP'D BY



SCALE: AS SHOWN

DRAWING NO. **23-016-B182**

FIGURE 24

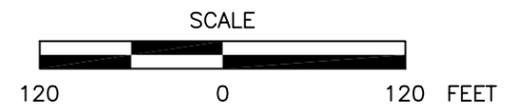


**LEGEND:**

- ▲ GROUNDWATER EXTRACTION WELL
- GROUNDWATER MONITORING WELL
- SLURRY WALL
- 300 TCE CONCENTRATION ( $\mu\text{g/L}$ )
- ND NOT DETECTED

**NOTES:**

1. TCE CONCENTRATION CONTOUR WITHIN THE SLURRY WALL ARE BASED ON THE MOST RECENT GROUNDWATER CONCENTRATIONS, 2006 - 2008.



2008 TCE CONCENTRATIONS  
UPPER "B2" AQUIFER  
350 ELLIS STREET  
MOUNTAIN VIEW, CALIFORNIA

PREPARED FOR  
RAYTHEON COMPANY

LOCATION OF  
GROUNDWATER  
TREATMENT SYSTEM

**REFERENCE:**

MWH BASEMAP  
FILE NO. USCKIS-INDSUR\INDUSTRIAL\  
MLUBKE\RAYTHEON\PSM UB2 AQUIFER  
DATED: 22 AUGUST 2002

No.	31	MAR 09	ISSUED FOR REPORT	LM	JAM	JWH
			ISSUE / REVISION	DWN. BY	CR'D BY	APP'D BY



SCALE: AS SHOWN

DRAWING NO. **23-016-B183**

FIGURE 25

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## **APPENDIX A**

# **2008 ANNUAL REPORT REMEDY PERFORMANCE CHECKLIST**

## 2008 Annual Report Remedy Performance Checklist

<b>I. GENERAL SITE INFORMATION</b>	
Facility Name: Raytheon Mountain View	
Facility Address, City, State: 350 Ellis Street, Mountain View, California	
Checklist completion date: April 1, 2009	EPA Site ID: CAD09205097
Site Lead: <input type="checkbox"/> Fund <input type="checkbox"/> PRP <input type="checkbox"/> State <input type="checkbox"/> State Enforcement <input type="checkbox"/> Federal Facility <input checked="" type="checkbox"/> Other, specify: U.S. EPA, Region IX	
Site Remedy Components (Include Other Reference Documents for More Information, as appropriate): Groundwater pump-and-treat system; Groundwater containment; Vertical barrier walls (slurry wall is 100 feet deep and extends into the B2-aquifer)	
<b>II. CONTACTS</b>	
<u>List important personnel associated with the Site:</u> Name, title, phone number, e-mail address:	
<b>PRP / Facility Representative:</b> Gregory Taylor, Raytheon Company Environmental Manager (310) 647-2495 gstaylor@raytheon.com	
<b>PRP Contractor/ Consultant:</b> Elie Haddad, Haley & Aldrich Vice President 408.529.9048 ehaddad@haleyaldrich.com	
J. Wesley Hawthorne, Locus Technologies Vice President (650) 960-1640 hawthornej@locustec.com	
<b>O&amp;M Contractor:</b> J. Wesley Hawthorne, Locus Technologies Vice President (650) 960-1640 hawthornej@locustec.com	
<b>Other:</b>	

## 2008 Annual Report Remedy Performance Checklist

### III. O&M COSTS (OPTIONAL) - CONFIDENTIAL

Total O&M costs include (1) report preparation for agencies (RWQCB, EPA), (2) sampling, analysis, data review (groundwater level monitoring, water quality sampling), (3) groundwater treatment system O&M (routine tasks for operations and maintenance of the treatment system), and (4) utilities & fees.

What is your annual O&M cost total for the reporting year?

Breakout your annual O&M cost total into the following categories (use either dollars or %):

- Analytical (e.g., lab costs): \_\_\_\_\_
- Labor (e.g., site maintenance, sampling): \_\_\_\_\_
- Materials (e.g., treatment chemicals): \_\_\_\_\_
- Oversight (e.g., project management): \_\_\_\_\_
- Utilities (e.g., electric, gas, phone, water): \_\_\_\_\_
- Reporting (e.g., NPDES, progress): \_\_\_\_\_
- Other (e.g., capital improvements): \_\_\_\_\_

Describe unanticipated/unusually high or low O&M costs (go to section [fill in] to recommend optimization methods):

### IV. ON-SITE DOCUMENTS AND RECORDS (Check all that apply)

- O&M Manual     O&M Maintenance Logs     O&M As-built drawings – *Part of O&M Manual*
- O&M reports
- Daily access/Security logs
- Site-Specific Health & Safety Plan     Contingency/Emergency Response Plan
- O&M/OSHA Training Records     Settlement Monument Records
- Gas Generation Records     Groundwater monitoring records     Leachate extraction records
- Discharge Compliance Records
- Air discharge permit     Effluent discharge permit     Waste disposal, POTW permit

Are these documents currently readily available?  Yes     No    If no, where are records kept?

O&M manual, Site H&S plan, discharge records and permits are kept onsite; O&M reports, maintenance logs and training records are available at Locus Technologies' office in Mountain View.

### V. INSTITUTIONAL CONTROLS (as applicable)

List institutional controls called for (and from what enforcement document):

Status of their implementation:

Where are the ICs documented and/or reported?

Governmental controls (zoning, local permits, state codes);

Environmental agreements with property owner (proprietary controls);

Informational devices (fact sheets, public meetings)

ICs are being properly implemented and enforced?  Yes     No, elaborate below

ICs are adequate for site protection?  Yes     No, elaborate below

Additional remarks regarding ICs:



## 2008 Annual Report Remedy Performance Checklist

■ The system is in compliance with discharge permits.

Slurry Wall Data

List the types of data that are available:

What is the source report?

Quarterly WL monitoring data from monitoring well pairs

Annual Report, Tables 7 and 8

Capture zone maps

Annual Report, Figures 6 – 9

Is slurry wall operating as designed? ■ Yes □ No

If not, what is being done to correct the situation?

Elaborate on technical data and/or other comments

Since 2000, when the 350 Ellis Street property was developed, an outward gradient has been observed along the northern slurry wall. However, these gradients do not have a significant impact on remediation because: 1) Raytheon installed two recovery wells in the "A" and "B1" aquifers immediately downgradient of the slurry wall; the wells provide an adequate capture of the area immediately downgradient of the slurry wall, and 2) the slurry wall is a low-permeability wall that allows only minimal chemical migration across its walls, even if the gradient is outward. That, combined with the fact that chemicals tend to take the easier pathway and migrate towards recovery wells within the wall enclosure, rather than across the low-permeability wall, would minimize outward chemical migration. Therefore, the slurry wall and the pumping activities within its enclosure physically contain chemicals. If a small flux of chemicals migrates through the slurry wall, it is captured immediately downgradient of the wall.

**IX. AIR MONITORING/VAPOR INTRUSION PATHWAY EVALUATION (Include in Annual Progress Report and reference document)**

**Walkthroughs/Surveys:** A walkthrough of utility rooms was performed in May 2008 to assess seals on conduits.

**Air testing/monitoring conducted:** Air samples were collected from all the buildings at the Site on February 20, 2008, a weekday when the ventilation system was operating

**Summary of Results:**

The results of sampling completed on weekdays in February confirmed that when HVAC systems are operating, as is the case during normal occupancy, vapor intrusion is not a concern. All indoor TCE concentrations were well below the interim action level of 2.7 µg/m<sup>3</sup>; detections in pathway samples also remained below the EPA interim action level.

Inspection of conduits in utility rooms revealed that all conduits remained sealed appropriately, with the exception of three rooms with exposed flex piping. The exposed conduits in those rooms were subsequently sealed.

**Problems Encountered:** No problems were encountered.

**Recommendations/Next Steps:** None.

**Schedule:** Currently, no additional sampling is scheduled.

## 2008 Annual Report Remedy Performance Checklist

### X. REMEDY PERFORMANCE ASSESSMENT

<b>A. Groundwater Remedies</b>
<p>What are the remedial goals for groundwater? <input checked="" type="checkbox"/> Plume containment (prevent plume migration); <input checked="" type="checkbox"/> Plume restoration (attain ROD-specific cleanup levels in aquifer); <input type="checkbox"/> Other goals, please explain: _____</p>
<p>Have you done a trend analysis? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No; If Yes, what does it show?</p> <p>Table 11 of the Annual Report provides a comparison of the average TCE concentration for each aquifer at different time periods. The concentrations have decreased significantly, but are approaching asymptotic levels.</p> <p>(Is it inconclusive due to inadequate data? Are the concentrations increasing or decreasing?) Explain and provide source document reference _____</p>
<p>If plume containment is a remedial goal, check all that apply:</p> <ul style="list-style-type: none"> <li><input checked="" type="checkbox"/> Plume migration is under control (explain basis below)</li> <li><input type="checkbox"/> Plume migration is not under control (explain basis below)</li> <li><input type="checkbox"/> Insufficient data to determine plume stability (explain below)</li> </ul> <p>(Include attachments that substantiate your answers, e.g., reference plume, trend analysis, and capture zone maps in source document)</p>
<p>Elaborate on basis for determining that plume containment goal is being met or not being met:</p> <p>The plume is not expanding and capture is adequate.</p>
<p>If plume restoration is a cleanup objective, check all that apply:</p> <ul style="list-style-type: none"> <li><input checked="" type="checkbox"/> Progress is being made toward reaching cleanup levels (explain basis below)</li> <li><input type="checkbox"/> Progress is not being made toward reaching cleanup levels (explain basis below)</li> <li><input type="checkbox"/> Insufficient data to determine progress toward restoration goal (explain below)</li> </ul>
<p>Elaborate on basis for determining progress or lack of progress toward restoration goal:</p> <p>As explained above, concentrations have decreased significantly since remedial measures were begun. Concentrations are approaching asymptotic levels, indicating that using the current remedy reaching MCLs will require many decades.</p>
<b>B. Vertical Migration</b>
<p>Have you done an assessment of vertical gradients? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No; If Yes, what does it show? (Is it inconclusive due to inadequate data? Are the concentrations increasing or decreasing? Explain and provide source document reference.</p> <p>Fifteen well pairs are used to monitor the vertical gradient direction across the "A/B1" and "B1/B2" Aquitards, and from the lower to upper "B2" aquifer. The differences in water elevations between the "B1" and "A" Aquifers are shown in Table 8 and on Figure 19 of the Annual Report. Upward gradients were observed in eight of the ten well pairs that are used to monitor the "A/B1" Aquitard gradients in the March, September, and November events. Slight downward gradients are observed in well pairs R-60A/R-63B1, RE-08A/R-67B1 for March event, and in well pairs R-67A/ R-68B1, and RE-08A/R-67B1 for the September and November events. A zero gradient was observed across well pair R-63B2/R-60A in September. Upward gradients were observed across the "B1/B2" Aquitard and between the upper "B2" and lower "B2" Aquifer. The slurry wall surrounding the site fully separates the onsite "A" and "B1" Aquifers from the offsite "A" and "B1" Aquifers, preventing lateral migration of chemicals, and there is an upward gradient across the "B1/B2" Aquitard and the upper "B2" and lower "B2" Aquifers, which encourage upward migration of water and chemicals, keeping them in the enclosed "A" and "B1" Aquifers.</p>

## 2008 Annual Report Remedy Performance Checklist

<p><b>C. Source Control Remedies</b></p> <p>What are the remedial goals for source control?</p> <p>Elaborate on basis for determining progress or lack of progress toward these goals:</p>
<p><b>XI. PROJECTIONS</b></p>
<p><u>Administrative Issues</u></p> <p>Dates of next monitoring and sampling events for next annual reporting period:</p> <p>March 26 and November 19, 2009 – Semiannual water elevation measurement events.</p> <p>May 28 and August 27, 2009 – Water elevation measurement events for the slurry wall and vertical well pairs.</p> <p>November 2009 – Annual groundwater monitoring for site-specific wells.</p>
<p><b>A. Groundwater Remedies - Projections for the upcoming year and long-term</b> (Check all that apply)</p>
<p><u>Remedy Projections for the upcoming year (2009)</u></p> <p><input type="checkbox"/> No significant changes projected.</p> <p><input type="checkbox"/> Groundwater remedy will be converted to monitored natural attenuation. Target date:</p> <p><input type="checkbox"/> Groundwater Pump &amp; Treat will be shut down. Target date:</p> <p><input type="checkbox"/> Groundwater cleanup standards to be modified. Target date:</p> <p><input checked="" type="checkbox"/> PRP will request remedy modification. Target date of request: Work Plan for oxidation pilot test was submitted December 1, 2008. Pilot test will be implemented after EPA's approval.</p> <p><input type="checkbox"/> Change in the number of monitoring wells. <input type="checkbox"/> Increasing or <input type="checkbox"/> decreasing? Target date:</p> <p><input checked="" type="checkbox"/> Change in the number and/or types of analytes being analyzed. <input checked="" type="checkbox"/> Increasing or <input type="checkbox"/> decreasing? Target date: In a subset of wells after implementation of pilot test.</p> <p><input checked="" type="checkbox"/> Change in groundwater extraction system. Expansion or minimization (i.e., number of extraction wells and/or pumping rate)? Target date: Remediation Process Optimization (RPO) report and Work Plan for Pilot Study were submitted on August 29, 2008, and December 1, 2008, respectively. The recommended change to the treatment system will be implemented after EPA's approval.</p> <p><input type="checkbox"/> Modification on groundwater treatment? Elaborate below. Target date:</p> <p><input type="checkbox"/> Change in discharge location. Target date:</p> <p><input type="checkbox"/> Other modification(s) anticipated: _____ Elaborate below. Target date:</p>
<p>Elaborate on Remedy Projections:</p>
<p><u>Remedy Projections for the long-term</u> (Check all that apply)</p> <p><input checked="" type="checkbox"/> No significant changes projected.</p> <p><input type="checkbox"/> Groundwater remedy will be converted to monitored natural attenuation. Target date:</p> <p><input type="checkbox"/> Groundwater Pump &amp; Treat will be shut down. Target date:</p> <p><input type="checkbox"/> Groundwater cleanup standards to be modified. Target date:</p> <p><input type="checkbox"/> PRP will request remedy modification. Target date of request:</p> <p><input type="checkbox"/> Change in the number of monitoring wells. <input type="checkbox"/> Increasing or <input type="checkbox"/> decreasing? Target date:</p> <p><input type="checkbox"/> Change in the number and/or types of analytes being analyzed. <input type="checkbox"/> Increasing or <input type="checkbox"/> decreasing? Target date:</p>

## 2008 Annual Report Remedy Performance Checklist

<input type="checkbox"/> Change in groundwater extraction system. Expansion or minimization (i.e., number of extraction wells and/or pumping rate)? Target date: <input type="checkbox"/> Modification on groundwater treatment? Elaborate below. Target date: <input type="checkbox"/> Change in discharge location. Target date: <input type="checkbox"/> Other modification(s) anticipated: _____ Elaborate below. Target date:
Elaborate on Remedy Projections:
<b>B. Projections – Slurry Walls (Check all that apply)</b>
<u>Remedy Projections for the upcoming year</u> <input checked="" type="checkbox"/> No significant changes projected. <input type="checkbox"/> PRP will request remedy modification. Target date of request: <input type="checkbox"/> Change in the number of monitoring wells. <input type="checkbox"/> Increasing or <input type="checkbox"/> decreasing? Target date: <input type="checkbox"/> Other modification(s) anticipated: _____ Elaborate below. Target date:
Elaborate on Remedy Projections:
<u>Remedy Projections for the long-term</u> <input checked="" type="checkbox"/> No significant changes projected. <input type="checkbox"/> PRP will request remedy modification. Target date of request: <input type="checkbox"/> Change in the number of monitoring wells. <input type="checkbox"/> Increasing or <input type="checkbox"/> decreasing? Target date: <input type="checkbox"/> Other modification(s) anticipated: _____ Elaborate below. Target date:
Elaborate on Remedy Projections:
<b>C. Projections – Other Remedial Options Being Reviewed to Enhance Cleanup</b>
Progress implementing recommendations from last report or Five-Year Review Has optimization study been implemented or scheduled? <input checked="" type="checkbox"/> Yes; <input type="checkbox"/> No; If Yes, please elaborate.  An optimization report was prepared and submitted to EPA in August 2008. The optimization report suggests modifications to pumping regime within the slurry wall enclosure to optimize mass removal rate, and preparation of a work plan for an alternative remedy pilot study. The work plan was submitted to EPA on December 1, 2008. We are waiting for EPA comments on optimization report and the pilot study.
<b>XII. ADMINISTRATIVE ISSUES</b> <b>Check all that apply:</b>
<input type="checkbox"/> Explanation of Significant Differences in progress <input type="checkbox"/> ROD Amendment in progress <input type="checkbox"/> Site in operational and functional ("shake down") period; <input type="checkbox"/> Notice of Intent to Delete in progress <input type="checkbox"/> Partial site deletion in progress <input type="checkbox"/> TI Waivers <input type="checkbox"/> Other administrative issues:  Date of Next EPA Five-Year Review: September 30, 2009

## 2008 Annual Report Remedy Performance Checklist

### **XII. RECOMMENDATIONS**

Recommendations were included in the August 29, 2008 Remedial Process Optimization report and the December 1, 2008, Work Plan for Pilot Test. The recommended activities will be implemented after EPA's approval of the documents.

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## **APPENDIX B**

# **LABORATORY ANALYTICAL REPORTS**

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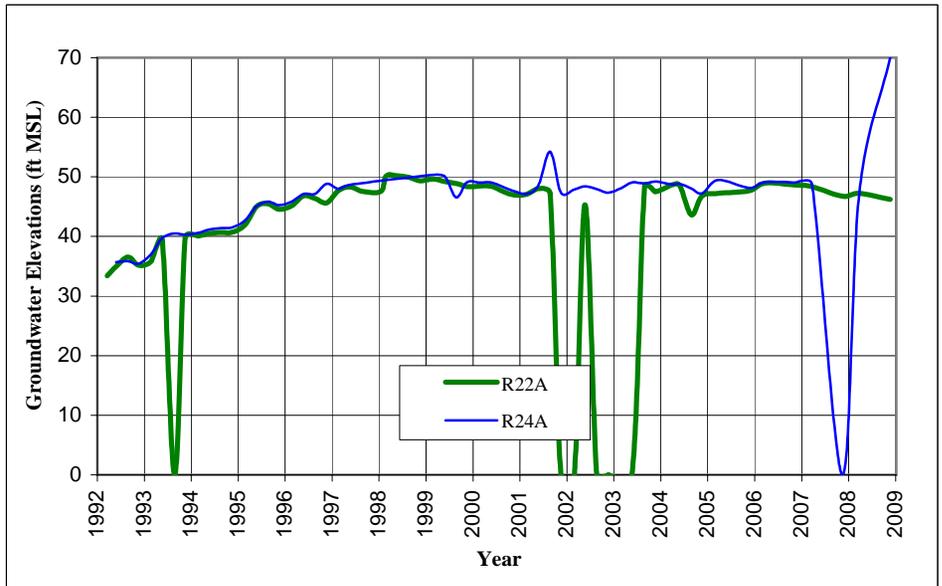
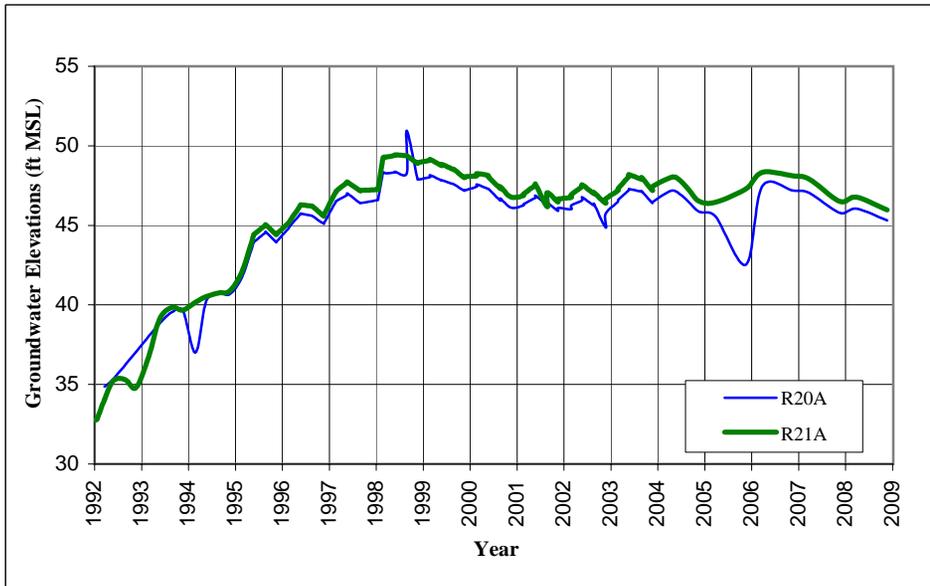
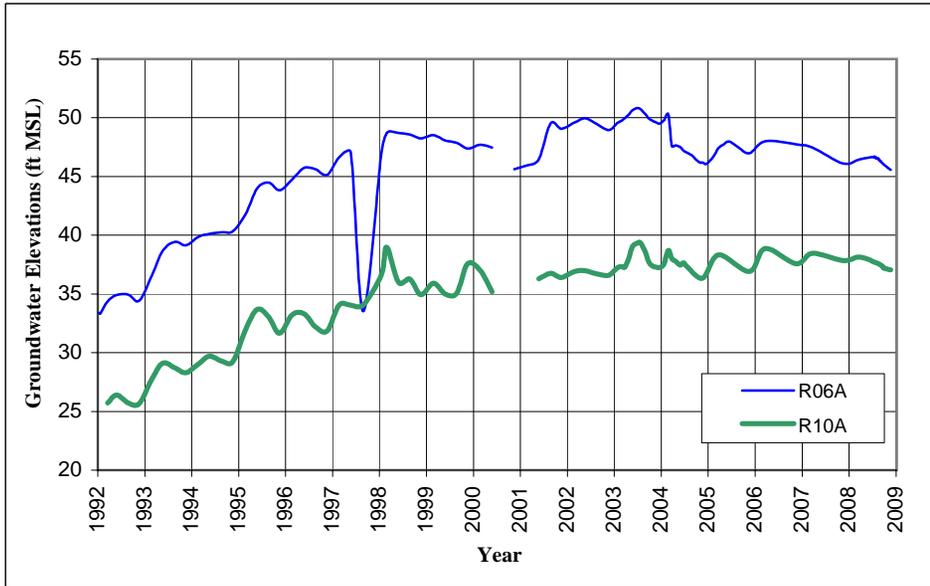
**LABORATORY ANALYTICAL REPORTS ARE NOT INCLUDED IN  
THIS TRANSMITTAL BUT ARE AVAILABLE UPON REQUEST**

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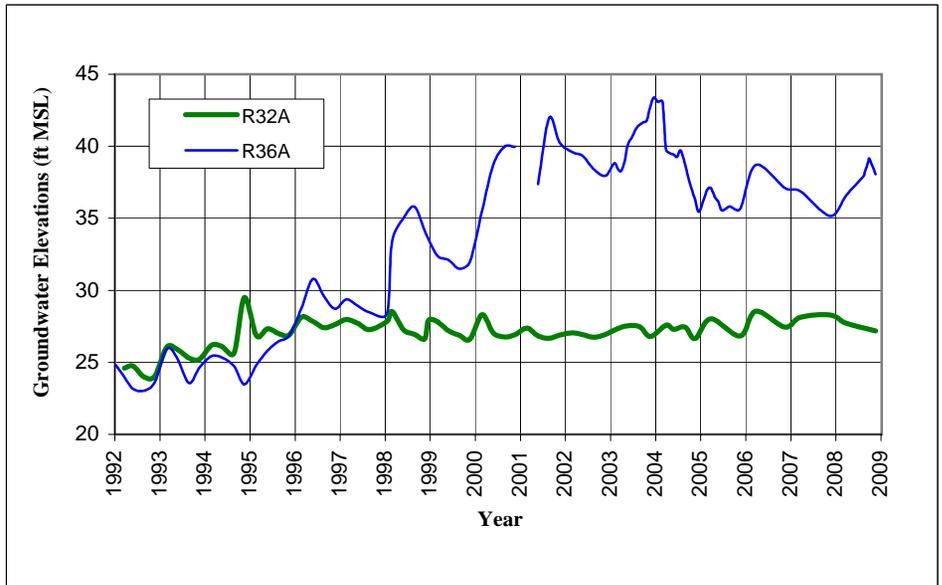
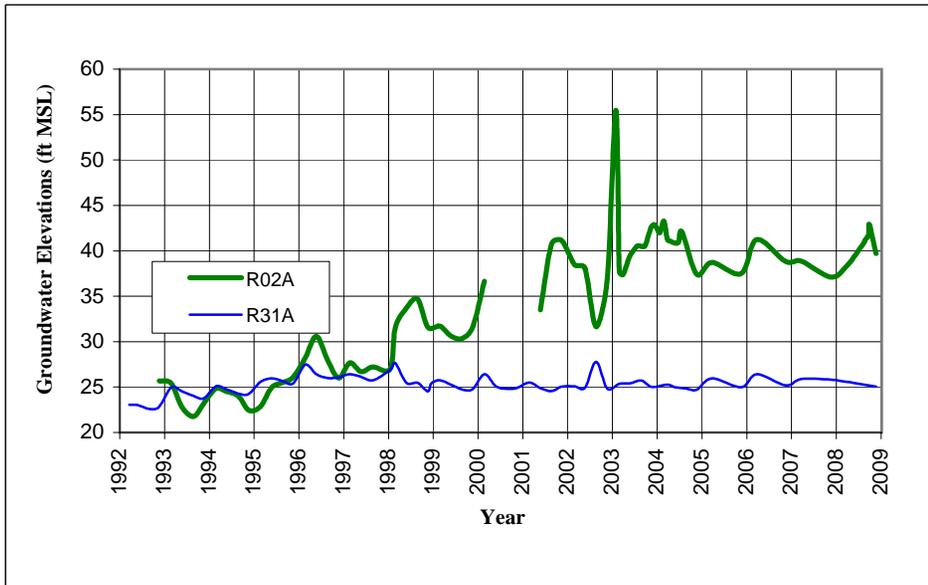
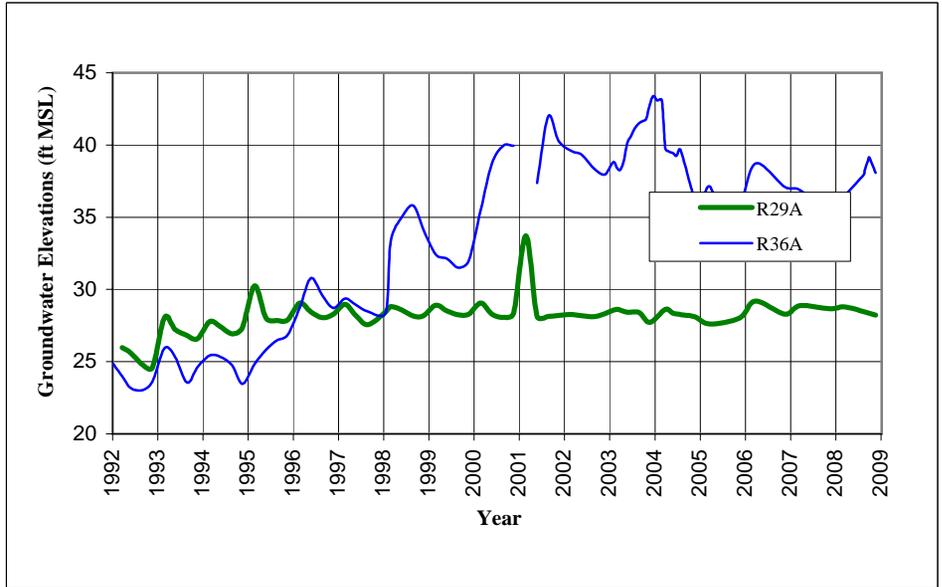
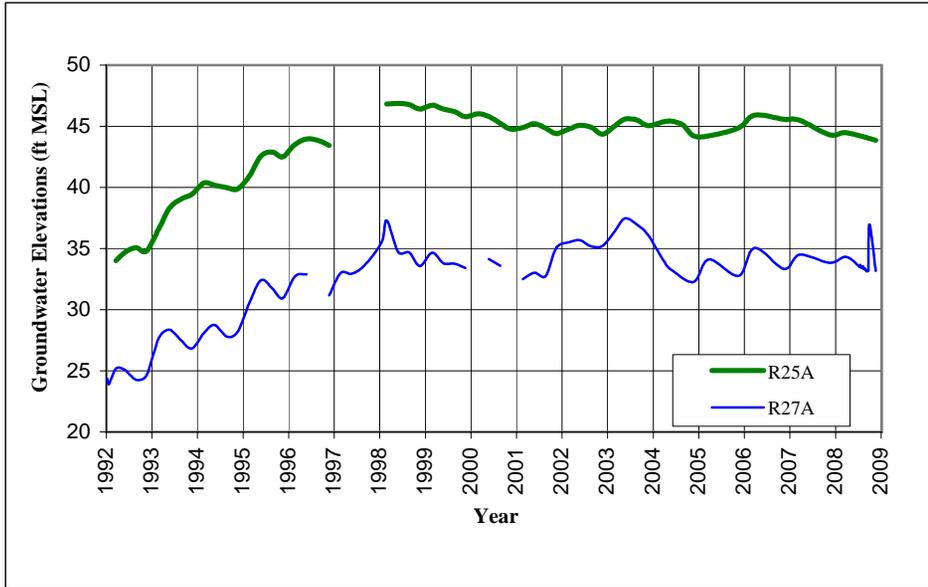
## APPENDIX C

# GROUNDWATER HYDROGRAPHS

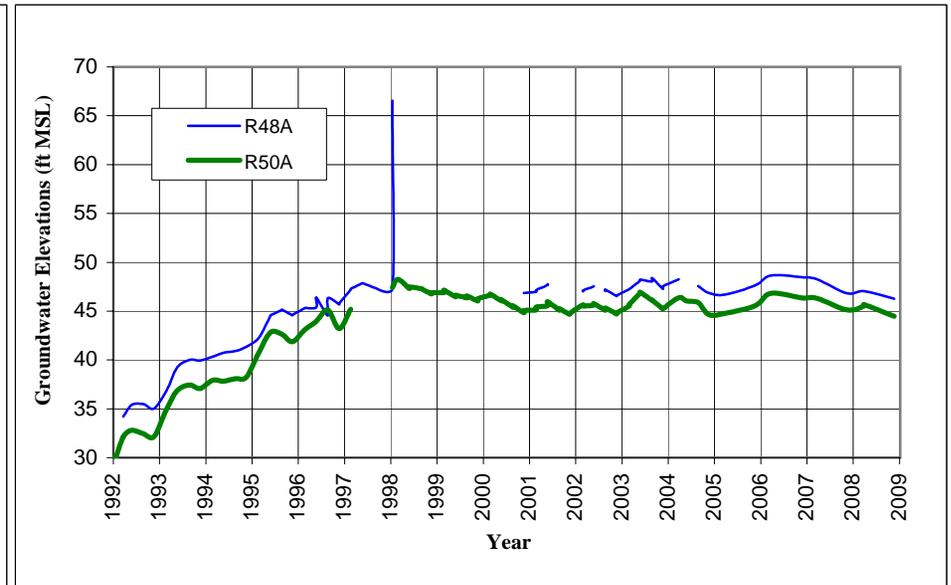
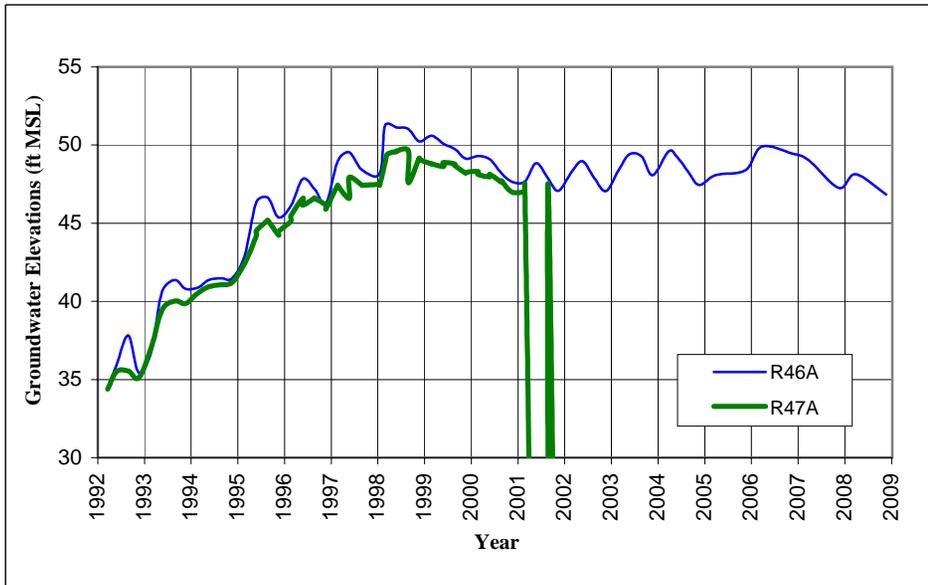
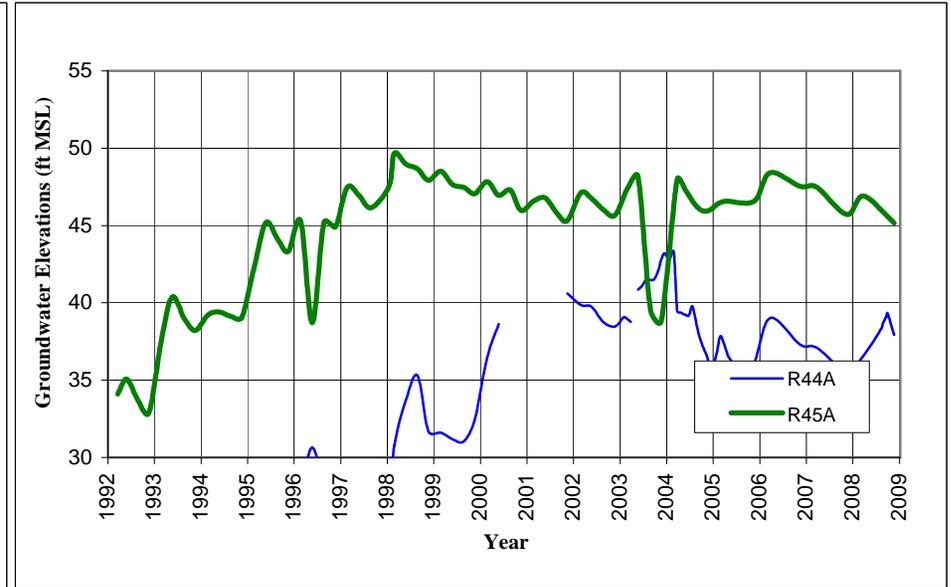
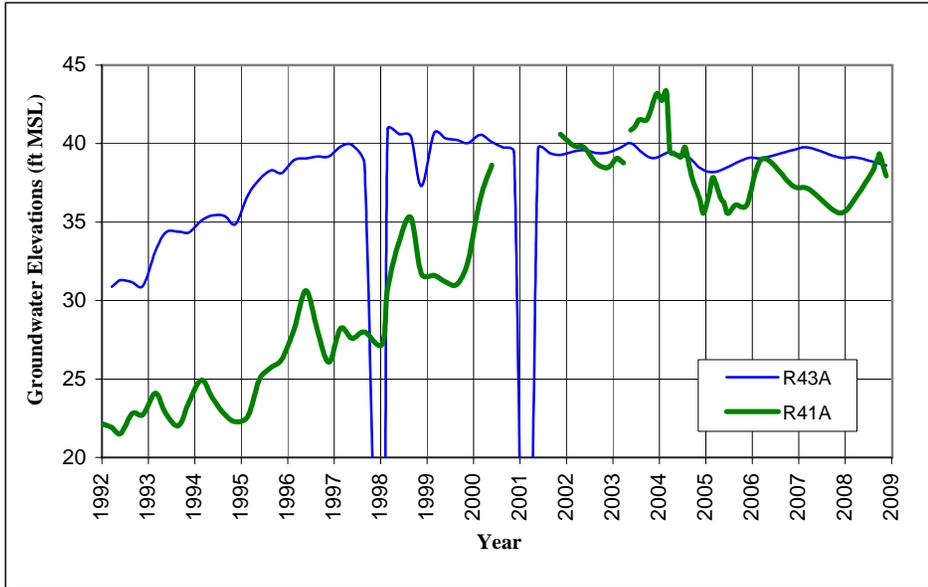
## APPENDIX C HISTORICAL GROUNDWATER ELEVATIONS IN "A" AQUIFER WELLS



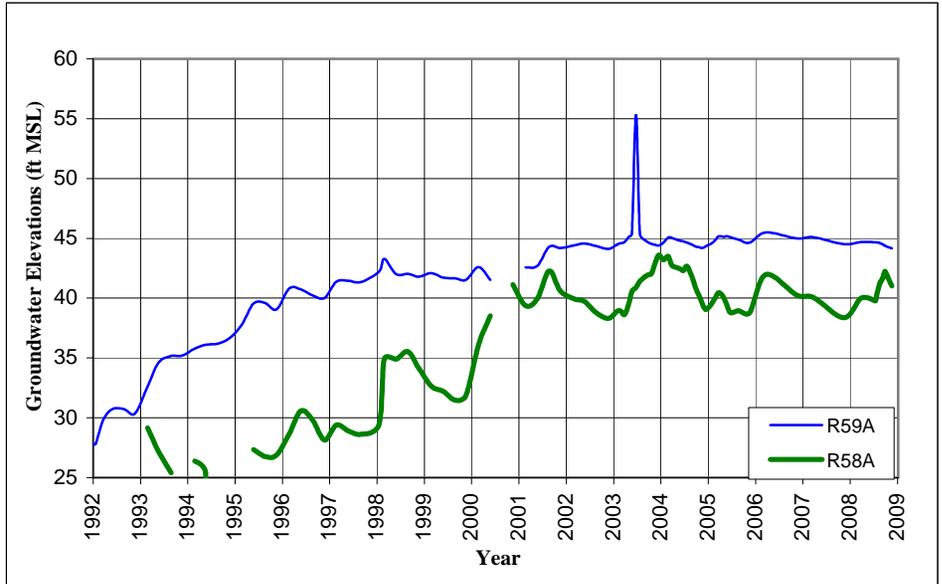
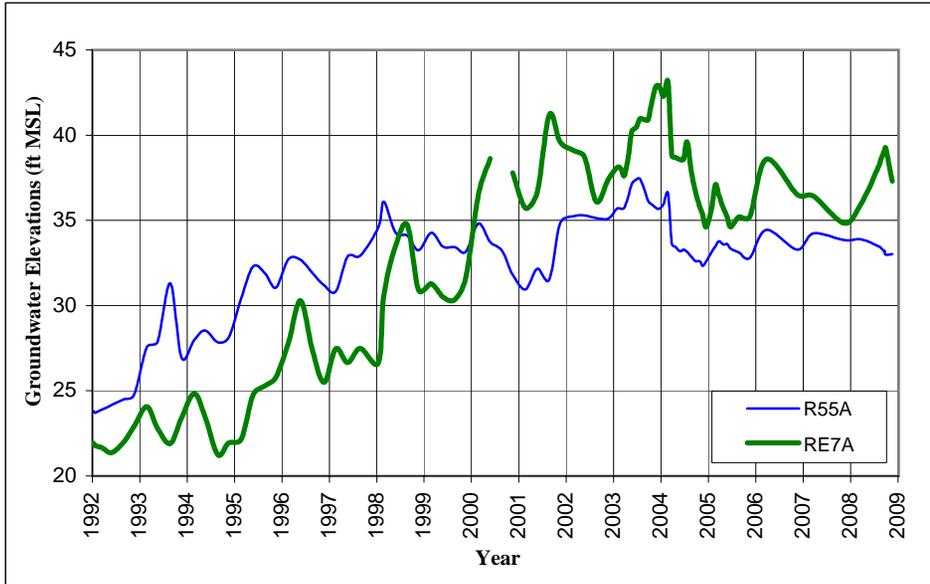
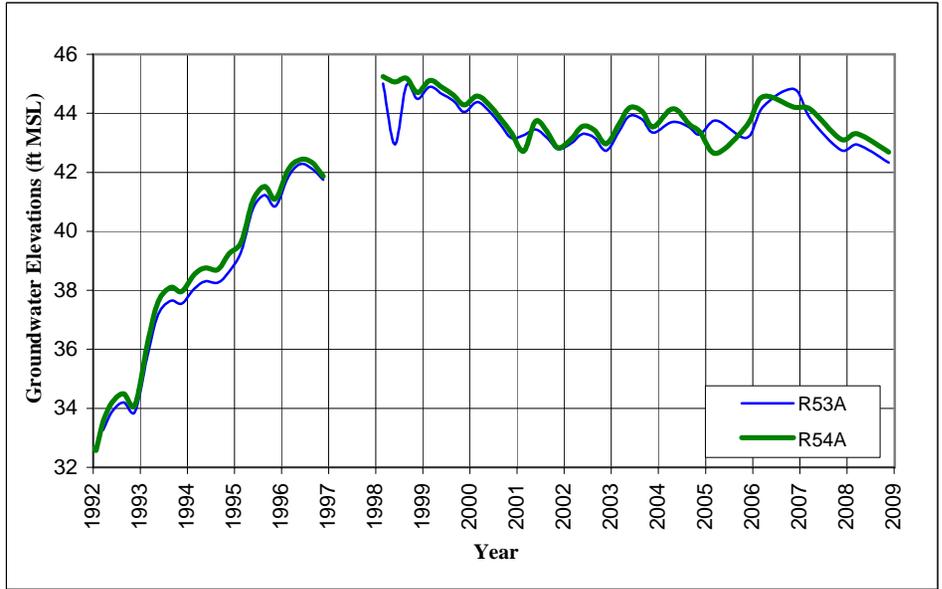
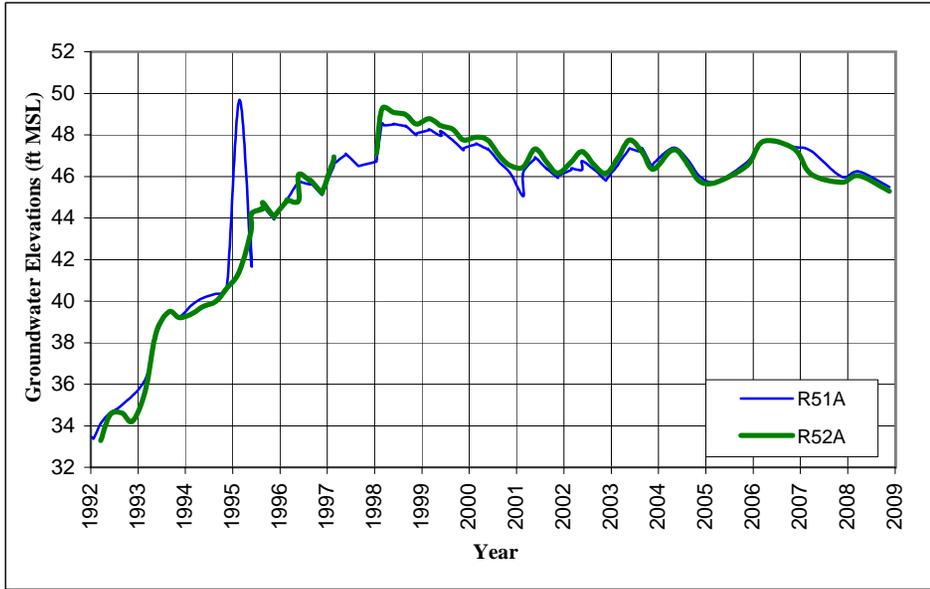
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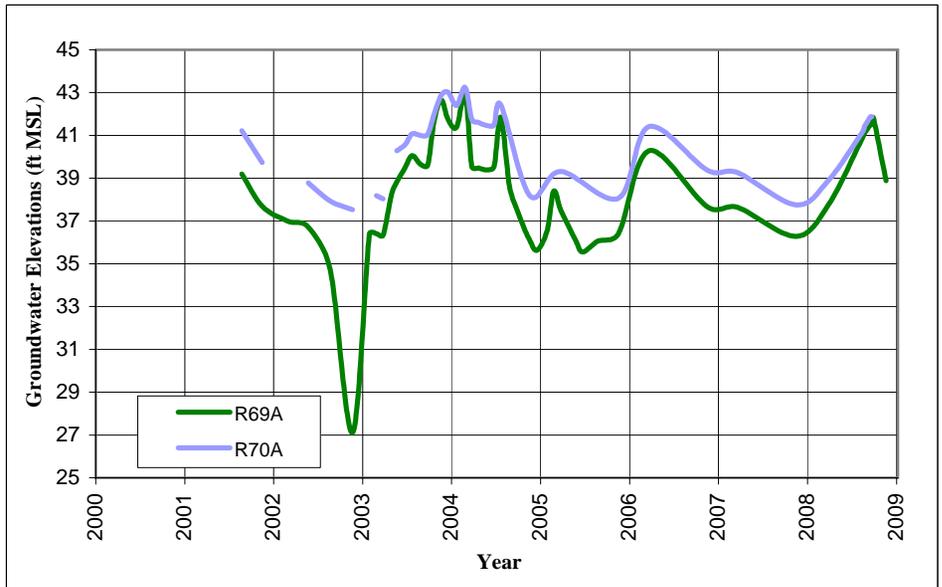
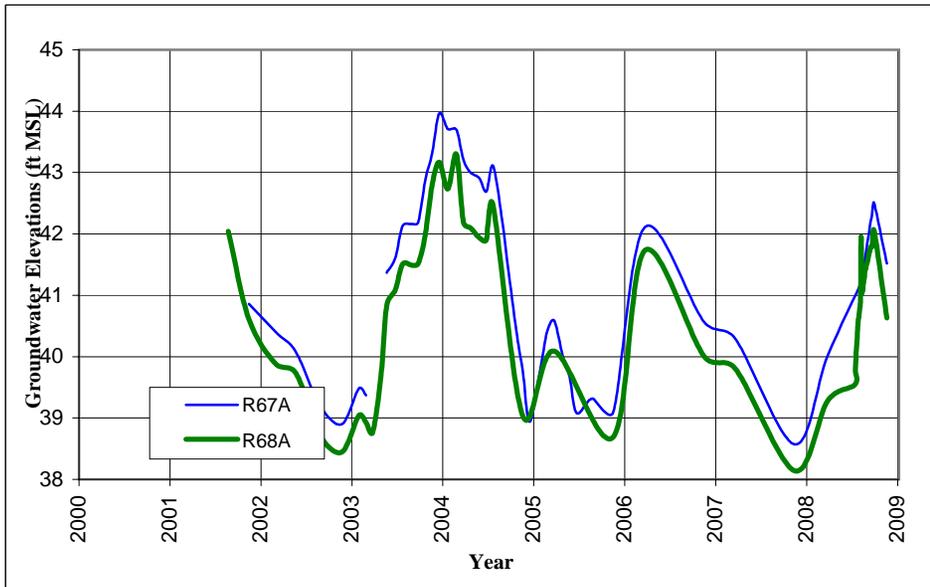
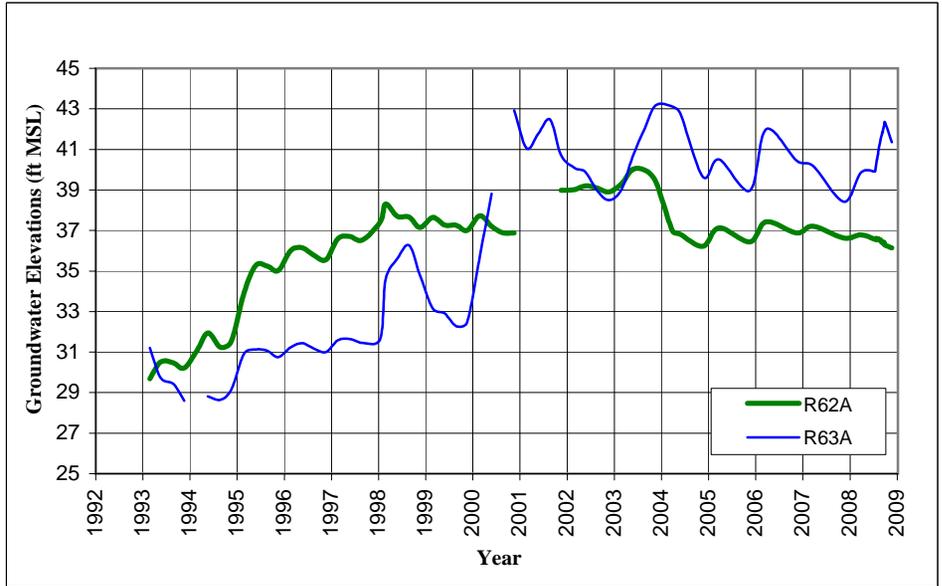
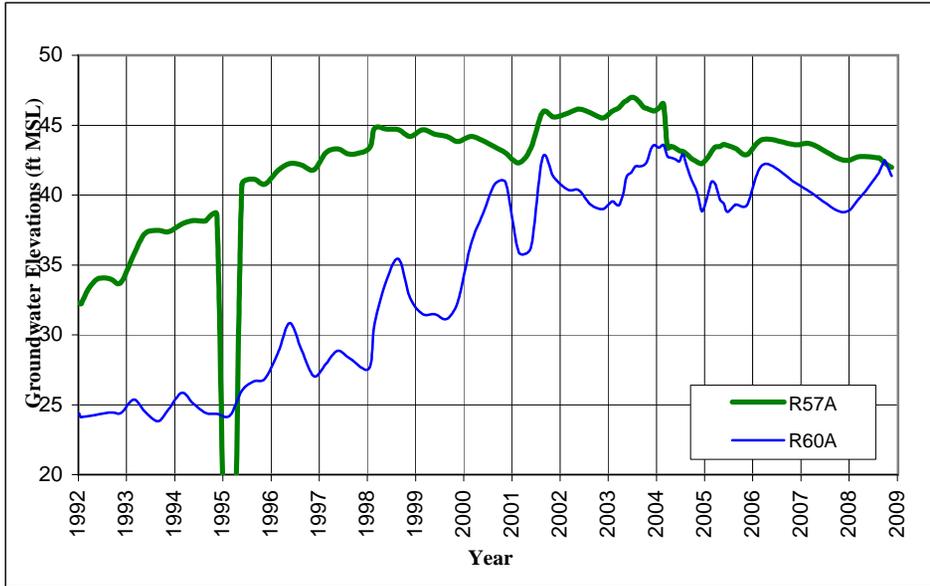
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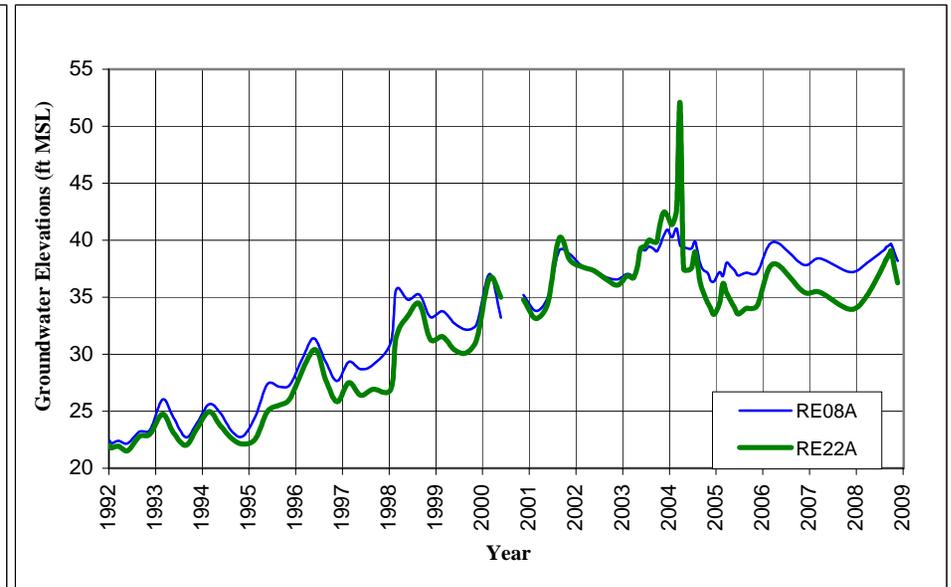
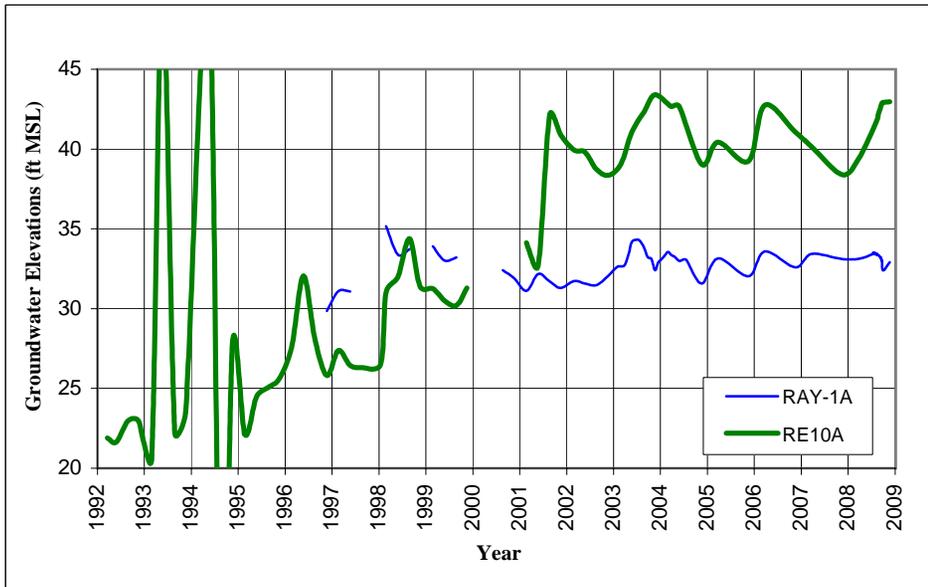
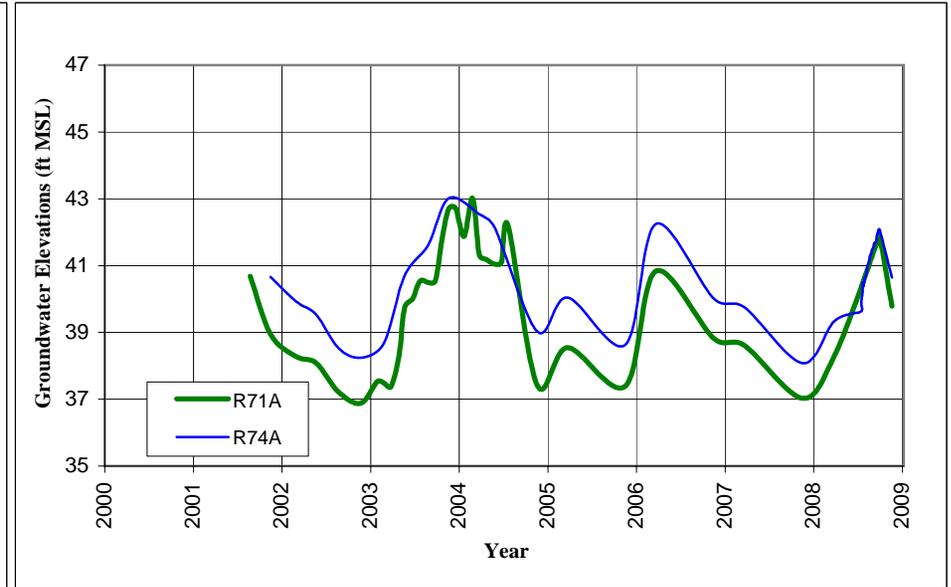
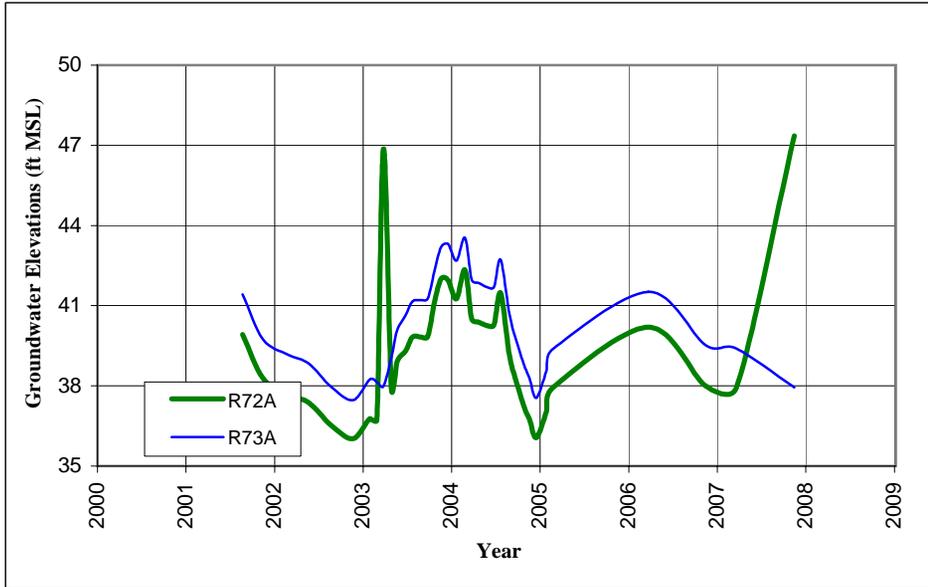
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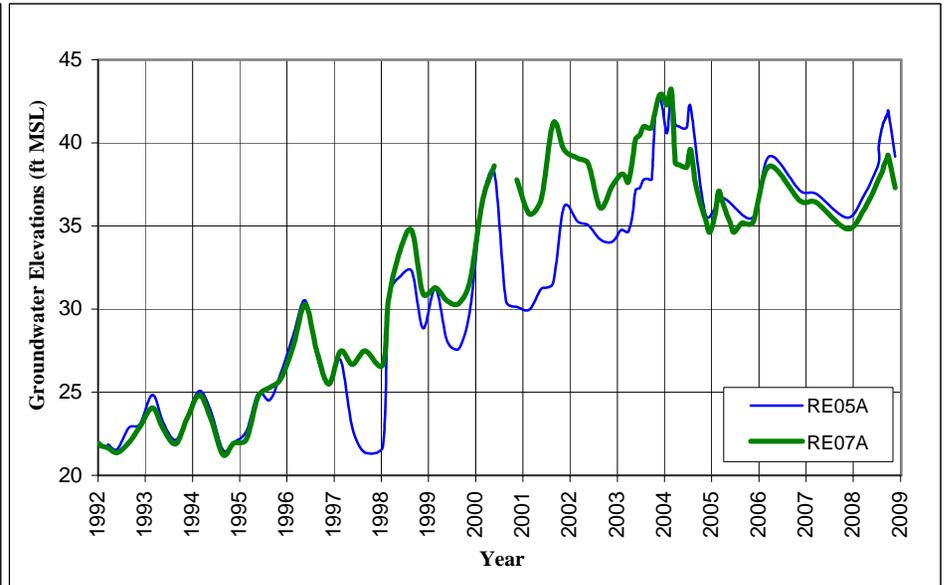
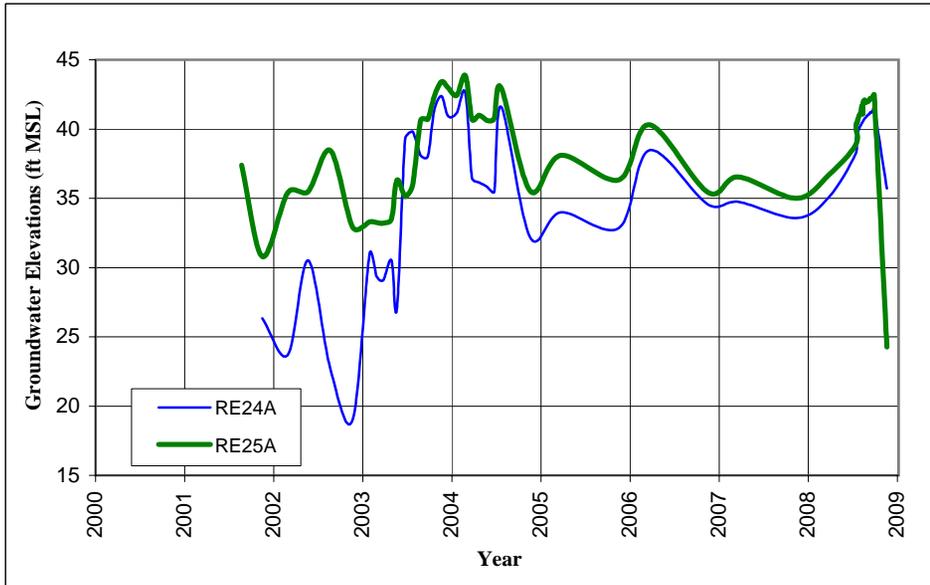
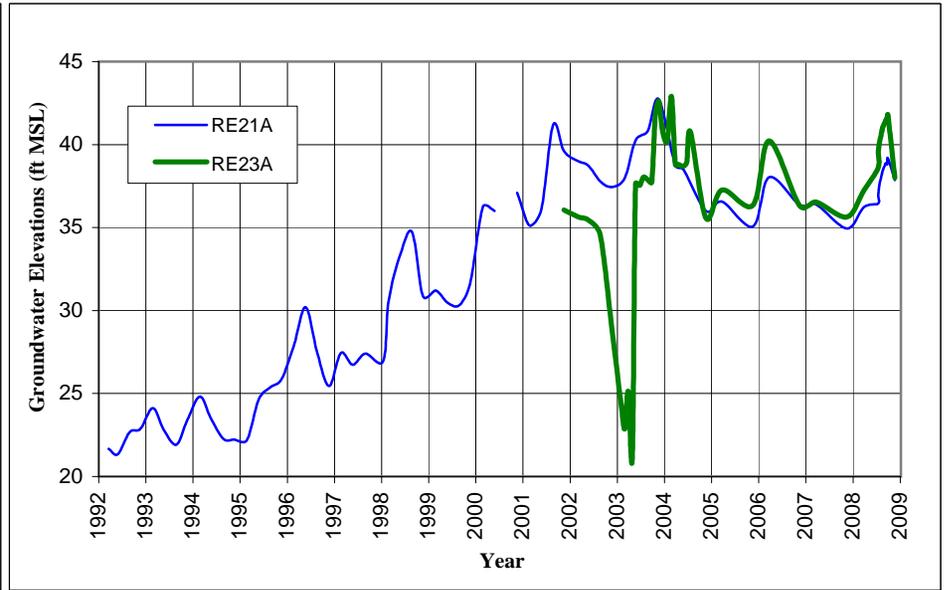
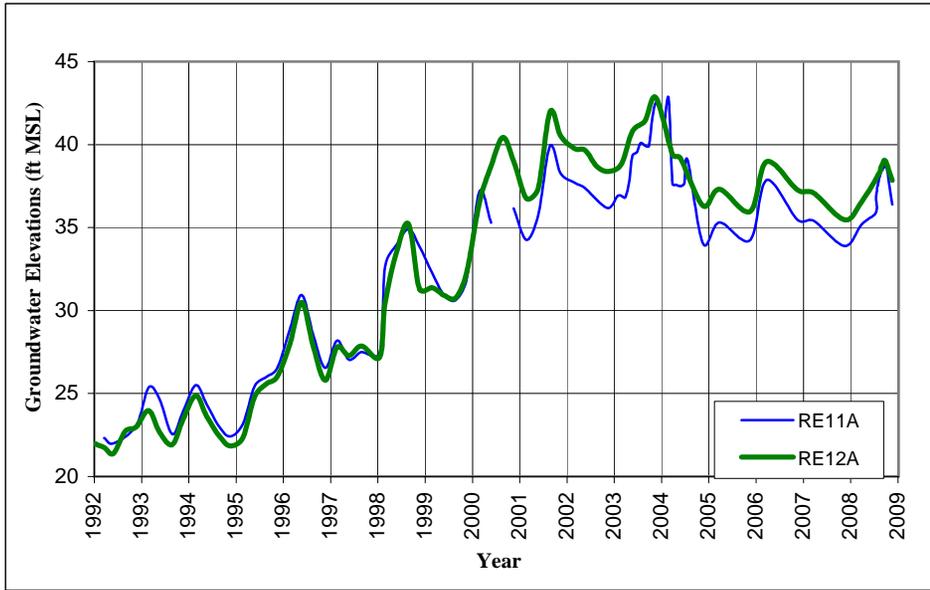
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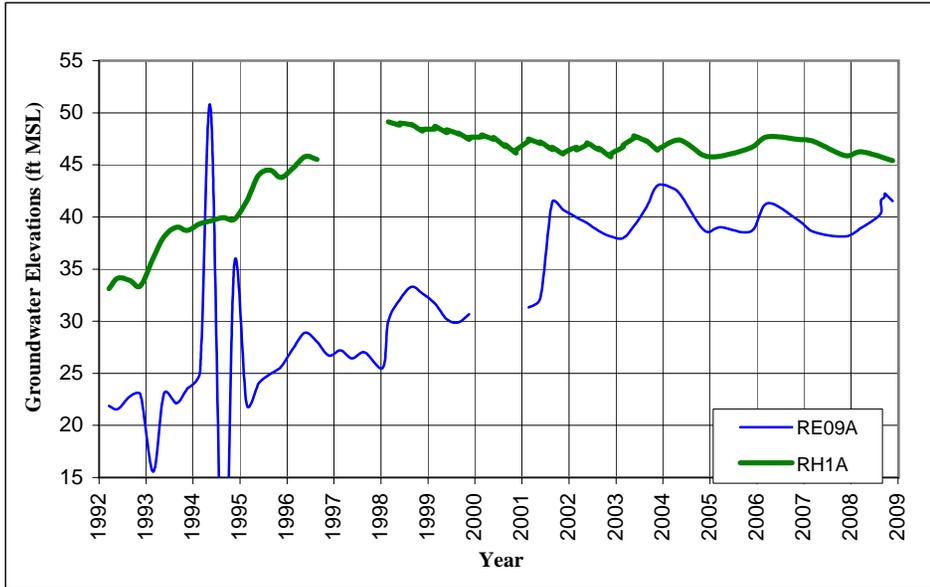
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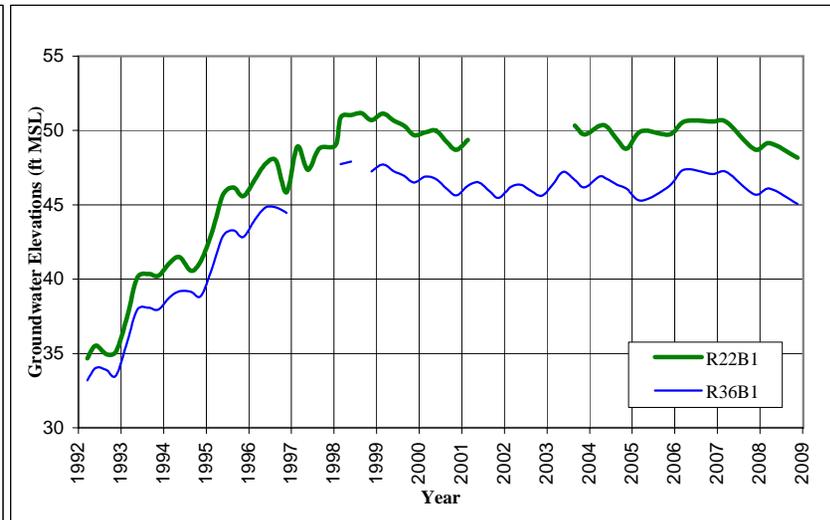
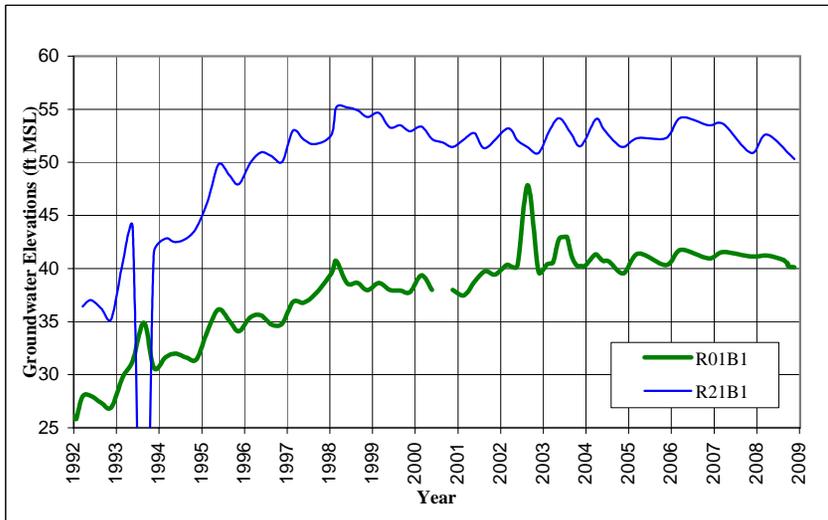
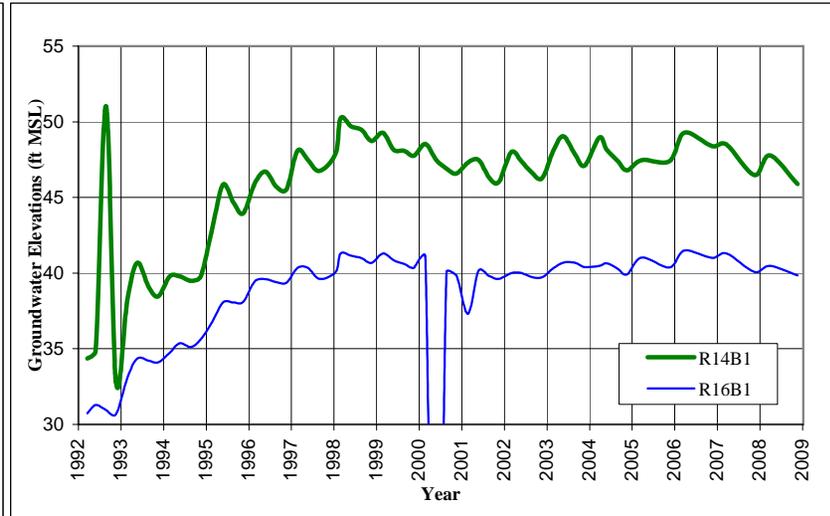
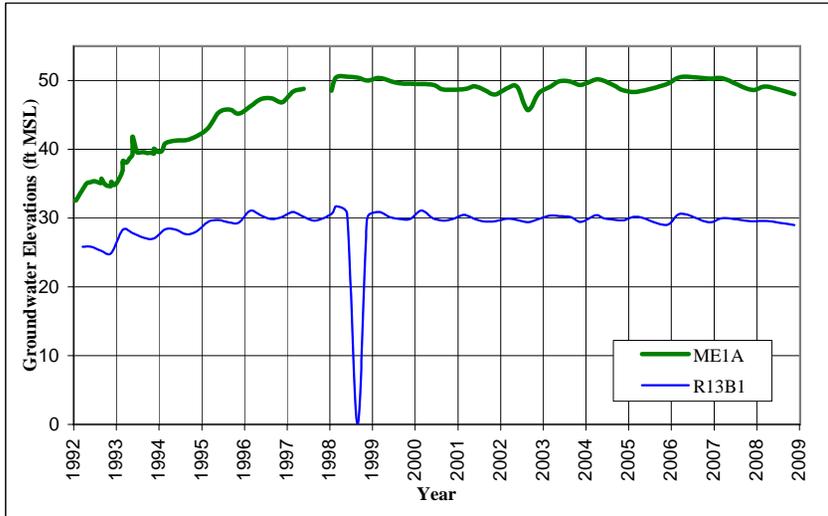
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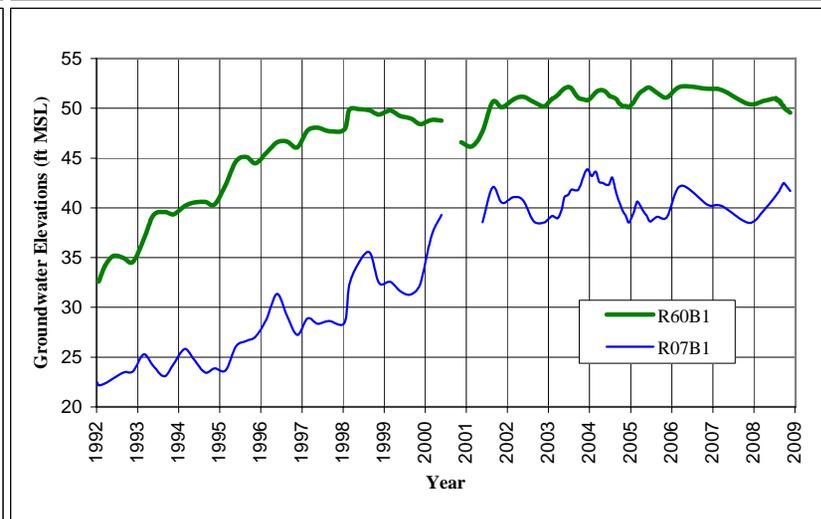
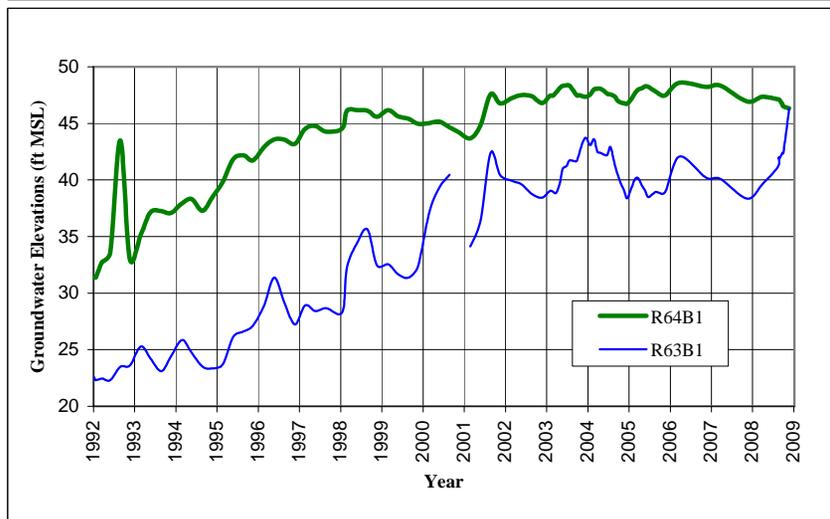
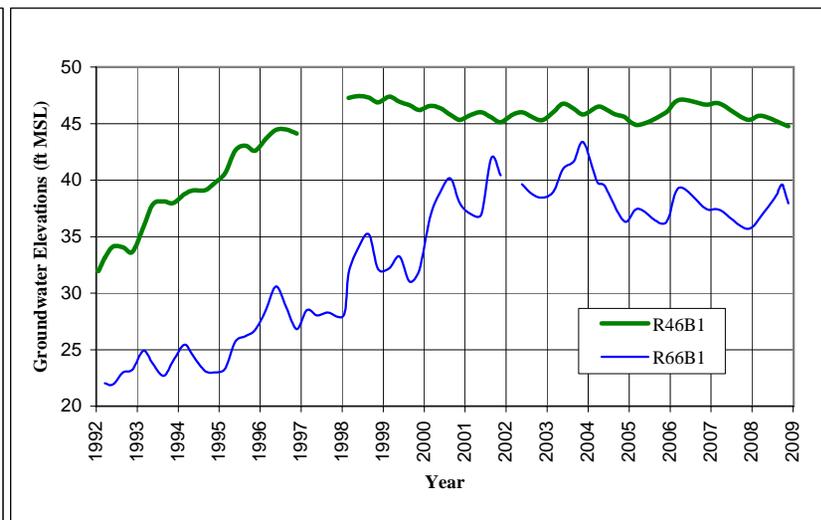
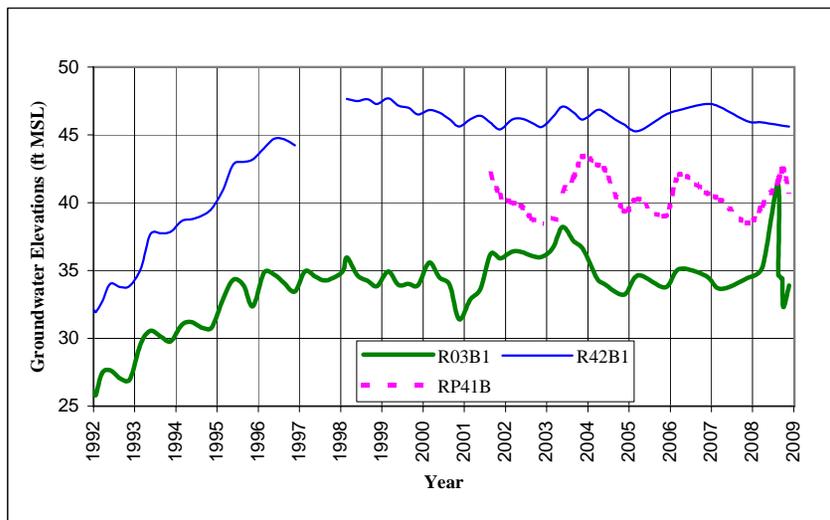
**APPENDIX C**  
**HISTORICAL GROUNDWATER ELEVATIONS IN "A" AQUIFER WELLS**



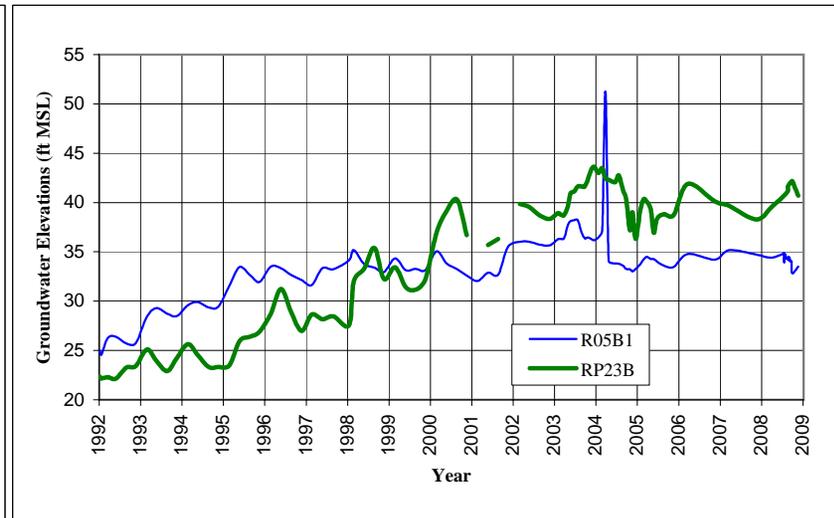
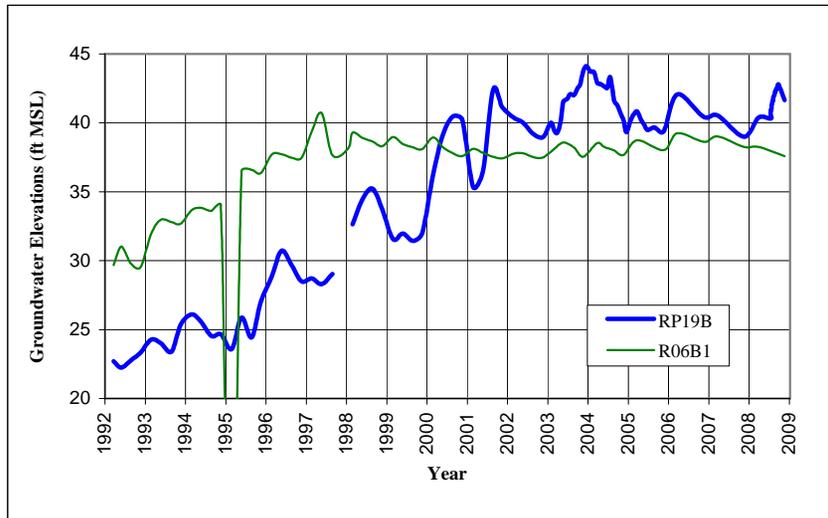
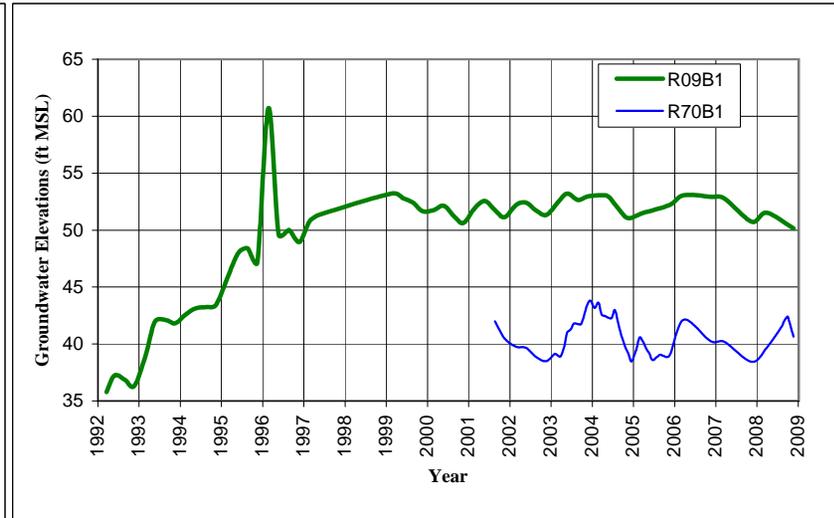
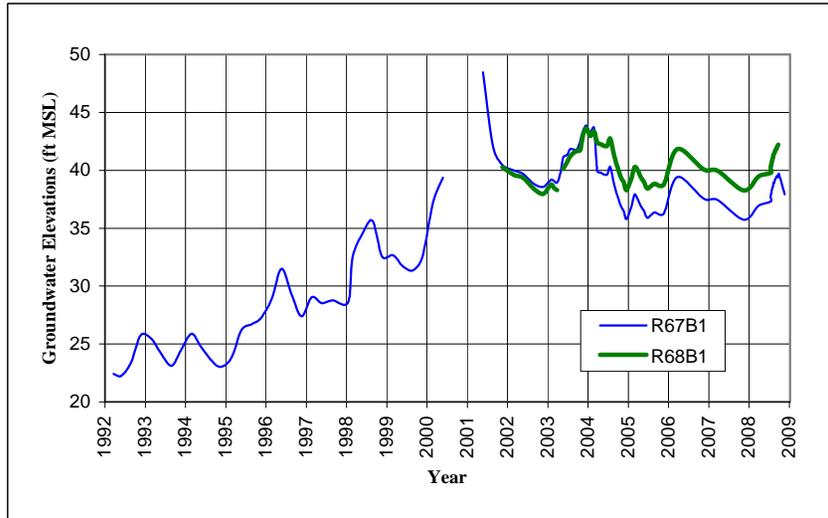
**APPENDIX C  
HISTORICAL GROUNDWATER ELEVATIONS IN "B1" AQUIFER WELLS**



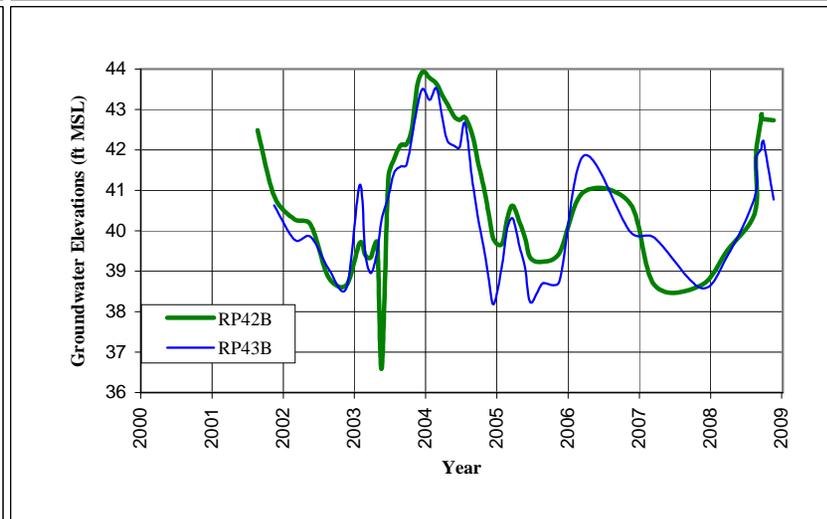
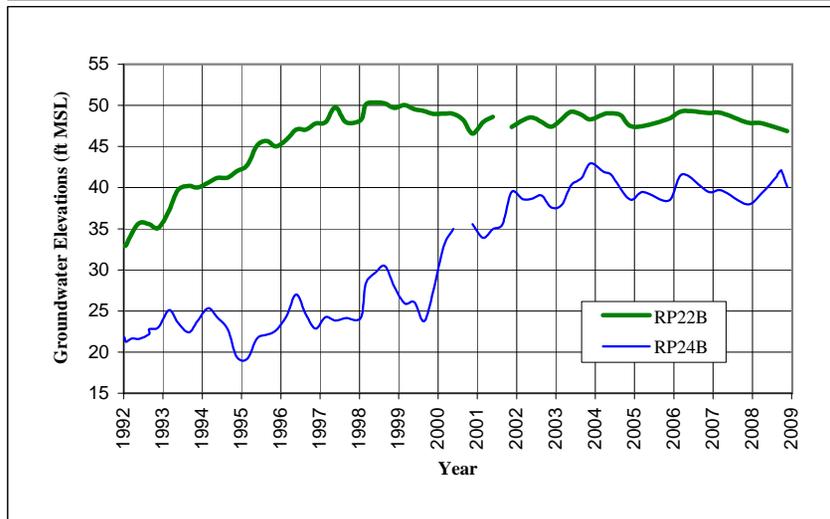
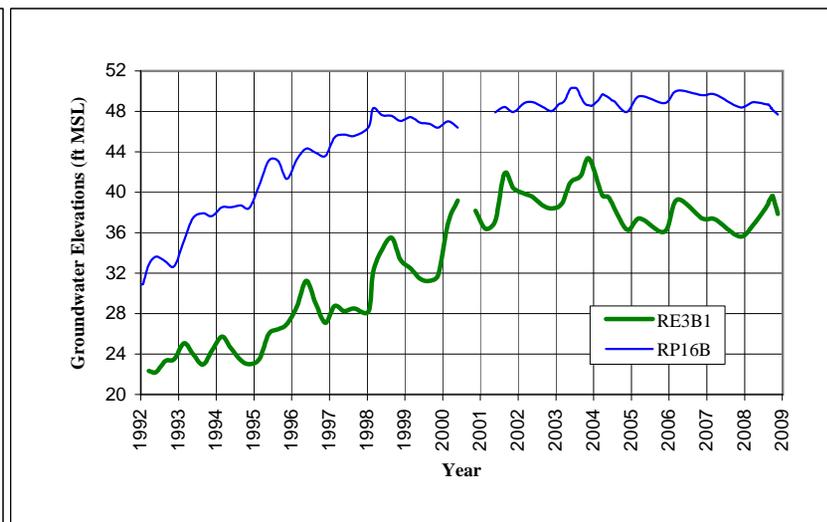
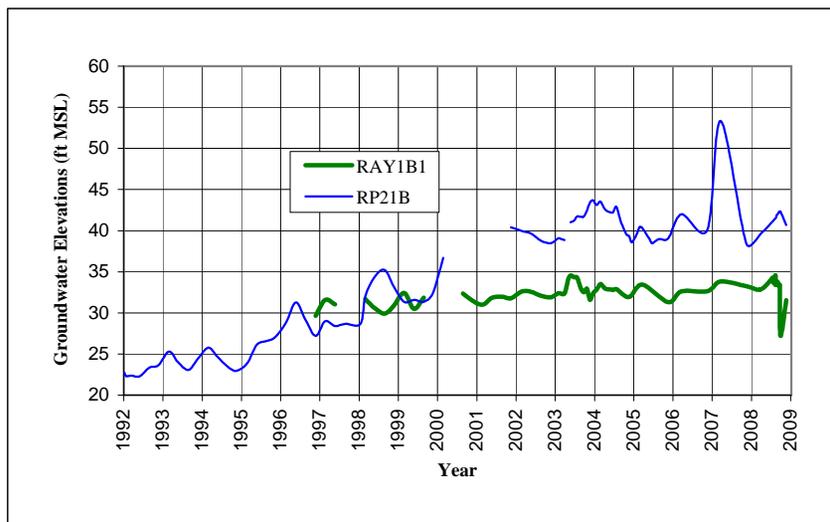
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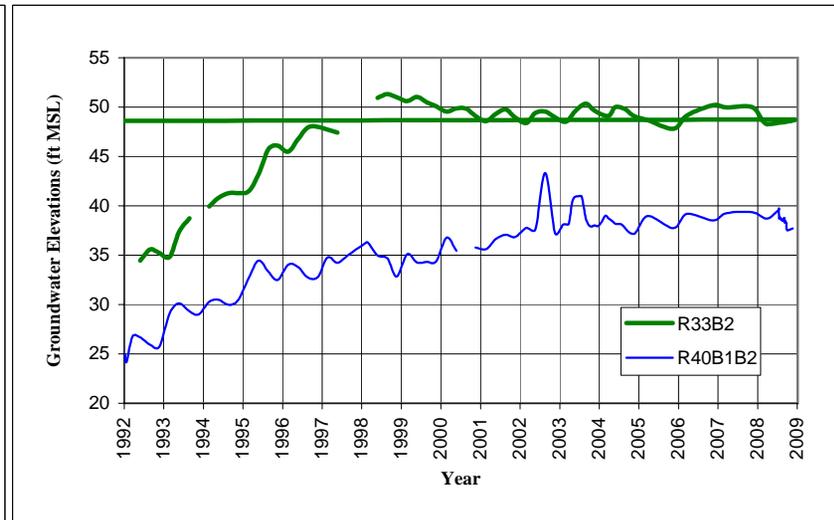
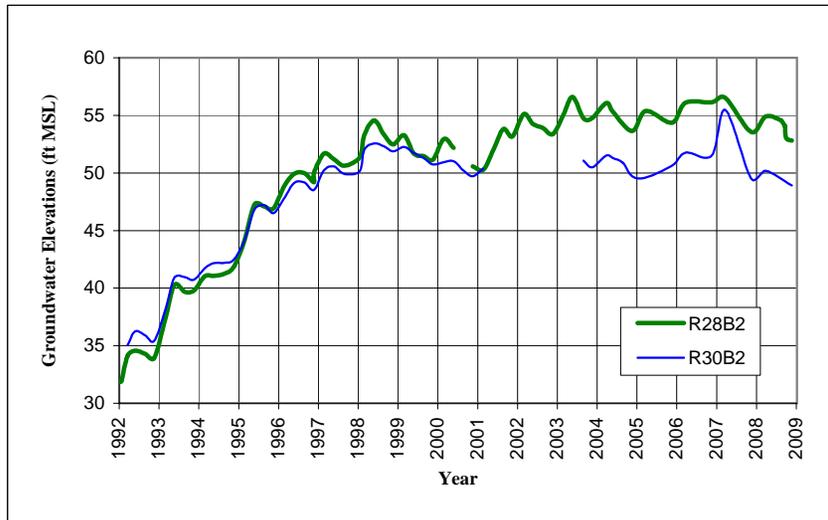
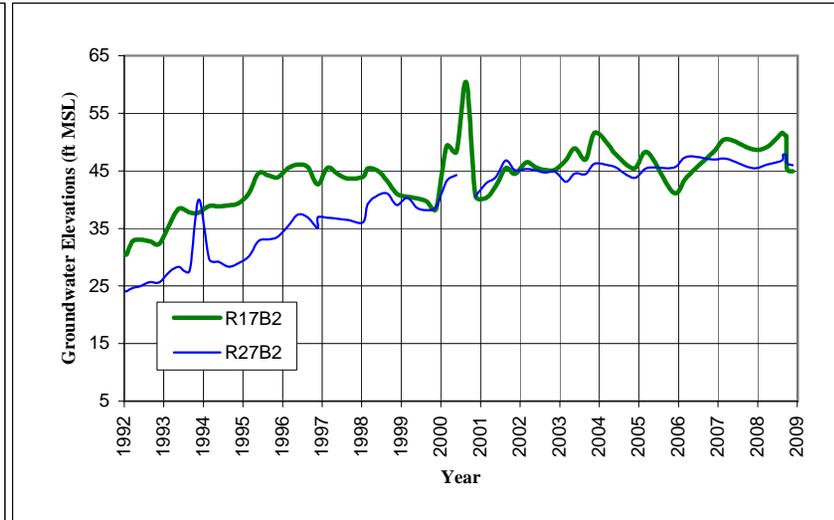
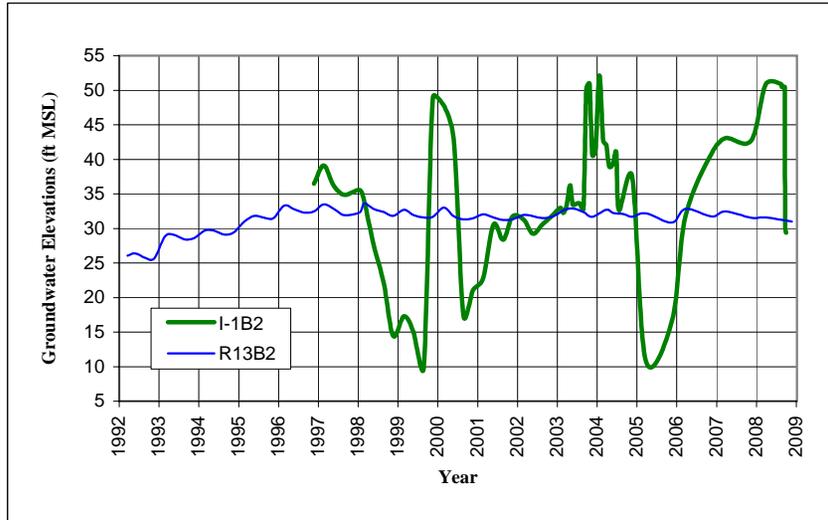
## APPENDIX C HISTORICAL GROUNDWATER ELEVATIONS IN "B1" AQUIFER WELLS



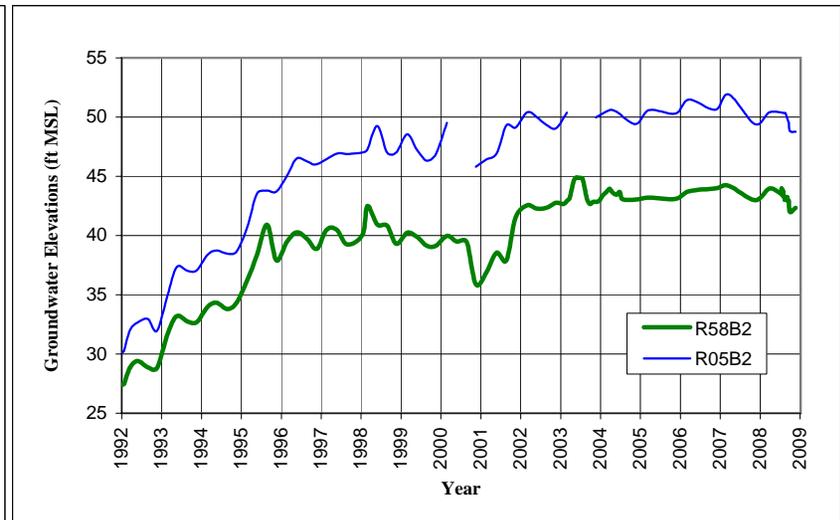
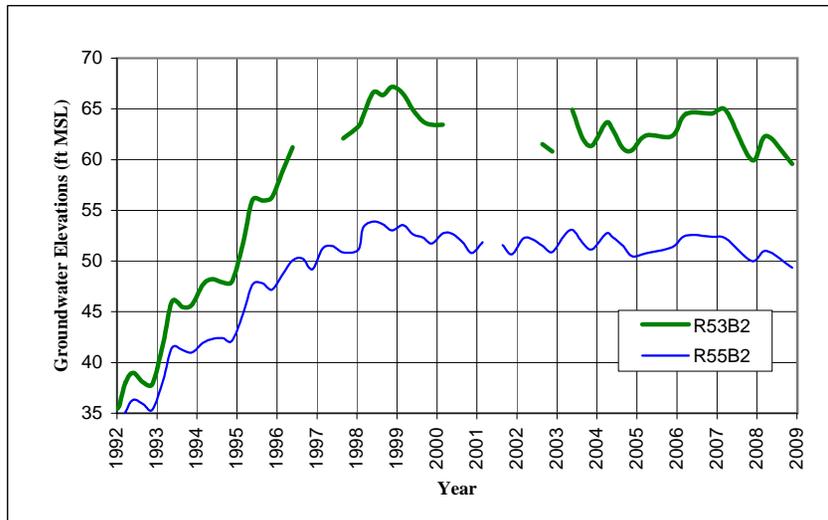
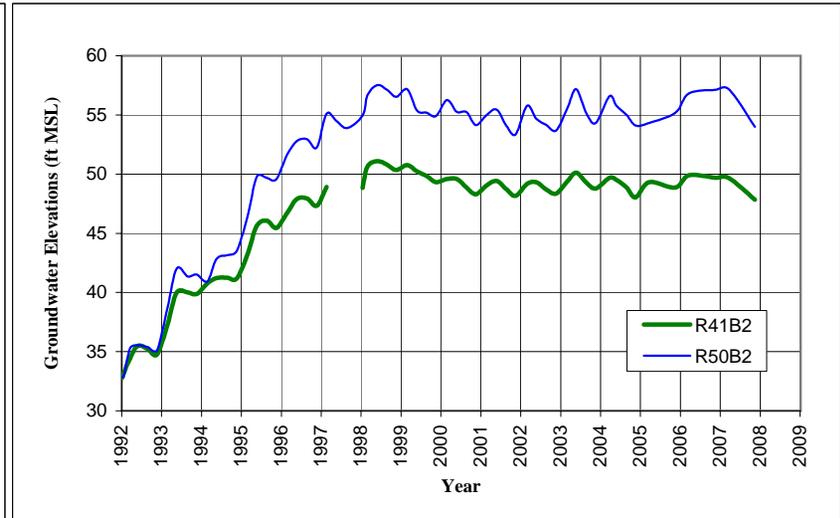
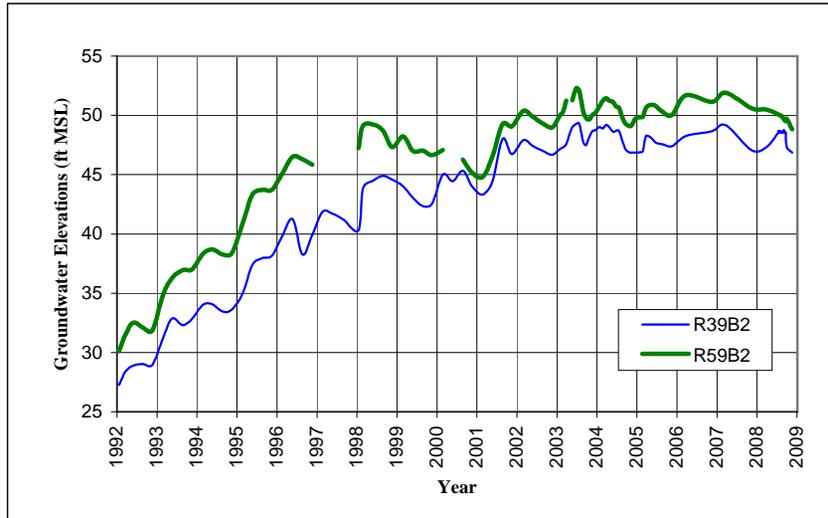
## APPENDIX C HISTORICAL GROUNDWATER ELEVATIONS IN "B1" AQUIFER WELLS



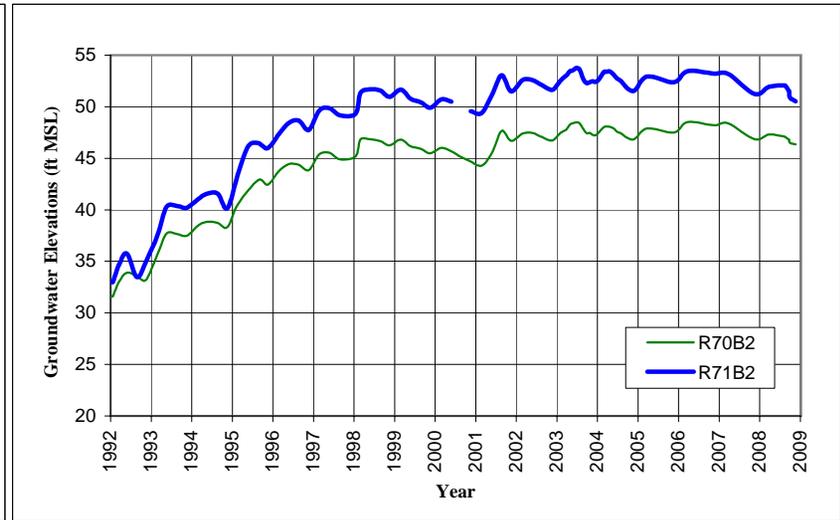
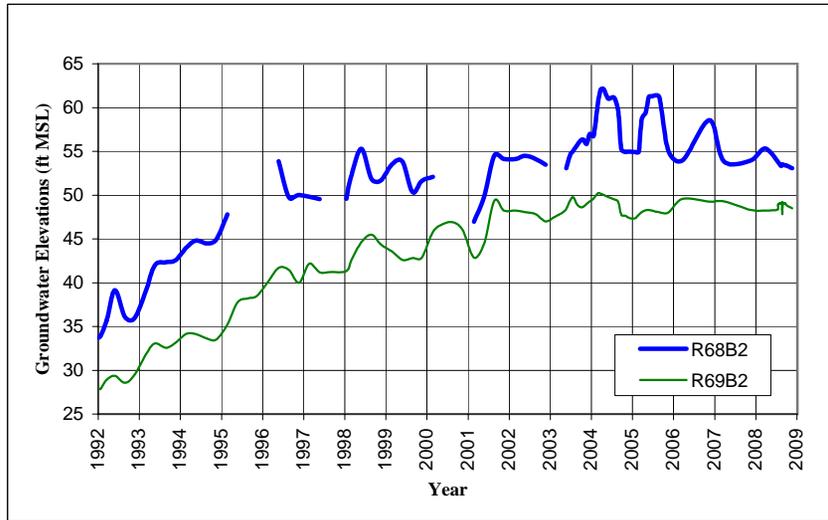
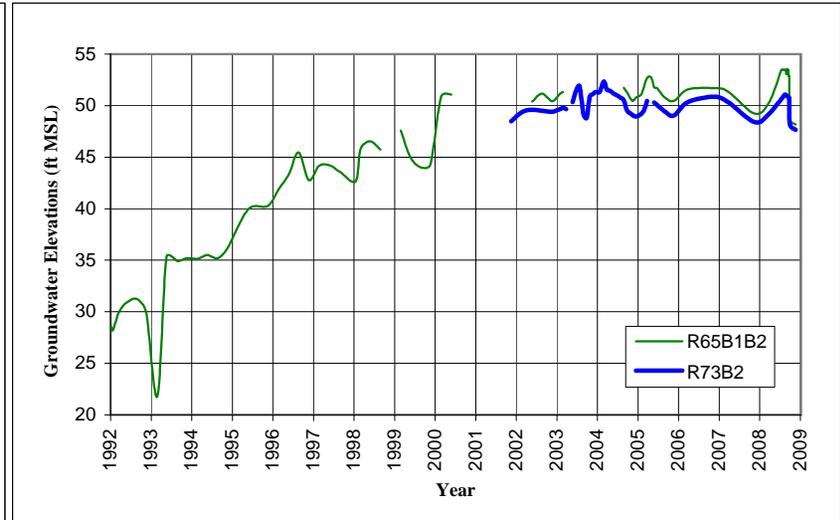
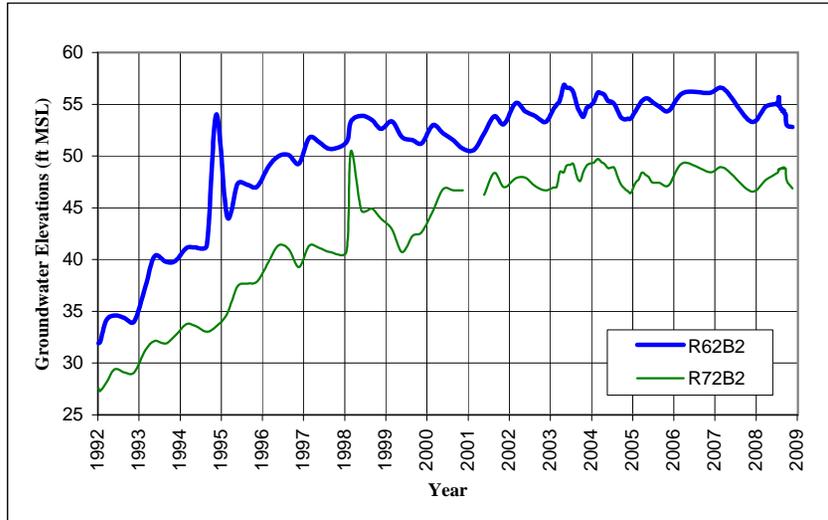
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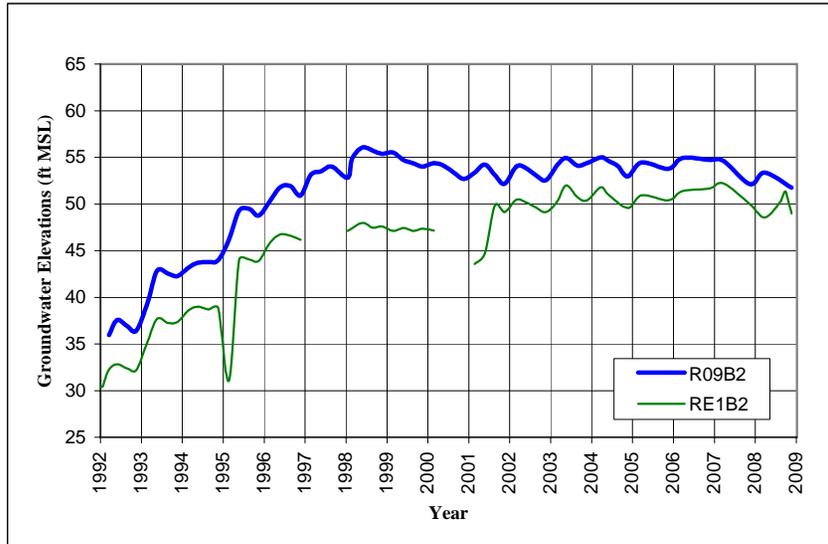
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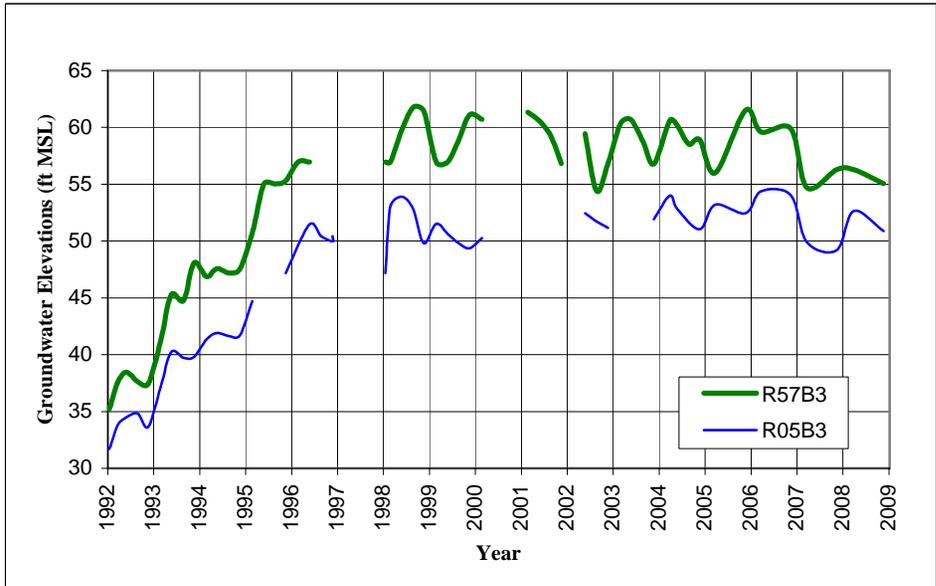
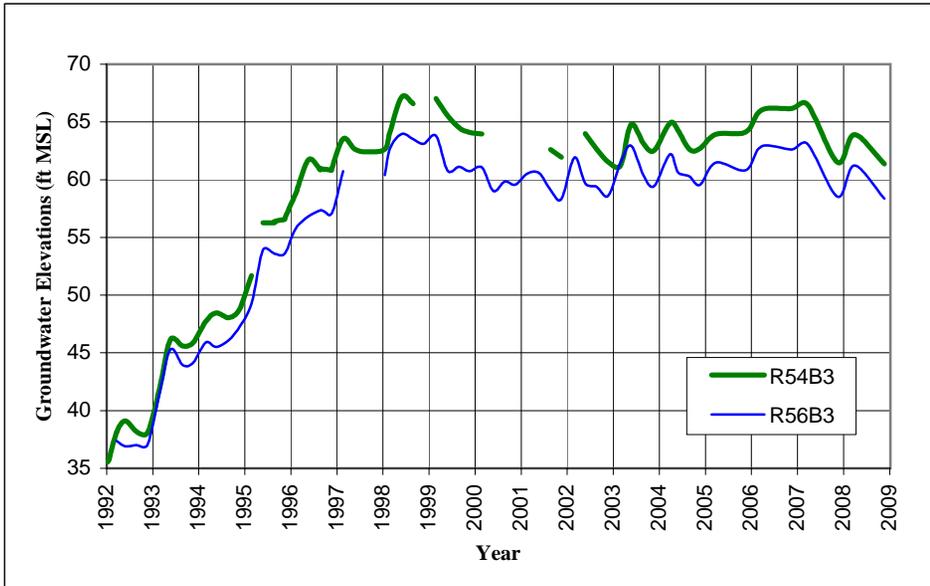
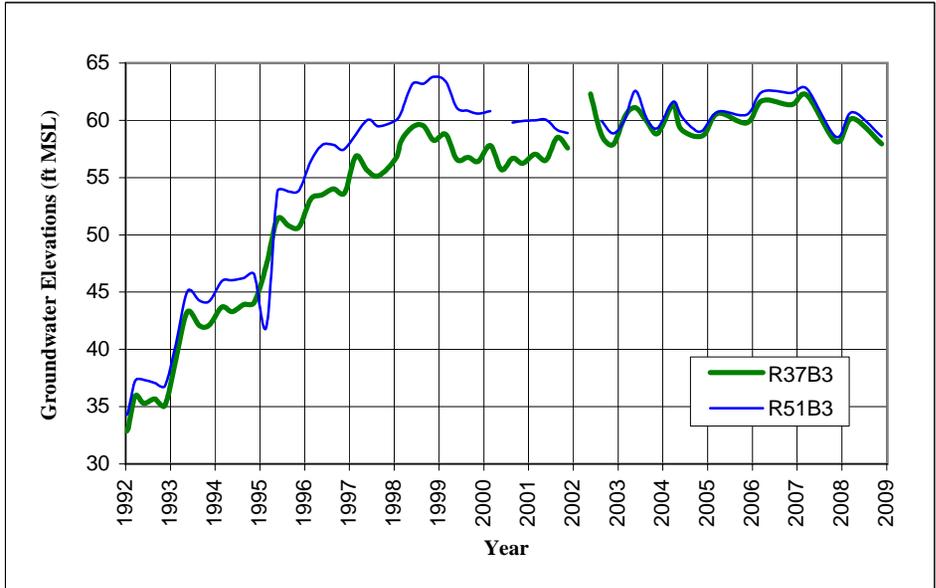
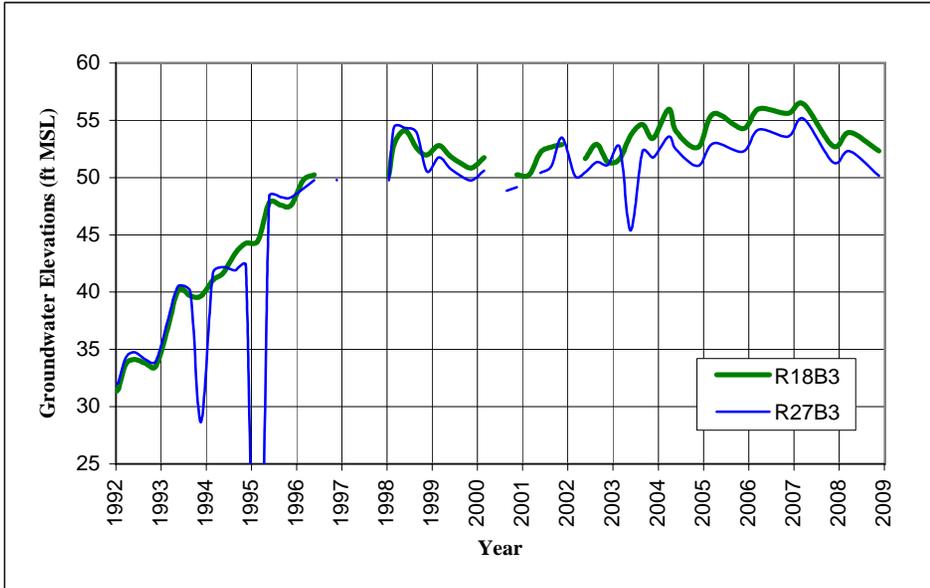
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HISTORICAL GROUNDWATER ELEVATIONS IN "B2" AQUIFER WELLS**



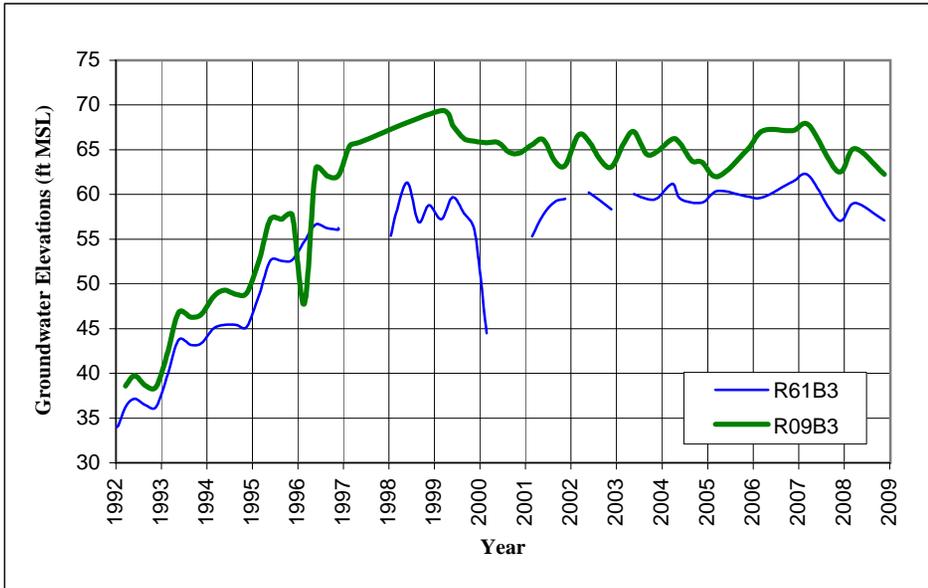
**APPENDIX C**  
**HISTORICAL GROUNDWATER ELEVATIONS IN "B2" AQUIFER WELLS**



## APPENDIX C HISTORICAL GROUNDWATER ELEVATIONS IN "B3" AQUIFER WELLS



## APPENDIX C HISTORICAL GROUNDWATER ELEVATIONS IN "B3" AQUIFER WELLS

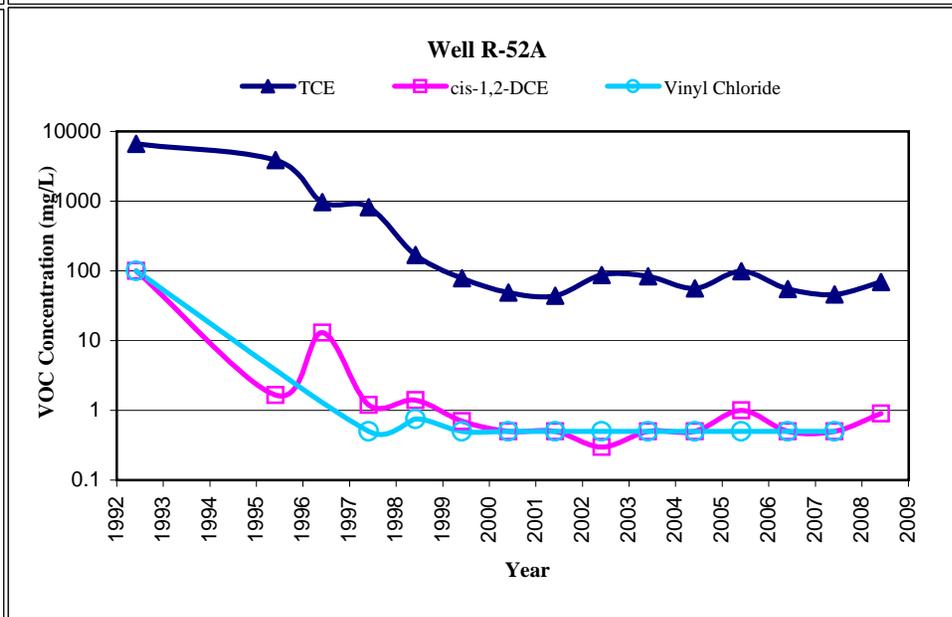
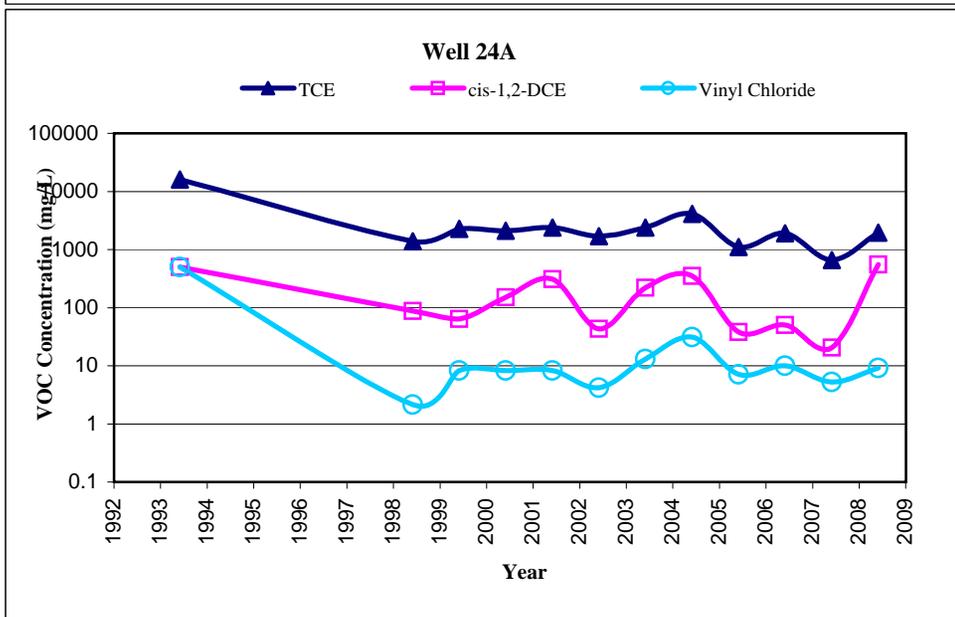
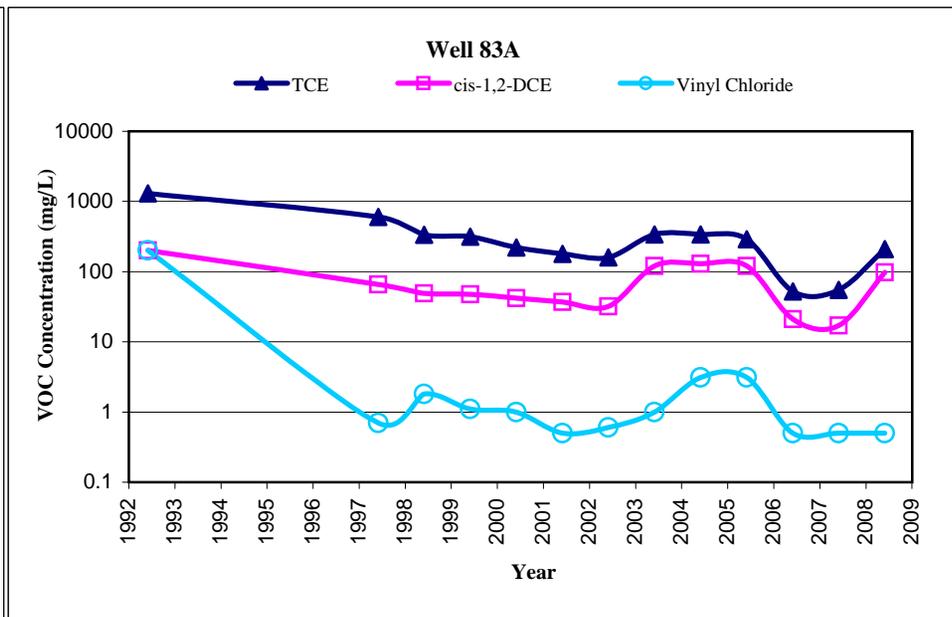
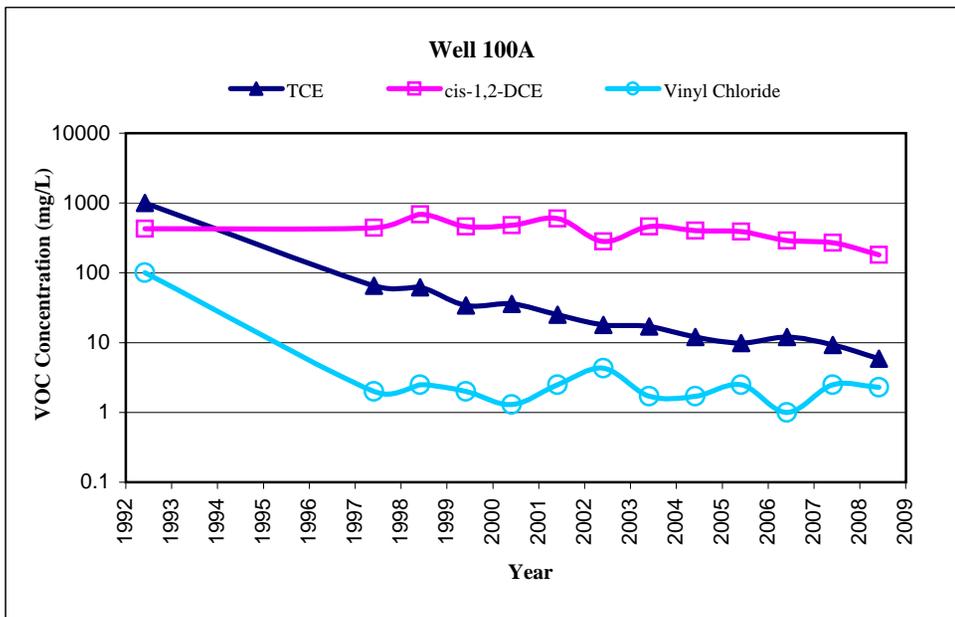


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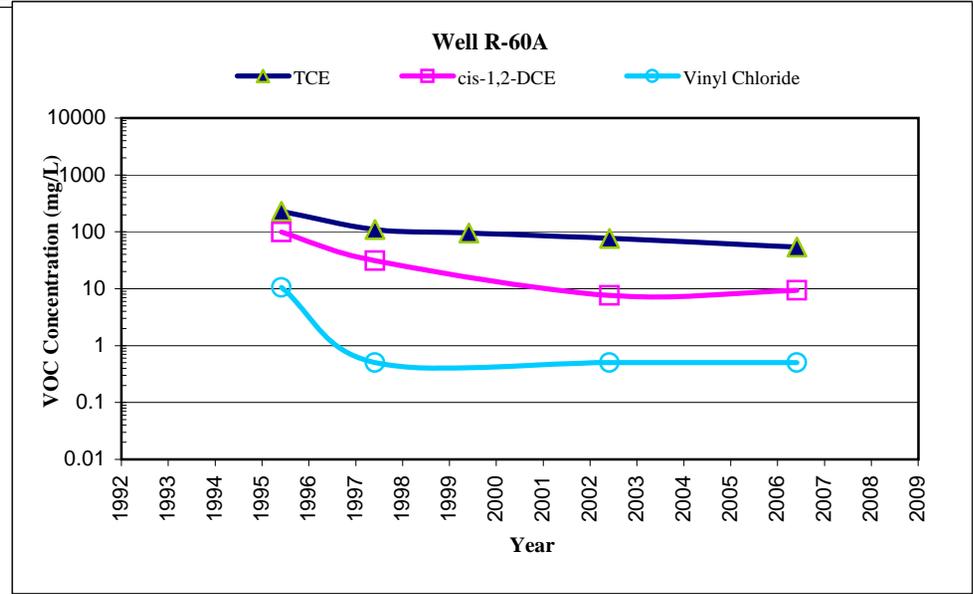
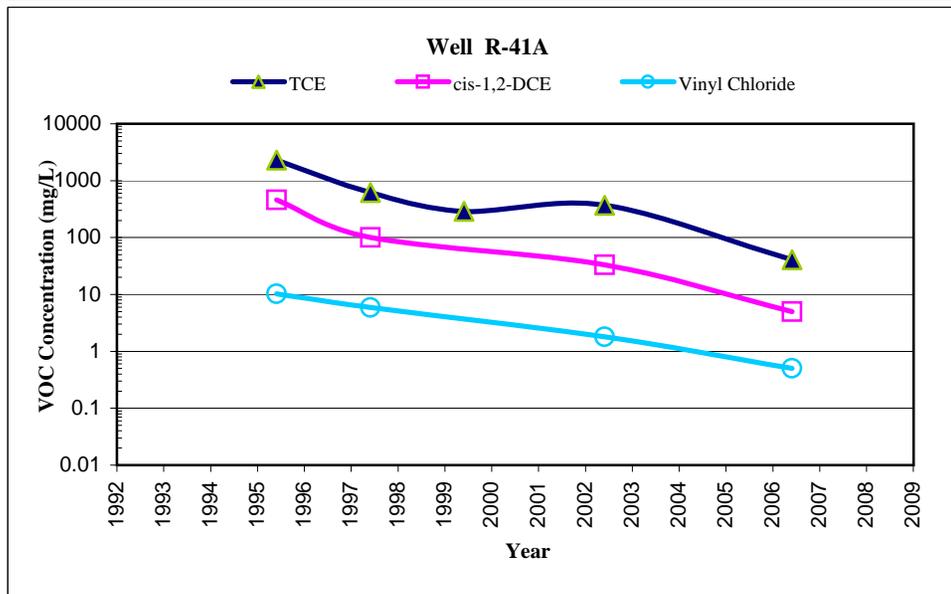
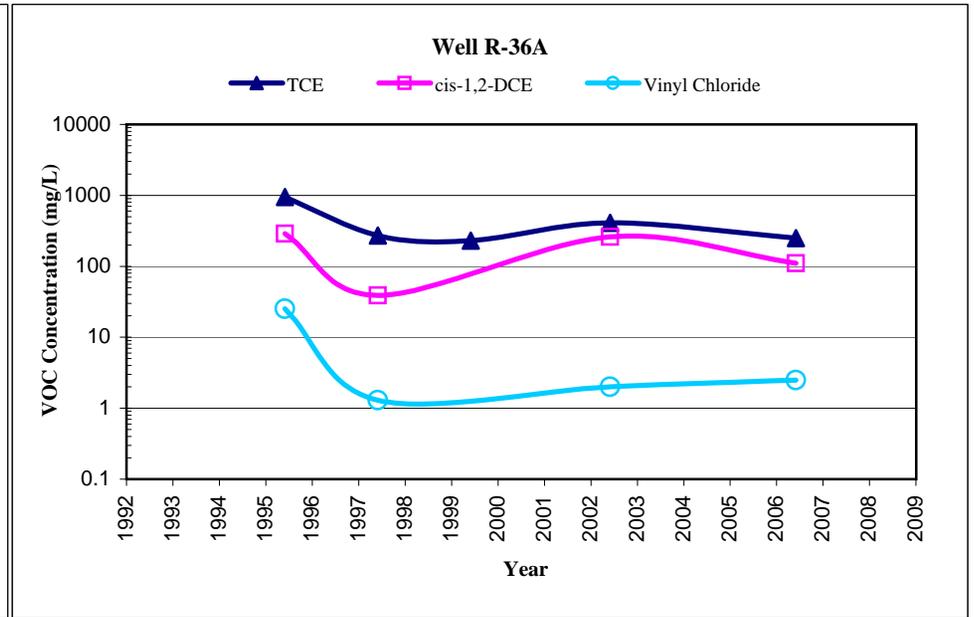
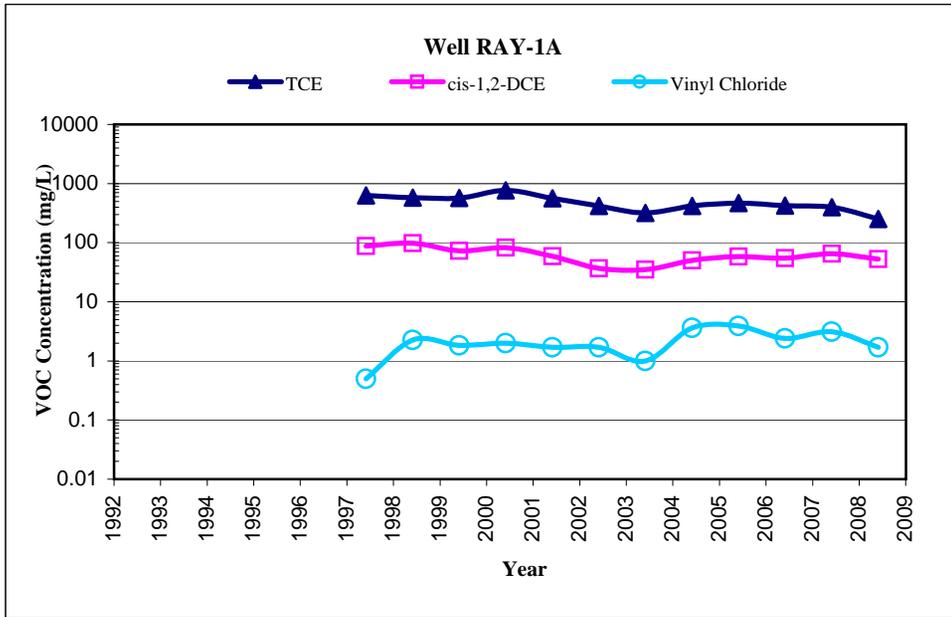
# **APPENDIX D**

## **HISTORICAL GROUNDWATER QUALITY DATA AND PLOTS**

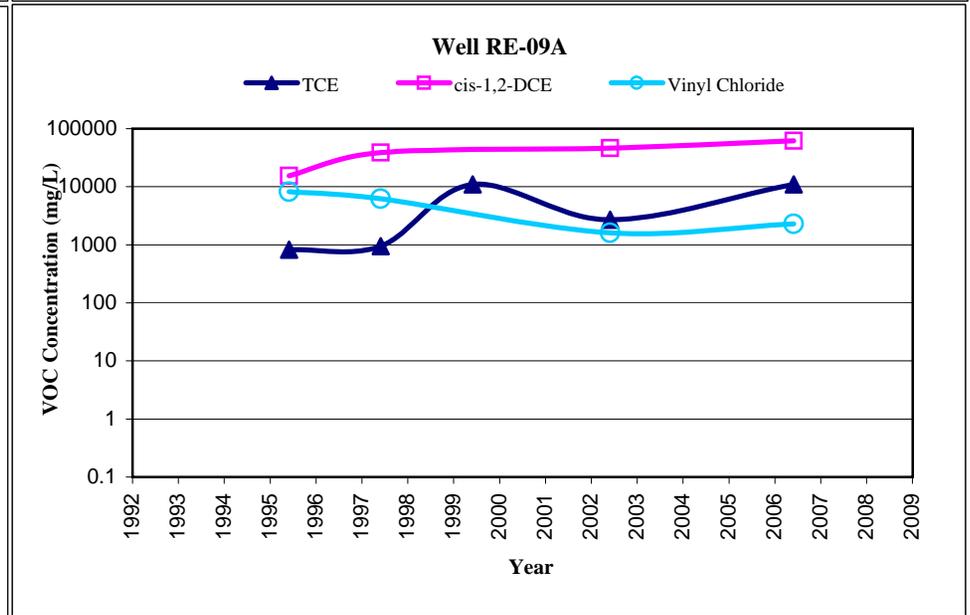
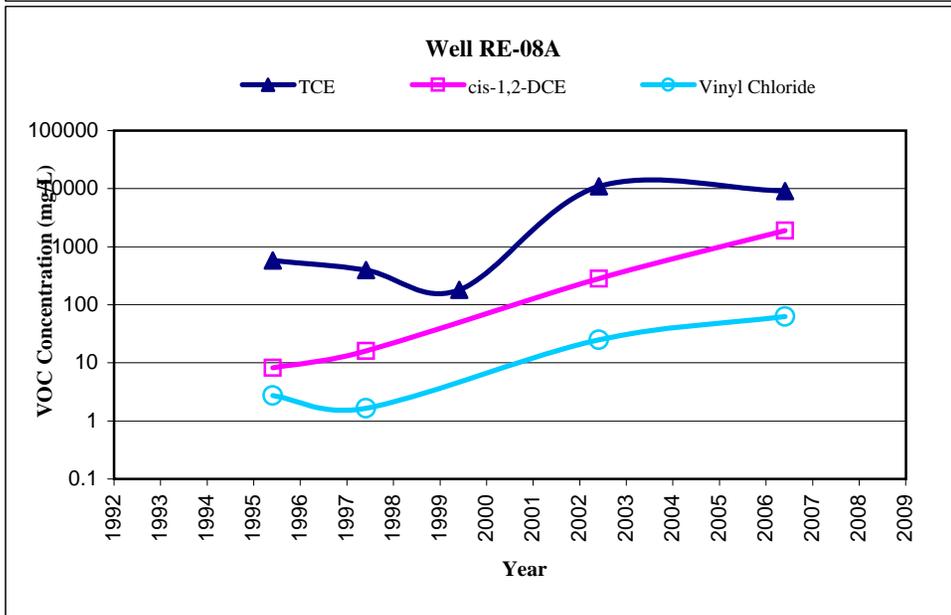
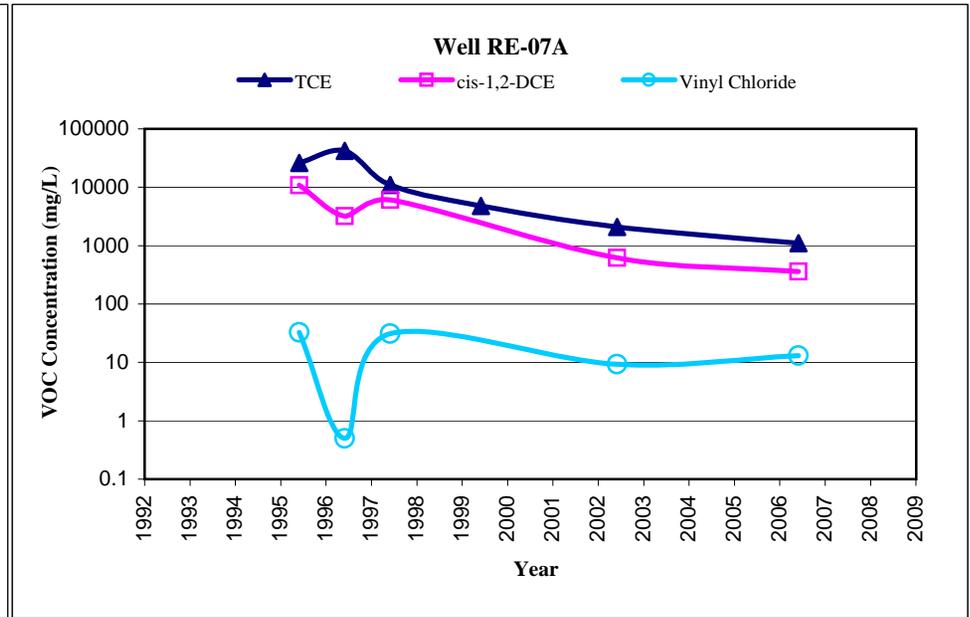
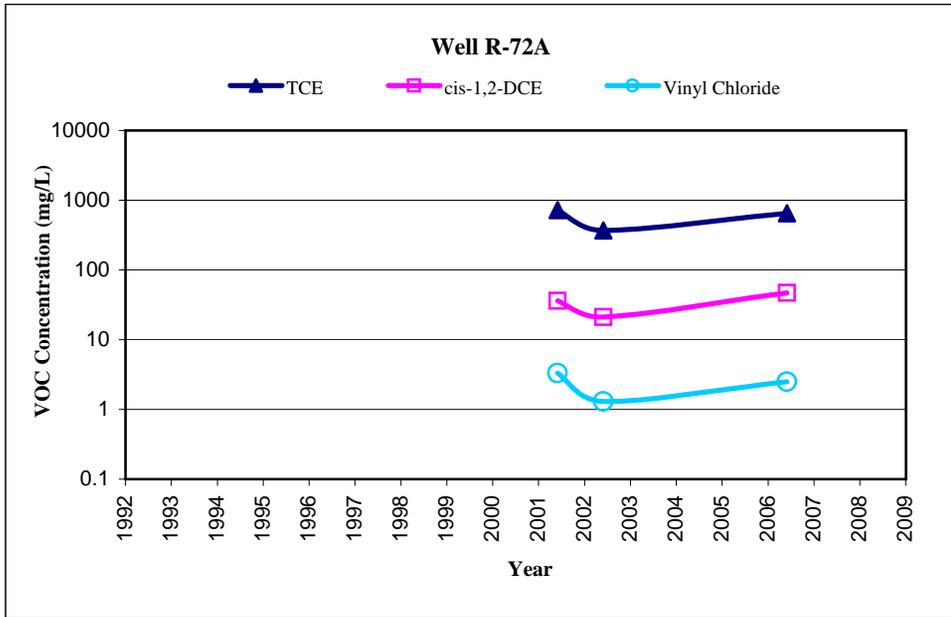
## APPENDIX D AVERAGE ANNUAL VOC CONCENTRATIONS IN SITE SPECIFIC "A" AQUIFER WELLS



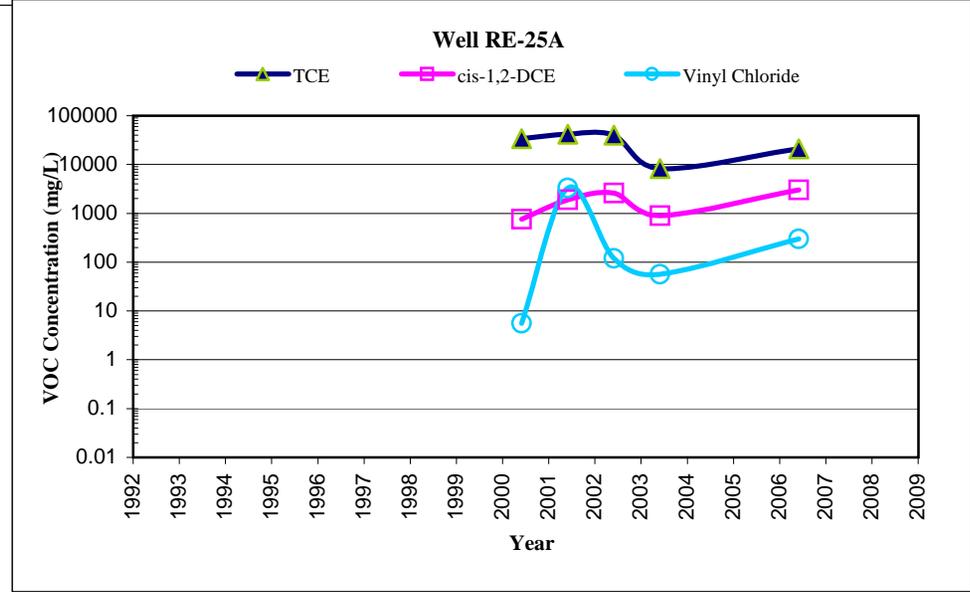
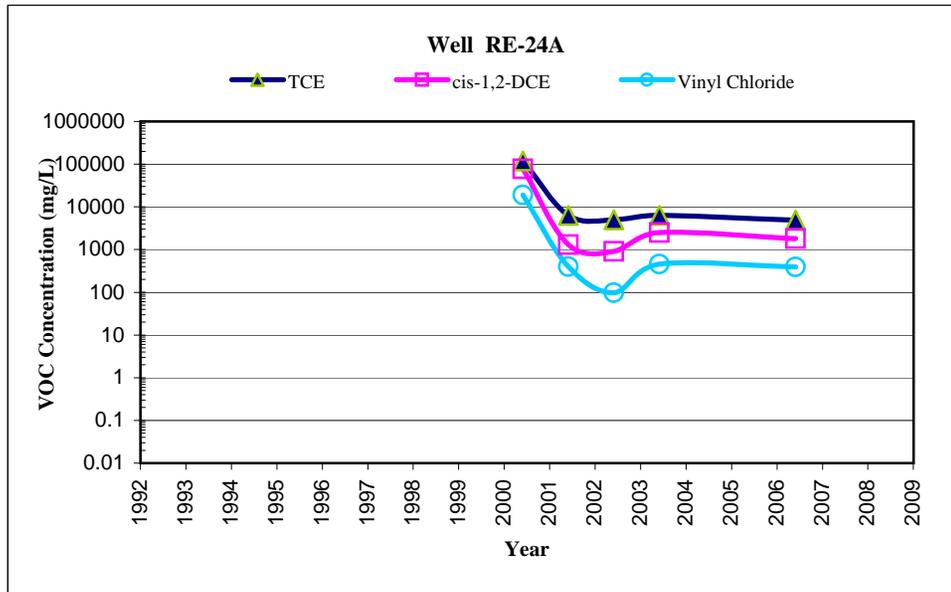
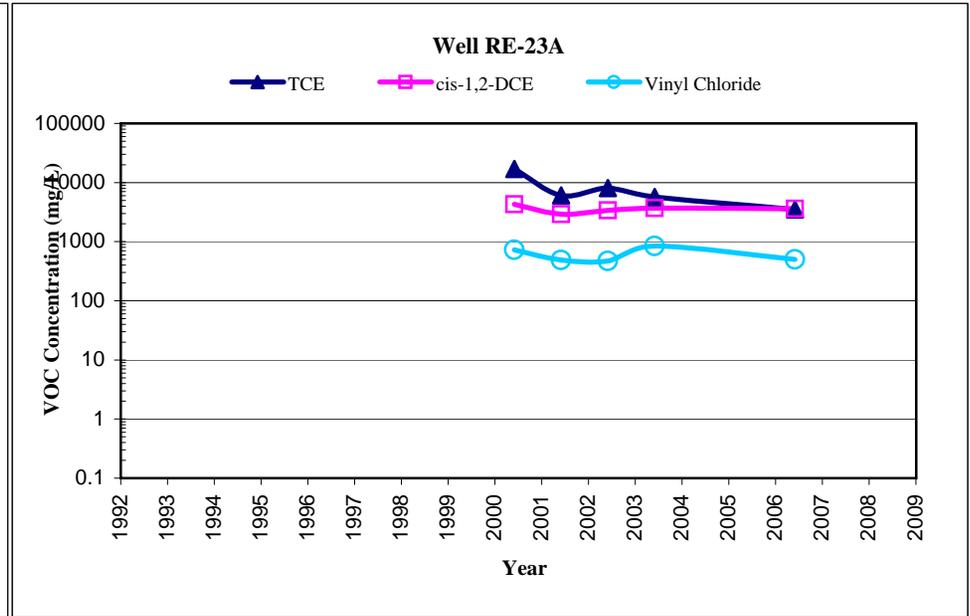
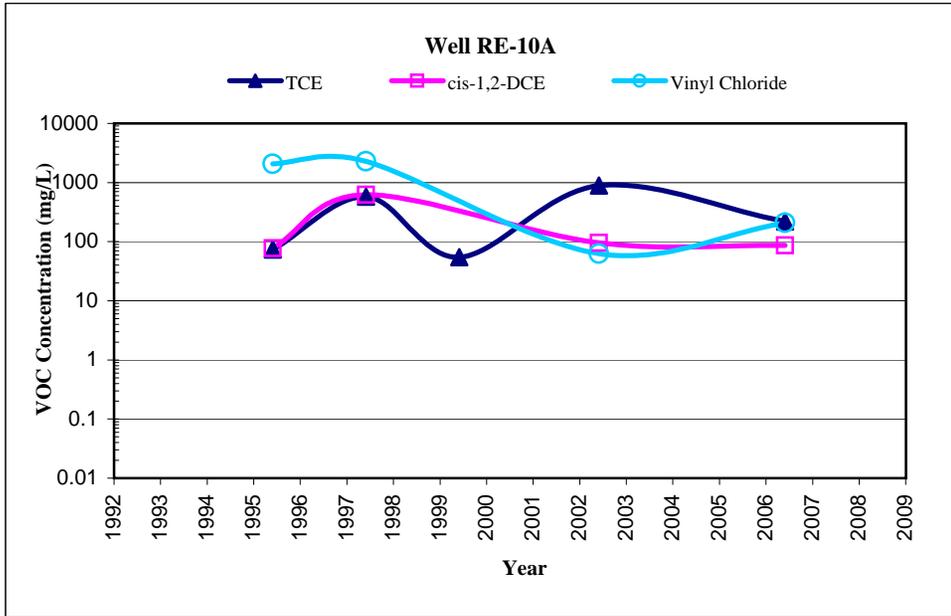
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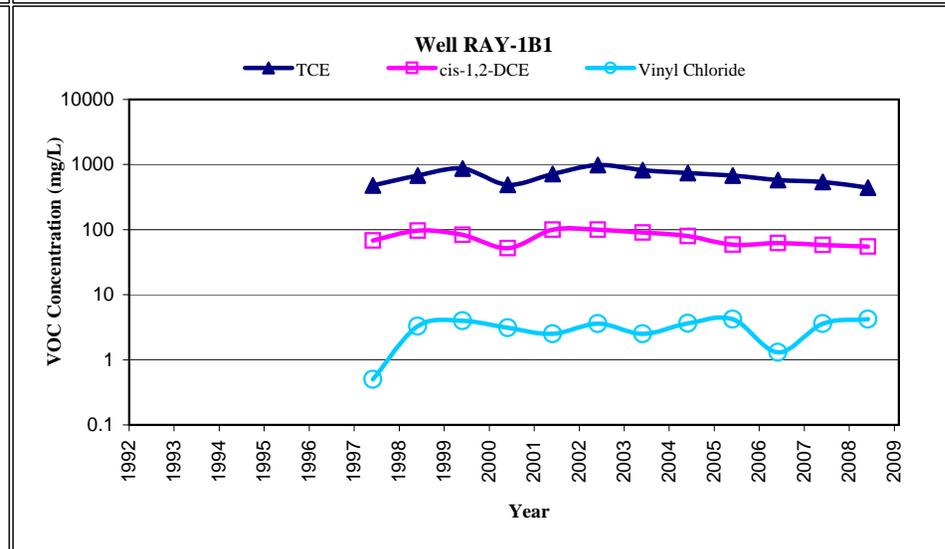
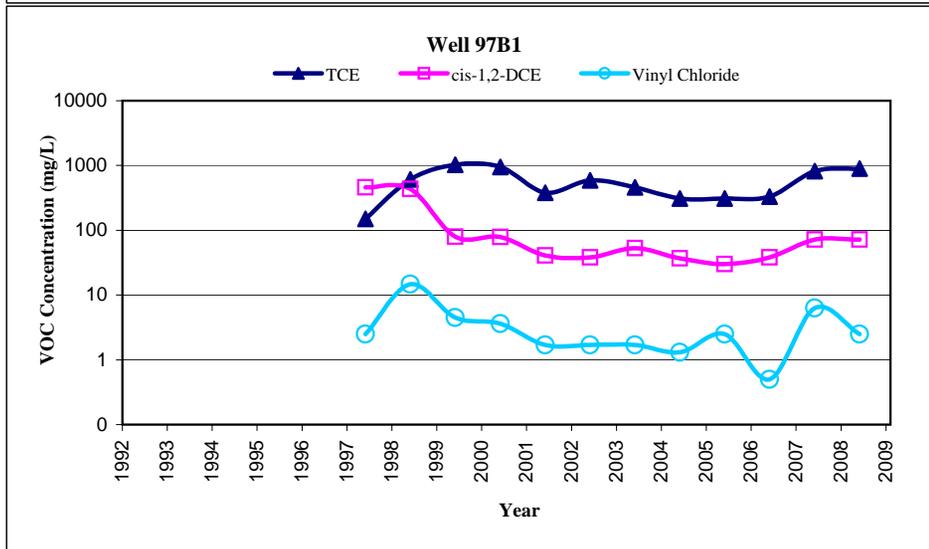
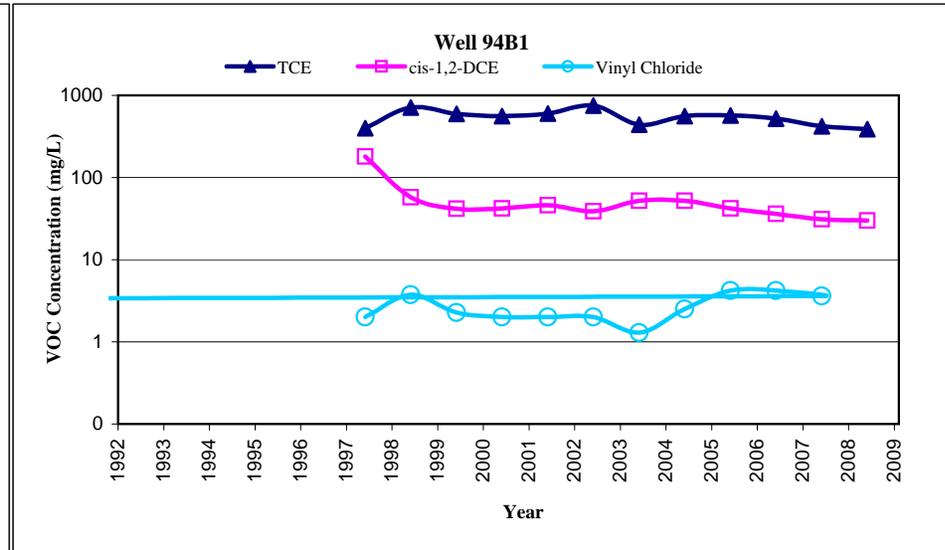
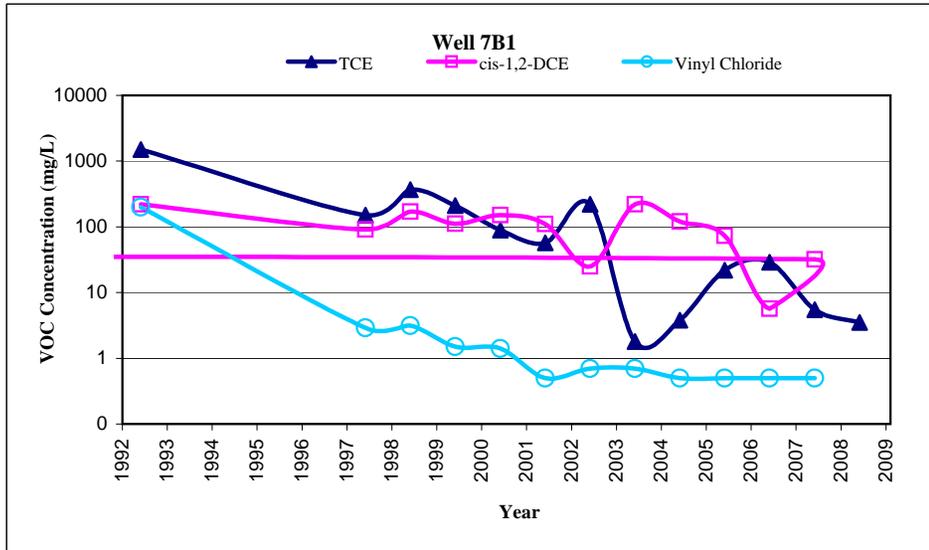
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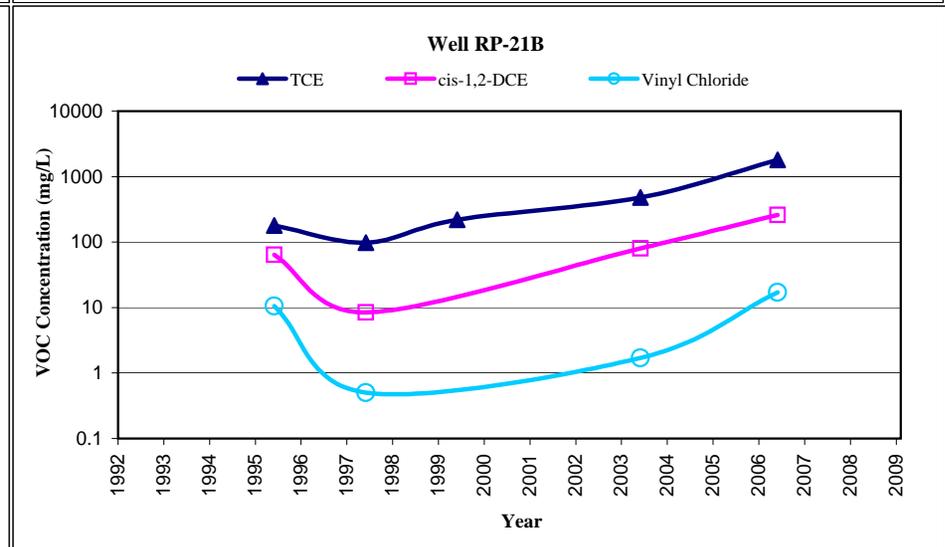
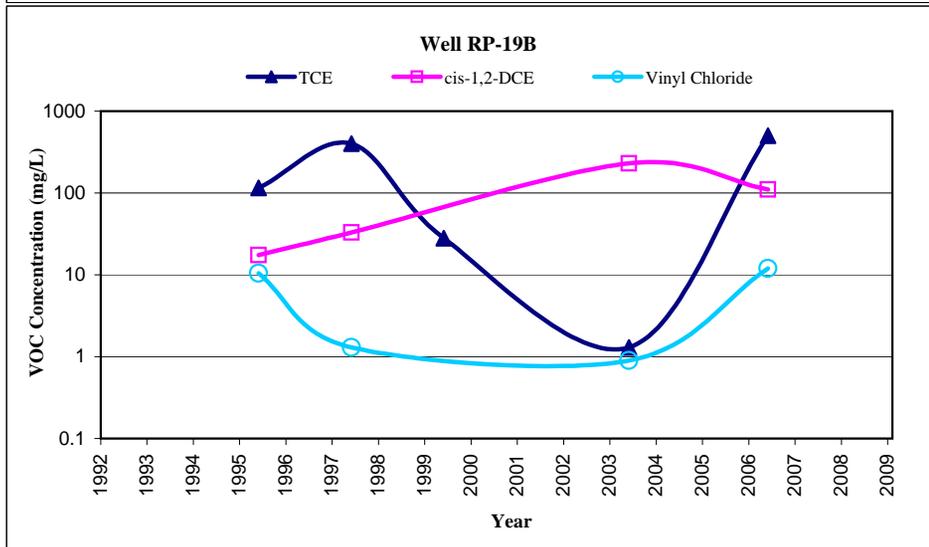
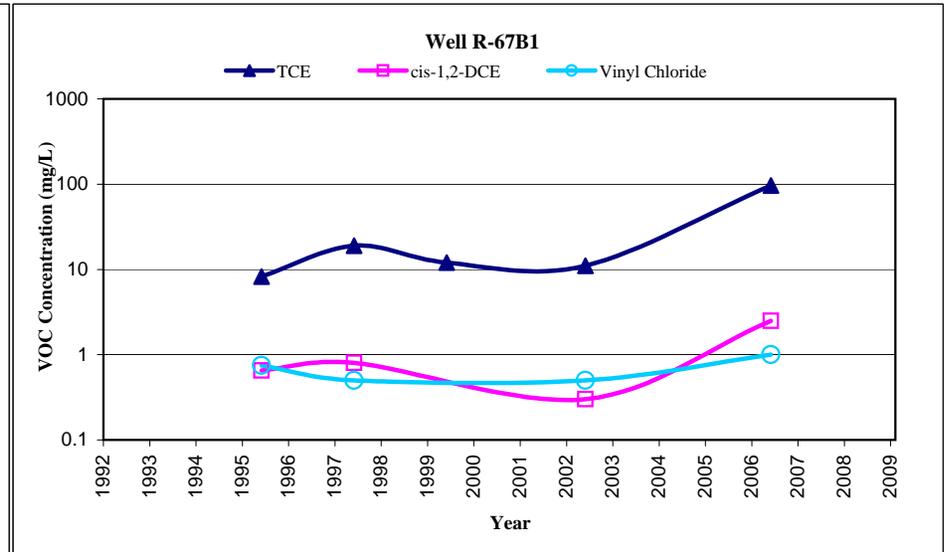
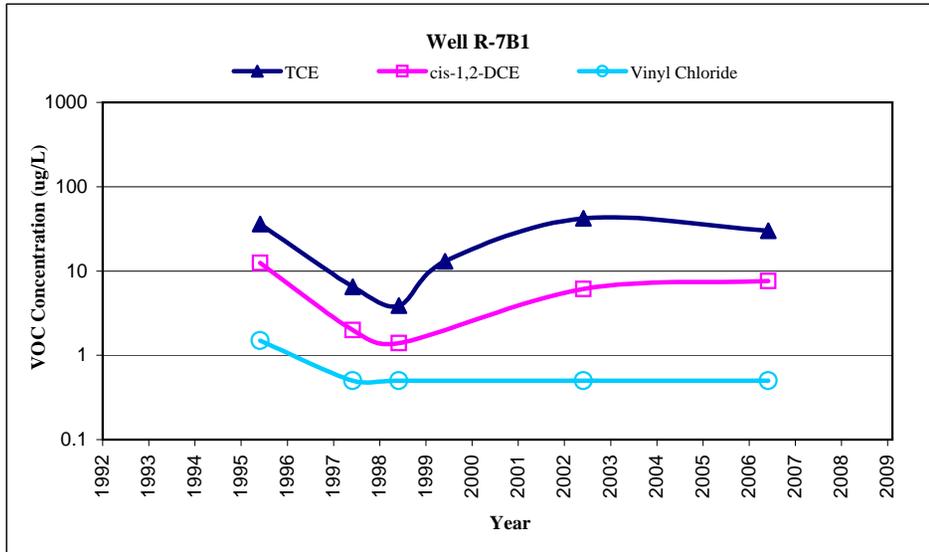
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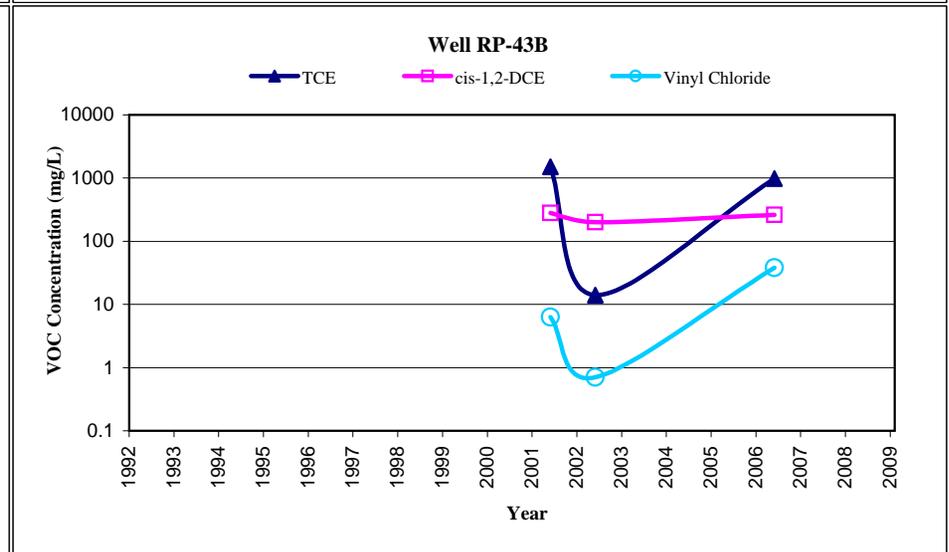
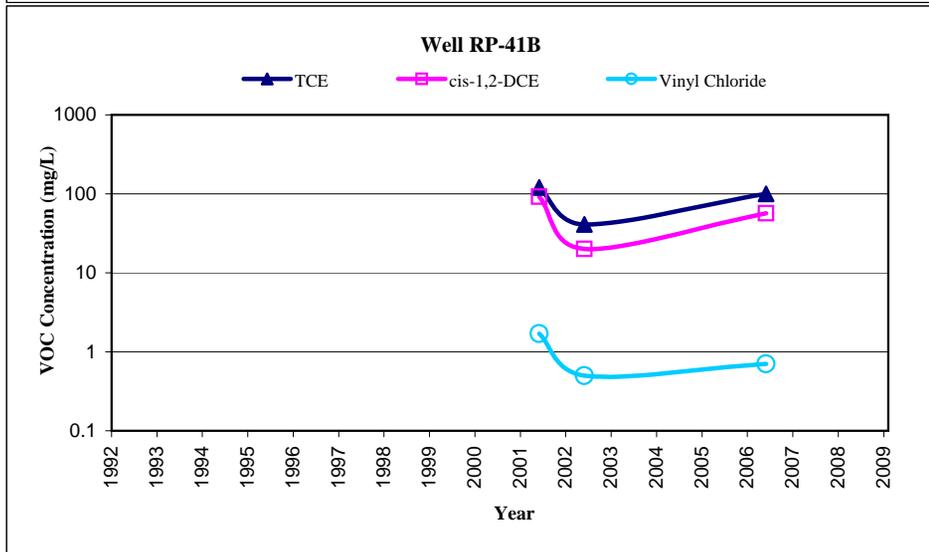
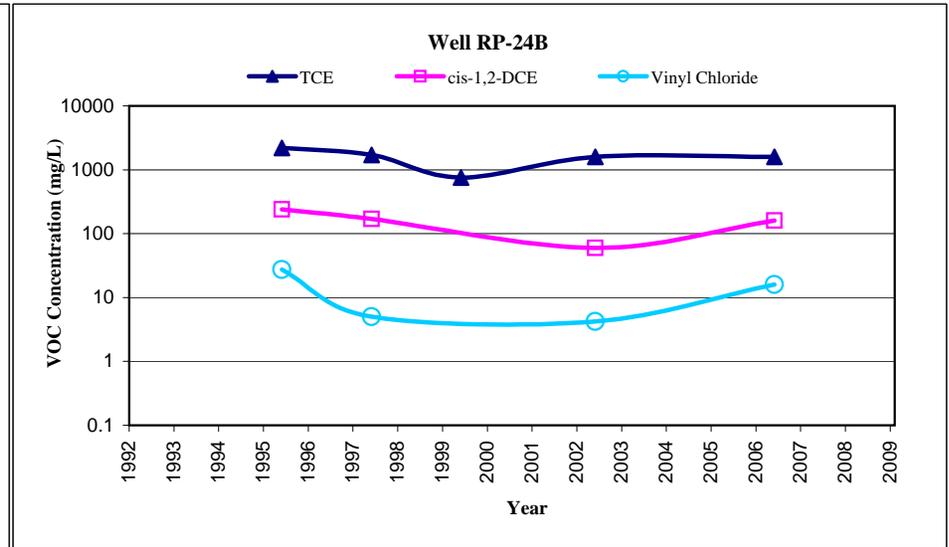
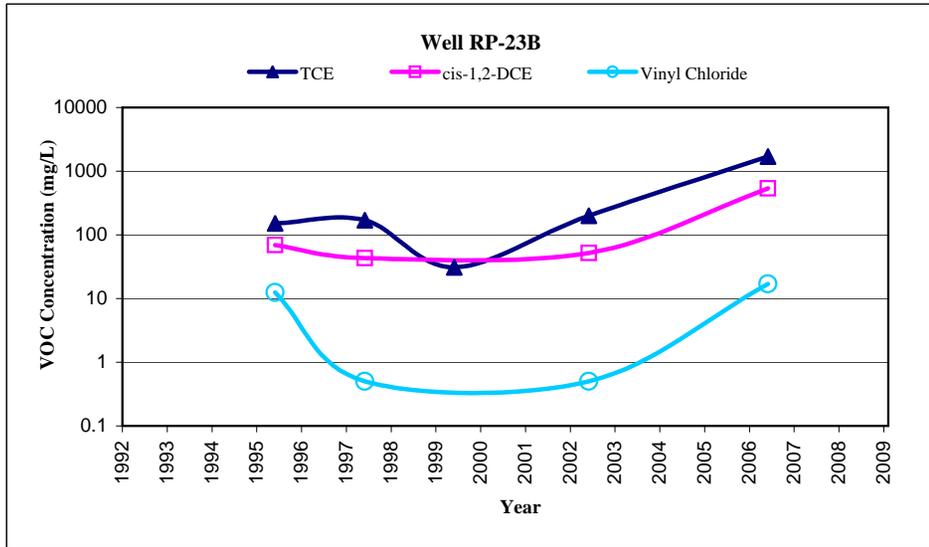
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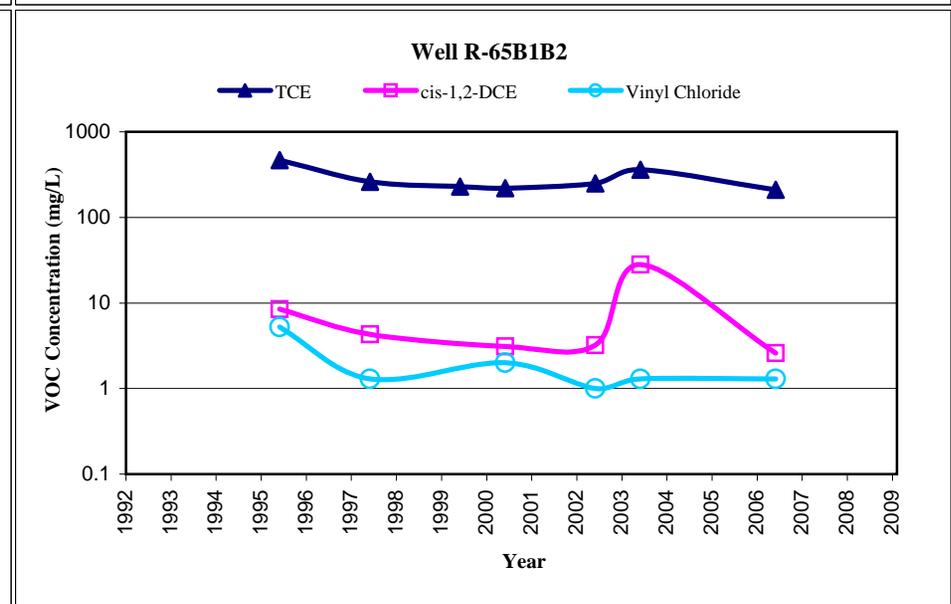
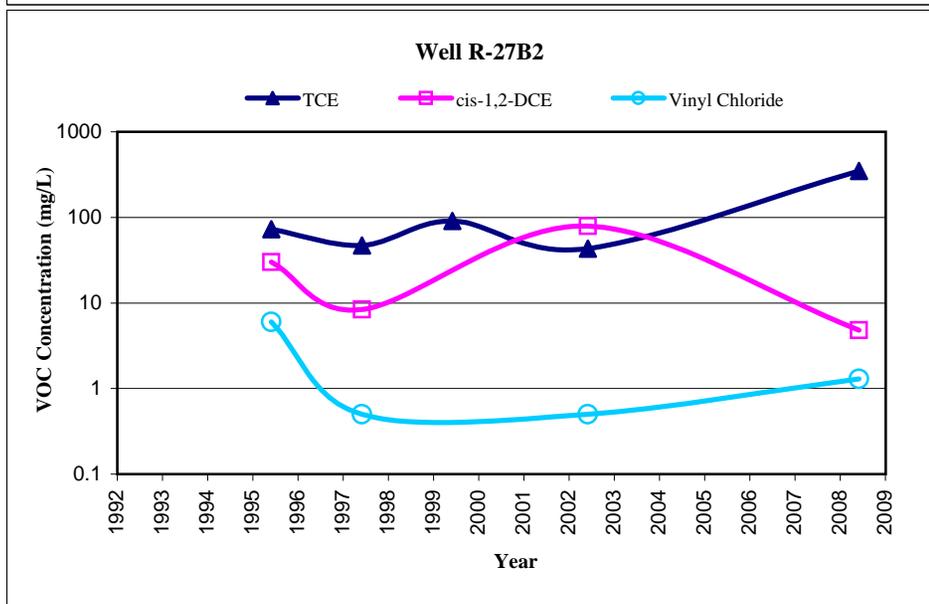
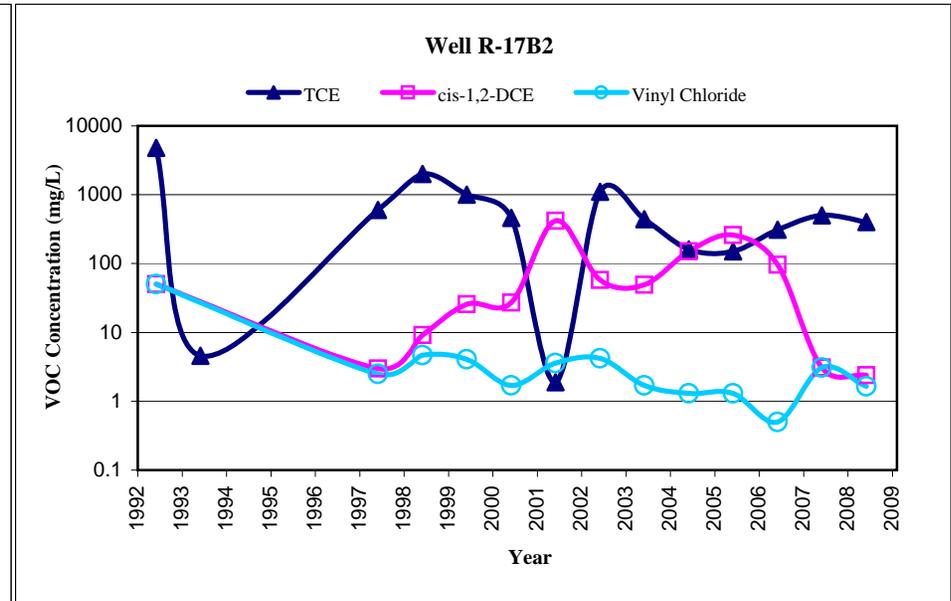
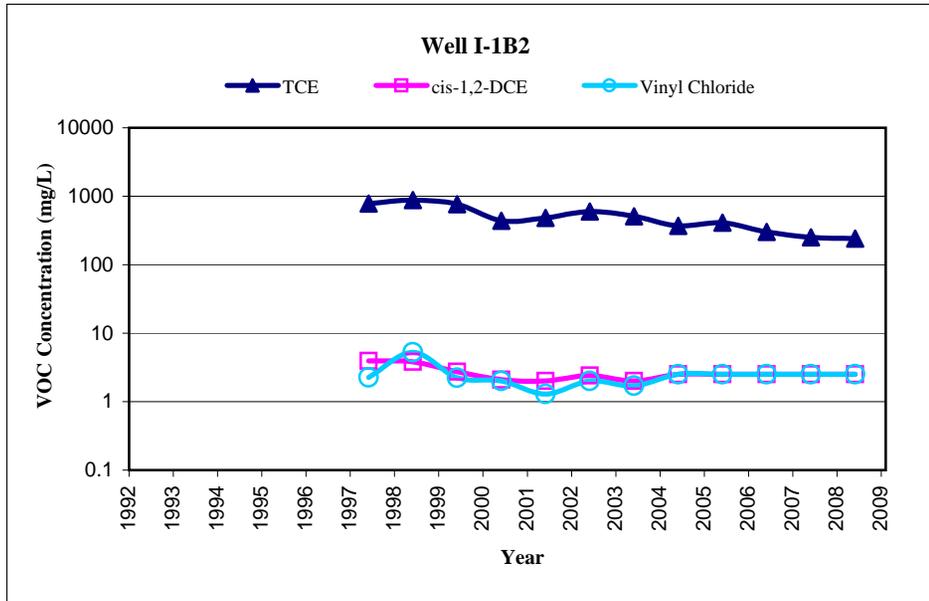
## APPENDIX D AVERAGE ANNUAL VOC CONCENTRATIONS IN SITE SPECIFIC "B1" AQUIFER WELLS



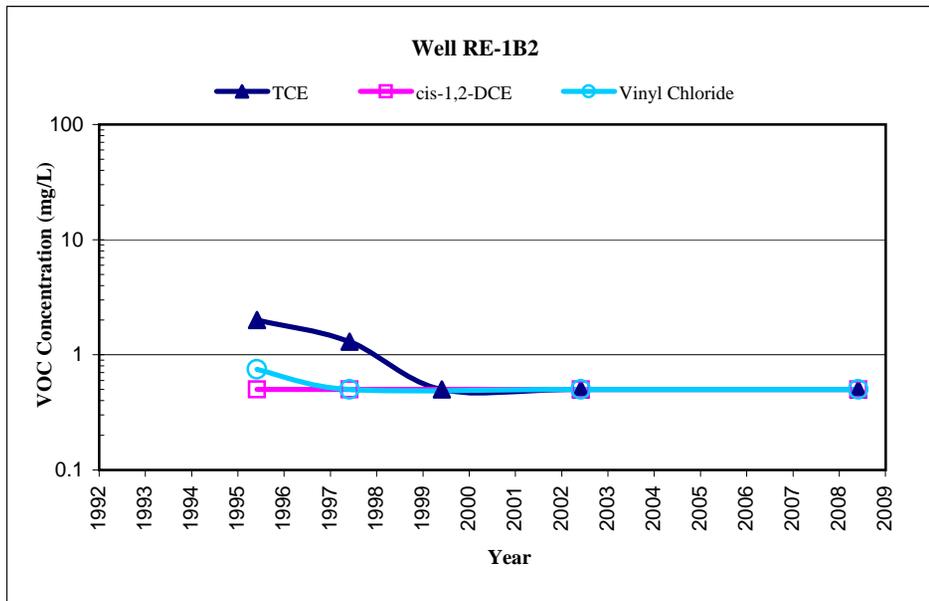
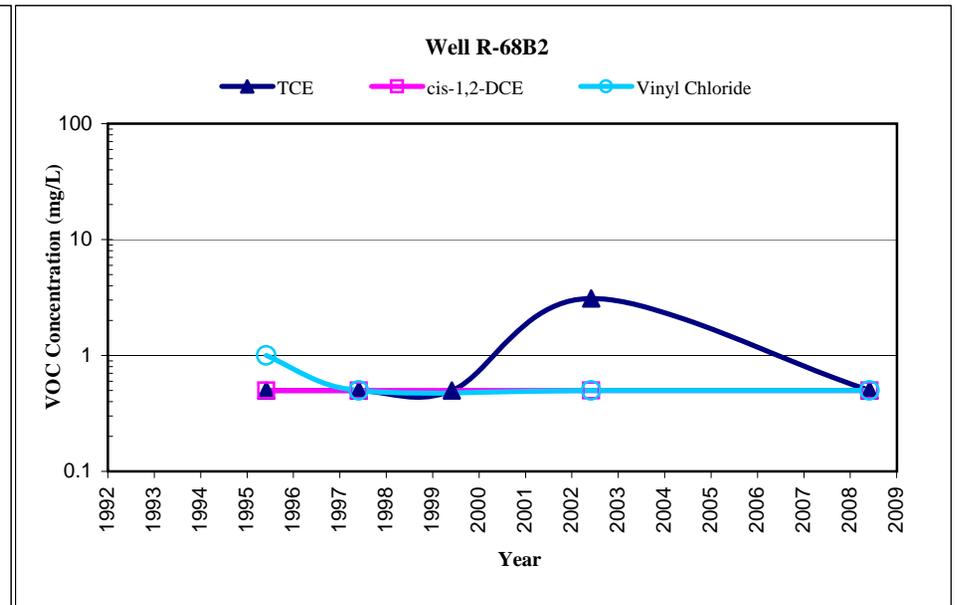
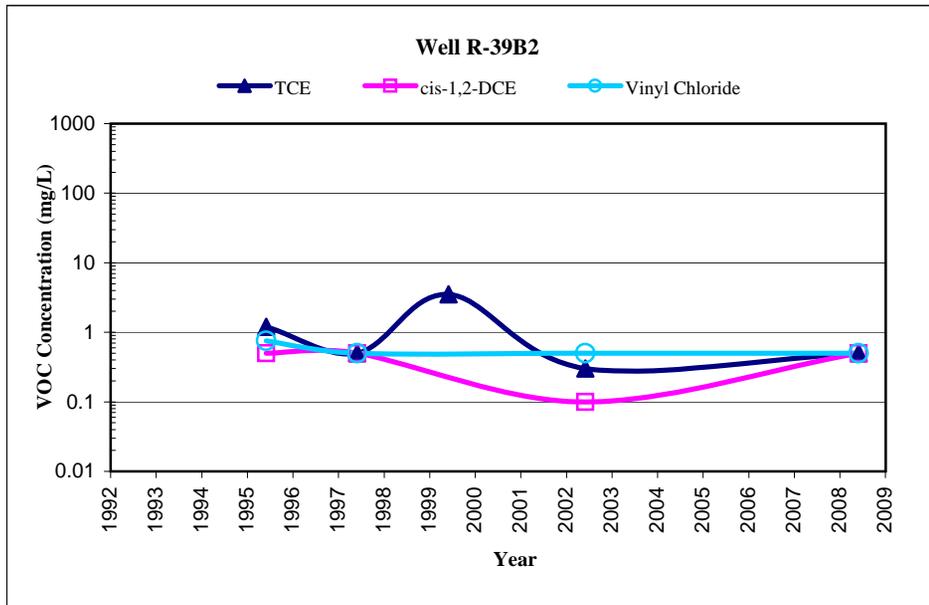
## APPENDIX D AVERAGE ANNUAL VOC CONCENTRATIONS IN SITE SPECIFIC "B1" AQUIFER WELLS



## APPENDIX D AVERAGE ANNUAL VOC CONCENTRATIONS IN SITE SPECIFIC "B2" AQUIFER WELLS



## APPENDIX D AVERAGE ANNUAL VOC CONCENTRATIONS IN SITE SPECIFIC "B2" AQUIFER WELLS



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**APPENDIX E**

**QUALITY ASSURANCE/ QUALITY CONTROL**

**REPORT**

## **Appendix E**

# **Quality Assurance/Quality Control Report**

### **Raytheon Company - Former Facilities**

### **350 Ellis Street Site**

### **Mountain View, California**

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This Quality Assurance/Quality Control Report has been prepared by Locus Technologies (Locus) on behalf of Raytheon Company for the groundwater treatment system samples collected during this reporting period at the Raytheon's former facility located at 350 Ellis Street in Mountain View, California. This QA/QC report demonstrates that the work performed at this site complied with the standards and protocols in accordance with the 1991 Unified Quality Assurance Project Plan for the Middlefield-Ellis-Whisman site in Mountain View, California (UQAPP).

In accordance with the UQAPP, one matrix spike/matrix spike duplicate (MS/MSD) and one method blank sample are to be analyzed for every 20 samples analyzed by the laboratory. In addition, one field duplicate is to be collected for every 20 samples collected and a laboratory prepared travel blank sample accompanies every shipment of samples.

#### **Matrix Spike/Matrix Spike Duplicate and Blank Spike/Blank Spike Duplicate (BS/BSD) Samples**

The MS/MSD and BS/BSD samples are used to assess accuracy and precision of the data. MS/MSD and/or BS/BSD samples were run for each of the analyses conducted. A precision goal of 35 percent relative percent difference (RPD) was used for VOC/SVOC analyses. The RPD values ranged from 0 to 14 and 0 to 15 percent for BSD and MSD samples, respectively (Table E-1), and are within the precision goals.

A percent recovery goal of 40 – 150 percent for the volatile analysis was used for the MS/MSD samples. Laboratory QC limits were used for the analyses for which the UQAPP does not specify a percent recovery goal. The percent recoveries ranged from 47 to 140 percent for the volatile analysis. The surrogate recoveries for the MS/MSD samples ranged from 86 – 115 percent; the quality assurance goal for MS/MSD samples is 80 to 120. For surrogate recoveries for the MS/MSD samples, only one was observed beyond the quality assurance goal. In terms of accuracy and precision for MS/MSD samples, the completeness is 100 percent (Table E-2).

The laboratory BS/BSD samples were run for the 8260 and 8270C analyses. Percent recovery goals for BS/BSD samples are not specified in the UQAPP; as such, the laboratory QC limits were used as the quality assurance goals. All BS/BSD sample percent recoveries were within the quality assurance goals, and are included in Table E-2. In terms of accuracy and precision, the completeness for both BS/BSD analyte recovery and surrogate recovery is 100 percent.

### **Travel Blank Samples**

A total of 13 travel blank samples were analyzed for this annual reporting period. The travel blank surrogate recoveries ranged from 97 to 116 percent, and are within the quality assurance goal of 80 – 120 percent (Table E-3). The completeness of the travel blank data is 100 percent and the data are valid.

### **Field Blank Samples**

Three field blank samples were analyzed during this reporting period. The percent recoveries of the field blank surrogates ranged from 97 to 111 percent, and are within the quality assurance goal of 80 – 120 percent (Table E-3). The completeness of the field blank data is 100 percent; the data are valid.

### **Method Blank Samples**

The laboratory analyzed 35 method blank samples in this reporting period. The percent recoveries ranged from 58 to 115 percent for surrogates associated with EPA Method 8260, and are within the quality assurance goals of 80 – 120 percent (Table E-3). The method blank data have a completeness of 100 percent; the data are valid.

### **Field Samples**

The laboratory analyzed a total of 48 field samples during this reporting period. The percent recoveries ranged from 87 to 120 percent for EPA Methods 8260. The field sample data have a completeness of 97 percent and are valid.

### **Field Duplicate Samples**

Three field duplicate samples were collected and analyzed in 2008. The percent recoveries ranged from 100 to 118 percent for the EPA Method 8260 analysis, which are within the quality assurance goals (Table E-3). The duplicate sample data have a completeness of 100 percent, and are valid.

**TABLE E-1**  
**2008 ANNUAL PROGRESS REPORT**  
**QUALITY ASSURANCE REPORT**  
**SUMMARY OF LABORATORY PRECISION DATA**  
**RAYTHEON COMPANY - FORMER FACILITIES**  
**350 ELLIS STREET, MOUNTAIN VIEW, CALIFORNIA**

Sample Type	Constituent	Precision		Completeness	
		Relative Percent Difference (%)	Quality Assurance Goal (%) <sup>2</sup>	Percent (%)	Quality Assurance Goal (%)
Blank Spike Duplicate	1,1-Dichloroethene	0 - 12	35	100	90
	Trichloroethene	1 - 14			
	Chlorobenzene	0 - 7			
	Toluene	2			
	Benzene	2 - 7			
	Pyrene <sup>1</sup>	7			
	Phenol <sup>1</sup>	6			
	Pentachlorophenol <sup>1</sup>	12			
	N-Nitroso-di-propylamine <sup>1</sup>	7			
	Acenaphthene <sup>1</sup>	9			
	4-Nitrophenol <sup>1</sup>	2			
	4-Chloro-3-Methylphenol <sup>1</sup>	7			
	2-Chlorophenol <sup>1</sup>	6			
	2,4-Dinitrotoluene <sup>1</sup>	6			
1,2,4-Trichlorobenzene <sup>1</sup>	10				
Matrix Spike Duplicate	1,1-Dichloroethene	2 - 11	35	100	90
	Trichloroethene	1 - 8			
	Chlorobenzene	1 - 15			
	Benzene	2 - 5			
	1,4-Dioxane	2			

Notes:

1. Constituent associated with EPA Method 8270C.

2. If QA Goal is not specified in UQAPP for specified compound, or its associated analysis, the laboratory QC limit is used. This was applicable to the 8270C and 8270C-SIM analyses.

**TABLE E-2**  
**2008 ANNUAL PROGRESS REPORT**  
**QUALITY ASSURANCE REPORT**  
**SUMMARY OF LABORATORY ACCURACY DATA**  
**RAYTHEON COMPANY - FORMER FACILITIES**  
**350 ELLIS STREET, MOUNTAIN VIEW, CALIFORNIA**

Sample Type	Constituent	Accuracy		Completeness			
		Percent Recovery (%)	Quality Assurance Goal (%)	Percent (%)	Quality Assurance Goal (%)		
Matrix Spike and Matrix Spike Duplicate	Analyte	1,1-Dichloroethene	54 - 135	40-150	100	90-100	
		Trichloroethene	47 - 140				
		Chlorobenzene	88 - 110				
	Surrogate	1,2-Dichloroethane-d4	86 - 115	80-120			
		Toluene-d8	99 - 105				
Blank Spike and Blank Spike Duplicate <sup>2</sup>	Analyte	Bromofluorobenzene	92 - 107	80 - 120	100	90-100	
		1,1-Dichloroethene <sup>1</sup>	80 - 120				
		Benzene	91 - 108				
		Trichloroethene	92 - 114				
		Toluene	93 - 109				
		Chlorobenzene	89 - 109				
		1,4-Dioxane <sup>1</sup>	55				28 - 120
		Phenol <sup>1</sup>	71 - 76				70 - 73
		4-Nitrophenol <sup>1</sup>	73 - 74				75 - 77
		2-Chlorophenol <sup>1</sup>	80 - 85				68 - 73
		1,4-Dichlorobenzene <sup>1</sup>	67 - 71				41 - 44
		N-nitroso-di-n-propylamine <sup>1</sup>	55 - 59				38 - 120
		1,2,4-Trichlorobenzene <sup>1</sup>	68 - 75				51 - 55
		4-Chloro-3-methylphenol <sup>1</sup>	70 - 75				67 - 71
		Acenaphthene <sup>1</sup>	77 - 85				65 - 70
		2,4-Dinitrotoluene <sup>1</sup>	79 - 84				57 - 60
		Pentachlorophenol <sup>1</sup>	65 - 73				70 - 76
Pyrene <sup>1</sup>	78 - 83	62 - 65					
Blank Spike and Blank Spike Duplicate <sup>2</sup>	Surrogate	Dibromofluoromethane	95 - 103	80-120	100	90-100	
		1,2-Dichloroethane-d4	83 - 111				
		Toluene-d8	92 - 108				
		Bromofluorobenzene	92 - 110				
		2-Fluorophenyl <sup>1</sup>	66 - 73				36 - 120
		2-Fluorobiphenyl <sup>1</sup>	69 - 82				49 - 120
		Nitrobenzene-d5 <sup>1</sup>	67 - 71				48 - 120
		Phenol-d5 <sup>1</sup>	63 - 66				32 - 120
		2,4,6-Tribromophenol <sup>1</sup>	72 - 77				37 - 120
Terphenyl-d14 <sup>1</sup>	67 - 72	22 - 120					

**Notes:**

1 Constituent associated with EPA Methods 8270C-SIM and/or 8270C analyses for 1,4-Dioxane and SVOCs. The percentages shown for the quality assurance goals are actually laboratory QC limits; when the UQAPP was written, these analyses were not required for treatment system samples, as such a QA goal was not established.

2 Quality assurance goals were not specified for BS/BSD samples in the UQAPP, as such the laboratory QC limits were used.

**TABLE E-3**  
**2008 ANNUAL PROGRESS REPORT**  
**QUALITY ASSURANCE REPORT**  
**SUMMARY OF ACCURACY AND PRECISION DATA**  
**RAYTHEON COMPANY - FORMER FACILITIES**  
**350 ELLIS STREET, MOUNTAIN VIEW, CALIFORNIA**

Sample Type	Constituent	Accuracy		Precision		Completeness	Quality Assurance Goal (%)
		Percent Recovery (%)	Quality Assurance Goal (%) <sup>a</sup>	Relative Percent Difference (%)	Quality Assurance Goal (%)	Percent (%)	Quality Assurance Goal (%)
Travel Blanks	Surrogate	Dibromofluoromethane	103 - 107	80-120	not applicable	100	90-100
		1,2-Dichloroethane-d4	91 - 119				
		Toluene-d8	90 - 111				
		Bromofluorobenzene	97 - 116				
Field Blanks	Surrogate	1,2-Dichloroethane-d4	101 - 111	80-120	not applicable	100	90-100
		Toluene-d8	100 - 106				
		Bromofluorobenzene	97 - 102				
Rinse Blanks	Surrogate	1,2-Dichloroethane-d4	99 - 111	80-120	not applicable	100	90-100
		Toluene-d8	99 - 103				
		Bromofluorobenzene	97 - 106				
Method Blanks	Surrogate	Dibromofluoromethane	95 - 105	80-120	not applicable	100	90-100
		1,2-Dichloroethane-d4	86 - 118				
		Toluene-d8	90 - 110				
		Bromofluorobenzene	90 - 115				
		2-Fluorobiphenyl <sup>c</sup>	68 - 76	49-120			
		Nitrobenzene-d5 <sup>c</sup>	65 - 80	48-120			
		2-Fluorophenyl <sup>c</sup>	65	36-120			
		Phenol-d5 <sup>c</sup>	62	32-120			
		2,4,6-Tribromophenol <sup>c</sup>	58	37-120			
Terphenyl-d14 <sup>c</sup>	66	22-120					
Field Samples	Surrogate	Dibromofluoromethane	104 - 111	80-120	not applicable	97 <sup>b</sup>	90-100
		1,2-Dichloroethane-d4	87 - 120				
		Toluene-d8	88 - 112				
		Bromofluorobenzene	88 - 118				
		2-Fluorobiphenyl <sup>c</sup>	81 - 87	49-120			
		Nitrobenzene-d5 <sup>c</sup>	68 - 96	48-120			
		2-Fluorophenyl <sup>c</sup>	68	36-120			
		Phenol-d5 <sup>c</sup>	64	32-120			
		2,4,6-Tribromophenol <sup>c</sup>	62	37-120			
Terphenyl-d14 <sup>c</sup>	68	22-120					
Field Duplicates	Surrogate	1,2-Dichloroethane-d4	105 - 118	80-120	not applicable	100	90-100
		Toluene-d8	100 - 111				
		Bromofluorobenzene	103 - 114				
Field Duplicates	Analyte	1,2-Dichloroethane-d4	not applicable	0	35	100	90-100
		Toluene-d8		0			
		Bromofluorobenzene		0			

**Notes:**

- Quality assurance goals were only specified for MS/MSD laboratory samples in the UQAPP, as such laboratory QC limits are used.
- Chloroform was detected in one of the field samples. The completeness of the field sample data is  $(47/48) \times 100 = 97.92\%$ .
- Constituent associated with EPA methods 8270C and/or 8270C analyses for 1,4-Dioxane and SVOCs. The quality assurance goals stated are the actual laboratory QC limits; the methods were not required on treatment system samples at the time the UQAPP was written.